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Table of Contents

1	Connections.....	14
1.1	Solar-Log™ RS485/422 B connection assignments (6 pin).....	14
1.2	RJ45.....	15
1.3	RJ11 Configuration.....	16
2	Connecting the inverters.....	17
2.1	Switch off the inverters and Solar-Log™.....	18
3	ABB.....	19
3.1	ABB PVS300.....	19
3.2	ABB Central Inverters.....	21
3.3	ABB-Power-One/Aurora/PVI/TRIO/UNO.....	22
4	Advanced Energy.....	24
4.1	Advanced Energy - AE-1.....	24
4.2	Advanced Energy - AE-3.....	26
4.3	Advanced Energy - AE-TX.....	28
5	AEG.....	30
5.1	AEG PS.....	30
5.2	AEG Protect.....	32
6	Albatech.....	34
6.1	Albatech APL Trifase 15 / 20.....	34
6.2	Albatech APL Monofase.....	36
7	ALPHA-SOL.....	38
7.1	ALPHA-SOL.....	38
8	AROS Solar Technology.....	41
8.1	AROS Solar Technology (RS422).....	41

8.2	AROS Solar Technology (RS485)	43
9	Astronergy	45
9.1	Astronergy	45
10	Aten	47
10.1	Aten	47
11	Benning	49
11.1	Benning	49
12	Bonfiglioli (formerly Vectron).....	51
12.1	Bonfiglioli	51
13	Carlo Gavazzi	53
13.1	Carlo Gavazzi - ISMG model	53
13.2	Carlo Gavazzi - HINRG model	55
14	Chint Power	57
14.1	Chint Power (CSP SC and CSP SCE to 20k).....	57
14.2	Chint Power (CPS 20k+).....	59
14.3	Chint Power Modbus.....	61
15	CMS.....	63
15.1	CMS.....	63
16	Conergy.....	65
16.1	Conergy (only Solar-Log 1000 and 2000)	65
17	CyberPower	67
17.1	CyberPower	67

18	Danfoss.....	69
18.1	Danfoss.....	69
19	Delta.....	71
19.1	Delta (RS485).....	71
20	Diehl Ako.....	73
20.1	Diehl Ako.....	73
21	Eaton.....	74
21.1	Eaton.....	74
22	EEl.....	76
22.1	EEl.....	76
23	Effekta.....	77
23.1	Effekta.....	77
23.2	Effekta KS Multitracker.....	79
23.3	Effekta KS Singletracker.....	81
24	Enfinity.....	83
24.1	Enfinity.....	83
25	EHE.....	85
25.1	EHE N1k5TL to N50kTL.....	85
25.2	EHE N10k to N100k.....	87
25.3	EHE N250k to N500k-TL.....	89
26	EKO Energy.....	91
26.1	EKO Energy.....	91
27	Eltek.....	93
27.1	Eltek.....	93

27.2	Eltek central inverter.....	95
28	Europa-Solar AG.....	97
28.1	Europa-Solar AG.....	97
29	Evoco	99
29.1	Evoco	99
30	Fronius.....	101
30.1	Fronius with ComCard	101
30.2	Fronius Symo and Galvo models	103
30.3	Fronius RL.....	104
31	Gefran	105
31.1	Gefran	105
32	General Electric inverters (GE).....	108
32.1	General Electric inverters (GE)	108
33	GESOLAR	109
33.1	GESOLAR.....	109
34	Ginlong.....	111
34.1	Ginlong.....	111
35	GMDE	113
35.1	GMDE.....	113
36	GoodWe.....	115
36.1	GoodWe.....	115

37	Growatt.....	117
37.1	Growatt	117
38	GTec.....	119
38.1	GTec.....	119
39	Helios Systems.....	121
39.1	Helios Systems	121
40	Huawei.....	123
40.1	Huawei.....	123
41	Hyundai.....	125
41.1	Hyundai HPC-050HT-E and HPC-100HT-E.....	125
41.2	Hyundai HPC-250HT-E.....	127
42	Ingeteam.....	129
42.1	Ingeteam.....	129
43	Kaco.....	131
43.1	Kaco - Powador	131
43.2	Kaco - PVI Blue Planet.....	133
44	KLNE.....	135
44.1	KLNE (Solartec and Sunteams).....	135
45	Kostal and Solar-Fabrik.....	137
45.1	Kostal Pico and Solar-Fabrik Inverter Convert T (RS485)	137
45.2	Kostal Ethernet Version.....	139
46	Kstar.....	141
46.1	Kstar Multitracker.....	141
46.2	Kstar Singletracker	143

47	Kyocera Inverter/Battery System.....	145
47.1	Kyocera Inverter/Battery System.....	145
48	Lufft - Pyranometer.....	147
48.1	Lufft - Pyranometer.....	147
49	Mastervolt.....	148
49.1	Mastervolt (RS485).....	148
50	Mitsubishi.....	151
50.1	Mitsubishi with RS485 interface.....	151
51	Motech.....	153
51.1	Motech (RS485).....	153
52	Oelmaier.....	155
52.1	Oelmaier.....	155
53	Omnik.....	157
53.1	Omnik.....	157
54	Omron.....	159
54.1	Omron.....	159
55	Pairan.....	161
55.1	Pairan.....	161
56	Phoenixtec.....	163
56.1	Phoenixtec.....	163
57	Phonosolar.....	165

57.1	PhonoCube 7.2 (Battery Hybrid System).....	165
58	Platinum (formerly Diehl Ako).....	167
58.1	Platinum with RS485 interface	167
58.2	Platinum H.....	169
59	Powercom	171
59.1	Powercom	171
60	Power-One/Aurora.....	174
60.1	Power-One/Aurora.....	174
61	PrimeVOLT	176
61.1	PrimeVOLT.....	176
62	PVPowered	178
62.1	PV Powered – central inverter RS485.....	178
62.2	PV Powered - string inverter.....	180
63	Q3.....	181
63.1	Q3 (RS485).....	181
64	REFUSOL.....	183
64.1	REFUSOL.....	183
65	REP	186
65.1	REP	186
66	Reverberi	188
66.1	Reverberi (EDI Series).....	188

67	Riello.....	190
67.1	Riello	190
68	SALICRU	192
68.1	SALICRU EQX.....	192
68.2	SALICRU EQXLV.....	194
69	Samil Power	195
69.1	Samil Power.....	195
70	Santerno.....	197
70.1	Santerno	197
71	Schneider Electric	199
71.1	Schneider Electric SunEzy.....	199
71.2	Schneider Electric Xantrex GT30E.....	201
71.3	Schneider Electric Conext TL15000E and Conext TL20000E.....	202
72	Schüco	204
72.1	IPE CN series.....	204
72.2	IPE CT series	206
72.3	IPE SN series	208
72.4	Schüco SGI series (RS485).....	210
73	Shindengen.....	212
73.1	Shindengen.....	212
74	SIEL.....	214
74.1	SIEL (single phase).....	214
75	Siemens.....	217
75.1	Siemens.....	217

76	SMA	220
76.1	Overview.....	220
76.2	SMA connection using special RS485 piggyback card.....	221
76.3	Connect SMA with original SMA RS485 piggy back and the SMA RS485 data module.....	224
76.4	SMA Bluetooth mode.....	226
76.5	SMA Meter Connection Box.....	227
76.6	SMA Speedwire.....	228
77	SOCOMEK	230
77.1	SOCOMEK Sunsys B20E.....	230
77.2	SOCOMEK Sunsys B12/B30.....	232
78	SolarEdge	234
78.1	SolarEdge.....	234
79	SolarMax	236
79.1	SolarMax – S, C, MT, P, TS, TS-SV and HT- series.....	236
79.2	SolarMax – Cx series.....	239
79.3	SolarMax – E series.....	241
79.4	SolarMax via Ethernet interface.....	243
80	SolaX Power	244
80.1	SolaX Power X1.....	244
80.2	SolaX Power X3.....	246
81	Solectria	248
81.1	Solectria >9k.....	248
81.2	Solectria <9k.....	250
82	Solutronic	252
82.1	Solutronic SP25-55 (RS485).....	252
82.2	Solutronic SP100, SP120 (RS485).....	254
83	Steca	256
83.1	Steca.....	256
83.2	Steca (larger than 17k).....	258

84	Sungrow	260
84.1	Sungrow.....	260
85	Sunpower	262
85.1	Sunpower SPR-F-Model with Fronius ComCard.....	262
85.2	Sunpower SPR-M-Model connection using special RS485 piggyback card.....	264
85.3	Sunpower SPR-M-Model connect with original SMA RS485 piggy back and the SMARS485 data module.....	266
86	Suntechnics	269
86.1	Suntechnics (only Solar-Log 1000 and 2000)	269
87	Suntigua	271
87.1	Suntigua.....	271
88	Sunville	273
88.1	Sunville	273
89	Sunways	275
89.1	Sunways - AT/NT/PT.....	275
90	Sustainable Energy	277
90.1	Sustainable Energy	277
91	TBEA	279
91.1	TBEA	279
92	Tranergy	281
92.1	Tranergy	281
93	Vaillant	283
93.1	Vaillant - auroPOWER VPI /1 and VPI (RS485).....	283

94	Valenia	285
94.1	Valenia	285
95	Vectron	287
95.1	Vectron	287
96	Vision.....	288
96.1	Vision Multitracker	288
96.2	Vision Singletracker.....	290
97	Voltwerk	292
97.1	Voltwerk (only Solar-Log 1000 and 2000).....	292
98	WINAICO	294
98.1	WINAICO	294
99	Würth	297
99.1	Würth SolarStar-Series	297
100	Yaskawa.....	299
100.1	Yaskawa	299
101	Zentral Solar Deutschland ZSD.....	301
101.1	Zentral Solar Deutschland ZSD (RS485)	301
101.2	Zentral Solar Deutschland ZSD - zentralpower.....	303
102	Zeversolar.....	304
102.1	Zeversolar.....	304
103	Appendix	306
103.1	SMA mixed wiring	306
103.2	Interconnection of Kaco Powador inverters.....	307

104 List of figures	308
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1 Connections

1.1 Solar-Log™ RS485/422 B connection assignments (6 pin)

The RS485/422 inverter B connection on the Solar-Log™ is pre-set for use with a Fronius/Eaton inverter, and is assigned as follows:

PIN	RS485 A	RS485/422 B	RS422 (for Fronius/Eaton)
1	Data+	Data+	T/RX+
2	12 V	12 V	12 V
3	Ground	Ground	Ground
4	Data-	Data-	Data-
5			T/RX+
6			T/RX-

The connection labels Data+/Data- are specific to the manufacturer and may also be labeled A/B, or similar.

Green 6-pin terminal block connectors are supplied for connecting the first inverter to the RS485/422 B interface of the Solar-Log™.

1.2 RJ45

Some inverter manufacturers use RJ45 jacks on their units.

The pin assignments are manufacturer-specific.

Connect the RS485/422 B and/or the RS485 interface of the Solar-Log™ in accordance with the description on the particular inverter. The details are described in detail in a separate manual..

Refer to the following document for the numbering of the pins for the RJ45 connection.

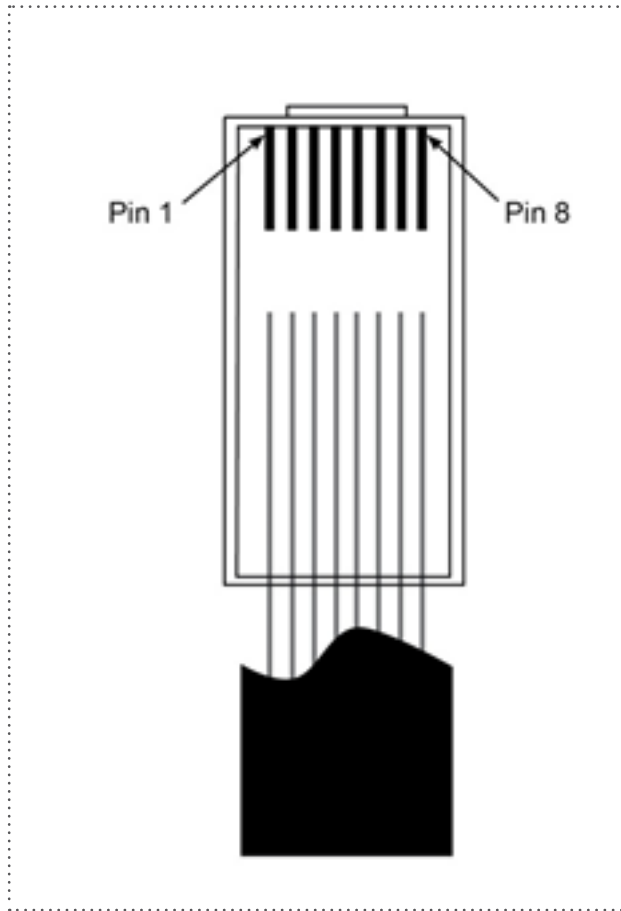


Figure 1: RJ45 plug pin assignments



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

► Only connect inverters via the RS485/422 Solar-Log™ interface(s).

1.3 RJ11 Configuration

Some inverter manufacturers use RJ11 jacks on their units.

The pin assignments are manufacturer-specific.

Connect the RS485/422 B and/or the RS485 interface of the Solar-Log™ in accordance with the description on the particular inverter.

Refer to the following document for the numbering of the pins for the RJ45 connection.

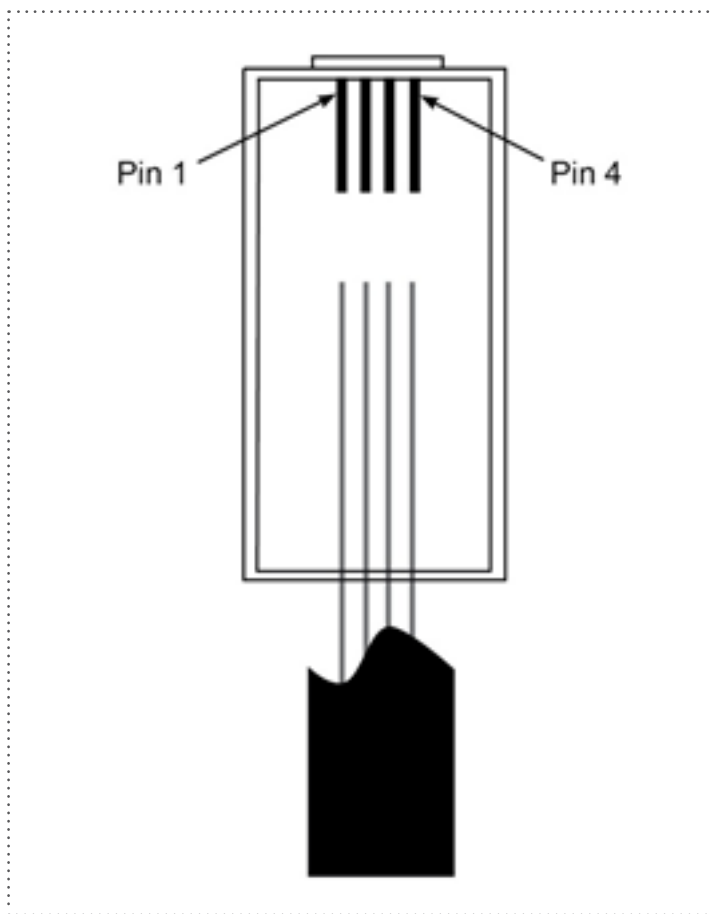


Figure 2: RJ11 plug pin assignments

Caution



Risk of damage to the unit!

The Solar-Log™ has an RJ45 socket, which must never be connected to the RJ11 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).
-

2 Connecting the inverters

As each inverter manufacturer uses different wiring connections and connectors, the corresponding data cables must be adapted correctly.

- You will find the terminal strip block wiring diagram to connect the inverters in table form in the following sections on connecting inverters.
- Refer the Installation Manual for assignment of the RS485/422 B connection to the Solar-Log™.



Note

Solare Datensysteme GmbH supplies suitable connection cables for most inverter manufacturers.

Always read the manufacturer-specific instructions for connecting the data cable. You will find these instructions in the manufacturer's documentation.

However, when assigning the inverter wiring on the Solar-Log™ (RS485/422 B connection) , follow the instructions in this manual, otherwise the inverters will not be detected by Solar-Log™.

Danger

Risk of death by electric shock if inverters are opened.



- Never open the inverter housing when the inverter is connected to power.
 - Switching inverters off.
 - Always read the installation and safety instructions given in the manual for the corresponding inverter.
 - Any work on inverters must only be carried out by trained electricians.
-

Caution

Damage to the electrical components in inverters and on interface cards due to electrostatic discharge.



- Avoid contact with component connections and plug contacts.
 - Before picking up the component, ground yourself by holding the PE or the unpainted part of the inverter housing.
-

Caution

Damage to the electrical components of the Solar-Log™ due to the wiring of the Solar-Log™!



- Switching the Solar-Log™ off.
-

2.1 Switch off the inverters and Solar-Log™.

Switching inverters off

Always turn off all of the inverters first before making a cable connection between the Solar-Log™ and the connections inside the inverter; and before installing an interface card in the inverter,

To do this, read the manufacturer's documentation for the inverter, and proceed as follows:

1. Disconnect the AC side
2. Disconnect the DC side
3. Wait at least 5 minutes until the condensers in the inverters have discharged.

Switching the Solar-Log™ off

- Remove the power plug from the socket or the "Power 12 V" jack on the Solar-Log™.

3 ABB

3.1 ABB PVS300

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Select “ABB-PVS” during the inverter detection

Overview

- Where to connect: X4 terminal block under the cover.
- Communication address must be allocated.
- 3-pin wiring
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with terminal block connector.

Procedure

1. Unscrew the side cover as shown in the inverter’s instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	X4 terminal block inverter
Terminal	PIN
▶ 1	1 - Data+
▶ 3	3 - GND
▶ 4	2 - Data-

3. If only one inverter is to be connected, according to the manufacturer’s handbook it must be terminated.
4. Screw the inverter cover on again.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: X4 terminal block under the cover.

Procedure

1. Unscrew the side cover as shown in the inverter's instructions.
2. Connect the self-made RS-485 cable to the X4 terminal block on inverter 1.
3. Connect the self-made RS-485 cable to the X4 terminal block on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter according to the inverter instructions.
6. Screw the inverter cover on again.

3.2 ABB Central Inverters

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	Yes	-	-	LAN

Select "ABB-PVS" during the inverter detection

Overview

- Interface not integrated; Retrofit components (with the label "RETA-01").
- Connected using network cable (patch cable) and Ethernet router or switch
- Communication address must be allocated.
- Installation steps
 - Allocate communication address
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Allocate communication address

- Recommendation: Continuous numbering starting with 1; address range 1 to 254.
- Setting: Using the inverter operating display
- Procedure: Before connecting to the Ethernet router or switch and allocating the IP address.

Connect inverters and the Solar-Log™.

The wiring is done using a

- network cable (patch cable) and the
- Ethernet router or switch.

Procedure

1. Set different unit IDs on each inverter in accordance with the inverter's instructions.
2. Connect the Solar-Log™ and the inverter to the router or switch.
3. Assign an IP address to every inverter. Assign the IP addresses according to the inverter's instructions.

The first three number blocks like the Solar-Log™, e.g. **192.168.178.49**.

The fourth number block: an address that is available, e.g. 192.168.178.50.

3.3 ABB-Power-One/Aurora/PVI/TRIO/UNO

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Switch	Yes	Yes	Yes	RS485

Select “ABB” during the inverter detection

Overview

- Interface integrated
Sometimes different interfaces are used for indoor and outdoor models.
- Where to connect: RS485 terminal strips inside the inverter
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made Power One data cable (optional extra; not supplied)
- or
- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter’s instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip (Outdoor)
Terminal	Terminal
▶ 1	▶ +T/R (PC)
▶ 3	▶ GND
▶ 4	▶ -T/R (PC)

4. If only one inverter is to be connected this must be terminated.
In the inverter, set the DIP switch for the terminal resistor to ON.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 3 pin, shielded data cable.
- Where to connect: RS485 terminal strips inside the inverter

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals +T/R, -T/R and RTN of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Set the DIP switch for the terminal resistor to ON.
5. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering from Solar-Log™, starting from 2 (not 1!).
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

4 Advanced Energy

4.1 Advanced Energy - AE-1

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Switch	Yes	Yes	Yes	RS485

Select “Steca” during the inverter detection

Overview

- Integrated interface
- Where to connect: RJ socket, on the outside of the inverter’s interface card.
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)

or

- self-made RS485 data cable with RJ45 plug and terminal block connector.

Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 1
▶ 4	▶ 2

2. Insert the RJ45 plug into any RJ45 socket on the first inverter.
3. If only one inverter is to be connected this must be terminated.
On the inverter insert the connection plug into the free RJ45 socket.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using the RS485 data cable with RJ45 plug;
Connection cables between the inverters are supplied with the inverters. Use these.
- Where to connect: RJ45 socket on the outside of the inverter

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Insert the connection plug into the free RJ45 socket.

Allocate communication address

1. Recommendation: Continuous numbering starting with 1.
2. Setting: Using the rotating switch on the inverter interface card.
3. Procedure: Start according to the inverter's instructions

4.2 Advanced Energy - AE-3

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Terminating plug	Yes	Yes	Yes	RS485

Select "Refusol" during the inverter detection

Overview

- Integrated interface
- Where to connect: RJ45 socket on the bottom of the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. Connect wires as shown in the diagram below.

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1	▶ 2
▶ 4	▶ 3

2. If only one inverter is to be connected this must be terminated.
On the sockets „RS485 OUT“ with REFUSOL round plugs bypass the connections PIN1 to PIN2 and PIN3 to PIN4.
3. Close the inverter if no other inverters are to be connected.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using
 - 2-wire, shielded data cable and
 - 4-pin „SACC-M12MS-4SC“ plug (two plugs included with the inverter)
- Where to connect: RS485 sockets on the bottom of the inverter.

The RS485 IN and OUT sockets are each double connections so that the wiring can be continued to the next inverter.

Procedure

1. Connect the data cable to the „SACC-M12MS-4SC“ plug as shown in the inverter's instructions.
2. Insert one plug into the OUT (X14B) socket of inverter 1.
3. Insert the other end of the wire into the IN socket (X15B) on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.

On the sockets „RS485 OUT“ with REFUSOL round plugs bypass the connections PIN1 to PIN2 and PIN3 to PIN4.

6. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1; highest possible address: 31

Set the following parameters on the inverter's operating display:

1. Press „F1“, select **Numerical list**, press „ENTER“.
2. Set parameter number **2000** [password protection], press „ENTER“ twice.
3. Enter **72555**, press „ENTER“
4. Set parameter number **0406**, press „ENTER“
5. Select sub parameter **0406,3**, press „ENTER“
6. Enter figure for communication x
[x = continuous numbering starting with 1; highest possible address: 31], press „ENTER“. 31], press „ENTER“.

After configuring on the display:

1. Using the installed DC isolating switch turn the inverters on and off briefly so that the settings are activated.
2. Set the date and time on the inverter as shown in the inverter instructions.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

Note

To use active and reactive power management, all of the inverters need to be set to:



- Protocol 1
 - 57600 baud
 - Parameter 1164 = 2
-

4.3 Advanced Energy - AE-TX

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Jumper	Yes	Yes	Yes	RS485

Select "PVPowered" during the inverter detection

Overview

- Integrated interface
- Where to connect: Modbus Slave socket on interface card
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Set the address of the inverters.
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made 3 pin connection cable and terminal block connector.



Note

The transfer rate for Modbus (RS485) on delivery to the customer is set to 9600bps. Please check these settings.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram
4. If only one inverter is to be connected this must be terminated.
Inside the inverter set the supplied jumper from „J4“ to „J5“.
5. Setting the address for the inverter: Set SW1 to „0“ and SW2 to „1“ in order to set the parameters for the inverter with the address „01“.
6. Close the inverter if no other inverters are to be connected.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Solar-Log™ terminal strip connector

RJ45 inverter

Terminal	PIN
▶ 1	2 - D+
▶ 3	1 - GND
▶ 4	3 - D-

Connect the inverters to each other

The wiring is done using a

- self-made connection cable and terminal block connector.
- Where to connect: Terminal strip inside the inverter

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	2 - D+
▶ 3	1 - GND
▶ 4	3 - D-

4. Connect terminals GND, D+ and D- of inverter 1 to the corresponding terminals on inverter 2.
5. Connect the other inverters to each other in the same way.
6. Terminate in the last inverter in accordance with the manufacturer's specifications.
Inside the inverter set the supplied jumper from „J4“ to „J5“
7. Address the individual inverters in accordance with the manufacturer's handbook: Inverter 1 should be the inverter that is directly connected to the Solar-Log™. To this end, set SW1 to „0“. Depending on the position of the inverter in the bus, SW2 should be set to 1-9.
If more than 9 inverters are to be connected to one Solar-Log™, please read the manufacturer's instructions for further information.
8. Close the inverter if no other inverters are to be connected.
9. Insert the terminal block connector into the Solar-Log™ RS485 socket.

5 AEG

5.1 AEG PS

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	RS422

Select “AEG-PS” during the inverter detection

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 4-pin cable – only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned.
- Multi-string technology

AEG inverters are fitted with 1 or 3 MPP trackers depending on the model. Each string input is monitored separately and ideally adjusted to the connected modules.

The Solar-Log™ automatically detects how many inverters and strings are active during inverter detection.

Note



The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the [Configuration/Basis/Inverters](#) dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the RS485 interface

Procedure

- ▶ Insert the RS485 interface in the bottom of the inverter in accordance with the interface card installation instructions and screw in.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 4 wire data cable and terminal block connector.



Note

Only connect inverter using the RS485/422 B/C interface.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ R+
▶ 4	▶ R-
▶ 5	▶ T+
▶ 6	▶ T-

4. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter (on the retrofitted RS485 interface)

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, R-, T+ and T- of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.
5. Close inverters.

5.2 AEG Protect

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Terminating plug	nen	Yes	Yes	RS485

Select "AEG-Protect" during the inverter detection

Overview

- Supported models PV 10; 12.5 and 15
- Where to connect: 2 RJ45 sockets on the right on the side cover
- Communication address does not have to be assigned
- 4-pin wiring
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made RJ45 data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.

Procedure

1. Unscrew the side cover as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	6
▶ 3	1
▶ 3	2
▶ 4	3

Caution



Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

3. If only one inverter is to be connected this must be terminated.
Insert the supplied connection plug into any free RJ45 socket on the inverter.

The connection plug is an 8-pin dummy plug with bridged wires: Bridge wires 3 and 4 and wires 5 and 6.

4. Screw the inverter cover on again.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: 2 RJ45 sockets on the right on the side cover

Procedure

1. Unscrew the side cover as shown in the inverter's instructions.
2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. Insert the other end of the wire into any RJ45 socket on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Insert the connection plug into the free RJ45 socket.
6. Screw the inverter cover on again.

6 Albatech

6.1 Albatech APL Trifase 15 / 20

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Jumper	Yes	Yes	Yes	RS485

Inverters from different Albatech model ranges (APL monophase / triphase) cannot be mixed on an RS485 connection. The correct range must be selected when selecting inverters.

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Allocate communication address
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other



Note:

If more than 32 inverters are connected a signal amplifier must be installed in the RS485 bus in accordance with the manufacturer.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 3 wire data cable and terminal block connector.

It is connected to the inverter as shown in the following diagram. The inverters are terminated on pin 9/10 of J1. Both the first and also the last inverter must be terminated.

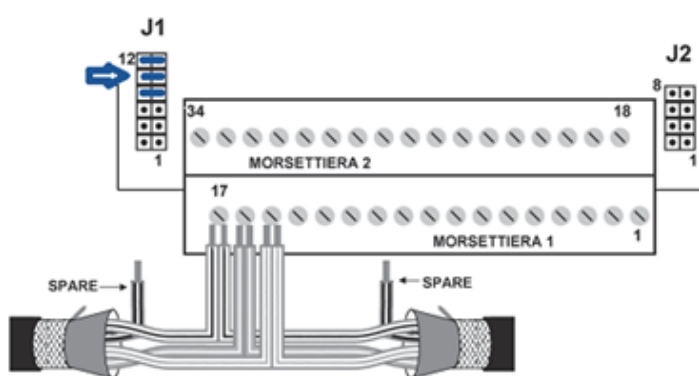


Figure 13: Albatech APL block connector

Procedure

1. Switch off the inverters and Solar-Log™
2. Unscrew the side cover as shown in the inverter's instructions.
3. Pull the free wires through the wire opening in the inverter.
4. If you have made the cable connection yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	PIN
▶ 1 (Data +)	▶ 15 (RS485 +)
▶ 3 (Ground)	▶ 17 (Ground)
▶ 4 (Data-)	▶ 16 (RS485 -)

5. Connect data cable to RS485+, RS485- and grounded terminals.
6. If only one inverter is to be connected this must be terminated.
7. To terminate set the jumper at J1 to pins 9 and 10.
8. Screw the inverter cover on again.
9. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

The wiring is done using a

- self-made, shielded 3 wire data cable.
- Where to connect: Terminal strip inside the inverter

Procedure

1. Switch off the inverters and Solar-Log™
2. Unscrew the side cover as shown in the inverter's instructions.
3. Connect data cable to RS485+, RS485- and grounded terminals.
4. Connect the other inverters to each other in the same way.
5. Terminate on the first and last inverters.
6. Set the jumper at J1 to pins 9 and 10.
7. Screw the inverter cover on again.
8. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication addresses

Before the inverters can be detected addresses must be allocated to them. To do this you must connect to the unit either via the Ethernet or RS232. You will find details on this procedure in the inverter's handbook. Now set another address (1 - 247) from the modbus parameters for each inverter and leave the baud rate at 19200 bit/s.

6.2 Albatech APL Monofase

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Jumper	Yes	Yes	Yes	RS485

APL Monofase 2.0/3.0/4.0/5.0

Inverters from different Albatech model ranges (APL monophase / triphase) cannot be mixed on an RS485 connection. The correct range must be selected when selecting inverters.

Overview

- Interface not integrated; Upgrade the Albatech RS485 interface
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Installing the RS485 interface

Procedure

- ▶ Install the RS485 interface in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ Pin 2 - D+
▶ 3	▶ Pin 3 - GND
▶ 4	▶ Pin 1 - D-

3. If only one inverter is to be connected this must be terminated.
Set the jumper on the RS485 interface card to ON.
4. Close the inverter if no other inverters are to be connected.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 3 wire, shielded data cable
- Where to connect: on the upgraded RS485 interface.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Using the data cable connect terminals „Pin 2-RS485-A (+)“, „Pin 3-GND“ and „Pin 1-RS485-B (-)“ of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
5. Set the jumper on the RS485 interface card to ON.
6. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

7 ALPHA-SOL

7.1 ALPHA-SOL

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Switch	Yes	Yes	Yes	RS485

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 4-pin wiring
- Communication address must be allocated.
- Installation steps
 - Allocate communication address
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the DIP switch on the interface card.

Before installing the RS485 interface card:

- ▶ Allocate the communication address using the 8 interface card DIP switches:

Example - Communication address 1:

On								
Off								
DIP switch								

Example - Communication address 2:

On								
Off								
DIP switch								

Example - Communication address 3:

On								
Off								
DIP switch								

Example - Communication address 4:

On								
Off								
DIP switch								

Example - Communication address 5:

On								
Off								
DIP switch								

You will find more information at:
http://en.wikipedia.org/wiki/Binary_number.

Installing the RS485 interface

Procedure

- ▶ Install the RS485 interface in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BKL2 data cable (optional extra; not supplied)
- or
- self-made, shielded 4 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector

Inverter terminal strip

Terminal	Terminal
▶ 1	▶ R+
▶ 1	▶ T+
▶ 4	▶ R-
▶ 4	▶ T-

4. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter on the retrofitted RS485 interface card

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, T+, R- and R+ of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.
5. Close inverters.

8 AROS Solar Technology

8.1 AROS Solar Technology (RS422)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	RS422

Select "Aros 422" during the inverter detection

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 4-pin cable only on RS485/422 B/C connection of the Solar-Log™
- Communication address does not have to be assigned



Note:

The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup in the [Configuration | Device | Configuration | Order](#) menu box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with terminal block connector.



Note

Only connect inverter using the RS485/422 B /C interface.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	PIN
▶ 1	▶ R+
▶ 4	▶ R-
▶ 5	▶ T+
▶ 6	▶ T-

2. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
3. Insert the terminal block connector into the Solar-Log™ RS485/422 B/C socket

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, R-, T+ and T- of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.
5. Close inverters.

8.2 AROS Solar Technology (RS485)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	Yes	Yes	RS485

Select "Aros 485" during the inverter detection

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 3-pin wiring
- Communication address does not have to be assigned



Note:

The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup in the [Configuration | Device | Configuration | Order](#) menu box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ A (+)
▶ 3	▶ GND
▶ 4	▶ B (-)

2. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 3 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals A+, GND and B- on inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.
5. Close inverters.

9 Astronergy

9.1 Astronergy

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	Yes	Yes	Yes	RS485

Select „Growatt“ during the inverter detection.

Overview

- Integrated interface
- Where to connect: Round sockets on the outside of the inverter.
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable with round plug and terminal block connector.
- The round plugs required can be obtained from the inverter manufacturer.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter round socket
Terminal	PIN
▶ 1	▶ 2 (+)
▶ 4	▶ 1 (-)

2. Insert the round plug into any COM round socket on the inverter.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Wiring using 2 pin cable with round plugs.
- Where to connect: Round sockets on the outside of the inverter.

Procedure

1. Insert the round plug into any round socket on inverter 1.
2. Insert the other end of the cable into any round socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Address range: 1 - 125
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

10 Aten

10.1 Aten

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	No	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ14 socket on the outside of the inverter.
- 2-pin wiring
- Communication address does not have to be assigned.

Installation steps

- Switch off the inverters and Solar-Log™
- Connect inverters to the Solar-Log™
- Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram

Solar-Log™ terminal strip connector	Inverters
RS485/422 B	RJ 14 socket
▶ 1	▶ Pin 2 - Data +
▶ 4	▶ Pin 4 - Data -

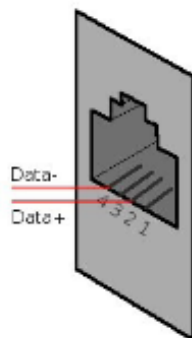


Figure 14: RJ14 socket pin allocation

2. Close the inverter if no other inverters are to be connected.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: RJ14 sockets.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Insert the self-made cable with the RJ14 plug into any RJ14 socket on inverter 1.
3. Insert the RJ11 cable into the 2nd RJ11 socket on inverter 1 and into any RJ11 socket on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Close inverters.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

11 Benning

11.1 Benning

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	No	Yes	Yes	Yes	LAN

Overview

- Integrated interface
- The inverter's IP address has to be assigned.
- Connected using network cable (patch cable) and Ethernet router or switch
- Installation steps
 - The inverter's has to be assigned a static IP address.
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™ (RJ45).
 - Connect the inverters to each other (RJ45).

Connect inverters to the Solar-Log™

The wiring is done using a

- network cable (patch cable/crossover cable) and the
- Ethernet router or switch.

Connect the inverters to each other

The inverters are connected together using the RJ45 interface and, if needed, a router or switch.

Connection setup according to the inverter's instructions.

Assigning IP addresses

- A static IP address has to be assigned to the inverter via the display.
- Please select an IP address with the same class C subnet as the Solar-Log™.
For example: The Solar-Log™ has the IP address 192.168.178.49.
The inverter in this case has to have a free IP address in the same range (from 192.168.178.1 to 192.168.178.254).
- Procedure: Start according to the inverter's instructions



Note

Each inverter has to be individually reachable via the network. For this, the network interface has to be activated for every inverter (select "Activate LAN" under the LAN menu) and the inverter needs to be connected to the local access network (LAN) via a switch.

Detection from the Solar-Log™

- For the detection on the Solar-Log™, select "Benning" as the inverter manufacturer in the **Configuration | Devices | Definition** menu from the **Network** section. Confirm the selection with **Save**.

Detection from the Solar-Log 1200

- When using the Solar-Log 1200, the detection can also be started from the display. Select "Benning" as the manufacturer for the inverter detection from the "network" interface and start the detection.



Note for feed-in management

Supported by Solar-Log
starting with inverter firmware version 19



Note

Using the inverter's web interface, select "External control via network interface" under "Settings -> Installation -> Grid Company Settings -> Power Reduction," and under "cos(phi) Settings."

12 Bonfiglioli (formerly Vectron)

12.1 Bonfiglioli

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 3 wire data cable with a terminal block connector.

Procedure

1. Get access to the inverter interface.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	RS485 terminal
▶ 1	▶ 1 A (Data+)
▶ 3	▶ 6 GND
▶ 4	▶ 3 B (Data-)

3. If only one inverter is to be connected this must be terminated.
In the inverter, set the DIP switch S1 for the terminal resistor to ON.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: Terminal strip on the inverter
- 3-pin wiring

Procedure

1. Get access to the inverter interface
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Terminal strip inside the inverter	Terminal strip inside the inverter
RS485 terminal	RS485 terminal
▶ 1 A (Data+)	▶ 2 A (Data+)
▶ 6 GND	▶ 6 GND
▶ 3 B (Data-)	▶ 4 B (Data-)

3. Connect terminals on inverter 1 to the corresponding terminals on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Set the DIP S1 switch for the terminal resistor to ON.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1 going to 30.
- Setting: Using the inverter DIP switch.
- Procedure: Start according to the inverter's instructions.



Note

A maximum of 20 inverters can be connected per RS485 bus.

13 Carlo Gavazzi

13.1 Carlo Gavazzi - ISMG model

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	No	Yes	Yes	RS485

Select "Gavazzi ISMG" during the inverter detection.

Overview

- Integrated interface
- Where to connect: RJ45 socket on the outside of the inverter
- 2-pin wiring
- Communication address does not have to be assigned.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BRJ2 data cable (optional extra; not supplied)
- or
- self-made, shielded 2 wire data cable and terminal block connector.

Installation steps

- Switch off the inverters and Solar-Log™
- Connect inverters to the Solar-Log™
- Connect the inverters to each other



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram

Solar-Log™ terminal strip connector	Inverters
RS485/422 B	RJ 45 socket
▶ 1	▶ Pin 7
▶ 4	▶ Pin 8

2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 socket on the outside of the inverter

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the cable into any RJ11 socket on inverter 2.
3. Connect the other inverters to each other in the same way.

13.2 Carlo Gavazzi - HINRG model

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Select "Gavazzi HINRG" during the inverter detection

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable with a terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	RS485 terminal
▶ 1 A/Data+	▶ 1 T/R 1+
▶ 4 B/Data-	▶ 2 T/R 1-

3. If only one inverter is to be connected this must be terminated.
In the inverter, set the DIP switch for the terminal resistor to ON.
4. Close inverters.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: Terminal strip inside the inverter
- 2-pin wiring

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Terminal strip inside the inverter	Terminal strip inside the inverter
RS485 terminal	RS485 terminal
▶ 1 T/R 1+	▶ 1 T/R 2+
▶ 2 T/R 1-	▶ 2 T/R 2-

3. Connect terminals A and B on inverter 1 to the corresponding terminals on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Set the DIP switch for the terminal resistor to ON.
6. Close inverters.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter DIP switch
- Procedure: Start according to the inverter's instructions

14 Chint Power

14.1 Chint Power (CSP SC and CSP SCE to 20k)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	No	No	RS422

Overview

- Interface not integrated; Retrofit RS485 interface card.
- Where to connect: RJ45 socket on the outside of the inverter
- 4-pin cable – only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned



Note:

The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the [Configuration/Basis/Inverters](#) dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Select the Chint CPS<20k inverter during the initial configuration.

Installing the RS485 interface

Procedure

- ▶ Insert the RS485 interface in the bottom of the inverter in accordance with the interface card installation instructions and screw in.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BRJ1 data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.

Procedure



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).



Note

Only connect inverter using the RS485/422 B/C interface.

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ Pin 3
▶ 4	▶ Pin 6
▶ 5	▶ Pin 1
▶ 6	▶ Pin 2

2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 socket on the outside of the inverter

Procedure

1. Insert the RJ45 plug into any RJ45 socket on inverter 1.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the inverter instructions.

14.2 Chint Power (CPS 20k+)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface.
- Where to connect: RJ45 socket on the outside of the inverter.
- 2-pin wiring.
- The communication addresses (1-32) have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™.
 - Connect inverters to the Solar-Log™.
 - Connect the inverters to each other

Select the Chint CPS20k+ inverter during the initial configuration.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.

Procedure



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

1. Connect wires as shown in the diagram below.

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 1-485+
▶ 4	▶ 3-485-

2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable).
- Where to connect: RJ45 socket on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into any RJ45 socket on inverter 1.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the inverter instructions.
5. Allocate communication address.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Address range: 1 - 32
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

14.3 Chint Power Modbus

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	No	Yes	Yes	Yes	RS485

The following types are to be connected according to this diagram:

CPS SCA5KTL-DO
 CPS SCA6KTL-DO
 CPS SCA7KTL-DO
 CPS SCA8KTL-DO
 CPS SCA10KTL-DO
 CPS SCA12KTL-DO
 CPS SCA8KTL-DO/HE
 CPS SCA10KTL-DO/HE
 CPS SCA12KTL-DO/HE

Select the inverter Chint-Mod for the inverter detection.

Overview

- Integrated interface
- Where to connect: RJ45 socket on the outside of the inverter
- 2-pin wiring
- The communication addresses (1-247) have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable with a RJ45 socket and a terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 socket
Terminal	PIN
▶ 1	▶ 1 (+)
▶ 4	▶ 3 (-)

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into the RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Address range: 1 - 247
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

15 CMS

15.1 CMS

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable with a terminal block connector.

Procedure

1. Open the inverter as shown in the inverter’s instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	RS485 terminal
▶ 1 A/Data+	▶ 1 T/R 1+
▶ 4 B/Data-	▶ 2 T/R 1-

3. If only one inverter is to be connected this must be terminated.
In the inverter, set the DIP switch for the terminal resistor to ON.
4. Close inverters.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: Terminal strip inside the inverter
- 2-pin wiring

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Terminal strip inside the inverter	Terminal strip inside the inverter
RS485 terminal	RS485 terminal
▶ 1 T/R 1+	▶ 1 T/R 2+
▶ 2 T/R 1-	▶ 2 T/R 2-

3. Connect terminals A and B on inverter 1 to the corresponding terminals on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Set the DIP switch for the terminal resistor to ON.
6. Close inverters.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter DIP switch
- Procedure: Start according to the inverter's instructions

16 Conergy

16.1 Conergy (only Solar-Log 1000 and 2000)



Note

Conergy inverters can only be connected to the Solar-Log 1000 and 2000, as only this one has a CAN interface.

The following description relates to inverters without transformers produced in or after 2007.

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	CAN bus

Overview

- CAN only to be used on Solar-Log 1000 and 2000 (CAN interface).
- Integrated interface
- Where to connect: CAN socket on the outside of the bottom of the inverter.
- Only use ready-made cable sets.

Two different special cable sets must be ordered separately.

- Prefabricated cable set between the Solar-Log 1000 and 2000 and the first inverter, including cable termination.
- Ready-made cable set with 5 pin Phoenix contact connection plug for connecting the inverters to each other.
- Depending on the number of inverters several of these cables will be required.

Maximum total cable length: 200 m

- Communication address does not have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect the inverters to the Solar-Log 1000 and 2000.

Connection is only done using a ready-made data cable, specially for connecting to the Solar-Log 1000 and 2000 (optional extra; not supplied).

Procedure

1. Insert the CAN plug into the inverter CAN IN socket.
2. If only one inverter is to be connected this must be terminated.
Insert the two 5 pin 120 Ω terminal resistors from the ready-made cable set into the CAN OUT socket.
3. Insert the terminal block connector into the Solar-Log 1000 and 2000 CAN socket.

Connecting inverters to each other (only Solar-Log1000 and 2000)

- Connection is made only with a ready-made data cable specially for connecting the inverters to each other (optional extra: not supplied).
- Where to connect: CAN socket outside the inverter.

Procedure

1. Insert the CAN plug into any CAN OUT socket on inverter 1.
2. Insert the other end of the wire into any CAN IN socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Insert the two 5 pin 120 Ω terminal resistors from the ready-made cable set into the CAN OUT socket.

17 CyberPower

17.1 CyberPower

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated RS485 interface
- 8-pin cable for the RS485 connection of the Solar-Log™
- The communication addresses (1-247) have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- partially ready-made RJ45 cable (not included)
- or
- self-made data cable with RJ45 plug and 6-pin terminal block connector



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. Connect wires as shown in the diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1 (Data+) A	▶ 3 RS485 A
▶ 4 (Data-) B	▶ 4 RS485 B

2. Run the wire from the Solar-Log™ to inverter 1 through the hole for the wire on the bottom of the unit.
3. In the inverter insert the RJ45 plug into the "RS-485 out" socket.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable).
- Where to connect: RJ45 socket on the outside of the inverter.

Procedure

1. Insert the RJ45 plug in inverter 1 into the RJ45 socket.
2. Insert the other end of the wire into the other RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.
5. Terminate in the last inverter according to the inverter instructions.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Address range: 1 - 247
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

18 Danfoss

18.1 Danfoss

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Connection plug	No	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: 2 RJ45 sockets on the right on the side cover
- Communication address does not have to be assigned
- 4-pin wiring
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made RJ45 data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.



Caution

The Master Mode has to be deactivated in the Pro series devices. See the manufacturer's manual for more detailed instructions.

Procedure

1. Unscrew the side cover as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	6
▶ 3	1
▶ 3	2
▶ 4	3



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

3. If only one inverter is to be connected this must be terminated.
Insert the supplied connection plug into any free RJ45 socket on the inverter.

The connection plug is an 8-pin dummy plug with bridged wires: Bridge wires 3 and 4 and wires 5 and 6.

4. Screw the inverter cover on again.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: 2 RJ45 sockets on the right on the side cover

Procedure

1. Unscrew the side cover as shown in the inverter's instructions.
2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. Insert the other end of the wire into any RJ45 socket on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Insert the connection plug into the free RJ45 socket.
6. Screw the inverter cover on again.

19 Delta

19.1 Delta (RS485)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Resistor	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 socket on the outside of the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made Delta data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 7
▶ 4	▶ 6
▶ 4	▶ 8



Note

The PIN allocation has been changed with the new generation. 3 wired cabling functions with both generations.

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is connected this must be terminated.
Insert the 120 Ω resistor into the free RJ45 socket.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.
5. Close the unit cover on the bottom of the inverter.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into any RJ45 socket on inverter 1.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Insert the 120 Ω resistor into the free RJ45 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Set the inverter baud rate to 19200.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

20 Diehl Ako

20.1 Diehl Ako

Diehl Ako inverters have been listed as „Diehl Ako“ in our firmware up to version 3.1.1. Starting with firmware version 3.1.2 they will be listed as „Platinum“.

21 Eaton

21.1 Eaton

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	RS422

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 4-pin cable – only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned
- Multi-string technology

Eaton inverters are fitted with 1 or 3 MPP trackers depending on the model. Each string input is monitored separately and ideally adjusted to the connected modules.

The Solar-Log™ automatically detects how many inverters and strings are active during inverter detection.

Note



The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the [Configuration/Basis/Inverters](#) dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Disconnect the power for the inverter and Solar-Log™
 - Connect the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the RS485 interface

Procedure

- ▶ Insert the RS485 interface in the bottom of the inverter in accordance with the interface card installation instructions and screw in.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 4 wire data cable and terminal block connector.

**Note**

Only connect inverter using the RS485/422 B/C interface.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ R+
▶ 4	▶ R-
▶ 5	▶ T+
▶ 6	▶ T-

4. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter (on the retrofitted RS485 interface)

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, R-, T+ and T- of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.
5. Close inverters.

22 EEI

22.1 EEI

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	No	Yes	Yes	Yes	LAN

Overview

- Integrated interface
- The inverter's IP address has to be assigned.
- Connected using network cable (patch cable) and Ethernet router or switch
- Installation steps
 - The inverter's has to be assigned a static IP address.
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™ (RJ45).
 - Connect the inverters to each other (RJ45).

Connect inverters to the Solar-Log™

The wiring is done using a

- network cable (patch cable/crossover cable) and the
- Ethernet router or switch.

Connect the inverters to each other

The inverters are connected together using

the RJ45 interface and, if needed, a router or switch.

Connection setup according to the inverter's instructions.

Assigning IP addresses

- A static IP address has to be assigned to the inverter via the display.
- Please select an IP address with the same class C subnet as the Solar-Log™.
For example: The Solar-Log™ has the IP address 192.168.178.49.
The inverter in this case has to have a free IP address in the same range (from 192.168.178.1 to 192.168.178.254).
- Procedure: Start according to the inverter's instructions

Detection from the Solar-Log™

- For the detection on the Solar-Log™, select „Benning“ as the inverter manufacturer in the [Configuration | Devices | Definition](#) menu from the [Network](#) section. Confirm the selection with [Save](#).

Detection from the Solar-Log 1200

- When using the Solar-Log 1200, the detection can also be started from the display. Select „Benning“ as the manufacturer for the inverter detection from the „network“ interface and start the detection.

23 Effekta

23.1 Effekta

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Jumper	Yes	Yes	Yes	RS485

Select "Effekta ES" during the inverter detection

Overview

- Interface not integrated; Retrofit Effekta RS485 interface.
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Installing the RS485 interface

Procedure

- ▶ Install the RS485 interface in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ Pin 2 RS485 A (+)
▶ 3	▶ Pin 3 GND
▶ 4	▶ Pin 1 RS485 B (-)

3. If only one inverter is to be connected this must be terminated.
Set the jumper on the RS485 interface card to ON.
4. Close the inverter if no other inverters are to be connected.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 3 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter (on the retrofitted RS485 interface).

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Using the data cable connect terminals "Pin 2-RS485-A (+)", "Pin 3-GND" and "Pin 1-RS485-B (-)" of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Set the jumper on the RS485 interface card to ON.
5. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

23.2 Effekta KS Multitracker

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Select “Effekta KS” during the inverter detection

Overview

- Integrated interface
- 3-pin wiring
- 2 RJ45 sockets on the outside of the inverter.
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address.
Address range 1 to 32
Settings on the inverter’s display according to the manufacturer’s manual.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1 A/Data +	▶ Pin 1 (A) T/R+
▶ 3 GND	▶ Pin 5 GND
▶ 4 B/Data -	▶ Pin 2 (B) T/R-

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected this must be terminated.
Set the dip switch to “on.”
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable) (No Crossover cable)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter, set the DIP switch to “on.”

Allocate communication address

- Recommendation: Continuous numbering from 1 to 32
- Setting: Using the inverter operating display.
- Procedure: Start according to the inverter’s instructions.



Note

The following setting needs to be enable so that the PM parameters can be received.
SETUP -> REMOTE CNTRL -> ENABLE

23.3 Effekta KS Singletracker

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Select “Effekta KS ST” during the inverter detection

Overview

- Integrated interface
- 3-pin wiring
- 2 RJ45 sockets on the outside of the inverter.
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address.
Address range 1 to 254
Settings on the inverter’s display according to the manufacturer’s manual.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1 A/Data +	▶ Pin 1 (A) T/R+
▶ 3 GND	▶ Pin 5 GND
▶ 4 B/Data -	▶ Pin 2 (B) T/R-

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected this must be terminated.
Set the dip switch to “on.”
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable) (No Crossover cable)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter, set the DIP switch to “on.”

Allocate communication address

- Recommendation: Continuous numbering from 1 to 254
- Setting: Using the inverter operating display.
- Procedure: Start according to the inverter’s instructions.

24 Enfinity

24.1 Enfinity

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	Yes	No	No	RS422

Overview

- Integrated interface
- 2 RJ11 sockets inside the inverter.
- 4-pin wiring
- Communication address does not have to be assigned.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other



Note

Only connect inverter using the RS485/422 B/C interface.

Connect inverters to the Solar-Log™.

The wiring is done using a

- self-made, shielded 4 wire data cable and terminal block connector.
- Where to connect: RJ11 socket on the inverter.

Procedure

Open the inverter as shown in the inverter's instructions.

1. If you are making the cable yourself, connect the wires as shown in the following diagram

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ Pin 3 - RX+
▶ 4	▶ Pin 4- RX-
▶ 5	▶ Pin 1 - TX+
▶ 6	▶ Pin 2 TX-

2. Insert the RJ11plug into any RJ11 socket on inverter 1.
3. Close the inverter if no other inverters are to be connected.
4. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.

Connect the inverters to each other

- Wiring using the RJ11 cable
- Where to connect: RJ11 sockets

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Insert the self-made cable with the RJ11 plug into any RJ11 socket on inverter 1. Connect the other end to the terminal plug on the Solar-Log™
3. Insert the RJ11 cable into the second RJ11 socket on the first inverter and into any RJ11 socket on the second inverter.
4. Connect the other inverters to each other in the same way.
5. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.
6. Close inverters.

25 EHE

Ehe offers three wiring options for their various models.

Some models can be connected using a bus. Please note that the wires (Data + and Data-) always have to properly connected together.

25.1 EHE N1k5TL to N50kTL

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

The following types are to be connected according to this diagram:

N1K5TL, N2KTL, N3KTL, N4KTL, N5KTL, N6KTL, N10KTL, N12KTL, N15KTL, N17KTL, N20KTL, N30KTL, N50KTL

Overview

- Integrated interface
 - Where to connect: RJ45 socket (RS485(WiFi)), on the outside of the inverter.
 - 2-pin wiring
 - Communication address must be allocated.
 - Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Enter the communication address on the inverter's display.
- Every address may only be used once.
Address range 1 to 247.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with terminal block connector.
- Where to connect: RJ45 socket (RS485(WiFi)), on the outside of the inverter.

Procedure

- If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	PIN
▶ 1 (Data+)	Pin 4 - 485+ (A)
▶ 4 (Data-)	Pin 5 - 485- (B)

- If only one inverter is to be connected, according to the manufacturer's handbook it must be terminated.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect with a shielded twisted-pair cable.
- Where to connect: RJ45 socket (RS485(WiFi)), on the outside of the inverter.

Procedure

- If you make the cable yourself, connect the wires as shown in the diagram:

Terminal strip inside the second inverter	Terminal strip inside the second inverter
PIN	PIN
Pin 4 - 485+ (A)	Pin 4 - 485+ (A)
Pin 5 - 485- (B)	Pin 5 - 485- (B)

- Wire the remaining inverters to each other according to the manufacturer's specifications.
- Terminate the last inverter according to the inverter instructions.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

The RS485 sockets are each double connections so that the wiring can also be continued to the next inverter.

Procedure

1. Connect the data cable to the free blocks A, B and G on inverter 1.
2. Connect the other end of the cable to the blocks A, B and G on inverter 2.
3. Connect the remaining inverters in the same way.
4. Terminate in the last inverter according to the manufacturer's instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Notes on inverter addresses

- Recommendation: Continuous numbering starting with 1.
- Settings: On the inverter operating display.
- Procedure: Follow the manufacturer's documentation for the inverter.

25.2 EHE N10k to N100k

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

The following types are to be connected according to this diagram:
N10K, N20K, N30K, N50K, N100K

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Enter the communication address on the inverter's display.

Every address may only be used once.
Address range 1 to 247.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with terminal block connector.
- Where to connect: Terminal strip inside the inverter

Procedure

- If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	Terminal
▶ 1 (Data+)	JX2 - A
▶ 4 (Data-)	JX2 - B

- If only one inverter is to be connected, according to the manufacturer's handbook it must be terminated.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect with a shielded twisted-pair cable.
- Where to connect: Terminal strip inside the inverter

Procedure

- If you make the cable yourself, connect the wires as shown in the diagram:

Terminal strip inside the first inverter	Terminal strip inside the second inverter
Terminal	Terminal
JX2 - A	JX2 - A
JX2 - B	JX2 - B

- Wiring the remaining inverters in the same way.
- Terminate the last inverter according to the inverter instructions.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

Procedure

1. Connect the data cable to the blocks JX2 A and B on inverter 1.
2. Connect the data cable to the blocks JX2 A and B on inverter 2.
3. Connect the remaining inverters in the same way.
4. Terminate in the last inverter according to the manufacturer's instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Notes on inverter addresses

- Recommendation: Continuous numbering starting with 1.
- Settings: On the inverter operating display.
- Procedure: Follow the manufacturer's documentation for the inverter.

25.3 EHE N250k to N500k-TL

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

The following types are to be connected according to this diagram:
N250K, N250K-TL, N500K-TL

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Enter the communication address on the inverter's display.
Every address may only be used once.
Address range 1 to 247.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with terminal block connector.
- Where to connect: Terminal strip inside the inverter

Procedure

- If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	Terminal
▶ 1 (Data+)	JX9 - A
▶ 4 (Data-)	JX9 - B

- If only one inverter is to be connected, terminate it according to the manufacturer's specifications.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect with a shielded twisted-pair cable.
- Where to connect: Terminal strip inside the inverter

Procedure

- If you make the cable yourself, connect the wires as shown in the diagram:

Terminal strip inside the first inverter	Terminal strip inside the second inverter
Terminal	Terminal
JX9 - A	JX9 - A
JX9 - B	JX9 - B

- Wiring the remaining inverters in the same way.
- Terminate the last inverter according to the inverter instructions.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

Procedure

1. Connect the data cable to the blocks JX2 A and B on inverter 1.
2. Connect the data cable to the blocks JX2 A and B on inverter 2.
3. Connect the remaining inverters in the same way.
4. Terminate in the last inverter according to the manufacturer's instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Notes on inverter addresses

- Recommendation: Continuous numbering starting with 1.
- Settings: On the inverter operating display.
- Procedure: Follow the manufacturer's documentation for the inverter.

26 EKO Energy

26.1 EKO Energy

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Between the COM round sockets on the outside of the inverter.
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (supplied with the inverter).
- or
- self-made, shielded 2 wire data cable with round plug and terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter round socket
Terminal	Terminal
▶ 1	▶ 1
▶ 4	▶ 2

2. Insert the round plug into any COM round socket on the inverter.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a self-made daisy chain cable.
- Where to connect: Between the COM round sockets on the outside of the inverter.

Procedure

1. Insert the round plug into any round socket on inverter 1.
2. Insert the other end of the cable into any round socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Default settings on the inverter: Communication address 1
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

27 Eltek

27.1 Eltek

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Configure the inverter's communication interface
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. Connect wires as shown in the diagram below.

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ B (Data+)
▶ 4	▶ A (Data-)

2. If only one inverter is to be connected, it must be terminated according to the manufacturer's instructions.
3. Close the inverter cover if no other inverters are to be connected.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

The inverters are connected together using the RS485 interface. Refer to the manufacturer's inverter manual for the details on how to setup the connection.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

Other configurations

- Activate the RS485 interface Using the inverter operating display.



Note

Pay particular attention to the instructions in the installation manual regarding the address types, activating the communication interface and the master/slave mode.

27.2 Eltek central inverter

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Select "Eltek Central" during the inverter detection

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 3-pin wiring
- The communication address has to be assigned (1 - 247)
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Configure the inverter's communication interface
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Connect wires as shown in the diagram below.

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ X12.1 A (Data +)
▶ 3	▶ X12.3 GND
▶ 4	▶ X12.2 B (Data -)

2. If only one inverter is to be connected, it must be terminated according to the manufacturer's instructions.
3. Close the inverter cover if no other inverters are to be connected.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

The inverters are connected together using the RS485 interface. Refer to the manufacturer's inverter manual for the details on how to setup the connection.

Allocate communication address

- Recommendation: Continuous numbering starting with 1 going to 247
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

Other configurations

- Activate the RS485 interface Using the inverter operating display.



Note

Address settings: from inverter menu: Settings -> Modbus -> Modbus Address
Please refer to the inverter instructions



Note

Please check the default values of the inverter. The inverter has to communicate with the following settings: Baud rate 9600, Data bits: 8, Parity: none and Stop bits: 2.

28 Europa-Solar AG

28.1 Europa-Solar AG

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	RS422

Overview

- Integrated interface
- Where to connect: RJ45 socket inside the inverter
- 4-pin cable – only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned



Note

The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the [Configuration/Basis/Inverters](#) dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BRJ1 data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 B-Solar-Log™ interface.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector

RJ45 inverter

Terminal	PIN
▶ 1	▶ Pin 3
▶ 4	▶ Pin 6
▶ 5	▶ Pin 1
▶ 6	▶ Pin 2

3. Insert the RJ45 plug into any RJ45 socket on inverter 1.
4. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 socket inside the inverter

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. Insert the other end of the wire into any RJ45 socket on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter according to the inverter instructions.
6. Close inverters.

29 Evoco

29.1 Evoco

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Between the COM round sockets on the outside of the inverter.
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (supplied with the inverter).
- or
- self-made, shielded 2 wire data cable with round plug and terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter round socket
Terminal	PIN
▶ 1	▶ 1
▶ 4	▶ 2

2. Insert the round plug into any COM round socket on the inverter.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using an Evoco daisy chain cable.
- Where to connect: Between the COM round sockets on the outside of the inverter.

Procedure

1. Insert the round plug into any round socket on inverter 1.
2. Insert the other end of the cable into any round socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Default settings on the inverter: Communication address 1
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

30 Fronius

30.1 Fronius with ComCard

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Connection plug Bridge 4-3 + 5-6	Yes	No	No	RS422

Overview

- The Fronius ComCard RS422 interface integrated as an option; otherwise can be retrofitted using "ComCard retrofit".
- Where to connect: RJ45 socket on the outside of the inverter
- 4 wire cabling with 6-pin terminal block connector
- Communication address must be allocated.
 - Recommendation: Continuous numbering starting with 1.
 - Setting: Using the inverter operating display
 - Procedure: Start according to the inverter's instructions
- Installation steps
 - Switch off the inverters and Solar-Log™
 - (Install Fronius ComCard RS485 interface into the inverter).
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Installing Fronius ComCard RS485 interface

Procedure

- ▶ Install the Fronius ComCard RS485 interface in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made Fronius data cable (optional extra; not supplied)
- or
- self-made data cable with RJ45 plug and 6-pin terminal block connector



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 B-Solar-Log™ interface.
-

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 4
▶ 4	▶ 5
▶ 5	▶ 3
▶ 6	▶ 6

2. In the inverter insert the RJ45 plug into the IN socket.
3. If only one inverter is to be connected this must be terminated.
Insert the supplied connection plug into the RJ45 OUT socket on the inverter.

The connection plug is an 8-pin dummy plug with bridged wires: Bridge wires 3 and 4 and wires 5 and 6.

4. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 socket on the outside of the inverter

Procedure

1. Insert the RJ45 plug in inverter 1 into the OUT socket.
2. Insert the other end of the wire into the IN socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Insert the supplied connection plug into the RJ45 OUT socket.
5. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.
6. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

30.2 Fronius Symo and Galvo models

For the Symo and Galvo series, Fronius offers two different inverters:

- Symo and Symo-Light.

The wiring instructions of the inverter to the Solar-Log™ are the same as the wiring of the Fronius inverter with ComCard. See chapter „Fronius with ComCard“.

General information Symo and Galvo models

The standard Symo comes equipped with a Datamanager that acts as a bus master. The Datamanager has to be removed to be able to communicate with the Solar-Log™. Since the Fronius Com Card is already integrated in the Symo and Galvo models, no additional Com Card is required for network interface. The Datamanager is not integrated into the Symo Light models.



Note

The Fronius Symo-/Galvo series is set by default to the „Solar Net“ protocol.
» Please check the setting.

30.3 Fronius RL

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Jumper	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Round socket on inverter
- 2-pin wiring
- Communication address does not have to be assigned.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

- The wiring is done using a self-made cable connection with the round plug and the terminal strip plug.
The round plug must be obtained from the manufacturer.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram

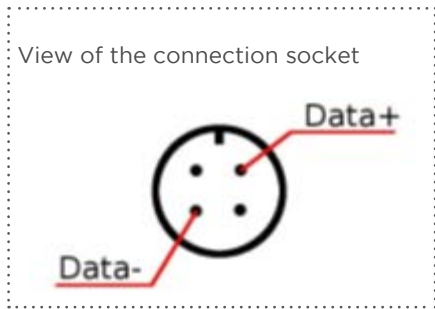


Figure 10: Fronius RL round plug

Solar-Log™ terminal strip connector	Inverters
RS485/422 B	Round socket
▶ 1	▶ 1 Data +
▶ 3	▶ 2 use the cable shield
▶ 4	▶ 3 Data -

2. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: Round socket on inverter

Procedure

1. self-made cable connection with round plug and a terminal block plug.
2. Also connect the cable to the next inverter in round plug 1.
3. Connect the other inverters to each other in the same way.

31 Gefran

31.1 Gefran

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Switch	Yes	Yes	Yes	RS485

Overview

- Integrated interface (two independent RS485 ports) (see Figure: Gefran RS485 terminal strip and termination)
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address has to be assigned.
- Installation steps
 - Switch off the inverters and the Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2-wire data cable.



Note

The two independent RS485 ports allow for different ways to wire the Solar-Log™ to the inverters. In addition there are different pin assignments based on whether port A or B is used.

Procedure

1. Open the inverter as shown in the inverter’s instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector Terminal strip inside the inverter

Terminal	Terminal strip RS485 (TB3)
▶ 1 A/Data+	▶ Pin 1 or 2 (Port A) or Pin 9 or 10 (Port B)
▶ 4 B/Data-	▶ Pin 3 or 4 (Port A) or Pin 11 or 12 (Port B)

3. If only one inverter is to be connected this must be terminated.
Set the switch (switch S1 for port A, switch S3 for port B) in the inverter to “1” for terminal resistance.
4. Close the inverter.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

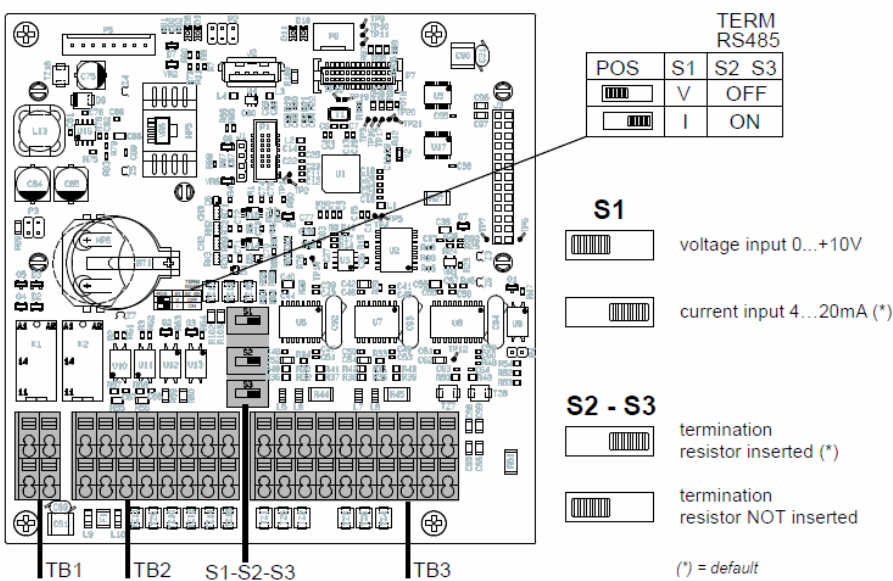


Fig.: Gefran RS485 terminal strip and termination

Connect the inverters to each other

- Where to connect: Terminal strip inside the inverter
- 2-pin wiring

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Terminal strip inside the inverter	Terminal strip inside the inverter
Terminal RS485 (TB3)	Terminal RS485 (TB3)
▶ Pin 1 or 2 (Port A) or Pin 9 or 10 (Port B)	▶ Pin 2 or 1 (Port A) or Pin 10 or 9 (Port B)
▶ Pin 3 or 4 (Port A) or Pin 11 or 12 (Port B)	▶ Pin 4 or 3 (Port A) or Pin 12 or 11 (Port B)

3. Connect terminals on inverter 1 to the corresponding terminals on inverter 2.
4. Connect the other inverters to each other in the same way (see Figure: 2-pin terminal TB3)
5. Terminate in the last inverter.
Set the switch (switch S1 for port A, switch S3 for port B) to "1" for terminal resistance.
6. Close inverters.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket

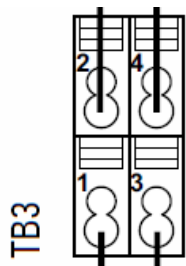


Fig.: 2-pin terminal TB3

Allocate communication address

- Recommendation: Continuous numbering starting with 1 going to 63
- Setting: Using the inverter display
- Procedure: Start according to the inverter's instructions



Note

The communication port has to be configured. The settings are located in the inverter display under "Configuration -> Communication." The RS485 port used (A or B) has to be configured as follows: Baud rate: 9600bps; Settings: N81; Address: the respective bus address

32 General Electric inverters (GE)

32.1 General Electric inverters (GE)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	No	No	No	No	LAN

Overview

- Integrated interface
- Connected using network cable (patch cable) and Ethernet router or switch
- Communication address must be allocated.
- Installation steps
 - Allocate communication address
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Before connecting to the Ethernet router or switch and allocating the IP address.

Connect inverters and the Solar-Log™.

The wiring is done using a

- network cable (patch cable/crossover cable) and the
- Ethernet router or switch.

Procedure

1. Set different unit IDs on each inverter in accordance with the inverter's instructions.
2. Connect the Solar-Log™ and the inverter to the router or switch.
3. Allocate an IP address to each inverter using the manufacturer's IP setting kit:

The first three number blocks like the Solar-Log™, e.g. 192.168.178.49.

The fourth number block: an address that is available, e.g. 192.168.178.50.

Details on using the IP setting kit can be found in the manufacturer's SVT monitoring manual.

33 GESOLAR

33.1 GESOLAR

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 plug outside the housing floor
- 2-pin wiring
- Communication address does not have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BRJ2 data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 7
▶ 4	▶ 8

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into any RJ45 socket on inverter 1.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the inverter instructions.

34 Ginlong

34.1 Ginlong

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Between the COM round sockets on the outside of the inverter.
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (supplied with the inverter).
- or
- self-made, shielded 2 wire data cable with round plug and terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter round socket
Terminal	PIN
▶ 1	▶ 1
▶ 4	▶ 2

2. Insert the round plug into any COM round socket on the inverter.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Wiring using Ginlong's daisy chain cable.
- Where to connect: Between the COM round sockets on the outside of the inverter.

Procedure

1. Insert the round plug into any round socket on inverter 1.
2. Insert the other end of the cable into any round socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Default settings on the inverter: Communication address 1
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

35 GMDE

35.1 GMDE

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	Yes	Yes	RS485

Overview

- Integrated RS485 interface
- 8-pin cable for the RS485 connection of the Solar-Log™
- Communication address does not have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- partially ready-made RJ45 cable (not included)
- or
- self-made data cable with RJ45 plug and 6-pin terminal block connector



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. Connect wires as shown in the diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1 (Data+) A	▶ 3 A
▶ 4 (Data-) B	▶ 6 B

2. Run the wire from the Solar-Log™ to inverter 1 through the hole for the wire on the bottom of the unit.
3. In the inverter insert the RJ45 plug into the "RS-485 out" socket.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable).
- Where to connect: RJ45 socket on the outside of the inverter.

Procedure

1. Insert the RJ45 plug in inverter 1 into the RJ45 socket.
2. Insert the other end of the wire into the other RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.
5. Terminate in the last inverter according to the inverter instructions.

36 GoodWe

36.1 GoodWe

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	RS422

Overview

- Integrated RS422 interface
- 8-pin cable – only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- partially ready-made RJ45 cable (not included)
- or
- self-made data cable with RJ45 plug and 6-pin terminal block connector



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. Connect wires as shown in the diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 6 Data+ (RX_RS485A)
▶ 3	▶ 4 GND
▶ 3	▶ 5 GND
▶ 4	▶ 3 Data- (RX_RS485B)
▶ 5	▶ 8 Data+ (TX_RS485A)
▶ 6	▶ 7 Data- (TX_RS485B)

2. Run the wire from the Solar-Log™ to inverter 1 through the hole for the wire on the bottom of the unit.
3. In the inverter insert the RJ45 plug into the "RS-485 out" socket.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable).

- Where to connect: RJ45 socket on the outside of the inverter.

Procedure

1. Insert the RJ45 plug in inverter 1 into the RJ45 socket.
2. Insert the other end of the wire into the other RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.
5. Terminate in the last inverter according to the inverter instructions.

37 Growatt

37.1 Growatt

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Round sockets on the outside of the inverter.
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable with round plug and terminal block connector.
- The round plugs required can be obtained from the inverter manufacturer.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter round socket
Terminal	PIN
▶ 1	▶ 2 (+)
▶ 4	▶ 1 (-)

2. Insert the round plug into any COM round socket on the inverter.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Wiring using 2 pin cable with round plugs.
- Where to connect: Round sockets on the outside of the inverter.

Procedure

1. Insert the round plug into any round socket on inverter 1.
2. Insert the other end of the cable into any round socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Address range: 1 - 125
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions



Note

When detecting inverters, there are two options for for Growatt in the initial configuration. "Growatt old" and "Growatt Mod". For newer models and modules with the latest firmware version version, please select "Growatt Mod", for models with older firmware versions select "Growatt old".

Inverters	Firmware version
Sungold 1500TL/2000TL/3000TL/5000TL	>= G.2.1 Modbus
Growatt 1500TL/2000TL/3000TL/4000TL/4400TL/5000TL	>= G.2.1 Modbus
Growatt 2500MTL/3000MTL	Modbus
Growatt 3600MTL/4200MTL/5000MTL	>= S.2.1 Modbus
Growatt 3600MTL-10/4200MTL-10/5000MTL-10	Modbus
Growatt 2000HF/2500HF/3000HF	Modbus
Growatt 10000UE/12000UE/18000UE/20000UE	Modbus
Growatt 4000UE/5000UE/6000UE	Modbus
Growatt 1500TL-US/2000TL-US/3000TL-US	>= U.1.5 Modbus
Growatt 3600MTL-US/4200MTL-US/5000MTL-US	>= U.1.5 Modbus
Growatt 2000HF-US/2500HF-US/3000HF-US	Modbus
Growatt 8000TL-US/9000TL-US/10000TL-US/11000TL-US	Modbus
Growatt 10000TL3-US/12000TL3-US/18000TL3-US/20000TL3-US	Modbus

38 GTec

38.1 GTec

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	RS422

Overview

- Interface not integrated; Retrofit RS485 interface card.
- Multi-string technology
- 4-pin wiring
- Communication address does not have to be assigned



Note:

The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the [Configuration/Basis/Inverters](#) dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the RS485 interface

Procedure

Insert the RS485 interface in the bottom of the inverter according to the interface card installation instructions.



Note

Only connect inverter using the [RS485/422 B/C](#) interface.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- self-made, shielded 4 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ Rx +
▶ 3	▶ GND
▶ 4	▶ Rx-
▶ 5	▶ Tx+
▶ 6	▶ Tx-

4. If only one inverter is to be connected, it must be terminated according to the manufacturer's instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter (on the retrofitted RS485 interface).

Procedure

- Open the inverter as shown in the inverter's instructions.
- Position the inverter up according to the diagram.
- Connect terminals R+, R-, T+ and T- of inverter 1 to the corresponding terminals on inverter 2.
- Connect the other inverters to each other in the same way.
- Terminate in the last inverter according to the inverter instructions.
- Close inverters.

39 Helios Systems

39.1 Helios Systems

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

String Inverter HSI 20

Overview

- Integrated interface
- Where to connect: RJ45 socket on the outside of the inverter
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Allocate communication address
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Insert the RJ45 plug into any RJ45 socket on the first inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	4
▶ 3	3
▶ 4	5

4. If only one inverter is to be connected this must be terminated.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: 2 RJ45 sockets

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Insert the RJ45 plug into any RJ45 socket on the first inverter.
3. Insert the other end of the wire into any RJ45 socket on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter in accordance with the manufacturer's specifications.
6. Close the inverter if no other inverters are to be connected.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Central inverter

Overview

- Integrated interface
- Connected using network cable (patch cable) and Ethernet router or switch
- Communication address must be allocated.
- Installation steps
 - Allocate communication address
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other



Caution

The IP addresses for the inverter must be in the same Class C network as the Solar-Log™. Alternatively, it is sufficient if the first three groups of digits in the IP addresses are the same.

Allocate communication address

- Setting: Using the inverter operating display.
Please follow the instructions in the manufacturer's manual.

Connect inverters and the Solar-Log™.

The wiring is done using a

- network cable (patch cable) and the
- Ethernet router or switch.

Procedure

1. Set different unit IPs on each inverter in accordance with the inverter's instructions.
2. Connect the Solar-Log™ and the inverter to the router or switch.

40Huawei

40.1 Huawei

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 socket on the outside of the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.

Procedure

- Open the inverter as shown in the inverter's instructions.
- Insert the RJ45 plug into RS485-Out socket on the inverter.
- If you are making the cable yourself, connect the wires as shown in the following diagram
- Address the inverter according to the manufacturer's specifications.
Address range 1 to 247.
- If only one inverter is to be connected, it must be terminated according to the manufacturer's instructions.
- Close the inverter if no other inverters are to be connected.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	1 or 4
▶ 4	2 or 5



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: 2 RJ45 sockets

Procedure

- Open the inverter as shown in the inverter's instructions.
- Insert the RJ45 plug into RS485-Out socket on the first inverter.
- If you are making the cable yourself, connect the wires as shown in the diagram above.
- Connect the remaining inverters with the network cable.
- Terminate in the last inverter in accordance with the manufacturer's specifications.
- Close the inverter if no other inverters are to be connected.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

41 Hyundai

41.1 Hyundai HPC-050HT-E and HPC-100HT-E

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 CN socket on the outside of the inverter.
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 3
▶ 4	▶ 6

2. Insert RJ45 plug into socket CN on the inverter.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into any RJ45 socket on inverter 1.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the inverter instructions.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

41.2 Hyundai HPC-250HT-E

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: 20 pin connection strip on the outside of the inverter at the top edge of the i-8142iW module.
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 2 wire data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ D1+/TxD1+
▶ 4	▶ D1-/TxD1-

2. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: 20 pin connection strip on the inverter at the top edge of the i-8142iW module.

Procedure

1. Connect terminal D1+/TxD1+ on inverter 1 to terminal D1+/TxD1+ on inverter 2.
2. Connect terminal D1-/TxD1- on inverter 1 to terminal D1-/TxD1- on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the inverter instructions.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using PC software for configuring inverters.
- Procedure: Start according to the inverter's instructions

42 Ingeteam

42.1 Ingeteam

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Jumper P3	Yes	Yes	Yes	RS485

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Installing the RS485 interface

In the 8-pin connection socket, insert the appropriate plug (Phoenix plug type: FKCT 2.5/8-ST) with RS485 wiring.

Procedure

- ▶ Install the RS485 interface in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ Pin 1 RS485 A (+)
▶ 3	▶ Pin 6 GND
▶ 4	▶ Pin 2 RS485 B (-)

4. If only one inverter is to be connected this must be terminated.
Insert jumper JP3 into the RS485 card.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 3 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter (on the retrofitted RS485 interface)

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals "Pin 1-RS485-A (+)", "Pin 6-GND" and "Pin 2-RS485-B (-)" of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Insert jumper JP3 into the RS485 card.
5. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

43 Kaco

43.1 Kaco - Powador

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address



Note

Instructions and a diagram for wiring Kaco Powador inverters together are in the appendix.

Connect inverters to the Solar-Log™

The wiring is done using a

- partly made data cable (optional extra; not supplied)
- or
- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ B
▶ 4	▶ A

4. If only one inverter is to be connected this must be terminated.
Series 2 Powador: Set the DIP switch inside the inverter to ON and all other inverters to OFF.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter

The RS485 connections on the terminal strip are each double connections so that the wiring can be continued to the next inverter.

Procedure

1. Connect the data cable to the free terminals A and B of inverter 1.
2. Insert the other end of the cable into terminals A and B of inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Series 2 Powador: Set the DIP switch inside the inverter to ON and all other inverters to OFF.
5. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions



Note

The 25000xi - 33000xi Kaco inverter models are shown as 3 independent inverters in the Solar-Log™. If, for example, such inverters are available, give them addresses 1 and 2. In the Solar-Log™ the inverters will be shown internally as 1.1 / 1.2 - 2.1 / 2.2 etc.

43.2 Kaco – PVI Blue Planet

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Switch	Yes	Yes	Yes	RS485

Overview

- The Solar-Log™ only works with Kaco Blue Planet inverters that have an RS485 interface. The RS232 interface is not supported.

RS232 models: RS485 interface can be retrofitted by the manufacturer.

RS485 models: Integrated interface

- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- partly fabricated data cable (optional extra; not supplied)
- or
- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ B
▶ 4	▶ A

4. If only one inverter is to be connected this must be terminated.
In the inverter connect the free terminal A to terminal B using the supplied 330 330 Ω terminating resistor.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter

The RS485 connections on the terminal strip are each double connections so that the wiring can be continued to the next inverter.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect the data cable to the free terminals A and B of inverter 1.
3. Insert the other end of the cable into terminals A and B of inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Connect the free terminal A to terminal B using the supplied 330 Ω terminating resistor.
6. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the DIP switch inside the inverter.
- Procedure: Start according to the inverter's instructions

44KLNE

44.1 KLNE (Solartec and Sunteams)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: 4-pin round socket on the button of the device
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication addresses

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with terminal block connector.
- Where to connect: 4-pin round socket on the button of the device

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	X4 socket inverter
Terminal	PIN
▶ 1	4 - Data+
▶ 4	2 - Data-

2. If only one inverter is to be connected, according to the manufacturer's handbook it must be terminated.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: 4-pin round socket on the button of the device

Procedure

1. Unscrew the side cover as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector

X4 socket inverter

Terminal	PIN
▶ 1	4 - Data+
▶ 4	2 - Data-

3. Connect the Solar-Log™ cable to socket A on the first inverter.
4. According to the same wiring diagram, connect socket B on the first inverter to socket A on the second inverter using the following diagram.

X4 socket inverter 1

X4 socket inverter 2

Terminal	PIN
▶ 2	2 - Data+
▶ 4	4 - Data-

5. Connect the other inverters to each other in the same way.
6. 6 Terminate the last inverter in accordance with the inverter instructions.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.



Note:

According to the manufacturer's specifications, a maximum of 31 devices can be connected per RS485 bus.

45 Kostal and Solar-Fabrik

45.1 Kostal Pico and Solar-Fabrik Inverter Convert T (RS485)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 3-pin wiring
- Communication address must be allocated.
- Multi-string technology

Pico / Convert inverters are fitted with several MPP trackers: Each string input is monitored separately and ideally adjusted to the connected modules.

Depending on any parallel connections inside the inverter the Solar-Log™ can read the data from up to 3 individual strings.

During the inverter detection, the Solar-Log™ automatically detects how many MPP trackers are active; only the active MPP trackers are displayed. The inverter must be feeding data in for successful detection.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)

or

- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1	▶ A
▶ 3	▶ GND
▶ 4	▶ B

4. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 3 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals A, B and GND of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.
5. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the software that came with the inverter.
- Procedure: Start according to the inverter's instructions

45.2 Kostal Ethernet Version

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	No	Yes	No	No	LAN

Overview

- Integrated interface
- Connected using network cable (patch cable) and Ethernet router or switch
- Communication address must be allocated.
- Installation steps
 - Assign a static IP address
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™ (RJ45).
 - Connect the inverters to each other (RJ45).

Note:

The RS485 bus address of every inverter has to be configured to 255 so that the Solar-Log can communicate with the inverter.



=> Starting with firmware version 3.2.1, inverters set up with bus address 1 are supported.

=> The bus address is determined once during the inverter detection process. For this reason, it is not possible to change it while in operation (the Solar-Log™ would then no longer be able to access the inverters). If this has accidentally happened, perform the inverter detection again to be able to access the inverter from the Solar-Log™.

Connect inverters to the Solar-Log™

The wiring is done using a

- network cable (patch cable/crossover cable) and the
- Ethernet router or switch.

Connect the inverters to each other

The inverters are connected together using the RJ45 interface and, if needed, a router or switch.

Connection setup according to the inverter's instructions.

Assigning IP addresses

- A static IP address has to be assigned to the inverter via the display.
- Please select an IP address with the same class C subnet as the Solar-Log™.
For example: The Solar-Log™ has the IP address 192.168.178.49.
The inverter in this case has to have a free IP address in the same range (from 192.168.178.1 to 192.168.178.254).
- Procedure: Start according to the inverter's instructions

Note



Each inverter must be accessible through the network individually. It is thereby necessary to activate the network interface on each inverter (under the menu item "LAN" select "Activate LAN") and to connect the inverters to the network by means of a switch.

Detection from the Solar-Log™

- For the detection on the Solar-Log™, select "Kostal" as the inverter manufacturer in the **Configuration | Devices | Definition** menu from the **Network** section. Confirm the selection with **Save**. **Detection from the Solar-Log 1200**
- When using the Solar-Log 1200, the detection can also be started from the display. Select "Kostal" as the manufacturer for the inverter detection from the "network" interface and start the detection.

Note Power Management



In order that reactive power control functions, the low-voltage guidelines have to be selected in the country settings for the inverter (e.g. "DE-NSR" for the German low-voltage guidelines).

Caution:



The country settings can only be configured once during the initial installation. If the wrong country is selected, it can be reset using the Kostal software tool "PARAKO." This tool can be obtained directly from Kostal after registering.

46 Kstar

46.1 Kstar Multitracker

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Select “Kstar” during the inverter detection

Overview

- Integrated interface
- 3-pin wiring
- 2 RJ45 sockets on the outside of the inverter.
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address.
Address range 1 to 32
Settings on the inverter’s display according to the manufacturer’s manual.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).
-

Procedure

1. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1 A/Data +	▶ Pin 1 (A) T/R+
▶ 3 GND	▶ Pin 5 GND
▶ 4 B/Data -	▶ Pin 2 (B) T/R-

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected this must be terminated.
Set the dip switch to “on.”
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable) (No Crossover cable)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter, set the DIP switch to “on.”

Allocate communication address

- Recommendation: Continuous numbering from 1 to 32
- Setting: Using the inverter operating display.
- Procedure: Start according to the inverter’s instructions.



Note

The following setting needs to be enable so that the PM parameters can be received.
SETUP -> REMOTE CNTRL -> ENABLE

46.2 Kstar Singletracker

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Select “Kstar SM” during the inverter detection

Overview

- Integrated interface
 - 3-pin wiring
 - 2 RJ45 sockets on the outside of the inverter.
 - Communication address must be allocated.
 - Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address.
Address range 1 to 254
- Settings on the inverter’s display according to the manufacturer’s manual.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1 A/Data +	▶ Pin 1 (A) T/R+
▶ 3 GND	▶ Pin 5 GND
▶ 4 B/Data -	▶ Pin 2 (B) T/R-

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected this must be terminated.
Set the dip switch to “on.”
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable) (No Crossover cable)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter, set the DIP switch to “on.”

Allocate communication address

- Recommendation: Continuous numbering from 1 to 254
- Setting: Using the inverter operating display.
- Procedure: Start according to the inverter’s instructions.

47 Kyocera Inverter/Battery System

47.1 Kyocera Inverter/Battery System

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	No	Yes	No	No	RS485

Selections available under Kyocera

Overview

- Integrated interface.
- Where to connect: Terminal strip under the cover on the bottom.
- The communication address has to be assigned.
- 2-pin wiring
- Installation steps
 - Switch off the inverters and Solar-Log™.
 - Connect inverters to the Solar-Log™.
 - Connect the inverters/battery systems to each other.
 - Assign the communication address according to the manufacturer's manual.

Connect the inverters to the Solar-Log™.

The wiring is done using a

- self-made, shielded 4-wire data cable with a terminal block connector.

Procedure

1. Unscrew the side cover as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	PIN
▶ 1 Data+	▶ 3 Data+
▶ 4 Data-	▶ 4 Data-

3. Screw the inverter cover on again.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other.

- Where to connect: Terminal strip under the cover on the bottom.

Procedure

1. Unscrew the side cover as shown in the inverter's instructions.
2. Connect the self-made RS-485 cable to the terminal block on inverter 1.
3. Connect other end of the self-made RS-485 cable to the terminal block on inverter 2 or to the battery system.
4. Connect the other inverters to each other in the same way.
5. Screw the inverter cover on again.

Allocate communication address:

- Procedure: According to the manufacturer's manual.

If all of the devices have been wired, they have to be powered for detection.

48 Lufft - Pyranometer

48.1 Lufft - Pyranometer

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	No*	No	No	RS485

Selections available under Lufft

Overview

- Integrated interface.
- Where to connect: Round socket on the bottom.
- Communication address does not have to be assigned.*
- 4-pin wiring
- Installation steps
 - Switch off the pyranometer and the Solar-Log™.
 - Connect the pyranometer to the Solar-Log™.

Connect the pyranometer to the Solar-Log 1000, 1200 or 2000.

The wiring is done using a

- self-made, shielded 4-wire data cable with a terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	X4 socket RS485-1 pyranometer
Terminal	PIN
▶ 1	▶ RS485 A (green)
▶ 2	▶ Positive voltage supply (brown)
▶ 3	▶ Ground (GND) (white)
▶ 4	▶ RS485 B (yellow)

*Allocate communication address:

The communication address is set to 1 by default. If several pyranometers are connected on a single bus, the address has to be adjusted. This requires a tool from the company Lufft. It can be downloaded from the Lufft website.

Termination:

Please contact Lufft for information on termination.

49 Mastervolt

49.1 Mastervolt (RS485)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Yes	No	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 plug outside the housing floor.
- 2-pin wiring
- Communication address does not have to be assigned
- Multi-string technology

Mastervolt inverters are fitted with 1 or 2 MPP trackers depending on the model. Each string input is monitored separately and ideally adjusted to the connected modules. Some inverters are also divided internally into 2 or even 3 individual inverters. For example, the QS6400 is recognized as 2 inverters each with 2 strings, an XL 15 as 3 independent XL5000s.

The Solar-Log™ automatically detects how many inverters and strings are active during inverter detection.



Note

A maximum of 20 inverters can be connected per RS485 bus.



Note

The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the **Configuration/Basis/Inverters** dialog box.

The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made Mastervolt data cable (optional extra; not supplied)
- or
- self-made cable connection with RJ45 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ **Only connect inverters via the RS485/422 Solar-Log™ interface(s).**
-

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 4
▶ 4	▶ 3

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 plug outside the housing floor

Procedure

1. Insert the RJ45 plug into any RJ45 socket on inverter 1.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the inverter instructions.

50 Mitsubishi

50.1 Mitsubishi with RS485 interface

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Switch	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: 2 RJ11 sockets inside the inverter.
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made RJ11 data cable (optional extra; not supplied)
- or
- self-made cable connection with RJ11 cable connection and terminal block connector.

Procedure

1. Unscrew the front plate of the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ11 Inverter
Terminal	PIN
▶ 1	▶ 3
▶ 4	▶ 4

3. Insert the RJ11 plug into any RJ11 socket on inverter 1.
4. If only one inverter is to be connected this must be terminated.
In the inverter, set the DIP switch for the terminal resistor to ON.
5. Screw the front plate inverter on again if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a data cable with an RJ11 plug.
- Where to connect: 2 RJ11 sockets at the bottom left inside the inverter.

Procedure

1. Unscrew the front plate of the inverter as shown in the inverter's instructions.
2. Insert the RJ11plug into any RJ11 socket on inverter 1.
3. Insert the other end of the cable into any RJ11 socket on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Set the DIP switch for the terminal resistor to ON.
6. Screw the inverter front plate on again.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

51 Motech

51.1 Motech (RS485)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 plug outside the housing floor
- 2-pin wiring
- Communication address does not have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BRJ2 data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 7
▶ 4	▶ 8

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into any RJ45 socket on inverter 1.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the inverter instructions.

52 Oelmaier

52.1 Oelmaier

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip behind service cover
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable with a terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	Terminal
▶ 1	▶ A-Data +
▶ 4	▶ B-Data -

3. Terminate the inverter as shown in the inverter's instructions.
4. Close inverters.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: Terminal strip behind service cover
- 2-pin wiring

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	RS485 terminal
▶ 1	▶ A-Data +
▶ 4	▶ B-Data -

3. Connect terminals A and B on inverter 1 to the corresponding terminals on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate the inverter as shown in the inverter's instructions.
6. Close inverters.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the solar fitter's menu on the inverter.
- Procedure: Start according to the inverter's instructions

53 Omnik

53.1 Omnik

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	No	Automatic	No	No	RS422

Overview

- Integrated interface
- Where to connect: RJ45 socket on the outside of the inverter
- 4-pin cable – only on RS485/422 B/C connection of the Solar-Log™
- Communication address does not have to be assigned



Note

The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup in the [Configuration | Device | Configuration | Order](#) menu box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 B/C Solar-Log™ interface.

Procedure

1. Connect the wires for the cable connection as shown in the following diagram.

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1 TX+	▶ PIN 4 RX+
▶ 4 TX-	▶ PIN 5 RX-
▶ 5 RX+	▶ PIN 3 TX+
▶ 6 RX-	▶ PIN 6 TX-

2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. Insert the terminal block connector into the Solar-Log™ RS485/422 B/C socket

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 socket outside the inverter

Procedure

1. Insert the RJ45 plug into any RJ45 socket on inverter 1.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.

54 Omron

54.1 Omron

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Bridge 9 -> 10	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect the cable as shown in the following diagram.

Solar-Log™ terminal strip connector	Inverter terminal strip
RS485/422 B	Terminal strip TB401
▶ 1	▶ Pin 4 - Data +
▶ 3	▶ Pin 3 - GND
▶ 4	▶ Pin 5 - Data -

3. If only one inverter is to be connected it must be terminated. To do this a bridge must be inserted on the inverter between pins 9 and 10.
4. Close the inverter if no other inverters are to be connected.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

The wiring is done using a

- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.

Inverter n	Inverter n+1
Terminal strip TB401	Terminal strip TB401
▶ 6	▶ Pin 3 - GND
▶ 7	▶ Pin 4 - Data +
▶ 8	▶ Pin 5 - Data -

2. Connect terminals 6, 7 and 8 on inverter 1 to terminals 3, 4 and 5 on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Bridge between pins 9 and 10.
5. Close inverters.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Inverter settings

The following values must be set in the inverter setup:

- COM_485 to 19200bps
- COM_Pari to Even
- COM_Stop to 2bit
- Set the communication protocol to "Auto" or "Compoway/F"; not "Modbus"

Please follow the instructions in the manufacturer's handbook for this.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

55 Pairan

55.1 Pairan

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Jumper	No	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Round socket on inverter
- 2-pin wiring
- Communication address does not have to be assigned.

Installation steps

- Switch off the inverters and Solar-Log™
- Connect inverters to the Solar-Log™
- Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with the round plug and the terminal strip plug.
The round plug must be obtained from the manufacturer.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram

View of the connection socket

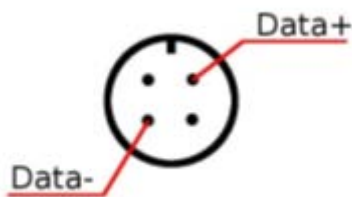


Figure 15: Pairan Round socket

Solar-Log™ terminal strip connector	Inverters
RS485/422 B	Round socket
▶ 1	▶ Data +
▶ 4	▶ Data -

2. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: Round socket on inverter

Procedure

1. self-made cable connection with round plug and a terminal block plug.
2. Also connect the cable to the next inverter in round plug 1.
3. Connect the other inverters to each other in the same way.

56 Phoenixtec

56.1 Phoenixtec

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Yes	No	No	No	RS422

Selectable under Sunville

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 4-pin cable – only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned
- Multi-string technology

The Sunville inverters are fitted with 1 or 3 MPP trackers depending on the model.

The Solar-Log™ automatically detects how many inverters and strings are active during inverter detection.



Note

The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the [Configuration | Devices | Configuration | Order](#) dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the RS485 interface

Procedure

Install the RS485 interface card according to the manufacturer's installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 4 wire data cable and terminal block connector.



Note

Only connect inverter using the RS485/422 B/C interface.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ R+
▶ 4	▶ R-
▶ 5	▶ T+
▶ 6	▶ T-

4. Close the inverter if no other inverters are to be connected.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable.
- Where to connect: Terminal strip inside the inverter (on the retrofitted RS485 interface).

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, R-, T+ and T- of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Close inverters.

57 Phonosolar

57.1 PhonoCube 7.2 (Battery Hybrid System)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	No	Yes	No	No	RS485

Selections available under Phonosolar



Note

When detecting a PhonoCubes, two devices are always detected. The first device consists of the inverter and the battery value. The second device consists of the consumption meter that is integrated into the PhonoCube.



Note on Solar Log²⁰⁰

The Solar Log²⁰⁰ is designed for an inverter. Since two devices are always detected with a PhonoCube, it cannot be connected to a Solar-Log²⁰⁰.

Overview

- Integrated interface.
- Where to connect: Terminal strip under the cover on the backside.
- The communication address has to be assigned.
- 2-pin wiring.
- Installation steps
 - Switch off the PhonoCube and Solar-Log™.
 - Connect the PhonoCube to the Solar-Log™.
 - Connect the PhonoCubes to each other.
 - Allocate communication address.
Address range 1 - 247.
Settings according to the manual.

Connect the PhonoCube to the Solar-Log™

The wiring is done using a

- self-made, shielded 4-wire data cable with a terminal block connector.

Procedure

1. Unscrew the cover according to the PhoneCube instructions.
2. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector

PhonoCube Terminal Strip

Terminal	PIN
▶ 1 A/Data+	1 - Data+
▶ 4 B/Data-	2 - Data-

3. Screw the PhonoCube cover on again.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the PhonoCubes to each other

- Where to connect: Terminal strip under the cover on the backside.

Procedure

1. Unscrew the cover according to the PhoneCube instructions.
2. Connect the self-made RS-485 cable to the PhonoCube terminal block 1.
3. Connect the other end of the cable to the PhonoCube terminal block 2.
4. Connect additional PhonoCubes to each other in the same way.
5. Screw the inverter cover on again.

Allocate communication address

- Recommendation: Continuous numbering from 1 to 247
- Procedure: Start according to the PhonoCube instructions.

58 Platinum (formerly Diehl Ako)

58.1 Platinum with RS485 interface

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Yes	No	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 socket on the bottom of the inverter
- 2-pin wiring
- Communication address does not have to be assigned



Note

The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the [Configuration/Basis/Inverters](#) dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ PIN 6 (A)
▶ 4	▶ PIN 3 (B)

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 sockets on the bottom of the inverter

Procedure

1. Insert the RJ45 plug into any RJ45 socket on inverter 1.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.

58.2 Platinum H

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Configure the inverter's communication interface
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. Connect wires as shown in the diagram below.

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ B (Data +)
▶ 4	▶ A (Data -)

2. If only one inverter is to be connected, it must be terminated according to the manufacturer's instructions.
3. Close the inverter cover if no other inverters are to be connected.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

The inverters are connected together using

the RS485 interface. Refer to the manufacturer's inverter manual for the details on how to setup the connection.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

Other configurations

- Activate the RS485 interface Using the inverter operating display.



Note

Pay particular attention to the instructions in the installation manual regarding the address types, activating the communication interface and the master/slave mode.

59 Powercom

59.1 Powercom

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Switch	Yes	Yes	Yes	RS485

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 4-pin wiring
- Communication address must be allocated.
- Installation steps
 - Allocate communication address
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the DIP switch on the interface card.

Before installing the RS485 interface card:

- ▶ Allocate the communication address using the 8 interface card DIP switches:

Example - Communication address 1:

On	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DIP switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Example - Communication address 2:

On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Off	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DIP switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Example - Communication address 3:

On								
Off								
DIP switch								

Example - Communication address 4:

On								
Off								
DIP switch								

Example - Communication address 5:

On								
Off								
DIP switch								

You will find more information at:

http://en.wikipedia.org/wiki/Binary_number.

Installing the RS485 interface

Procedure

- ▶ Install the RS485 interface in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BKL2 data cable (optional extra; not supplied)

or

- self-made, shielded 4 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	PIN
▶ 1	▶ R+
▶ 1	▶ T+
▶ 4	▶ R-
▶ 4	▶ T-

4. Close the inverter if no other inverters are to be connected.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter on the retrofitted RS485 interface card

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, T+, R- and R+ of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Close inverters.

60Power-One/Aurora

60.1 Power-One/Aurora

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Switch	Yes	Yes	Yes	RS485

Overview

- Interface integrated
Sometimes different interfaces are used for indoor and outdoor models.
- Where to connect: RS485 terminal strips inside the inverter
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made Power One data cable (optional extra; not supplied)
- or
- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip (Outdoor)
Terminal	Terminal
▶ 1	▶ +T/R (PC)
▶ 3	▶ GND
▶ 4	▶ -T/R (PC)

4. If only one inverter is to be connected this must be terminated.
In the inverter, set the DIP switch for the terminal resistor to ON.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 3 pin, shielded data cable.
- Where to connect: RS485 terminal strips inside the inverter

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals +T/R, -T/R and RTN of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Set the DIP switch for the terminal resistor to ON.
5. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering from Solar-Log™, starting from 2 (not 1!).
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

61 PrimeVOLT

61.1 PrimeVOLT

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable with a terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	RS485 terminal
▶ 1 A/Data+	▶ 1 T/R 1+
▶ 4 B/Data-	▶ 2 T/R 1-

3. If only one inverter is to be connected this must be terminated.
In the inverter, set the DIP switch for the terminal resistor to ON.
4. Close inverters.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: Terminal strip inside the inverter
- 2-pin wiring

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Terminal strip inside the inverter	Terminal strip inside the inverter
RS485 terminal	RS485 terminal
▶ 1 T/R 1+	▶ 1 T/R 2+
▶ 2 T/R 1-	▶ 2 T/R 2-

3. Connect terminals A and B on inverter 1 to the corresponding terminals on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Set the DIP switch for the terminal resistor to ON.
6. Close inverters.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter DIP switch
- Procedure: Start according to the inverter's instructions

62 PVPowered

62.1 PV Powered – central inverter RS485

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Jumper	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Modbus Slave socket on interface card
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Set the address of the inverters.
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made 3 pin connection cable and terminal block connector.



Note

The transfer rate for Modbus (RS485) on delivery to the customer is set to 9600bps. Please check these settings.

Procedure

1. Open the inverter as shown in the inverter’s instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram
4. If only one inverter is to be connected this must be terminated.
Inside the inverter set the supplied jumper from "J4" to "J5".
5. Setting the address for the inverter: Set SW1 to "0" and SW2 to "1" in order to set the parameters for the inverter with the address "01".
6. Close the inverter if no other inverters are to be connected.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	2 - D+
▶ 3	1 - GND
▶ 4	3 - D-

Connect the inverters to each other

The wiring is done using a

- self-made connection cable and terminal block connector.
- Where to connect: Terminal strip inside the inverter

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	2 - D+
▶ 3	1 - GND
▶ 4	3 - D-

4. Connect terminals GND, D+ and D- of inverter 1 to the corresponding terminals on inverter 2.
5. Connect the other inverters to each other in the same way.
6. Terminate in the last inverter in accordance with the manufacturer's specifications.
Inside the inverter set the supplied jumper from "J4" to "J5"
7. Address the individual inverters in accordance with the manufacturer's handbook: Inverter 1 should be the inverter that is directly connected to the Solar-Log™. To this end, set SW1 to "0". Depending on the position of the inverter in the bus, SW2 should be set to 1-9.
If more than 9 inverters are to be connected to one Solar-Log™, please read the manufacturer's instructions for further information.
8. Close the inverter if no other inverters are to be connected.
9. Insert the terminal block connector into the Solar-Log™ RS485 socket.

62.2 PV Powered - string inverter

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	Yes	-	-	LAN

Overview

- Integrated interface
- Connected using network cable (patch cable) and Ethernet router or switch
- Communication address must be allocated.
- Installation steps
 - Allocate communication address
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Before connecting to the Ethernet router or switch and allocating the IP address.

Connect inverters and the Solar-Log™.

The wiring is done using a

- network cable (patch cable) and the
- Ethernet router or switch.

Procedure

1. Set different unit IDs on each inverter in accordance with the inverter's instructions.
2. Connect the Solar-Log™ and the inverter to the router or switch.

63 Q3

63.1 Q3 (RS485)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Between the COM round sockets on the outside of the inverter.
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

Connecting is done using a self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Connect wires as shown in the diagram below.

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ 1 (RS485-A)
▶ 3	▶ 3 (GND)
▶ 4	▶ 2 (RS485-B)

2. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a self-made daisy chain cable.
- Where to connect: X2 connection socket on outside of the inverter.

Procedure

1. Insert the plug into socket X2 on inverter 1.
2. Insert the other end of the wire into the X2 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the inverter instructions.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Default settings on the inverter: Communication address 1
- Setting: Using the inverter operating display Notes
 - Select Address for ProLog in the Communication / RS485 menu
 - Set Protocol type COM 1 to 9 in the Communication menu
- Procedure: Start according to the inverter's instructions

64 REFUSOL

64.1 REFUSOL

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Terminating plug	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 socket on the bottom of the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Instructions for older Solar-Log™/ Refu installations

- Set compatibility

Note

To use active and reactive power management, all of the inverters need to be set to:



- Protocol 1
- 57600 baud
- Parameter 1164 = 2

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. Connect wires as shown in the diagram below.

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1	▶ 2
▶ 4	▶ 3

2. If only one inverter is to be connected this must be terminated.
On the sockets "RS485 OUT" with REFUSOL round plugs bypass the connections PIN1 to PIN2 and PIN3 to PIN4.
3. Close the inverter if no other inverters are to be connected.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using
 - 2-wire, shielded data cable and
 - 4-pin "SACC-M12MS-4SC" plug (two plugs included with the inverter)
- Where to connect: RS485 sockets on the bottom of the inverter.

The RS485 IN and OUT sockets are each double connections so that the wiring can be continued to the next inverter.

Procedure

1. Connect the data cable to the "SACC-M12MS-4SC" plug as shown in the inverter's instructions.
2. Insert one plug into the OUT (X14B) socket of inverter 1.
3. Insert the other end of the wire into the IN socket (X15B) on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
On the sockets "RS485 OUT" with REFUSOL round plugs bypass the connections PIN1 to PIN2 and PIN3 to PIN4.
6. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1; highest possible address: 31

Set the following parameters on the inverter's operating display:

1. Press "F1", select **Numerical list**, press "ENTER".
2. Set parameter number **2000** [password protection], press "ENTER" twice.
3. Enter **72555**, press "ENTER"
4. Set parameter number **0406**, press "ENTER"
5. Select sub parameter **0406,3**, press "ENTER"
6. Enter figure for communication **x**
[x = continuous numbering starting with 1; highest possible address: 31], press "ENTER". 31], press "ENTER".

After configuring on the display:

1. Using the installed DC isolating switch turn the inverters on and off briefly so that the settings are activated.
2. Set the date and time on the inverter as shown in the inverter instructions.

Older Solar-Log™ / Refusol installations: Set compatibility

With older Solar-Log™ / Refusol installations the inverter had to be set with additional parameters for Solar-Log™ compatibility. This is only still necessary if an inverter has been replaced because it was faulty or if the system is extended. In these cases the new inverters must also be provided with the extended parameters again.

The extended parameters are only available starting from inverter firmware version 800.2.20 or higher. The firmware version can be checked on the inverter menu:

- ▶ "F1" / **Numerical list** / Parameters 1.1 to 1.3

Current firmware versions and update instructions can be found at www.refu-elektronik.de.

Set the following parameters on the inverter's operating display:

1. Press "F1"
2. Select Numerical list, press "ENTER".
3. Set parameter number 0407 press "ENTER"
4. Select sub parameter 0407,3, press "ENTER"
5. Enter "2"
[Communication type RS485: Solarlog], press "ENTER".31], press "ENTER".
6. Set parameter number 0420 press "ENTER"
7. Select sub parameter 0420,3, press "ENTER"
8. Enter the numerical value 9600, press "ENTER"
9. Using the installed DC isolating switch turn the inverters on and off briefly so that the settings are activated.

Note



The numerical value "2" under point 5 in the settings refers to the old Solar-Log protocol and the value "1" to the native protocol for active and reactive power control.

The value under point 8 refers to the inverter's baud rate and is 9600 for the old Solar-Log protocol and 57600 for the native protocol.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

Note



To use active and reactive power management, all of the inverters need to be set to:

- Protocol 1
 - 57600 baud
 - Parameter 1164 = 2
-

65 REP

65.1 REP

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable with a terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	RS485 terminal
▶ 1 A/Data+	▶ 1 T/R 1+
▶ 4 B/Data-	▶ 2 T/R 1-

3. If only one inverter is to be connected this must be terminated.
In the inverter, set the DIP switch for the terminal resistor to ON.
4. Close inverters.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: Terminal strip inside the inverter
- 2-pin wiring

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Terminal strip inside the inverter	Terminal strip inside the inverter
RS485 terminal	RS485 terminal
▶ 1 T/R 1+	▶ 1 T/R 2+
▶ 2 T/R 1-	▶ 2 T/R 2-

3. Connect terminals A and B on inverter 1 to the corresponding terminals on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Set the DIP switch for the terminal resistor to ON.
6. Close inverters.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter DIP switch
- Procedure: Start according to the inverter's instructions

66 Reverberi

66.1 Reverberi (EDI Series)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Allocate communication address
 - Terminate inverter

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)

Procedure:

- Open the inverter as shown in the inverter's instructions.
- Pull the free wires through the wire opening in the inverter.
- If you are making the cable yourself, connect the wires as shown in the following diagram

Solar-Log™ terminal strip connector	Terminal strip inverter
Terminal	PIN
▶ 1	5
▶ 1	7
▶ 4	4
▶ 4	6

- If only one inverter is to be connected this must be terminated.
- Close the inverter if no other inverters are to be connected.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: Terminal strip inside the inverter
- 2-pin wiring

Procedure

- Open the inverter as shown in the inverter's instructions.
- Connect the other inverters to each other in the same way.
- Terminate in the last inverter.
- Close inverters.
- Allocate communication address
- Recommendation: Continuous numbering from Solar-Log™, starting from 2 (not 1!). Last address at 247.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

67 Riello

67.1 Riello

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	RS422

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 4-pin cable - only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned.
- Multi-string technology

Riello inverters are fitted with 1 or 3 MPP trackers depending on the model. Each string input is monitored separately and ideally adjusted to the connected modules.

The Solar-Log™ automatically detects how many inverters and strings are active during inverter detection.

Note



The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the **Configuration/Basis/Inverters** dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the RS485 interface

Procedure

- ▶ Insert the RS485 interface in the bottom of the inverter in accordance with the interface card installation instructions and screw in.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 4 wire data cable and terminal block connector.

Note



Only connect inverter using the RS485/422 B/C interface.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ R+
▶ 4	▶ R-
▶ 5	▶ T+
▶ 6	▶ T-

4. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter (on the retrofitted RS485 interface)

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, R-, T+ and T- of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.
5. Close inverters.

68 SALICRU

68.1 SALICRU EQX

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	RS422

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 4-pin cable – only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned
- Multi-string technology

The inverters are fitted with 1 or 3 MPP trackers depending on the model. Each string input is monitored separately and ideally adjusted to the connected modules.

The Solar-Log™ automatically detects how many inverters and strings are active during inverter detection.

Note



The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the **Configuration/Basis/Inverters** dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Procedure

- ▶ Insert the RS485 interface in the bottom of the inverter in accordance with the interface card installation instructions and screw in.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BKL1 data cable (optional extra; not supplied)
- or
- self-made, shielded 4 wire data cable and terminal block connector.

Note



Only connect inverter using the RS485/422 B interface.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ R+
▶ 1	▶ T+
▶ 4	▶ R-
▶ 4	▶ T-

4. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter (on the retrofitted RS485 interface)

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, R-, T+ and T- of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.
5. Close inverters.

68.2 SALICRU EQXLV

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Resistor	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)

or

- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ 4 (A in)
▶ 4	▶ 3 (B in)

2. If only one inverter is to be connected this must be terminated.
Insert 120 Ω terminal resistor.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter

Procedure

1. Connect terminal 2 (A out) on inverter 1 to terminal 4 (A in) on inverter 2.
2. Connect terminal 1 (B out) on inverter 1 to terminal 3 (B in) on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter. Insert 120 Ω terminal resistor.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using PC software for configuring inverters.
- Procedure: Start according to the inverter's instructions

69 Samil Power

69.1 Samil Power

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	No	No	No	RS422

Overview

- Integrated interface
- 2 RJ11 sockets inside the inverter.
- 4-pin wiring
- Communication address does not have to be assigned



Note

Only connect inverter using the RS485/422 B/C interface.

Installation steps

- Switch off the inverters and Solar-Log™
- Connect inverters to the Solar-Log™
- Connect the inverters to each other

Connect inverters to the Solar-Log™.

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- self-made, shielded 4 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram

Solar-Log™ terminal strip connector	Inverter SolarRiver*	Inverter SolarLake
RS485/422 B	RJ 11 socket	RJ45 socket
▶ 1	▶ 2 R+	▶ 3 R+
▶ 4	▶ 1 R-	▶ 6 R-
▶ 5	▶ 4 T+	▶ 1 T+
▶ 6	▶ 3 T-	▶ 2 T-

*Some of the SolarRiver models use the same connection as SolarLake. Setup the wiring according to SolarLake in this case.



Note:

The wiring above refers to the RJ45 or RJ11 socket.

3. Insert the RJ11 plug into any RJ11 socket on inverter 1.
4. Close the inverter if no other inverters are to be connected.
5. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: RJ11 sockets



Note:

A maximum of 32 inverters can be connected per RS422 bus.

Procedure

Open the inverter as shown in the inverter's instructions.

1. Insert the self-made cable with the RJ11 plug into any RJ11 socket on inverter 1.
2. Insert the RJ11 cable into the 2nd RJ11 socket on inverter 1 and into any RJ11 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Close inverters.
5. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.

70 Santerno

70.1 Santerno

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: 9 pin socket on the outside of the housing floor.
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made Santerno data cable (optional extra; not supplied)
- or
- self-made, shielded 2 wire data cable with a 9 pin plug and a terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ 1 (A-Line)
▶ 4	▶ 2 (B-Line)

2. Insert the plug into socket A on the inverter.
3. If only one inverter is to be connected this must be terminated.
Connect socket A on the Santerno Solar-Log™ data cable to the plug of the first Santerno inverter data cable.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Santerno inverter data cable (optional extra; not supplied)
- Where to connect: 9 pin socket on the outside of the housing floor.

Procedure

1. Insert the Santerno inverter data cable plug into socket B of the first inverter.
2. Insert the Santerno inverter data cable plug into socket C of the first inverter.
3. Insert the plug on the other end of the cable into socket C of the second inverter.
4. Connect the other inverters to each other using socket C.
5. Terminate in the last inverter.
Connect socket A on the Santerno Solar Log™ data cable to the plug of the first Santerno data cable.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

71 Schneider Electric

71.1 Schneider Electric SunEzy

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	RS422

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 4-pin cable - only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned
- Multi-string technology

The inverters are fitted with 1 or 3 MPP trackers depending on the model. Each string input is monitored separately and ideally adjusted to the connected modules.

The Solar-Log™ automatically detects how many inverters and strings are active during inverter detection.



Note

The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup in the [Configuration | Device | Configuration | Order](#) menu box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the RS485 interface

Procedure

- ▶ Insert the RS485 interface in the bottom of the inverter in accordance with the interface card installation instructions and screw in.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BKL1 data cable (optional extra; not supplied)
- or
- self-made, shielded 4 wire data cable and terminal block connector.



Note

Only connect inverter using the RS485/422 B interface.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ R+
▶ 4	▶ R-
▶ 5	▶ T+
▶ 6	▶ T-

4. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter (on the retrofitted RS485 interface)

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, R-, T+ and T- of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.
5. Close inverters.

71.2 Schneider Electric Xantrex GT30E

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	No	Yes	Yes	Sub D9 socket

Overview

- Integrated interface
- Where to connect: Sub D 9 socket X51 inside the inverter.
- 2-pin wiring
- Communication address must be allocated to the inverter.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- self-made, shielded 2 wire data cable and terminal block connector

Procedure:

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram

Solar-Log™ terminal strip connector	Inverters
RS485 A	Sub D9 socket X51
▶ 1	▶ 8
▶ 4	▶ 6

3. Close the inverter if no other inverters are to be connected.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: Sub D 9 socket X51 inside the inverter.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram

Solar-Log™ terminal strip connector	Inverters
RS485/422 B	Sub D9 socket X51
▶ 1	▶ 8
▶ 4	▶ 6

2. Connect the other inverters to each other in the same way (1:1).
3. Close the inverter if no other inverters are to be connected.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

71.3 Schneider Electric Conext TL15000E and Conext TL20000E

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 socket on the outside of the inverter
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Allocate communication address
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Insert the RJ45 plug into any RJ45 socket on the first inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram
4. If only one inverter is to be connected this must be terminated.

Solar-Log™ terminal strip connector	Inverters
Terminal	PIN
▶ 1	▶ 4
▶ 3	▶ 3
▶ 4	▶ 5

5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: 2 RJ45 sockets

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Insert the RJ45 plug into any RJ45 socket on the first inverter.
3. Insert the other end of the wire into any RJ45 socket on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter in accordance with the manufacturer's specifications.
6. Close the inverter if no other inverters are to be connected.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

72 Schüco

72.1 IPE CN series

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Terminating plug	Yes	Yes	Yes	RS485

Selectable under RefuSol

Overview

- Integrated interface.
- Where to connect: RJ45 socket on the bottom of the inverter.
- 2-pin wiring.
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™.
 - Connect inverters to the Solar-Log™.
 - Connect the inverters to each other.
 - Allocate communication address.

Note

To use active and reactive power management, all of the inverters need to be set to:



- Protocol 1
- 57600 baud
- Parameter 1164 = 2

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. Connect wires as shown in the diagram below.

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1	▶ 2
▶ 4	▶ 3

2. If only one inverter is to be connected this must be terminated.
On the sockets „RS485 OUT“ with REFUSOL round plugs bypass the connections PIN1 to PIN2 and PIN3 to PIN4.
3. Close the inverter if no other inverters are to be connected.

4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using
 - 2-wire, shielded data cable and
 - 4-pin „SACC-M12MS-4SC“ plug.
- Where to connect: RS485 sockets on the bottom of the inverter.

The RS485 IN and OUT sockets are each double connections so that the wiring can be continued to the next inverter.

Procedure

1. Connect the data cable to the „SACC-M12MS-4SC“ plug as shown in the inverter’s instructions.
2. Insert one plug into the OUT (X14B) socket of inverter 1.
3. Insert the other end of the wire into the IN socket (X15B) on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
On the sockets „RS485 OUT“ with REFUSOL round plugs bypass the connections PIN1 to PIN2 and PIN3 to PIN4.
6. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1; highest possible address: 31.
- Procedure: Start according to the inverter’s instructions.

72.2 IPE CT series

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Selectable under Bonfiglioli

Overview

- Integrated interface.
- Where to connect: Terminal strip inside the inverter.
- 3-pin wiring.
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™.
 - Connect inverters to the Solar-Log™.
 - Connect the inverters to each other.
 - Allocate communication address.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 3 wire data cable with a terminal block connector.

Procedure

1. Get access to the inverter interface
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	RS485 terminal
▶ 1	▶ 1 A (Data+)
▶ 3	▶ 6 GND
▶ 4	▶ 3 B (Data-)

3. If only one inverter is to be connected this must be terminated.
In the inverter, set the DIP switch S1 for the terminal resistor to ON.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: Terminal strip on the inverter
- 3-pin wiring

Procedure

1. Get access to the inverter interface
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Terminal strip inside the inverter

RS485 terminal

▶ 1 A (Data+)

▶ 6 GND

▶ 3 B (Data-)

Terminal strip inside the inverter

RS485 terminal

▶ 2 A (Data+)

▶ 6 GND

▶ 4 B (Data-)

3. Connect terminals on inverter 1 to the corresponding terminals on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Set the DIP S1 switch for the terminal resistor to ON.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1 going to 30
- Procedure: Start according to the inverter's instructions



Note

A maximum of 20 inverters can be connected per RS485 bus.

72.3 IPE SN series

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Yes	Yes	Yes	Yes	RS485

Selectable under Sunways

Overview

- Integrated interface.
- Where to connect: Terminal strip inside the inverter.
 - 750 V models: 4 RS485 terminals on 10 pin terminal strip.
 - 850 V models: 4 pin RS485 terminal strip.
- 2-pin wiring.
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™.
 - Connect inverters to the Solar-Log™.
 - Connect the inverters to each other.
 - Allocate communication address.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made Sunways data cable (optional extra; not supplied)
- or
- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ RS485+
▶ 4	▶ RS485-

4. If only one inverter is to be connected, terminate it according to the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter
 - 750 V models: 4 RS485 terminals on 10 pin terminal strip
 - 850 V models: 4 pin RS485 terminal strip

The RS485 connections on the terminal strip are each double connections so that the wiring can be continued to the next inverter.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals RS485+ and RS485- on all inverters to the two data cable wires in accordance with the inverter instructions.
3. Terminate in the last inverter in accordance with the inverter instructions.
4. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

72.4 Schüco SGI series (RS485)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Terminating plug	Yes	Yes	Yes	RS485

Selectable under Schüco

Overview

- Integrated interface
- Where to connect: RJ45 socket on the bottom of the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 4	▶ 3 (A)
▶ 1	▶ 6 (B)

2. Open the unit cover on the bottom of the inverter.
3. Insert the RJ45 plug into the RJ45 socket on the inverter.
4. If only one inverter is to be connected this must be terminated.
Insert the IP20 terminal plug into a free RJ45 socket (not strictly required for cables up to 100 m long).
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.
6. Close the unit cover on the bottom of the inverter.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 sockets on the bottom of the inverter

Procedure

1. Open the unit cover on the bottom of the inverter.
2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. Insert the other end of the wire into any RJ45 socket on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Insert the IP20 terminal plug into a free RJ45 socket (not strictly required for cables up to 100 m long).
6. Close the unit cover on the bottom of the inverter.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

73 Shindengen

73.1 Shindengen

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 3 wire data cable with a terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	RS485 terminal
▶ 1 A/Data+	▶ 30 A (+)
▶ 3 GND	▶ 31 GND
▶ 4 B/Data-	▶ 13 B (-)

3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Close inverters.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: Terminal strip inside the inverter
- 3-pin wiring

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Terminal strip inside the inverter	Terminal strip inside the inverter
RS485 terminal	RS485 terminal
▶ 30 A (+)	▶ 30 A (+)
▶ 31 GND	▶ 31 GND
▶ 13 B (-)	▶ 13 B (-)

3. Connect terminals on inverter 1 to the corresponding terminals on inverter 2.
4. Connect the other inverters to each other in the same way.
5. If only one inverter is to be connected, terminate it according to the inverter instructions.
6. Close inverters.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering from 1 to 30
- Procedure: Start according to the inverter's instructions.

74 SIEL

74.1 SIEL (single phase)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Interface not integrated; Retrofit RS485 interface card
- 2-pin wiring
- The communication address has to be assigned.
- Installation steps
 - Allocate communication address
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the DIP switch on the interface card.

Before installing the RS485 interface card:

- ▶ Allocate the communication address using the 8 interface card DIP switches:

Example - Communication address 1:

On		■	■	■	■	■	■	■
Off	■							
DIP switch								

Example - Communication address 2:

On	■		■	■	■	■	■	■
Off		■						
DIP switch								

Example - Communication address 3:

On								
Off								
DIP switch								

Example - Communication address 4:

On								
Off								
DIP switch								

Example - Communication address 5:

On								
Off								
DIP switch								

You will find more information at:
http://en.wikipedia.org/wiki/Binary_number.

Installing the RS485 interface

Procedure

- ▶ Install the RS485 interface in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. Open the inverter according to the inverter's instructions.
2. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector

Terminal

- ▶ 1 Data+

- ▶ 4 Data-

Inverter terminal strip

Terminal

- ▶ R+

- ▶ R-

3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Close the inverter if no other inverters are to be connected.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2-wire, shielded data cable.
- Where to connect: Terminal strip inside the inverter on the retrofitted RS485 interface card

Procedure

1. Open the inverter according to the inverter’s instructions.
2. Connect terminals T+ and T-on inverter 1 to terminals R+ and R- on inverter 2.

Terminal strip connection inverter 1	Terminal strip inverter 2
Terminal	Terminal
▶ T+	▶ R+
▶ T-	▶ R-

3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the inverter instructions.
5. Close the inverter.

75 Siemens

75.1 Siemens

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Resistor	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 socket on the bottom of the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

To connect the Solar-Log™ and the inverters prepare cables with the following pin allocation.

Connecting the Solar-Log™ to the first inverter

Solar-Log™ (4/6 pin terminal plug)	First inverter - RS485 IN (4-pin round plug)
Pin 1 (white)	Pin 2
Pin 4 (brown)	Pin 3

If only one inverter is to be connected this must be terminated (see following item "Bus termination").

Connect the inverters to each other

Inverters must be connected to each other using shielded data cables via the RS485 connections located on the SINVERT PVM.

The following illustration shows the main connection diagram.

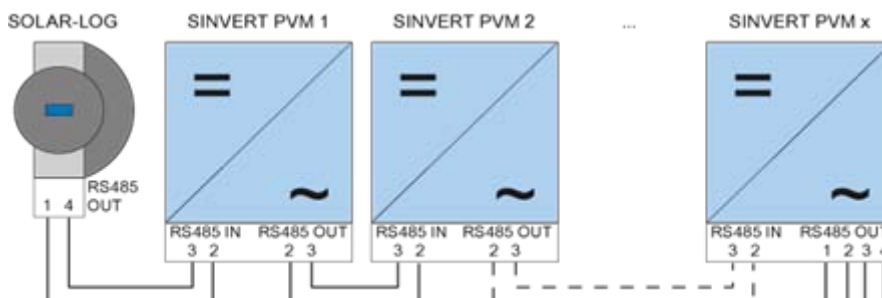


Figure 12: Siemens - connecting inverters together

Use the SACC-M12MS-4SC connectors supplied with the inverter for data cables.

- Connect them as shown in the diagram.
- Connect the bus cable on the last inverter to the RS485 OUT socket using a terminal resistor.

Inverter - RS485 OUT (4-pin round plug)

Pin 2

Pin 3

Inverter - RS485 IN (4-pin round plug)

Pin 2

Pin 3

Bus termination

The bus must be terminated on the RS485 OUT connection of the last inverter with 120Ω .

To do this use the internal 120Ω resistor and wire the following pins in a round 4-pin plug with two jumpers.

Inverter - RS485 OUT (4-pin round plug)

Pin 1

Pin 3

Pin 2

Pin 4

- Insert this plug into the RS485 OUT socket of the last inverter.

Setting parameters

- Parameters are set using the display on the inverter.
- The date and time must be correctly set and the password "72555" entered before the communication settings.
- The communication parameters are set in the sub-menu "F1 -> Configuration -> Communication -> RS 485."
- The individual menu items are selected with the arrow keys $\uparrow\downarrow$ and confirmed by pressing ENTER.
- A consecutive communication address must be allocated to each SINVERT PVM. It is advisable to arrange the addresses consecutively beginning with 1, i.e. 1, 2, 3 up to a maximum of 31. The Solar-Log™ has address "0".
- The baud rate should be set to 57600. Baud rate 9600 must only be used when using the wireless package.

How to set communication address parameters

1. Select "USS address" and press ENTER.
2. Enter the numerical value xx [Address] and press ENTER.
3. Select "Baud rate" and press ENTER.
4. Enter the numerical value [Baud rate] and press ENTER.
5. Select "Protocol" and press ENTER.
6. Select protocol type "1" and press ENTER.

After the parameters have been set on the display the inverter must be switched off for one minute using the installed DC isolation switch. The settings are now applied and set to active. The configuration procedure is described in the manufacturer's handbook. Starting with Solar-Log™ firmware version 2.0.3 (Nov.09) no other parameters must be set on the inverter. The setting up (commissioning) can be continued immediately.

Solar-Log™ compatibility with older PVM installations

With older Solar-Log™ / PVM installations the inverter had to be set with additional parameters for Solar-Log™ compatibility. This is only still necessary if an inverter has been replaced because it was faulty or if the system has been extended. Only in these cases must the additional parameters be set again on the new inverters.

76 SMA

76.1 Overview

SMA inverters do not have an integrated RS485 interface.

However, the following RS485 interfaces can be retrofitted to SMA inverters:

- Special RS485 piggyback card (by Solare Datensysteme GmbH)
- Original SMA RS485 piggyback card (by SMA)

Both piggyback cards can be installed in "Sunny Boy" inverters (except for 3000/4000/5000TL-20 next generation) or "Sunny Mini Central" by SMA. The SMA RS485 data module is required for the SMA -20 and Tripower inverters.

Special RS485 piggyback card

- Only use with Solar-Log™ devices.

Piggyback mixed mode

Inverters with special RS485 piggybacks and original SMA piggybacks or data modules can be used together.

A diagram for wiring in SMA combined mode can be found in the appendix.

SMA Bluetooth mode

The Solar-Log™ BT model is compatible with Bluetooth enabled SMA inverters. On Bluetooth Solar-Log™ models it is possible to combine Bluetooth and hardwired RS485 devices but only using the RS485/422 B port. When Bluetooth operation is activated Port A becomes dedicated and restricted to 7 SMA BT inverters.



Note

Refer to the chapters in the Installation Manual when exchanging SMA inverters.

76.2 SMA connection using special RS485 piggyback card

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Jumper	No	Yes	Yes	RS485

Overview

- Interface not integrated; retrofit the special RS485 piggyback card
- Where to connect: Terminal strip inside the inverter on the piggyback
- Communication address does not have to be assigned
- 4-pin wiring
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Installing the special RS485 piggyback in inverters
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the special RS485 piggyback in inverters

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. The Piggy Back has to be installed on the inverter's circuit board aligned to the left side under the pin contract strip (Figure 3, left).

The print "unten [down]" on the board has to be visible on the bottom left-hand side (Figure 3, right).

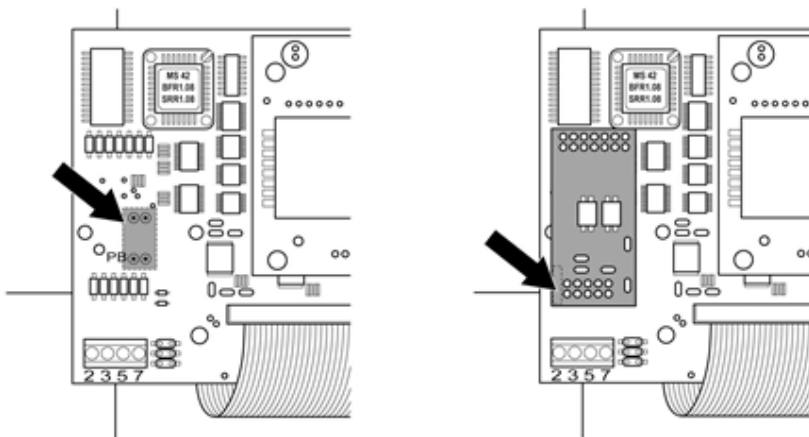


Figure 3: Control board before and after installation of the piggyback

Connect inverters to the Solar-Log™

- The wiring is done using a ready-made data cable (optional extra; not supplied) or self-made, shielded 4 wire data cable and terminal block connector.

Procedure

1. Pull the free wires through the wire opening in the inverter.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ 2
▶ 2	▶ 3
▶ 3	▶ 5
▶ 4	▶ 7

3. Pull the wire in the inverter through the insulation sleeve attached to the piggy back. The wire must be enclosed in the insulating hose inside the inverter.
4. Ground the connection: Connect terminal 5 on the inverter to the inverter housing using the supplied flat strip connector.
5. If only one inverter is to be connected it must be terminated. Put the supplied jumper onto the lower pins on the connector strip.

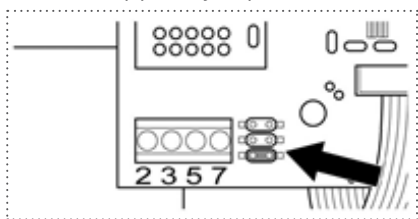


Figure 4: Piggyback - insert jumper

6. Close the inverter if no other inverters are to be connected.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable (e.g. a 25 m ring cable, Solare Datensysteme order 220014)
- Where to connect: Terminal block in inverter (on the retrofitted RS485 interface)

Procedure

1. Pull the wire in the inverter through the insulation sleeve attached to the piggy back

The wire must be enclosed in the insulating hose inside the inverter.

2. Connect all 4 contacts (2, 3, 5, 7) on the terminal strip of inverter 1 to inverter 2



Note

A diagram for wiring in SMA combined mode can be found in the appendix.

3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.

Put the supplied jumper onto the lower pins on the connector strip.

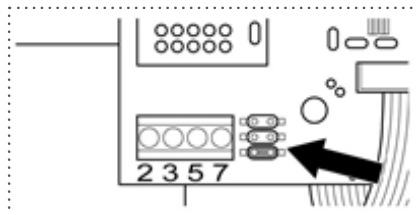


Figure 5: Jumper SMA

5. Close inverters.

76.3 Connect SMA with original SMA RS485 piggy back and the SMA RS485 data module

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Resistor jumper	No	Yes	Yes	RS485

Overview

- Interface not integrated; retrofit the SMA RS485 piggyback card
- Where to connect: Terminal strip inside the inverter on the piggyback
- Communication address does not have to be assigned
- 3-pin wiring
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Installing the original SMA RS485 piggyback in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the original SMA RS485 piggyback in the inverter

Procedure

- ▶ Install the original SMA RS485 piggy back in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter’s instructions.
2. Pull the free wires through the wire opening in the inverter.
3. Pull the cable through the insulation tube.



Note

The wire must be enclosed in the insulating hose inside the inverter.

4. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ 2
▶ 3	▶ 5
▶ 4	▶ 7

5. Ground the connection: Connect terminal 5 on the inverter to the inverter housing using the supplied flat strip connector.
6. If only one inverter is to be connected it must be terminated.
Put the supplied jumper onto the lower pins on the connector strip.

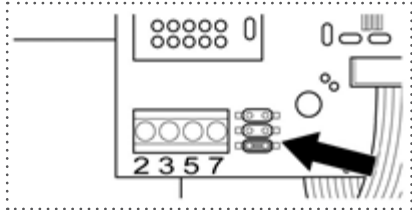


Figure 6: Jumper SMA

7. Close the inverter if no other inverters are to be connected.
8. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 3 wire, shielded data cable.
- Where to connect: Terminal block in inverter (on the retrofitted RS485 interface)

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect the inverter in accordance with the inverter installation instructions.
3. If only one inverter is to be connected it must be terminated.
Put the supplied jumper onto the lower pins on the connector strip.

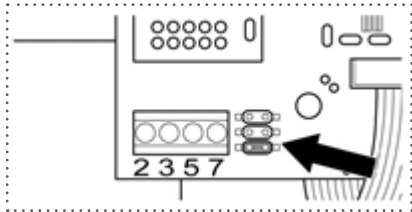


Figure 7: Jumper SMA

4. Close inverters.



Note

A diagram for wiring in SMA combined mode can be found in the appendix.

76.4 SMA Bluetooth mode

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Resistor jumper	No	Yes	Yes	RS485

Bluetooth mode is only possible if the optional Bluetooth module is installed in the Solar-Log™. Bluetooth mode is possible only with Solar-Log™ BT models. All SMA Bluetooth inverters are supported, even Bluetooth Piggy Back cards.

Overview

- All SMA Bluetooth piggybacks are supported.
- Simultaneous operation with SMA SunnyBeam Bluetooth is not possible.
- Solar-Log™ BT Devices:
 - A maximum of 7 SMA Bluetooth inverters can be read
 - Possible to connect inverters from other manufactures

Bluetooth settings on the Solar-Log™

- The Solar-Log™ supports both the "direct connection" and "networked connection" modes. The models from the R2 series only have the option for "networked connections."
- Direct connection: The Solar-Log™ directly connects to each and every inverter individually. This requires that the Solar-Log™ is within range of the inverters. The NET-ID on the inverter and Solar-Log™ is set to 1.
- Networked connection (recommended): The Solar-Log™ connects to one inverter which then relays the connection signals to the other inverters. This greatly increases the range for the Bluetooth connection. Select a NET-ID between 2 and F for both the inverter and Solar-Log™ to use this mode. The NET-ID for the inverter and Solar-Log™ have to match.

Bluetooth addressing on the inverter

- Setting: Rotary switch in the inverter.
Refer to the inverter's manual for more information.

Bluetooth detection

- If possible, carry out Bluetooth detection in the room in which the inverter is installed, in order to avoid any detection errors resulting from lack of range.
- Then test the Bluetooth connection from further away. The maximum range is 50 m in a free field.
- The Easy Installation only works with NET-ID 2 on the inverter.



Note

The preset user name and password in the inverter may not be modified.



Note

The feed-in management functions are also available for the Bluetooth interface. Please note that the necessary settings have to be configured with the manufacturer's software. Please refer to the inverter's user manual for more information.

76.5 SMA Meter Connection Box

An energy meter with S0 output can be connected to the SMA Meter Connection Box. The Meter Connection Box then converts the S0 signal to the RS485 Bus.

The Meter Connection Box is connected to the RS485 socket the same way as with the SMA inverter. In the course of the inverter detection, the Box is recognized as an inverter - SMA is to be selected.

The configuration is done in the [Configuration | Devices | Configuration](#) menu.

Procedure

- Perform detection.
- Select the respective number.
- Enter the generator power.
- Enter the pulse factor.
- Select the type of power meter.
- Save.

76.6 SMA Speedwire



Note

The trademark "Speedwire" is registered trademark of SMA Solar Technology AG in many countries.

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Resistor jumper	No	Yes	Yes	RS485

Overview

- Integrated or retrofitted Speedwire interface
- The inverter's IP address has to be assigned.
- Connected using network cable (patch cable) and Ethernet router or switch
- Installation steps
 - The inverter's has to be assigned a static IP address.
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™ (RJ45).
 - Connect the inverters to each other (RJ45).

Retrofitting the inverter with a SMA Speedwire module

Procedure

- ▶ Install the original Speedwire module in the inverter according to the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- network cable (patch cable/crossover cable) and the
- Ethernet router or switch.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the network cable through the inverter's cable opening and connect it to the Speedwire interface.
3. Close the inverter cover if no other inverters are to be connected.
4. Plug the network cable into the RJ45 socket (Ethernet) on the Solar-Log™.

Connect the inverters to each other

The inverters are connected together using the RJ45 interface and, if needed, a router or switch.

Connection setup according to the inverter's instructions.

Assigning IP addresses

- A static IP address has to be assigned to the inverter. This is set to automatic by default. Please refer to the inverter's user manual for more information.
- Please select an IP address with the same subnet as the Solar-Log™.
For example: The Solar-Log™ has the IP address 192.168.178.49.
The inverter in this case has to have a free IP address in the same range (from 192.168.178.2 to 192.168.178.254).
- Procedure: Start according to the inverter's instructions

Detection from the Solar-Log™

- For the detection on the Solar-Log™, select "SMA" as the inverter manufacturer in the [Configuration | Devices | Definition](#) menu from the [Network](#) section. Confirm the selection with [Save](#).

Detection from the Solar-Log 1200

- When using the Solar-Log 1200, the detection can also be started from the display. Select "SMA" as the manufacturer for the Speedwire detection from the "network" interface and start the detection.



Note for feed-in management

The feed-in management functions are also available for the Bluetooth interface. Please note that the necessary settings have to be configured with the manufacturer's software. Please refer to the inverter's user manual for more information.



Note

Please refer to the instructions in the manufacturer's installation manual in regard to address types.



Note

Wiring with the bus.

Only one network connection is available per inverter with the integrated Speedwire interface.

A router or switch is required when using several inverters or when using the Ethernet (RS45) interface on the Solar-Log™.

Connect the inverters to each other

- Where to connect: Terminal strip inside the inverter
- 5-wire cabling

Procedure

- Open the inverter according to the inverter's instructions.
- Connect the other inverters to each other in the same way.
- Terminate the last inverter according to the inverter instructions.
- Close the inverter.
- Communication address according to the inverter's instructions.
- Recommendation: Continuous numbering starting with 1.
Address range 1 - 255.

77.2 SOCOMECC Sunsys B12/B30

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Selection available under SOCOMECC

Overview

- Integrated interface.
- Where to connect: RJ45 sockets inside the inverter
- 3-pin wiring.
- The communication address has to be assigned.
- Installation steps
 - Switch off the inverters and Solar-Log™.
 - Connect inverters to the Solar-Log™.
 - Connect the inverters to each other according to the inverter instructions
 - Communication address according to the inverter's instructions.
Address range 1 - 255.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.

Procedure

1. Open the inverter according to the inverter's instructions.
2. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1 Data+	▶ 5
▶ 3 GND	▶ 7
▶ 4 Data-	▶ 4

3. Insert the RJ45 plug into the RJ45 socket on the first inverter.
4. If only one inverter is to be connected, terminate this according to the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a data cable with an RJ45 plug.
- Where to connect: RJ45 sockets in the inverter.

Procedure

1. Open the inverter according to the inverter's instructions.
2. Insert the RJ45 plug into the RJ45 socket on the first inverter.
3. Insert the other end of the cable into the RJ45 socket on second inverter.
4. Connect the other inverters to each other in the same way.
5. Terminate the last inverter according to the inverter instructions.
6. Close the inverter.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
Address range 1 - 255.
- Procedure: Start according to the inverter's instructions.

78 SolarEdge

78.1 SolarEdge

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Switch	No	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- Communication address must be allocated.
- 3-pin wiring
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Address inverter and set protocol
 - Connect the inverters to each other

Note

Installing a “SolarEdge-Gateway” on a RS485 bus, connecting SolarEdge inverters with a Solar-Log™, can lead to communication problems with the inverters. In order to ensure a correct communication with the Solar-Log™, the “Wireless package” switch must be activated on the respective I/O port in the web menu.



=> The SolarEdge-Gateway is not supported on I/O port “C”, which has no wireless package option.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	X4 socket RS485-1 inverter
Terminal	PIN
▶ 1	A - Data+
▶ 3	G - GND
▶ 4	B - Data-

4. If only one inverter is to be connected, it must be terminated with DIP switch SW7 according to the manufacturer's instructions.
5. Screw the inverter cover on again.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: Terminal strip inside the inverter

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

X4 socket RS485-2 inverter n	X4 socket RS485-1 inverter n+1
PIN	PIN
A - Data+	A - Data+
G - GND	G - GND
B - Data-	B - Data-

4. Connect the other inverters to each other in the same way.
5. Terminate the last inverter with DIP switch SW7 according to the manufacturer's instructions.
6. Screw the inverter cover on again.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1; highest possible address: 247.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

Inverter settings

Two settings need to be checked on the inverter's control panel and changed if needed before performing the inverter detection.

1. **Non-SE Logger** has to be set in the **Communication // RS485-1 Conf // Device Type** menu.
2. **SunSpec** has to be activated in the **Communication // RS485-1 Conf // Protocol** menu.

79 SolarMax

79.1 SolarMax – S, C, MT, P, TS, TS-SV and HT- series

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	No	Yes	Yes	Yes	RS485

Note regarding the HT series:



Inverter models that have more than 3 MPP trackers are subdivided by the Solar-Log™ into multiple “virtual” devices. Thus, for inverter type 32HT4, for example, with 4 MPP trackers, two virtual devices are detected.

» The reason for this is because the Solar-Log™ is limited to a maximum of 3 MPP trackers per inverter.



Note for Solar-Log²⁰⁰

The Solar-Log²⁰⁰ is designed for one inverter only. For this reason, Solar Max inverters of the HT series with more than 3 MPP trackers cannot be installed to the Solar-Log²⁰⁰ since the Solar-Log™ subdivides this model of inverter into multiple “virtual” devices.

Overview

- Integrated interface
- Where to connect: RJ45 socket on the outside of the inverter
- Where to connect HT series: RJ45 socket inside the inverter
- 6-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made RS485 data cable with RJ45 plug and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Wiring the C-series

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 7
▶ 2	▶ 1
▶ 2	▶ 2
▶ 3	▶ 3
▶ 3	▶ 4
	5 - unused
	6 - unused
▶ 4	▶ 8

2. Insert the RJ45 plug into any RJ45 socket on the first inverter.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Wiring the S, MT, P, TS, TS-SV and HT-series

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 7
▶ 4	▶ 8

2. Insert the RJ45 plug into any RJ45 socket on the first inverter.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using the RS485 data cable with an RJ45 plug
- Where to connect: RJ45 socket on the outside of the inverter
- Where to connect HT series: RJ45 socket inside the inverter

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

Notice concerning the RS485 wiring of the SolarMax P series:

The P series from SolarMax does not support RS485 "Daisy Chain" connections. This means that multiple inverters cannot be connected together on the same RS485 bus cable.

For this reason, a maximum of one inverter of the P series can be connected to the respective RS485 ports (A/B/C, max. 3) of a Solar-Log™.

- » Alternatively to using the RS485 variation, you can connect multiple P series inverters to the Solar-Log™ by means the Ethernet connection to the LAN.

Note

The inverter's factory setting is communication address 255.

- ▶ On the inverter operating display set the communication address manually to 1 even if only one inverter is connected to the Solar-Log™.

S series:

- ▶ When setting the communication address on the inverter display only the RS485 interface must be activated (set at the factory), not the Ethernet interface that is also installed in the inverter.

Note for feed-in management

The inverter itself has to be configured with MaxTalk2 (SolarMax's software) and set to "Remote mode" to be able to use reactive power management. Please refer to the inverter instructions for more information on this topic.

79.2 SolarMax – Cx series

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	No	Yes	Yes	Yes	RS485

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 6-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Installing the RS485 interface

Procedure

- ▶ Install the RS485 interface in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made cable connection using RS485 data cable with RJ45 plug and terminal block connector



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 7
▶ 2	▶ 1
▶ 2	▶ 2
▶ 3	▶ 3
▶ 3	▶ 4
	5 - unused
	6 - unused
▶ 4	▶ 8

3. Insert the RJ45 plug into any RJ45 socket on inverter 1.
4. Close the inverter if no other inverters are to be connected.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 socket inside the inverter (on the retrofitted RS485 interface)

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. Insert the other end of the wire into any RJ45 socket on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions



Note for feed-in management

The inverter itself has to be configured with MaxTalk2 (SolarMax's software) and set to "Remote mode" to be able to use reactive power management. Please refer to the inverter instructions for more information on this topic.

79.3 SolarMax – E series

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	No	Yes	Yes	Yes	RS485

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 6-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Installing the RS485 interface

Procedure

- ▶ Install the RS485 interface in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made cable connection using RS485 data cable, RJ45 plug and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 7
▶ 2	▶ 1
▶ 2	▶ 2
▶ 3	▶ 3
▶ 3	▶ 4
	5 - unused
	6 - unused
▶ 4	▶ 8

3. Run the wire from the Solar-Log™ to inverter 1 through the hole for the wire on the bottom of the unit.
4. In the inverter insert the RJ45 plug into the "RS-485 out" socket.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using the RS485 data cable with an RJ45 plug
- Where to connect: RJ45 socket inside the inverter (on the retrofitted RS485 interface)

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Run the wire from inverter 1 to inverter 2 through the hole for the wire on the bottom of the unit.
3. Insert the RJ45 plug into the "RS485 in" socket in inverter 1.
4. Insert the other end of the cable with the RJ45 plug into the "RS485 out" socket in inverter.
5. Connect the other inverters using the "RS-485 in" and "RS485 out" sockets.
6. Two cables will be run through each inverter.
7. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions



Note for feed-in management

The inverter itself has to be configured with MaxTalk2 (SolarMax's software) and set to "Remote mode" to be able to use reactive power management. Please refer to the inverter instructions for more information on this topic.

79.4 SolarMax via Ethernet interface

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	No	Yes	Yes	Yes	LAN

Overview

- Integrated interface
- The inverter's IP address has to be assigned.
- Connected using a network cable (patch cable) and Ethernet router or switch.
- Installation steps
 - The inverter has to be assigned a static IP address.
 - Switch off the inverters and Solar-Log™.
 - Connect inverters to the Solar-Log™ (RJ45).
 - Connect the inverters to each other (RJ45).

Connect inverters to the Solar-Log™

The wiring is done using a

- network cable (patch cable/crossover cable) and the
- Ethernet router or switch.

Connect the inverters to each other

The inverters are connected together using the RJ45 interface and, if needed, a router or switch.

Follow the connection setup according to the inverter's instructions.

Assigning IP addresses

- A static IP address has to be assigned to the inverter via the display.
- Please select an IP address with the same class C subnet as the Solar-Log™.
For example: The Solar-Log™ has the IP address 192.168.178.49.
The inverter in this case has to have a free IP address in the same range (from 192.168.178.1 to 192.168.178.254).
- Procedure: Start according to the inverter's instructions.



Notes on inverter configuration

- The inverter's Ethernet interface has to be activated.
- Only the TCP port "12345" is supported.



Note for feed-in management

The inverter itself has to be configured with MaxTalk2 (SolarMax's software) and set to "Remote mode" to be able to use reactive power management. Please refer to the inverter instructions for more information on this topic.

80 SolaX Power

80.1 SolaX Power X1

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Automatic	No	No	RS422

The following types are to be connected according to this diagram:

SL-TL1500, SL-TL2200, SL-TL2500, SL-TL2800, SL-TL3000, SL-TL3300T, SL-TL3600T, SL-TL4400T, SL-TL5000T

Select SolaXPower X1 during the inverter detection.

Overview

- Integrated interface.
- 2 RJ45 sockets on the outside of the inverter.
- 4-pin wiring.
- Communication address does not have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™.
 - Connect inverters to the Solar-Log™.
 - Connect the inverters to each other



Note

Only connect inverter using the RS485/422 B or RS485/422 C interface.

Connect inverters to the Solar-Log™.

The wiring is done using a

- self-made, shielded 8 wire data cable and terminal block connector.
- Where to connect: RJ45 socket on the inverter



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you make the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1	▶ Pin 3 - TX+
▶ 4	▶ Pin 6 - TX-
▶ 5	▶ Pin 1 - RX+
▶ 6	▶ Pin 2 - RX-

2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. If only one inverter is to be connected, terminate it according to the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485/422 B or RS485/422 C socket.

Connect the inverters to each other

- Connect using a RJ45 cable (patch cable).
- Where to connect: RJ45 socket.

Procedure

1. Insert the self-made cable with the RJ45 plug into any RJ45 socket on inverter 1. Connect the other end to the terminal plug on the Solar-Log™.
2. Insert the RJ45 cable into the 2nd RJ45 socket on inverter 1 and into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Insert the terminal block connector into the Solar-Log™ RS485/422 B/C socket.
5. Terminate in the last inverter in accordance with the inverter instructions.

80.2 SolaX Power X3

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

The following types are to be connected according to this diagram:

ZDNY-TL10000, ZDNY-TL12000, ZDNY-TL15000, ZDNY-TL17000

Select SolaXPower X3 during the inverter detection.

Overview

- Integrated interface.
- 2 RJ45 sockets on the outside of the inverter.
- 2-pin wiring.
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™.
 - Connect inverters to the Solar-Log™.
 - Connect the inverters to each other
 - Allocate communication address.
Address range 1 to 247
Settings on the inverter's display according to the manufacturer's manual.

Connect inverters to the Solar-Log™.

The wiring is done using a

- self-made, shielded 8 wire data cable and terminal block connector.
- Where to connect: RJ45 socket on the inverter

Procedure

1. If you make the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1	▶ Pin 4 - Data+
▶ 4	▶ Pin 5 - Data-

2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. If only one inverter is to be connected, terminate it according to the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a RJ45 cable.
- Where to connect: RJ45 socket.

Procedure

1. Insert the self-made cable with the RJ45 plug into any RJ45 socket on inverter 1. Connect the other end to the terminal plug on the Solar-Log™.
2. Insert the RJ45 cable into the 2nd RJ45 socket on inverter 1 and into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.
5. Terminate in the last inverter in accordance with the inverter instructions.

Allocate communication address

1. Recommendation: Continuous numbering starting with 1.
Address range 1 - 247.
2. Setting: Using the inverter operating display.
3. Procedure: Start according to the inverter's instructions.

81 Solectria

81.1 Solectria >9k

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

The following types are to be connected according to this diagram:

- PVI 10KW
- PVI 13KW
- PVI 15KW
- PVI 100KW

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Change the communication address if required.
Every address may only be used once.
Address range 1 to 16.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with terminal block connector.
- Where to connect: Terminal strip inside the inverter

Procedure

- If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	PIN
▶ 1 (Data+)	RS485 A
▶ 3 (Ground)	RS485 G
▶ 4 (Data-)	RS485 B

- If only one inverter is to be connected, according to the manufacturer's handbook it must be terminated.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect with a shielded twisted-pair cable.
- Where to connect: Terminal strip inside the inverter

Procedure

- If you make the cable yourself, connect the wires as shown in the diagram:

Terminal strip inside the inverter	Terminal strip inside the inverter
PIN	PIN
RS485 A	RS485 A
RS485 G	RS485 G
RS485 B	RS485 B

- Wire the remaining inverters to each other according to the manufacturer's specifications.
- Terminate the last inverter according to the inverter instructions.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

The RS485 connections on the terminal strip are each double connections so that the wiring can also be continued to the next inverter.

Procedure

1. Connect the data cable to the free blocks A, B and G on inverter 1.
2. Connect the other end of the cable to the blocks A, B and G on inverter 2.
3. Connect the remaining inverters in the same way.
4. Terminate in the last inverter according to the manufacturer's instructions.
5. Close the inverter if no other inverters are to be connected.

Notes on inverter addresses

- Recommendation: Continuous numbering starting with 1.
- Settings: On the inverter operating display.
- Procedure: Follow the manufacturer's documentation for the inverter.

Note



Check the baud rate on the inverters. The baud rate has to be set to 19200 with one Stop Bit and No Parity (19200-8N1). Set the baud rate according to the instructions of the inverter manufacturer.

81.2 Solectria <9k

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	Yes	Yes	RS485

The following types are to be connected according to this scheme:

- PVI 3KW
- PVI 4KW
- PVI 5KW
- PVI 5,3kW

Overview

- Integrated interface
- Where to connect: RJ45 plug outside the housing floor
- 2-pin wiring
- Communication address does not have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BRJ2 data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 7 (TX A)
▶ 3	▶ 4 or 5 (GND)
▶ 4	▶ 8 (RX B)

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected, terminate this according to the inverter instructions (DIP switch on the device).
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 socket (RJ45 R and L) on the outside of the inverter,

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the inverter instructions.

Caution



Every inverter has to have an unique ID number (address) between 1 and 16. Please contact Solectria Renewables for support if you have inverters with the same ID number. Only the manufacturer can change the ID numbers.

82 Solutronic

82.1 Solutronic SP25-55 (RS485)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip on the outside of the inverter
- 3-pin wiring
- Communication address must be allocated.
- All inverters must be fitted with firmware version 1.2.39 or later.
- Inverters must be grounded otherwise this could lead to problems with inverter detection.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ Pin 1 RS485-A
▶ 3	▶ Pin 3 GND
▶ 4	▶ Pin 2 RS485-B

2. If only one inverter is to be connected it must be terminated.
You will find detailed instructions for setting the inverters on the Solutronic website.
3. Close the inverter if no other inverters are to be connected.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 3 wire, shielded data cable
- Where to connect: Terminal strip on the outside of the inverter

Procedure

1. Insert the plug into the X2 socket on inverter 1.
2. Insert the other end of the wire into the X2 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.

Detailed instructions for setting the inverters are available on the Solutronic website.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Suing the inverter's control panel (starting with inverter firmware 2.62 parameter 89 and parameter 230 for older firmware versions):
- In addition, set the COM port to Protocol 1 - Solutronic protocol (parameter 265).
- Procedure: Start according to the inverter's instructions



Note

The mode Fixed cos Phi has to be set according to the manufacturer's specifications for all of the inverters to use active and reactive power management.

82.2 Solutronic SP100, SP120 (RS485)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Round pin plug on the outside of the inverter.
- 3-pin wiring
- Communication address must be allocated.
- All inverters must be fitted with firmware version 1.2.39 or later.
- Inverters must be grounded otherwise this could lead to problems with inverter detection.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ 2 - Data +
▶ 3	▶ 3 - Ground
▶ 4	▶ 4 - Data -

2. Terminate pin 1 on the terminal block connector and pin 4 on the Solar-Log™ using the 120 Ω terminal resistor.
3. Terminate on the inverter in accordance with the manufacturer's handbook.
4. Close the inverter if no other inverters are to be connected.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connection in the master-slave data network using an 1:1 cable with M12 plug connector (available as an optional extra from Solutronic)

Sockets X6 and X7 are connected to each other electrically.

- Where to connect: Round pin plug on the outside of the inverter.

Procedure

1. Insert the plug into the X6 socket on inverter 1.
2. Insert the other end of the wire into the X7 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the manufacturer's instructions.

Allocate communication address

- Setting: Using the inverter's control panel, parameter 89 in the communication menu.
Recommendation: Continuous numbering starting with 1.
Set this in the SSP address menu item.
- Procedure: Start according to the inverter's instructions



Note

The mode Fixed cos Phi has to be set according to the manufacturer's specifications for all of the inverters to use active and reactive power management.

83 Steca

83.1 Steca

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Switch	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ socket, on the outside of the inverter's interface card.
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made RS485 data cable with RJ45 plug and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 1
▶ 4	▶ 2

2. Insert the RJ45 plug into any RJ45 socket on the first inverter.
3. If only one inverter is to be connected this must be terminated.
On the inverter insert the connection plug into the free RJ45 socket.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using the RS485 data cable with RJ45 plug;
Connection cables between the inverters are supplied with the inverters. Use these.
- Where to connect: RJ45 socket on the outside of the inverter

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Insert the connection plug into the free RJ45 socket.

Allocate communication address

1. Recommendation: Continuous numbering starting with 1.
2. Setting: Using the rotating switch on the inverter interface card.
3. Procedure: Start according to the inverter's instructions

83.2 Steca (larger than 17k)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 socket on the bottom of the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Select the Steca >=17k inverter during the initial configuration.

Note

To use active and reactive power management, all of the inverters need to be set to:



- Protocol 1
- 57600 baud
- Parameter 1164 = 2

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

- Connect wires as shown in the diagram below.

Solar-Log™ terminal strip connector

RS485 inverter socket

Terminal	PIN
▶ 1	▶ 2
▶ 4	▶ 3

- If only one inverter is to be connected this must be terminated.
On the sockets "RS485 OUT" with SACC-M12MS-4SC round plugs bypass the connections PIN1 to PIN2 and PIN3 to PIN4.
- Close the inverter if no other inverters are to be connected.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

Connect using

- a 2-wire shielded data cable and
- 4-pin Phoenix Contact Connection plug type "M12MS SACC-4SC SH" (two plugs included with the inverter).
- Where to connect: RS485 sockets on the bottom of the inverter.

The RS485 IN and OUT sockets are each double connections so that the wiring can be continued to the next inverter.

Procedure

- Wiring the data cable to the "Phoenix Contact Type M12MS SACC-4SC SH" according to the manufacturer's instructions.
- Insert one plug into the OUT (X14B) socket of inverter 1.
- Insert the other end of the wire into the IN socket (X15B) on inverter 2.
- Connect the other inverters to each other in the same way.
- Terminate in the last inverter.
On the sockets "RS485 OUT" with Phoenix contact type M12MS SACC-4SC SH bridge the connections PIN1 to PIN2 and PIN3 to PIN4.
- Close inverters.

Allocate communication address

Recommendation: Continuous numbering starting with 1.

highest possible address: 31

Set the following parameters on the inverter's operating display:

- Press "F1", select **Numerical list**, press "ENTER".
- Set parameter number **2000** [password protection], press "ENTER" twice.
- Enter **72555**, press "ENTER"
- Set parameter number **0406**, press "ENTER"
- Select sub parameter **0406,3**, press "ENTER"
- Enter figure for communication **x**
[x = continuous numbering starting with 1; highest possible address: 31], press "ENTER". 31], press "ENTER".

After configuring on the display:

- Using the installed DC isolating switch turn the inverters on and off briefly so that the settings are activated.
- Set the date and time on the inverter as shown in the inverter instructions.

84 Sungrow

84.1 Sungrow

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	120 Ω resistor	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 socket or COM round sockets on the outside of the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address



Note: The inverter's communication connection is then changed to the from the round socket to RJ45. Currently, the SG1,5KTL is still supplied with round sockets.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable with round plug and terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Round socket inverter for SG1,5KTL
Terminal	PIN
▶ 1	▶ 1 (A)
▶ 4	▶ 2 (B)

Solar-Log™ terminal strip connector

RJ45 socket inverter

Terminal	PIN
▶ 1	▶ 3 (Data -B)
▶ 4	▶ 6 (Data +A)

2. Insert the plug into the socket on the inverter
3. If only one inverter is to be connected, terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Wiring with a self-made RS485 cable,
- RJ45 socket and COM round sockets on the outside of the inverter,

Procedure

Connect a cable between the RJ45 and round sockets.

- Connect the first inverter as explained above.
- Connect the second inverter via the RS485/WiFi socket, in accordance to the inverter's instructions.
- Connect the other inverters to each other in the same way.
- Terminate the last inverter in accordance with the inverter instructions.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

85 Sunpower

85.1 Sunpower SPR-F-Model with Fronius ComCard

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Connection plug Bridge 4-3 + 5-6	Yes	No	No	RS422

Select "Fronius" during the inverter detection

Overview

- The Fronius ComCard RS422 interface integrated as an option; otherwise can be retrofitted using „ComCard retrofit“.
- Where to connect: RJ45 socket on the outside of the inverter
- 4 wire cabling with 6-pin terminal block connector
- Communication address must be allocated.
 - Recommendation: Continuous numbering starting with 1.
 - Setting: Using the inverter operating display
 - Procedure: Start according to the inverter's instructions
- Installation steps
 - Switch off the inverters and Solar-Log™
 - (Install Fronius ComCard RS485 interface into the inverter).
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Installing Fronius ComCard RS485 interface

Procedure

- ▶ Install the Fronius ComCard RS485 interface in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made Fronius data cable (optional extra; not supplied)
- or
- self-made data cable with RJ45 plug and 6-pin terminal block connector

Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 B-Solar-Log™ interface.



Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 4
▶ 4	▶ 5
▶ 5	▶ 3
▶ 6	▶ 6

2. In the inverter insert the RJ45 plug into the IN socket.
3. If only one inverter is to be connected this must be terminated.
Insert the supplied connection plug into the RJ45 OUT socket on the inverter.

The connection plug is an 8-pin dummy plug with bridged wires: Bridge wires 3 and 4 and wires 5 and 6.

4. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 socket on the outside of the inverter

Procedure

1. Insert the RJ45 plug in inverter 1 into the OUT socket.
2. Insert the other end of the wire into the IN socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.
Insert the supplied connection plug into the RJ45 OUT socket.
5. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.
6. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

85.2 Sunpower SPR-M-Model connection using special RS485 piggyback card

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Jumper	No	Yes	Yes	RS485

Select “SMA” during the inverter detection

Overview

- Interface not integrated; retrofit the special RS485 piggyback card
- Where to connect: Terminal strip inside the inverter on the piggyback
- Communication address does not have to be assigned
- 4-pin wiring
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Installing the special RS485 piggyback in inverters
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the special RS485 piggyback in inverters

Procedure

1. Open the inverter as shown in the inverter’s instructions.
2. The Piggy Back has to be installed on the inverter’s circuit board aligned to the left side under the pin contract strip (Figure 3, left).
The print „unten [down]“ on the board has to be visible on the bottom left-hand side (Figure 3, right).

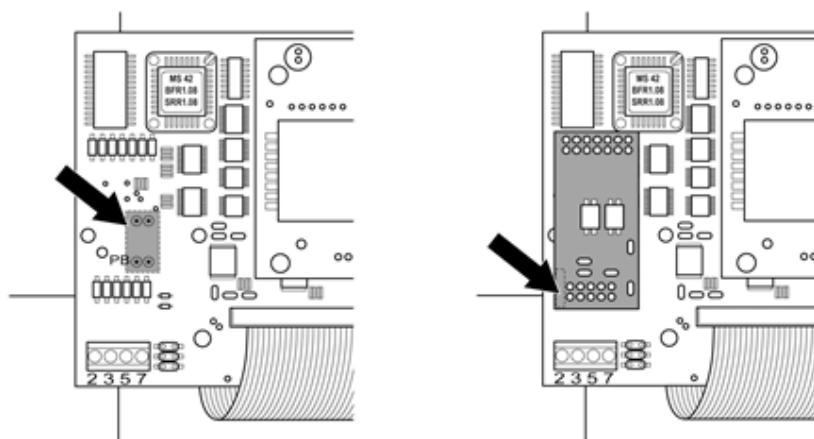


Figure 3: Control board before and after installation of the piggyback

Connect inverters to the Solar-Log™

- The wiring is done using a ready-made data cable (optional extra; not supplied) or self-made, shielded 4 wire data cable and terminal block connector.

Procedure

1. Pull the free wires through the wire opening in the inverter.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ 2
▶ 2	▶ 3
▶ 3	▶ 5
▶ 4	▶ 7

3. Pull the wire in the inverter through the insulation sleeve attached to the piggy back. The wire must be enclosed in the insulating hose inside the inverter.
4. Ground the connection: Connect terminal 5 on the inverter to the inverter housing using the supplied flat strip connector.
5. If only one inverter is to be connected it must be terminated. Put the supplied jumper onto the lower pins on the connector strip.

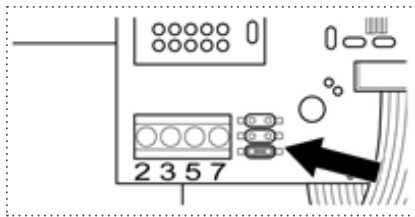


Figure 4: Piggyback - insert jumper

6. Close the inverter if no other inverters are to be connected.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable (e.g. a 25 m ring cable, Solare Datensysteme order 220014)
- Where to connect: Terminal block in inverter (on the retrofitted RS485 interface)

85.3 Sunpower SPR-M-Model connect with original SMA RS485 piggy back and the SMARS485 data module

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Resistor jumper	No	Yes	Yes	RS485

Select “SMA” during the inverter detection

Overview

- Interface not integrated; retrofit the SMA RS485 piggyback card
- Where to connect: Terminal strip inside the inverter on the piggyback
- Communication address does not have to be assigned
- 3-pin wiring
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Installing the original SMA RS485 piggyback in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the original SMA RS485 piggyback in the inverter

Procedure

- ▶ Install the original SMA RS485 piggy back in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 3 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter’s instructions.
2. Pull the free wires through the wire opening in the inverter.
3. Pull the cable through the insulation tube.



Note

The wire must be enclosed in the insulating hose inside the inverter.

4. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector**Inverter terminal strip**

Terminal	Terminal
▶ 1	▶ 2
▶ 3	▶ 5
▶ 4	▶ 7

- Ground the connection: Connect terminal 5 on the inverter to the inverter housing using the supplied flat strip connector.
- If only one inverter is to be connected it must be terminated.
Put the supplied jumper onto the lower pins on the connector strip.

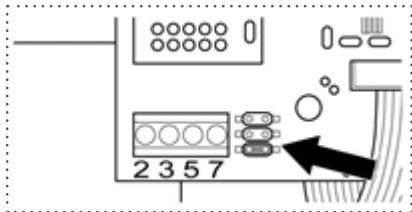


Figure 6: Jumper SMA

- Close the inverter if no other inverters are to be connected.
- Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 3 wire, shielded data cable.
- Where to connect: Terminal block in inverter (on the retrofitted RS485 interface)

Procedure

- Open the inverter as shown in the inverter's instructions.
- Connect the inverter in accordance with the inverter installation instructions.
- If only one inverter is to be connected it must be terminated.
Put the supplied jumper onto the lower pins on the connector strip.

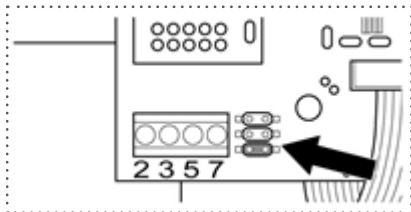


Figure 7: Jumper SMA

- Close inverters.

**Note**

A diagram for wiring in SMA combined mode can be found in the appendix.

Procedure

1. Pull the wire in the inverter through the insulation sleeve attached to the piggy back

The wire must be enclosed in the insulating hose inside the inverter.

2. Connect all 4 contacts (2, 3, 5, 7) on the terminal strip of inverter 1 to inverter 2



Note

A diagram for wiring in SMA combined mode can be found in the appendix.

3. Connect the other inverters to each other in the same way.

4. Terminate in the last inverter.

Put the supplied jumper onto the lower pins on the connector strip.

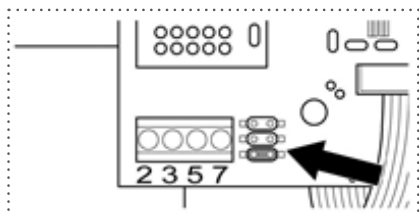


Figure 5: Jumper SMA

5. Close inverters.

86 Suntechnics

86.1 Suntechnics (only Solar-Log 1000 and 2000)



Note

Suntechnics inverters can only be connected to the Solar-Log 1000 and 2000, as only this one has a CAN interface.

The following description relates to inverters without transformers produced in or after 2007.

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	CAN bus

Overview

- CAN only to be used on Solar-Log 1000 and 2000 (CAN interface).
- Integrated interface
- Where to connect: CAN socket on the outside of the bottom of the inverter.
- Only use ready-made cable sets.

Two different special cable sets must be ordered separately.

- Prefabricated cable set between the Solar-Log 1000 and 2000 and the first inverter, including cable termination.
- Ready-made cable set with 5 pin Phoenix contact connection plug for connecting the inverters to each other.

The number of cables are required depends on the number of inverters.

Maximum total cable length: 200 m

- Communication address does not have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect the inverters to the Solar-Log 1000 and 2000.

Connection is only done using a ready-made data cable, specially for connecting to the Solar-Log 1000 and 2000 (optional extra; not supplied).

Procedure

1. Insert the CAN plug into the inverter CAN IN socket.
2. If only one inverter is to be connected this must be terminated.
Insert the two 5 pin 120 Ω terminal resistors from the ready-made cable set into the CAN OUT socket.
3. Insert the terminal block connector into the Solar-Log 1000 and 2000 CAN socket.

Connecting inverters to each other (only Solar-Log1000 and 2000)

- Connection is made only with a ready-made data cable specially for connecting the inverters to each other (optional extra: not supplied).
- Where to connect: CAN socket outside the inverter.

Procedure

1. Insert the CAN plug into any CAN OUT socket on inverter 1.
2. Insert the other end of the wire into any CAN IN socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.

Insert the two 5 pin 120 Ω terminal resistors from the ready-made cable set into the CAN OUT socket.

87 Suntigua

87.1 Suntigua

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable with a terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inside the inverter
Terminal	RS485 terminal
▶ 1 A/Data+	▶ 1 T/R 1+
▶ 4 B/Data-	▶ 2 T/R 1-

3. If only one inverter is to be connected this must be terminated.
In the inverter, set the DIP switch for the terminal resistor to ON.
4. Close inverters.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Where to connect: Terminal strip inside the inverter
- 2-pin wiring

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram:

Terminal strip inside the inverter	Terminal strip inside the inverter
RS485 terminal	RS485 terminal
▶ 1 T/R 1+	▶ 1 T/R 2+
▶ 2 T/R 1-	▶ 2 T/R 2-

3. Connect terminals A and B on inverter 1 to the corresponding terminals on inverter 2.
4. Connect the other inverters to each other in the same way.
5. Terminate in the last inverter.
Set the DIP switch for the terminal resistor to ON.
6. Close inverters.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter DIP switch
- Procedure: Start according to the inverter's instructions

88 Sunville

88.1 Sunville

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Yes	No	No	No	RS422

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 4-pin cable - only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned
- Multi-string technology

The Sunville inverters are fitted with 1 or 3 MPP trackers depending on the model. Each string input is monitored separately and ideally adjusted to the connected modules.

The Solar-Log™ automatically detects how many inverters and strings are active during inverter detection.

Note



The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the [Configuration/Basis/Inverters](#) dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the RS485 interface

Procedure

- ▶ Insert the RS485 interface in the bottom of the inverter in accordance with the interface card installation instructions and screw in.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 4 wire data cable and terminal block connector.

Note



Only connect inverter using the RS485/422 B/C interface.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ R+
▶ 4	▶ R-
▶ 5	▶ T+
▶ 6	▶ T-

4. Close the inverter if no other inverters are to be connected.
5. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter (on the retrofitted RS485 interface)

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, R-, T+ and T- of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Close inverters.

89 Sunways

89.1 Sunways - AT/NT/PT

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
 - 750 V models: 4 RS485 terminals on 10 pin terminal strip
 - 850 V models: 4 pin RS485 terminal strip
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made Sunways data cable (optional extra; not supplied)
- or
- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ RS485+
▶ 4	▶ RS485-

4. If only one inverter is to be connected, terminate it according to the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter
 - 750 V models: 4 RS485 terminals on 10 pin terminal strip
 - 850 V models: 4 pin RS485 terminal strip

The RS485 connections on the terminal strip are each double connections so that the wiring can be continued to the next inverter.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals RS485+ and RS485- on all inverters to the two data cable wires in accordance with the inverter instructions.
3. Terminate in the last inverter in accordance with the inverter instructions.
4. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

90 Sustainable Energy

90.1 Sustainable Energy

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Terminating plug	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ 4 (A in)
▶ 4	▶ 3 (B in)

2. If only one inverter is to be connected this must be terminated.
Insert 120 Ω terminal resistor.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter

Procedure

1. Connect terminal 2 (A out) on inverter 1 to terminal 4 (A in) on inverter 2.
2. Connect terminal 1 (B out) on inverter 1 to terminal 3 (B in) on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter. Insert 120 Ω terminal resistor.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using PC software for configuring inverters.
- Procedure: Start according to the inverter's instructions

91 TBEA

91.1 TBEA

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	120 Ω resistor	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Round sockets on the outside of the inverter.
- 2-pin wiring
- The communication address has to be assigned.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Assign the communication address; address range 1 to 247

Connect inverters to the Solar-Log™

- self-made, shielded 2 wire data cable with round plug and terminal block connector.

Procedure

1. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	Inverter round socket
Terminal	PIN
▶ 1	▶ 1
▶ 4	▶ 3

2. Insert the round plug into the COM round socket 1 on the inverter.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a data cable with a round plug
- Where to connect: Round sockets on the outside of the inverter.

Procedure

1. Insert the round plug into the COM round socket 1 on inverter 1
2. Connect additional inverters to each other according to the inverter instructions
3. Terminate in the last inverter according to the inverter instructions.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
Address range 1 - 247.
- Setting: Using the inverter's operating display
- Procedure: Start according to the inverter's instructions



Note

Both bus ends have to be terminated.

92 Tranergy

92.1 Tranergy

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	RS485

Overview

- Interface not integrated; Retrofit RS485 interface card.
- 4-pin cable - only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned
- Multi-string technology

The Tranergy inverters are fitted with 1 or 3 MPP trackers depending on the model. Each string input is monitored separately and ideally adjusted to the connected modules.

The Solar-Log™ automatically detects how many inverters and strings are active during inverter detection.



Note:

The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the [Configuration/Basis/Inverters](#) dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Installing the RS485 interface

Procedure

- ▶ Insert the RS485 interface in the bottom of the inverter in accordance with the interface card installation instructions and screw in.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 4 wire data cable and terminal block connector

**Note**

Only connect inverter using the RS485/422 B/C interface.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Terminal strip inverter
Terminal	Terminal
▶ 1	▶ R+
▶ 4	▶ R-
▶ 5	▶ T+
▶ 6	▶ T-

4. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable..
- Where to connect: Terminal strip inside the inverter (on the retrofitted RS485 interface)

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, R-, T+ and T- of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.
5. Close inverters.

93 Vaillant

93.1 Vaillant – auroPOWER VPI /1 and VPI (RS485)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Resistor Switch	Yes	Yes	Yes	RS485

Overview

- VPI until 2005 RS485 interface can be retrofitted by the manufacturer. Interface integrated - activate using operating display.
- Where to connect: Terminal strip inside the inverter
- 2-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Models until 2005 Retrofit RS485 interface
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made data cable (optional extra; not supplied)
- or
- self-made, shielded 2 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter’s instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	Terminal
▶ 1	▶ B
▶ 4	▶ A

4. If only one inverter is to be connected this must be terminated.
 In the inverter connect the free terminal A to terminal B using the supplied 330 Ω terminating resistor.
 Devices without a transformer: From unit generation VPI xx00 /2 the 330 Ω resistor is switched on using the DIP switch. When the unit is delivered the terminal resistor is switched on.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 2 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter

The RS485 connections on the terminal strip are each double connections so that the wiring can be continued to the next inverter.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminal A on inverter 1 to terminal A on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter. In the inverter connect the free terminal A to terminal B using the supplied 330 Ω terminating resistor.

Devices without a transformer: From unit generation VPI xx00 /2 the 330 Ω resistor is switched on using the DIP switch. When the unit is delivered the terminal resistor is switched on.

5. Close inverters.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting:
Units without transformers: using the DIP switch inside the inverter
Units with transformers: using the inverter operating display.
- Procedure: Start according to the inverter's instructions

94 Valenia

94.1 Valenia

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip on internal interface card
- 3-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Set the address of the inverters.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made 3 pin connection cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. If you are making the cable yourself, connect the wires as shown in the following diagram
3. If only one inverter is to be connected, according to the manufacturer's handbook it must be terminated.
4. Set the address for the inverter on the inverter itself.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Solar-Log™ terminal strip connector	Inverter terminal strip
Terminal	PIN
▶ 1	P
▶ 3	0 V
▶ 4	N



Note

The inverter terminal strip's 5V output must not be connected to the Solar-Log™.

Connect the inverters to each other

The wiring is done using a

- self-made connection cable and terminal block connector.
- Where to connect: Terminal strip on internal interface card

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals P, N and 0V of the first inverter 1 to the corresponding terminals on the next inverter.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the manufacturer's specifications.
5. Address the individual inverters in accordance with the manufacturer's manual.
6. Close the inverter if no other inverters are to be connected.
7. Insert the terminal block connector into the Solar-Log™ RS485 socket.

95 Vectron

95.1 Vectron

Inverters manufactured by Bonfiglioli Vectron GmbH were listed under „Vectron“ up to firmware version 3.1.2. Starting with firmware version 3.1.3 the name has been changed to „Bonfiglioli“.

96 Vision

96.1 Vision Multitracker

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Select "Vision" during the inverter detection

Overview

- Integrated interface
- 3-pin wiring
- 2 RJ45 sockets on the outside of the inverter.
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address.
Address range 1 to 32
Settings on the inverter's display according to the manufacturer's manual.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1 A/Data +	▶ Pin 1 (A) T/R+
▶ 3 GND	▶ Pin 5 GND
▶ 4 B/Data -	▶ Pin 2 (B) T/R-

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected this must be terminated.
Set the dip switch to “on.”
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable) (**No Crossover cable**)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter, set the DIP switch to “on.”

Allocate communication address

- Recommendation: Continuous numbering from 1 to 32
- Setting: Using the inverter operating display.
- Procedure: Start according to the inverter’s instructions.



Note

The following setting needs to be enable so that the PM parameters can be received.
SETUP -> REMOTE CNTRL -> ENABLE

96.2 Vision Singletracker

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	DIP switch	Yes	Yes	Yes	RS485

Select “Vision SM” during the inverter detection

Overview

- Integrated interface
- 3-pin wiring
- 2 RJ45 sockets on the outside of the inverter.
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address.
Address range 1 to 254
Settings on the inverter’s display according to the manufacturer’s manual.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are fabricating the cable yourself, connect the wires as shown in the following diagram.

Solar-Log™ terminal strip connector	RS485 inverter socket
Terminal	PIN
▶ 1 A/Data +	▶ Pin 1 (A) T/R+
▶ 3 GND	▶ Pin 5 GND
▶ 4 B/Data -	▶ Pin 2 (B) T/R-

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected this must be terminated.
Set the dip switch to “on.”
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable) (**No** Crossover cable)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter, set the DIP switch to “on.”

Allocate communication address

- Recommendation: Continuous numbering from 1 to 254
- Setting: Using the inverter operating display.
- Procedure: Start according to the inverter’s instructions.

97 Voltwerk

97.1 Voltwerk (only Solar-Log 1000 and 2000)



Note

Voltwerk inverters can only be connected to the Solar-Log 1000 and 2000, as only this one has a CAN interface.

The following description relates to inverters without transformers produced in or after 2007.

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	CAN bus

Overview

- CAN only to be used on Solar-Log 1000 and 2000 (CAN interface).
- Integrated interface
- Where to connect: CAN socket on the outside of the bottom of the inverter.
- Only use ready-made cable sets.

Two different special cable sets must be ordered separately.

- Prefabricated cable set between the Solar-Log 1000 and 2000 and the first inverter, including cable termination.
- Ready-made cable set with 5 pin Phoenix contact connection plug for connecting the inverters to each other.

The number of cables are required depends on the number of inverters.

Maximum total cable length: 200 m

- Communication address does not have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect the inverters to the Solar-Log 1000 and 2000.

Connection is only done using a ready-made data cable, specially for connecting to the Solar-Log 1000 and 2000 (optional extra; not supplied).

Procedure

1. Insert the CAN plug into the inverter CAN IN socket.
2. If only one inverter is to be connected this must be terminated.
Insert the two 5 pin 120 Ω terminal resistors from the ready-made cable set into the CAN OUT socket.
3. Insert the terminal block connector into the Solar-Log 1000 and 2000 CAN socket.

Connecting inverters to each other (only Solar-Log1000 and 2000)

- Connection is made only with a ready-made data cable specially for connecting the inverters to each other (optional extra: not supplied).
- Where to connect: CAN socket outside the inverter.

Procedure

1. Insert the CAN plug into any CAN OUT socket on inverter 1.
2. Insert the other end of the wire into any CAN IN socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter.

Insert the two 5 pin 120 Ω terminal resistors from the ready-made cable set into the CAN OUT socket.

98 WINAICO

98.1 WINAICO

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Switch	Yes	Yes	Yes	RS485

- Interface not integrated; Retrofit RS485 interface card.
- 4-pin wiring
- Communication address must be allocated.
- Installation steps
 - Allocate communication address
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the DIP switch on the interface card.

Before installing the RS485 interface card:

- ▶ Allocate the communication address using the 8 interface card DIP switches:

Example - Communication address 1:

On								
Off								
DIP switch								

Example - Communication address 2:

On								
Off								
DIP switch								

Example - Communication address 3:

On								
Off								
DIP switch								

Example - Communication address 4:

On								
Off								
DIP switch								

Example - Communication address 5:

On								
Off								
DIP switch								

You will find more information at:

http://en.wikipedia.org/wiki/Binary_number.

Installing the RS485 interface

Procedure

- ▶ Install the RS485 interface in the inverter in accordance with the interface card installation instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BKL2 data cable (optional extra; not supplied)

or

- self-made, shielded 4 wire data cable and terminal block connector.

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector

Inverter terminal strip

Terminal	Terminal
▶ 1	▶ R+
▶ 4	▶ R-
▶ 5	▶ T+
▶ 6	▶ T-

4. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
5. Close the inverter if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a 4 wire, shielded data cable
- Where to connect: Terminal strip inside the inverter on the retrofitted RS485 interface card

Procedure

1. Open the inverter as shown in the inverter's instructions.
2. Connect terminals R+, T+, R- and R+ of inverter 1 to the corresponding terminals on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.
5. Close inverters.

99 Würth

99.1 Würth SolarStar-Series

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
Yes	No	Yes	Yes	Yes	RS485

Select “SolarMax” during the inverter detection

Supported Models:

SolarStar a2000
SolarStar a3000
SolarStar a4200
SolarStar a6000

Overview

- Integrated interface
- Where to connect: RJ45 socket on the outside of the inverter
- 6-pin wiring
- Communication address must be allocated.
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made RS485 data cable with RJ45 plug and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).
-

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 7
▶ 4	▶ 8

2. Insert the RJ45 plug into any RJ45 socket on the first inverter.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using the RS485 data cable with an RJ45 plug
- Where to connect: RJ45 socket on the outside of the inverter

Procedure

1. Insert the RJ45 plug into the free RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

100Yaskawa

100.1 Yaskawa

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: Terminal strip inside the inverter
- Communication address must be allocated.
- 3-pin wiring
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Address the inverter.
 - Connect the inverters to each other
 - Terminate the inverter as shown in the inverter’s instructions.

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made cable connection with terminal block connector.

Procedure

1. Open the inverter as shown in the inverter’s instructions.
2. Pull the free wires through the wire opening in the inverter.
3. If you are making the cable yourself, connect the wires as shown in the following diagram:



Note

Please note that the connection label (e.g. 2-6) refers to the second row on the terminal block, connection 6).

Solar-Log™ terminal strip connector

RJ45 inverter

Terminal	PIN
▶ 1-(Data+) A	2-6 D+
▶ 3-GND	1-8 GND
▶ 4-(Data-) B	2-7 D-

4. If only one inverter is to be connected, it must be terminated according to the manufacturer’s instructions.
5. Close the inverter cover if no other inverters are to be connected.
6. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

The inverters are connected together using the RS485 interface. Refer to the manufacturer's inverter manual for the details on how to setup the connection.

Allocate communication address

- Recommendation: Continuous numbering starting with 1; highest possible address: 247.
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions



Note

Please refer to the manufacturer's notes in regard to the addressing in the installation manual.

101 Zentral Solar Deutschland ZSD

101.1 Zentral Solar Deutschland ZSD (RS485)

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 plug outside the housing floor
- 2-pin wiring
- Communication address does not have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BRJ2 data cable (optional extra; not supplied)
- or
- self-made cable connection with RS485 data cable and terminal block connector.



Caution

Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 Solar-Log™ interface(s).

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ 7
▶ 4	▶ 8

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into any RJ45 socket on inverter 1.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter in accordance with the inverter instructions.

101.2 Zentral Solar Deutschland ZSD - zentralpower

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	-	Yes	Yes	Yes	RS485

Overview

- Integrated interface
- Where to connect: RJ45 socket on the outside of the inverter
- 2-pin wiring
- The communication addresses (1-247) have to be assigned
- Installation steps
 - Switch off the inverters and Solar-Log™
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other
 - Allocate communication address

Connect inverters to the Solar-Log™

The wiring is done using a

- self-made, shielded 2 wire data cable with a RJ45 socket and a terminal block connector.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ 45 socket
Terminal	PIN
▶ 1	▶ 4 (+)
▶ 4	▶ 3 (-)

2. Insert the RJ45 plug into the RJ45 socket on the inverter.
3. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Connect the inverters to each other

- Wiring using 2 pin cable with round plugs.
- Where to connect: Round sockets on the outside of the inverter.

Procedure

1. Insert the RJ45 plug into the RJ45 socket on the first inverter.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Insert the terminal block connector into the Solar-Log™ RS485 socket.

Allocate communication address

- Recommendation: Continuous numbering starting with 1.
- Address range: 1 - 247
- Setting: Using the inverter operating display
- Procedure: Start according to the inverter's instructions

102 Zeversolar

102.1 Zeversolar

Easy Installation	Termination	Addressing	Sensors RS485	Meters RS485	Interface
No	Yes	No	No	No	RS422

Overview

- Interface integrated.
- Where to connect: RJ45 socket on the outside of the inverter
- 4-pin cable - only on RS485/422 B connection of the Solar-Log™
- Communication address does not have to be assigned

Note



The order in which the inverters are displayed in the Solar-Log™ after detection is random. We strongly recommend that you change the order of the inverters immediately after detection at startup, in the [Configuration/Basis/Inverters](#) dialog box. The inverters can be identified using the displayed serial number.

- Installation steps
 - Switch off the inverters and Solar-Log™
 - Install the RS485 interface in the inverter
 - Connect inverters to the Solar-Log™
 - Connect the inverters to each other

Connect inverters to the Solar-Log™

The wiring is done using a

- ready-made BRJ1 data cable (optional extra; not supplied)

or

- self-made cable connection with RS485 data cable and terminal block connector.

Caution



Risk of damage to the unit!

The Solar-Log™ also has an RJ45 socket, which must never be connected to the RJ45 socket on the inverter.

- ▶ Only connect inverters via the RS485/422 B- or the RS485/422-C-Solar-Log™ interface.

Note



Only connect inverter using the RS485/422 B or the RS485/422-C-interface.

Procedure

1. If you are making the cable yourself, connect the wires as shown in the following diagram:

Solar-Log™ terminal strip connector	RJ45 inverter
Terminal	PIN
▶ 1	▶ Pin 3
▶ 4	▶ Pin 6
▶ 5	▶ Pin 1
▶ 6	▶ Pin 2

2. Insert the RJ45 plug into any RJ45 socket on inverter 1.
3. If only one inverter is to be connected terminate this in accordance with the inverter instructions.
4. Insert the terminal block connector into the Solar-Log™ RS485/422 B socket.

Connect the inverters to each other

- Connect using a network cable (patch cable)
- Where to connect: RJ45 socket on the outside of the inverter

Procedure

1. Insert the RJ45 plug into any RJ45 socket on inverter 1.
2. Insert the other end of the wire into any RJ45 socket on inverter 2.
3. Connect the other inverters to each other in the same way.
4. Terminate in the last inverter according to the inverter instructions.

103 Appendix

103.1 SMA mixed wiring

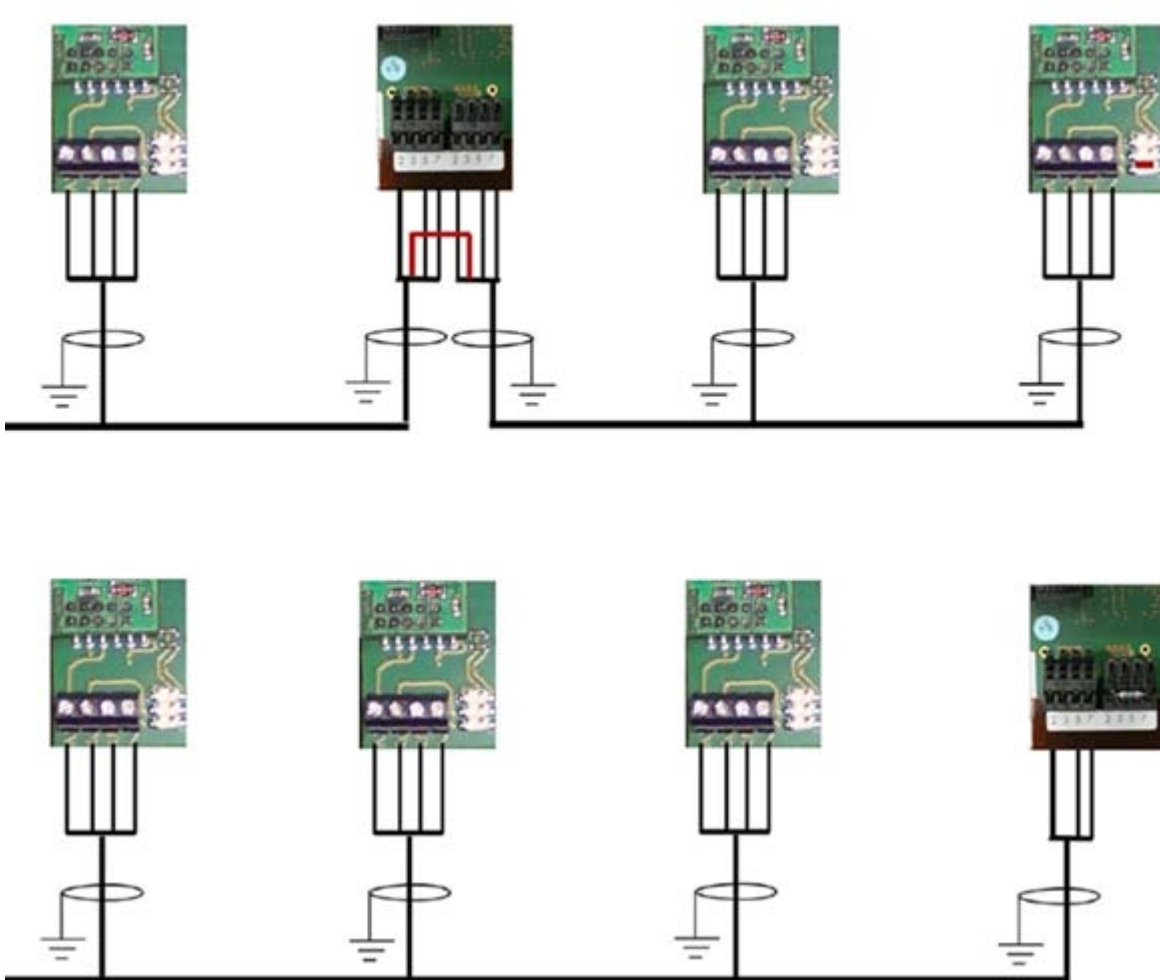


Figure 16: SMA mixed wiring

103.2 Interconnection of Kaco Powador inverters

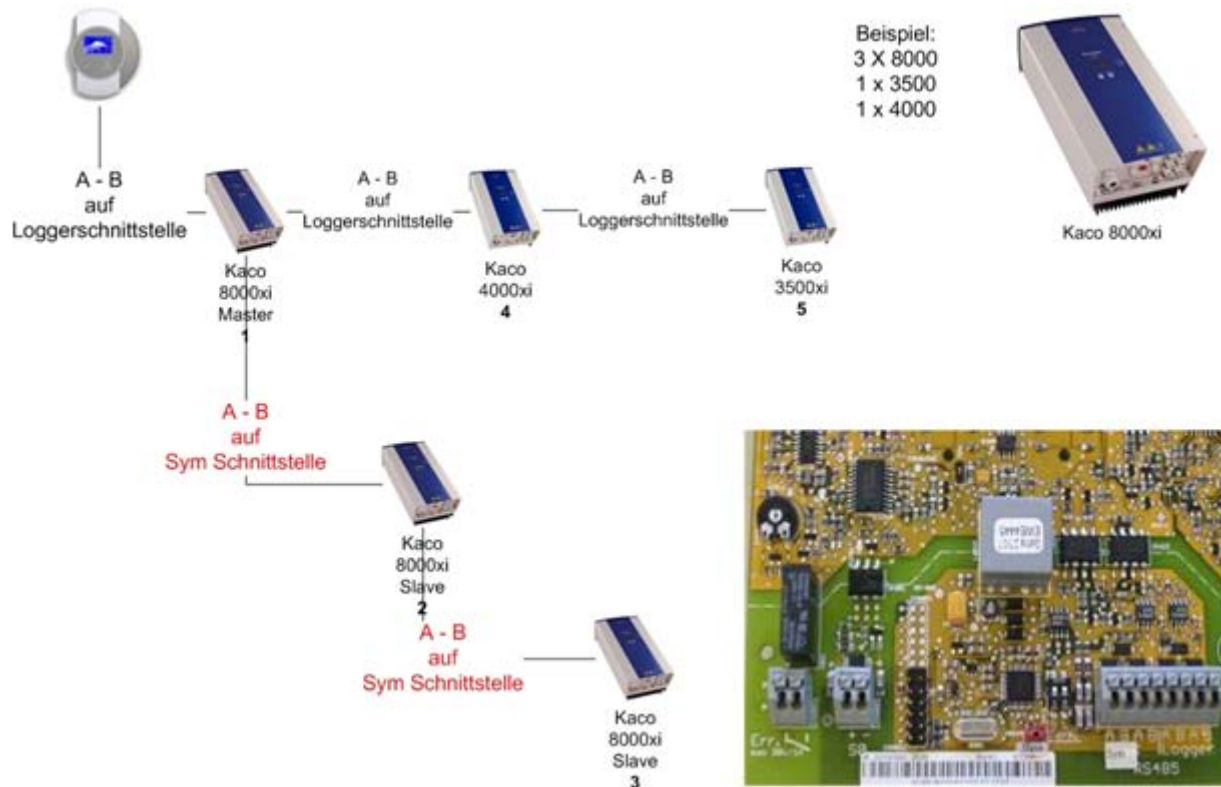


Figure 17: Interconnection of Kaco Powador inverters

Instructions for Powador 6400xi and 8000xi

- Interconnection of Powador 6400Xi and 8000xi:
 - ▶ Set 1 inverter as "Master", 2 as "Slaves";
Read the labeling on the inverter circuit board!
 - ▶ Clamp the Solar-Log™ data cable to the "LOGGER" terminal strip on the Master inverter.
 - ▶ Also connect the inverters to each other through the "SYM" terminal strip
 - ▶ Connect any additional inverters through the "Logger" terminal strip
 - ▶ On the inverter operating display:
Set the communication addresses, numbering consecutively
 - ▶ On the inverter operating display: Switch "SYM Bus" to active
- Powador 6400Xi and 8000xi stand-alone mode:
 - ▶ Set the inverter to "Slave", irrespective of labeling on the circuit board
 - ▶ Clamp the Solar-Log™ data cable to the "SYM Bus" terminal strip
 - ▶ On the inverter operating display: Switch "SYM Bus" to inactive
 - ▶ On the inverter operating display: Set the communication addresses, numbering consecutively

104 List of figures

Figure 1: RJ45 plug pin assignments 15
Figure 2: RJ11 plug pin assignments 16
Figure 13: Albatech APL block connector 34
Figure 14: RJ14 socket pin allocation..... 47
Figure 10: Fronius RL round plug..... 104
Fig.: Gefran RS485 terminal strip and termination..... 106
Fig.: 2-pin terminal TB3..... 107
Figure 15: Pairan Round socket..... 161
Figure 12: Siemens - connecting inverters together 217
Figure 3: Control board before and after installation of the piggyback 221
Figure 4: Piggyback - insert jumper 222
Figure 5: Jumper SMA 223
Figure 6: Jumper SMA..... 225
Figure 7: Jumper SMA 225
Figure 3: Control board before and after installation of the piggyback 264
Figure 4: Piggyback - insert jumper 265
Figure 6: Jumper SMA 267
Figure 7: Jumper SMA 267
Figure 5: Jumper SMA 268
Figure 16: SMA mixed wiring..... 306
Figure 17: Interconnection of Kaco Powador inverters..... 307

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