

Front and back layout



Picture 1: Front of PReview 5714.



Picture 2: Back of PReview 5714.

Programmable LED indicator PReview 5714

- *4-digit 14 segment LED indicator*
- *Input for mA, V, Pt100, TC and potentiometer*
- *2 relays and analogue output*
- *Universal voltage supply*
- *Front key programmable*

Application:

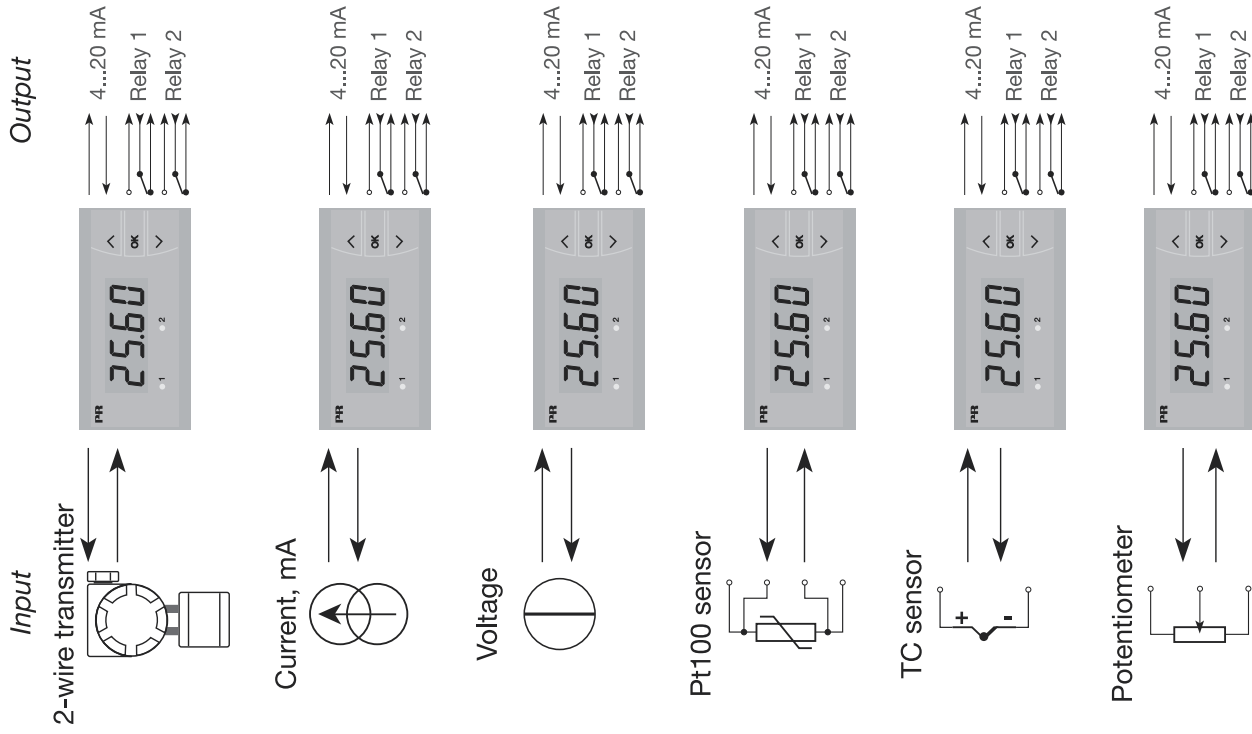
- Display for digital readout of current, voltage, temperature or potentiometer signals.
- Process control with 2 potential free relays and / or analogue output.
- For local readout in extreme wet atmospheres with a special designed splash-proof cover.

Technical characteristics:

- 4-digit LED indicator with 13.8 mm 14 segment characters. Max. display readout - 1999...9999 with programmable decimal point, relay ON / OFF-indication.
- With the function front keys all operational parameters can be adjusted to any application.
- PReview 5714 is available fully-configured acc. to specifications ready for process control and visualisation.
- In versions with relay outputs the user can minimise the installation test time by activating / deactivating each relay independent of the input signal.

Mounting:

- To be mounted in board front panel. An included rubber packing must be mounted between the panel cutout hole and the display front to obtain IP65 (NEMA 4) tightness. PReview 5714 can be delivered with a special designed splash-proof cover as accessory to obtain IP67 tightness.



Order: 5714

Type	Version	Language
5714	Standard 2 Relays Analogue output Analogue output and 2 relays	English : UK Dansk : DK Français : FR Deutsch : DE Svenska : SE Italiano : IT Español : ES

NB! Please order the splash-proof cover (IP67) separately. Order No 8335.

Electrical specifications:

Specifications range:

-20°C to +60°C

Common specifications:

- Supply voltage..... 24...230 VAC ±10%
- 50...60 Hz
- 24...250 VDC ±20%
- Max. consumption ≤ 3.5 W
- Isolation voltage / operation..... 2.3 kVAC / 250 VAC
- Signal- / noise ratio..... min. 60 dB (0...100 kHz)
- Response time (0...90 %, 100...10 %):
 - Temperature input..... < 1 s
 - Current / Voltage input < 400 ms
 - Calibration temperature 20...28°C
- Accuracy, the greater of general and basic values:

General values	
Input type	Absolute accuracy
All	≤ ±0.1% of reading
	Temperature coefficient
	≤ ±0.01% of reading / °C

Basic values		
Input type	Basic accuracy	Temperature coefficient
mA	$\leq \pm 4 \mu\text{A}$	$\leq \pm 0,4 \mu\text{A} / ^\circ\text{C}$
Volt	$\leq \pm 20 \mu\text{V}$	$\leq \pm 2 \mu\text{V} / ^\circ\text{C}$
Pt100	$\leq \pm 0,2^\circ\text{C}$	$\leq \pm 0,02^\circ\text{C} / ^\circ\text{C}$
Potentiometer	$\leq \pm 0,1 \Omega$	$\leq \pm 0,01 \Omega / ^\circ\text{C}$
TC-type: E, J, K, L, N, T, U	$\leq \pm 1^\circ\text{C}$	$\leq \pm 0,05^\circ\text{C} / ^\circ\text{C}$
TC-type: B, R, S, W3, W5	$\leq \pm 2^\circ\text{C}$	$\leq \pm 0,2^\circ\text{C} / ^\circ\text{C}$

Auxiliary supplies:

2 wire supply	25...15 VDC / 0...20 mA
Wire size, pin 41-46 (max.)	1 x 1.5 mm ² multicore cable
Wire size, others (max.)	1 x 2.5 mm ² multicore cable
Screw terminal torsion	0.5 Nm
Relative humidity	< 95% RH (non cond.)
Dimensions (HxWxD)	48 x 96 x 120 mm
Cutout dimensions	44.5 x 91.5 mm
Tightness (mounted in panel)	IP65 (IP67 with cover 8335)
Weight	230 g

Pt100- and potentiometer input:

Input type	Min. value	Max. value	Norm
Pt100	-200°C	+850°C	IEC60751
Potentiometer	10 Ω	100 kΩ	-

Cable resistance pr. wire, Pt100 (max.):50 Ω

Sensor current, Pt100

Effect of sensor cable resistance

(3- / 4-wire), Pt100

Sensor error detection, Pt100

Short circuit detection, Pt100

Nom. 0.2 mA

< 0.002 Ω / Ω

Yes

< 15 Ω

TC input:

Type	Min. value	Max. value	Norm
B	+400°C	+1820°C	IEC 60584-1
E	-100°C	+1000°C	IEC 60584-1
J	-100°C	+1200°C	IEC 60584-1
K	-180°C	+1372°C	IEC 60584-1
L	-200°C	+900°C	DIN 43710
N	-180°C	+1300°C	IEC 60584-1
R	-50°C	+1760°C	IEC 60584-1
S	-50°C	+1760°C	IEC 60584-1
T	-200°C	+400°C	IEC 60584-1
U	-200°C	+600°C	DIN 43710
W3	0°C	+2300°C	ASTM E988-90
W5	0°C	+2300°C	ASTM E988-90

Cold junction compensation (CJC)

Sensor error detection

Sensor error current:

when detecting

else

Norm. 2 μA

0 μA

Current input:

Measure range

Programmable measure ranges

Input resistance

Norm. 20 Ω + PTC 25 Ω

Voltage input:

Measure range

Programmable measure ranges

Input resistance

Norm. 10 MΩ

Display:

Display readout

Decimal point

Digit height

Display updating

Input outside input range is

indicated by

Explaining text

Current output:

Signal range (span)..... 0...20 mA
 Programmable signal ranges..... 0...20, 4...20, 20...0 and 20...4 mA
 Load (max.)..... 20 mA / 800 Ω / 16 VDC
 Load stability..... ≤ 0.01% of span / 100 Ω
 Sensor error detection..... 0 / 3,5 / 23 mA or none
 NAMUR NE 43 Upscale..... 23 mA
 NAMUR NE 43 Downscale..... 3,5 mA
 Current limit..... ≤ 28 mA

Relay outputs:
 Max. voltage..... 250 VRMS
 Max. current..... 2 A / AC
 Max. AC power..... 500 VA
 Max. current at 24 VDC..... 1 A
 Sensor error detection..... Make/Break/Hold

Marine approval*:

Det Norske Veritas Rules for ships..... Certificat. Notes No.2.4

Observed authority requirements:

EMC 89/336/EEC: EN 61326
 Emission and immunity..... EN 61010-1
 LVD 73/23/EEC.....
 UL *, Standard for Safety:..... UL 508 and UL 873

* Certificates pending

Sensor error detection / sensor error detection outside range:

Variant:	Configuration	Sensor error detection:
5714A	Always:	ON
5714B	ERR1=NONE, ERR2=NONE:	OFF
	else:	ON
5714C	O.ERR=NONE:	OFF
	else:	ON
5714D	ERR1=NONE, ERR2=NONE, O.ERR=NONE:	OFF
	else:	ON

At excess of the valid range of the A/D converter or the polynomial		
Input	Range	Limit
VOLT	0..1V / 0..2..1V	IN.LO < -25 mV
		IN.HI > 1,2 V
	0..10V / 2..10V	IN.LO < -25 mV
		IN.HI > 12 V
CURR	0..20mA / 4..20mA	IN.LO < -1,05 mA
		IN.HI > 25,05 mA
POTM	-	IN.LO < -0,5%
		IN.HI > 100,5%
TEMP	TC / PT-100	IN.LO < temperature range
		IN.HI > temperature range

Sensor error detection (SE.BR, SE.SH):		
Input	Range	Limit
CURR	Loop break (4..20mA) TC	SE.BR <= 3,6 mA; > = 21 mA
		SE.BR > ca. 750 kohm / (1,25V)
		SE.BR > ca. 15 kohm
TEMP	PT-100 2-wire PT-100 3-wire PT-100 4-wire	SE.SH < ca. 15 ohm
		SE.BR > ca. 15 kohm
		SE.SH < ca. 15 ohm
		SE.BR > ca. 15 kohm
		SE.SH < ca. 15 ohm

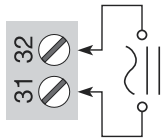
Display readout below min. / above max. (-1.9.9.9, 9.9.9.9):		
Input	Range	Limit
CURR	All	Readout <-1.9.9.9 Display readout <-1999
		Readout >9.9.9.9 Display readout >9999
VOLT	All	Readout <-1.9.9.9 Display readout <-1999
		Readout >9.9.9.9 Display readout >9999
POTM	-	Readout <-1.9.9.9 Display readout <-1999
		Readout >9.9.9.9 Display readout >9999

Readout at hardware error		
Error search	Readout	Error cause
Test of internal communication uC / ADC	HW.ER	Permanent error in ADC
Test of internal CJC sensor	CJ.ER	CJC sensor defect
Check-sum test of the configuration in RAM	RA.ER	Error in RAM
Check-sum test of the configuration in EEPROM	EE.ER	Error in EEPROM

! Error indications in the display blinks once a second. The help text explains the error.

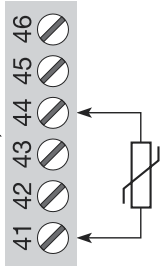
Connections:

Supply:

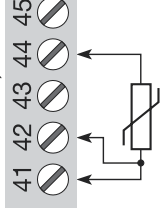


Input:

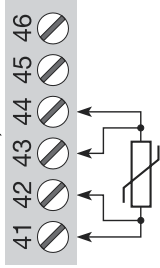
PT100, 2-wire



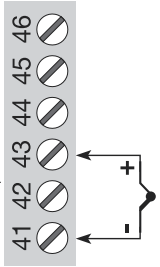
PT100, 3-wire



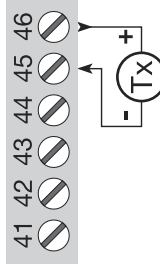
PT100, 4-wire



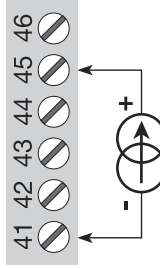
TC, internal CJC



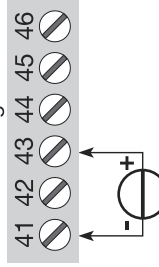
2-wire transmitter



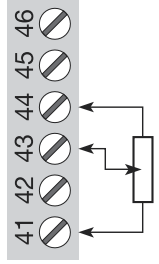
Current



Voltage

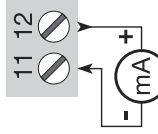


Potentiometer

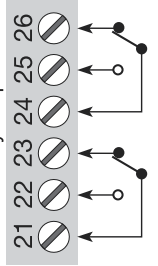


Output:

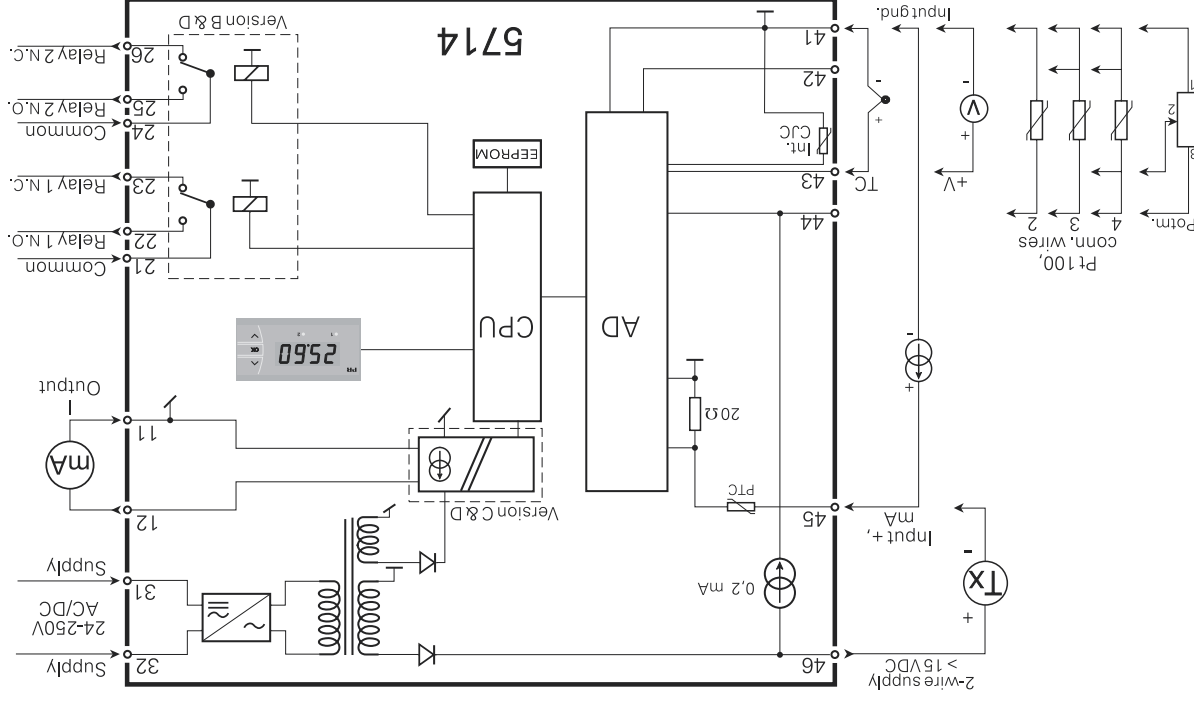
Current



Relay outputs



Block diagram



Routing diagram

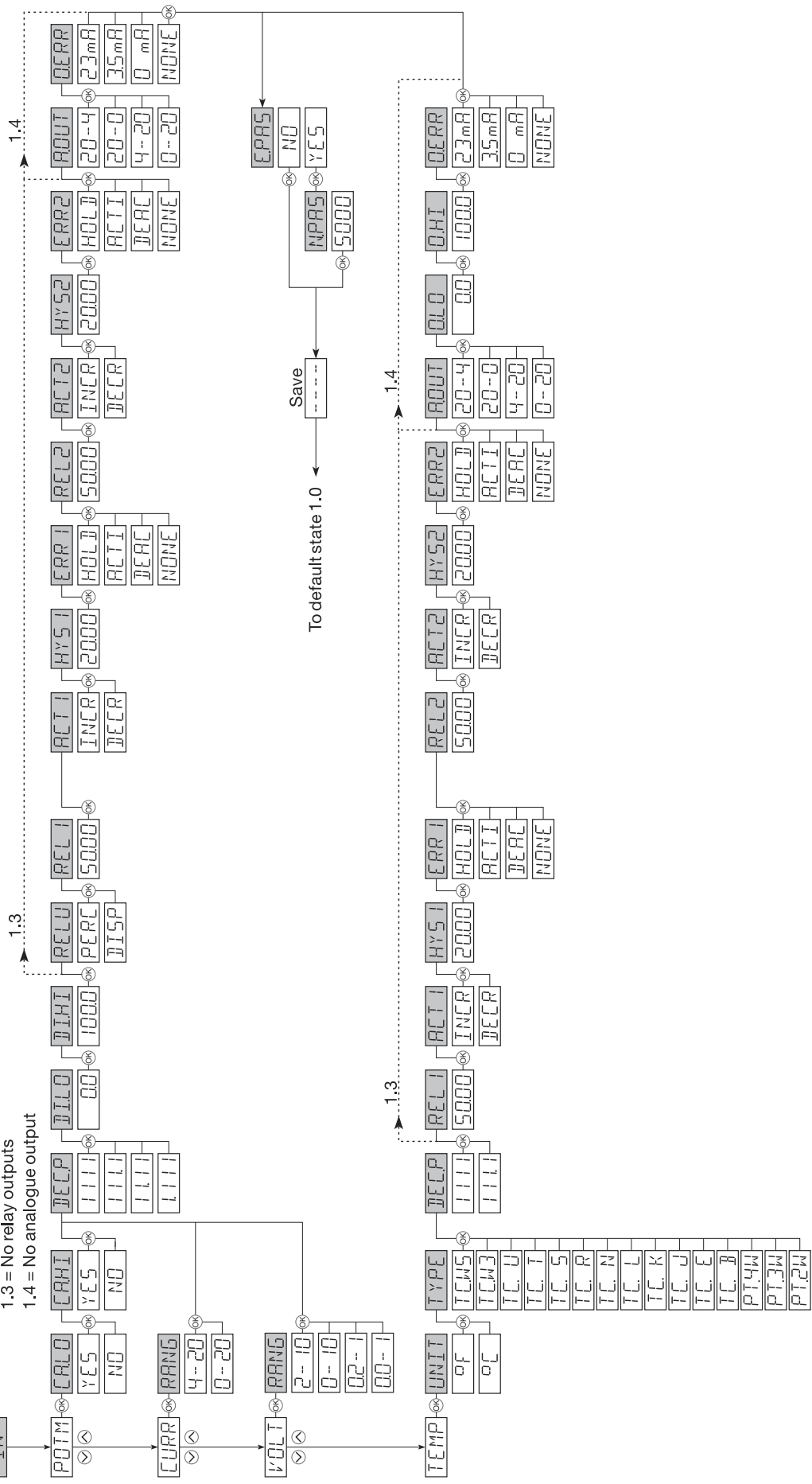
If no keys are activated for 2 minutes the display returns to default state 1.0 without saving configuration changes.

- ⏪ Increase value / choose next parameter
- ⏩ Decrease value / choose previous parameter
- ⏴ Save the chosen parameter and go to the next menu
- ⏴⏴ Back to previous menu / return to menu 1.0 without saving

Fast setpoint adjustment and relay test

- ⏪ Increase setpoint
- ⏩ Decrease setpoint
- ⏴ Save and close the menu and ⏴ simultaneously = change relay state

- 1.0 = Default state
- 1.1 = Only if password protected
- 1.2 = Fast setting and relay test
- 1.3 = No relay outputs disabled at password 5000...9999
- 1.4 = No analogue output



Scrolling help text

Process Value (←Normal): xxxx	INCR --> ACTIVATE AT INCREASING SIGNAL
SEBR --> SENSOR WIRE BREAKAGE	DECR --> ACTIVATE AT DECREASING SIGNAL
SE.SH --> SENSOR SHORT CIRCUIT	HYS2 --> HYSTERESIS RELAY 2
IN.LO --> INPUT UNDERRANGE	
IN.HI --> INPUT OVERRANGE	
9.9.9.9 --> DISPLAY OVERRANGE	
-1.9.9.9 --> DISPLAY UNDERRANGE	
HW.ER --> HARDWARE ERROR	
EE.ER --> EEPROM MEMORY ERROR	
RA.ER --> RAM MEMORY ERROR	
CJ.ER --> C/J SENSOR ERROR	
NO.CA --> DEVICE NOT CALIBRATED	
FastSet (set enabled):	
REL1 --> SETPOINT RELAY 1 - PRESS OK TO SAVE	
REL2 --> SETPOINT RELAY 2 - PRESS OK TO SAVE	
FastSet (set disabled):	
REL1 --> SETPOINT RELAY 1 - READ ONLY	
REL2 --> SETPOINT RELAY 2 - READ ONLY	
Configuration Setup:	
PASS --> SET PASSWORD	
IN --> POTENTIOMETER INPUT	
CURR --> CURRENT INPUT	
VOLT --> VOLTAGE INPUT	
TEMP --> TEMPERATURE SENSOR INPUT	
RANG --> (when volt selected)	
2-10 --> INPUT RANGE IN VOLTS	
0-10 --> INPUT RANGE IN VOLTS	
0-2-1 --> INPUT RANGE IN VOLTS	
0-0-1 --> INPUT RANGE IN VOLTS	
DEC.P	
1111 --> DECIMAL POINT POSITION	
111.1 --> DECIMAL POINT POSITION	
1.1.11 --> DECIMAL POINT POSITION	
1.1.11 --> DECIMAL POINT POSITION	
D.LO --> DISPLAY READOUT LOW	
xxxx --> DISPLAY READOUT HIGH	
DI.HI --> DISPLAY READOUT HIGH	
xxxx --> DISPLAY READOUT HIGH	
REL.U	
PERC --> SET RELAY IN PERCENTAGE	
DISP --> SET RELAY IN DISPLAY UNITS	
REL1	
xxxx --> SETPOINT RELAY 1	
ACT1	
INCR --> ACTIVATE AT INCREASING SIGNAL	
DECR --> ACTIVATE AT DECREASING SIGNAL	
HYS1	
xxxx --> HYSTERESIS RELAY 1	
ERR1	
HOLD --> HOLD RELAY AT ERROR	
ACT1 --> ACTIVATE RELAY AT ERROR	
DEAC --> DEACTIVATE RELAY AT ERROR	
NONE --> UNDEFINED STATUS AT ERROR	
REL2	
xxxx --> SETPOINT RELAY 2	
ACT2	
DEC.P	
1111 --> (when temp selected)	
111.1 --> DECIMAL POINT POSITION	
1.1.11 --> DECIMAL POINT POSITION	

Configuration / Operating function keys

Documentation for routing diagram

In general:

When configuring the display you are guided through all parameters, you can choose the settings which fit the application. For each menu there is a scrolling help text which is automatically shown in the display, this starts after 5 seconds if no key has been activated.

Configuration is carried out by using the 3 function keys.

- ↵ will increase the numerical value or choose the next parameter.
 - ↵ will decrease the numerical value or choose the previous parameter.
 - OK will accept the chosen value and end the menu.
- If a function does not exist in the display all parameters are skipped to make the configuration as simple as possible.

Once the configuration has been entered the display will show "----".

Pressing and holding OK will return to the previous menu or return to the default state (1.0) without saving the changed values or parameters.

If no key is activated for 2 minutes, the display will return to the default state (1.0) without saving the changed values or parameters.

Further explanations:

Fast setpoint adjustment and relay test:

These menus allow you to change the set point quickly and to check the operation of the relays.

Pressing ↵ and ↵ at the same time will change the state of the relay – this change is indicated by the diodes on the display.

Pressing OK will save the set point change.

Holding down OK for more than 0.5 seconds will return the unit to the default state without changing the set point.

Password protection:

Using a password will stop access to the menu and parameters.

There are two levels of password protection.

Passwords between 0000...4999 allow access to the fast set point adjustment and relay test.

(Using this password stops access to all other parts of the menu)

Passwords between 5000...9999 stop access to all parts of the menu, fast set point and relay test.

(Current set point is still shown)

By using the master password 2008, all configuration menus are available.