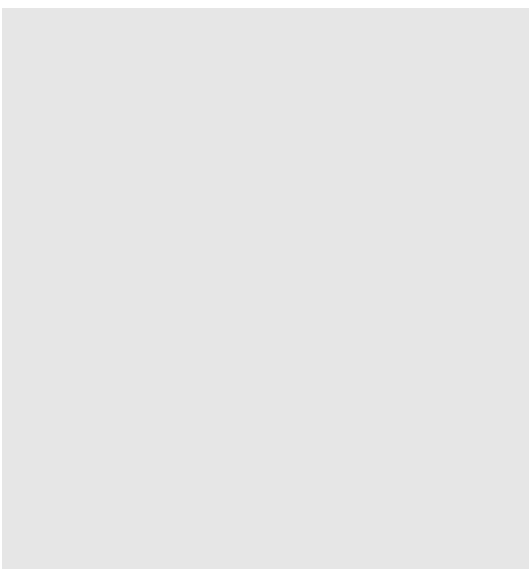
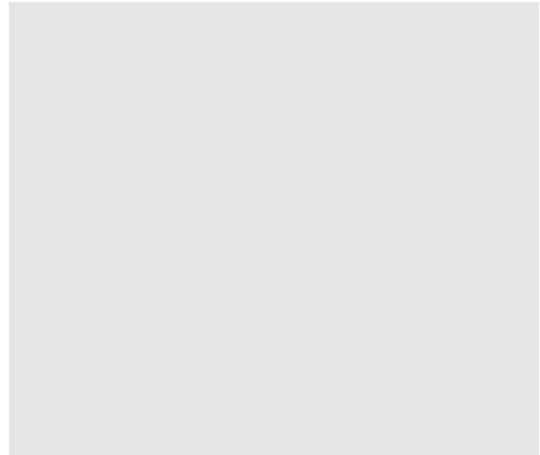
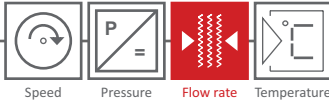


FLOW COMPUTER GDR 1501

Gas volume in cubic meters or liters with optional standardization



Rev. no.: GDR 150xDS 324 E-V3.3 2021-10-29



Speed Pressure Flow rate Temperature

General Description

The flow computer of the GDR 1501 series are used to calculate the current gas quantity. The actual amount of gas can be displayed in cubic meters or liters on an hourly or minute basis.

The total quantity counter can be output either in cubic meters or liters. The counter can have 9 digits up to 999 mil. cubic meters. The resolution is 0.1 liters.

The devices can process on input signal regarding the gas flow. For connection 4 different types of inputs are available.

Gas flow meter GD 300 / GD 500:

1. direct connection of the platinum wire sensor (NON-ATEX)
2. connection of the HB 300 Ex (ATEX area)

Thirs party products:

3. Connection to the pulse input using open collector or reed relays
4. Connection to the Namur input (PRO-N version)

The current output 0 (4) - 20 mA gives the current flow rate in the form of operating or standard cubic meters. With 2 semiconductor relays, flow rates, device status and error messages can be passed on to a superior PLC system.

- 4 line display of 20 characters
- Multilingual menu (german, english, french, italien, bulgarian, polish, more in progress)
- Capacitive and wear-free touch keypad
- Full device configuration via touch keypad, no additional software required
- Protection of the configuration via security code
- Recording of essential actions with time stamp in the system logbook (device start, sensor failure, overrange, etc.)
- Easy and fast cable connection thanks to tool-free push-in connections

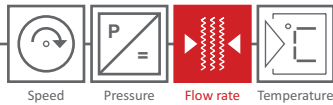


The standardization can be calculated according to the standards DIN 1343, DIN 6358, DIN ISO 2533 or DIN 102 / ISO 1-1975.

The PRO versions have a Pt100 input and additionally mA inputs for pressure and temperature sensors. The measuring range of the respective sensors can be freely configured in the GDR 1501. The Modbus RTU bus system can optionally be integrated for data transmission.

All parameter settings / configuration can be set using the touch keypad.

- Housing material made of UV-resistant polycarbonate, protection class: IP 65
- Persistent meter reading for 5 years
- Integrated real-time clock, battery buffered over 5 years
- Standardization according to DIN 1343, DIN 6358, DIN ISO 2533, DIN 102/ISO 1-1975
- Freely scalable current output for the current flow
- Adjustable pulse weighting (0.1, 1 or 10 or 100 m³ per pulse)
- Optional Datatransfer via Modbus RTU



Technical details

INPUT

The devices can process one input signal of the flow rate.
The following alternatives are available for the input signal:

| | |
|-----------------------|---|
| FLOW | input for direct connection of the platinum wire sensor (GD 300 / GD 500) ¹⁾ or |
| FLOW IMPULSE INPUT | <ul style="list-style-type: none"> - impulse input for HB 300 / HB 300 Ex (GD 300 (Ex)/ GD 500 (Ex)) or - thirdparty products with Open-Collector or input frequency: 0 Hz ... 500 Hz - thirdparty products with Reed-Relais or input frequency: 0 Hz ... 2 Hz, resolution It is possible to define a minimum threshold to differentiate between gas flow and standstill (min. flow volume suppression). |
| FLOW | NAMUR ³⁾ |

The following inputs are integrated for connecting external sensors for pressure and temperature:

| | |
|-------------|--|
| TEMPERATURE | <ul style="list-style-type: none"> - 4 - 20 mA, 2 wire, meas. range: -100 °C - +800 °C (12 bit) ²⁾ or - pt100, 3 wire, meas. range: -100 °C - +800 °C |
| PRESSURE | 4 - 20 mA, 2 wire, meas. range: -500 mbar - +1.000 bar (12 bit), (rel. or abs.) ²⁾ |

OUTPUT

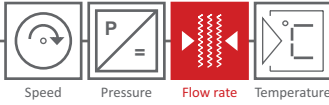
| | |
|--------------|--|
| CURRENT | 0(4) - 20 mA, resolution 12 bit flow: 0 - 100.000 m ³ /h, resolution 0,1 m ³ /h |
| RELAY K1, K2 | 2 x relay (NO) freely programmable <ul style="list-style-type: none"> - pulse output (0,1, 1 or 10 or 100 m³ per impulse, - counter output quantity or - limit value or - device status |

DISPLAY & RANGES OF VALUES

| | |
|--|--|
| LCD DISPLAY | 4 lines à 20 characters size: 66 x 40mm, font size 4,8 mm color: black on white |
| DATE | acc. to ISO8601/EN28601 |
| COUNTER PULSES | max. 999.999.999.999.999 Pulse (1*10 ¹⁸ - 1 pulse), resolution 1 pulse (In the event of a counter overflow, the counter starts at zero.) |
| PULSE OUTPUT | 0,001 - 1.000.000 m ³ /pulse, resolution 1l/pulse max. 10 pulses/s for Bm ³ or Nm ³ |
| FLOW „OPERATIONAL“ | max. 100 Bm ³ /s, 360.000 Bm ³ /h |
| FLOW „STANDARDIZED“ | max. 1.000 Nm ³ /s, 3.600.000 Nm ³ /h |
| COUNTER OPERATING QUANTITY STANDARDIZED QUANTITY | max. 99.999.999.999.999,999999999 m ³ (<1*10 ¹⁵) resolution 0,1 cm ³ display: 99.999.999.999,9 m ³ or Nm ³ (In the event of a counter overflow, the counter starts at zero.) |

1) only NON-ATEX applications
2) only GDR 1501 PRO / PRO-N

3) only GDR 1501 PRO-N



ELECTRICAL VALUES

| | |
|------------------------|---|
| ACCURACY | $\pm 0,05 \% \text{ EW} \pm 1 \text{ digit at } 23 \text{ }^\circ\text{C}$ |
| POWER SUPPLY | |
| STANDARD | 24 V, DC $\pm 3 \text{ V}$, max. 200 mA |
| OPTIONAL ¹⁾ | - 100 - 240 V, AC, 144 mA max. 50/60 Hz and - 24 V, DC $\pm 3 \text{ V}$, max. 200 mA |

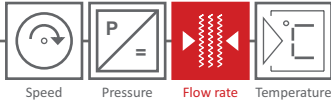
ENVIRONMENTAL INFLUENCES

| | |
|-------------------------------|------------------|
| AMBIENT TEMPERATURE | -10 to +55°C |
| STORAGE TEMPERATURE | -20 to +85°C |
| TEST VOLTAGE | 3 kV |
| HUMIDITY CLASS | E-DIN 40040 |
| ELECTROMAGNETIC COMPATIBILITY | acc. to EN 61000 |

CASING & MOUNTING OPTIONS

| | |
|--|---|
| STANDARD CASE | Polycarbonate case for wall mounting material: polycarbonate UL 94 V0 color: graphite gray (similar to RAL 7024), red (similar to RAL 3000) dimensions: 151 mm (W) x 125 mm (H) x 90 mm (D) protection class: IP 65 net weight: approx. 650 g |
| OPTIONAL CASE ¹⁾ | Aluminum case for wall mounting material: aluminum color: graphite gray, similar to RAL 7024 dimensions: 159 mm (W) x 128 mm (H) x 91 mm (D) protection class: IP 65 net weight: approx. 1250 g |
| DIN RAIL (OPTIONAL) | mounting parts for DIN rail mounting |
| MOUNTING GAS FLOW METER ²⁾ (OPTIONAL) | - Fastening element for direct mounting on gas flow meter the GD 300 / GD 500 with flange connection - Fastening element for direct mounting on gas flow meter the GD 300 / GD 500 with wafer connection |

1) only GDR 1501 PRO / PRO-N
2) only NON-ATEX applications



Speed Pressure **Flow rate** Temperature

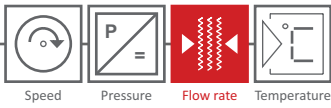
Order code

| | ECO | PRO | PRO-N | | | | |
|---|------|------|-------|----|---|---|-----|
| GDR 1501-XXXX-XYZ0 | 0048 | 0049 | 0061 | | | | |
| INPUT | | | | | | | |
| 1: Gas flow: Eingang für Platindraht-Sensor (GD 300/GD 500) ¹⁾ <u>or</u> | • | • | • | | | | |
| 1: Gas flow: impulse input for HB 300 / HB 300 Ex (GD 300 (Ex)/ GD 500 (Ex)), <u>or</u> | | • | • | | | | |
| 1: Gas flow: Third party devices with Open-Collector, Reed-Relais, input frequency 0 Hz ... 500 Hz <u>or</u> | | • | • | | | | |
| 1: Gas flow: NAMUR | | | • | | | | |
| 2: Temperature ²⁾ : 4 - 20 mA, 2 wire = -100 - 800 °C <u>or</u> | V | • | • | | | | |
| 2: Temperature ²⁾ : Pt100, 3 wire, -100 - 800 °C | • | • | • | | | | |
| 3: Pressure ²⁾ : 4 - 20 mA, 2 wire = -500 mbar - 1.000 bar | V | • | • | | | | |
| OUTPUT | | | | | | | |
| 1: (0) 4 - 20 mA = 0 - (x) Bm ³ /h, l/h, Bm ³ /min, l/min, Nm ³ /h, NL/h, Nm ³ /min, NL/min) Durchfluss | • | • | • | | | | |
| RELAY OUTPUT | | | | | | | |
| K1: Relay (NO) freely programmable - pulse output (0,1, 1 or 10 or 100 m ³ per impulse, counter output quantity <u>or</u> - limit value <u>or</u> - device status | • | • | • | | | | |
| K2: Relay (NO) freely programmable according to K1 | • | • | • | | | | |
| GDR 1501-xxxx-XYZ0 | | | | -X | Y | Z | |
| CASING FOR WALL MOUNTING | | | | | | | |
| Polycarbonate case (standard) | | | | 1 | | | |
| Aluminum case ³⁾ | | | | 2 | | | |
| POWER SUPPLY | | | | | | | |
| 24 V, DC ± 3 V (standard), max. 200 mA | | | | | 0 | | |
| - 100 - 240 V, AC, 144 mA max. 50/60 Hz <u>and</u> - 24 V, DC ± 3 V , max. 200 mA ²⁾ | | | | | 1 | | |
| INTERFACE | | | | | | | |
| no interface | | | | | | 0 | |
| interface Modbus RTU ³⁾ | | | | | | 1 | |
| MOUNTING OPTIONS | | | | | | | |
| Fastening element for DIN rail (Option HT) | | | | | | | -HT |
| Fastening element for direct mounting on gas flow meter the GD 300 / GD 500 with flange connection ¹⁾ | | | | | | | -F0 |
| Fastening element for direct mounting on gas flow meter the GD 300 / GD 500 with wafer connection ¹⁾ | | | | | | | -W1 |

V virtual input for freely definable fixed values
1) NON-ATEX applications only

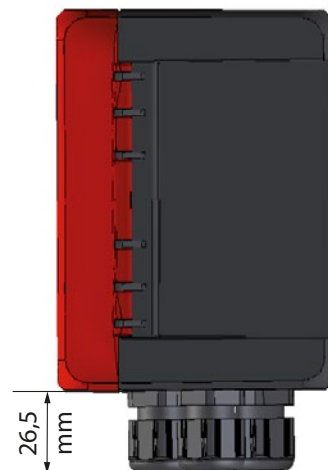
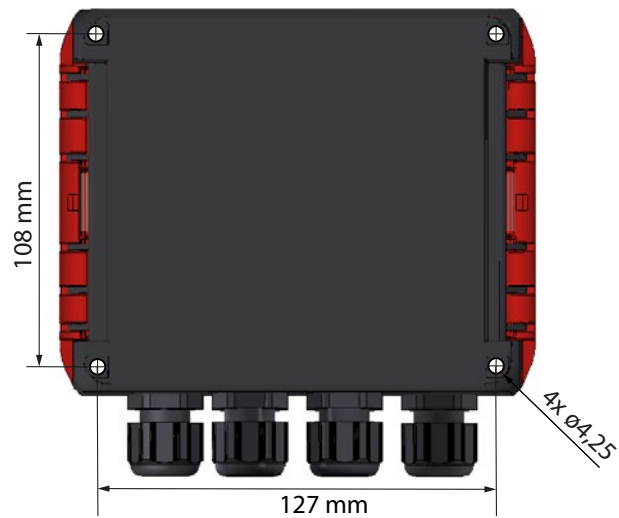
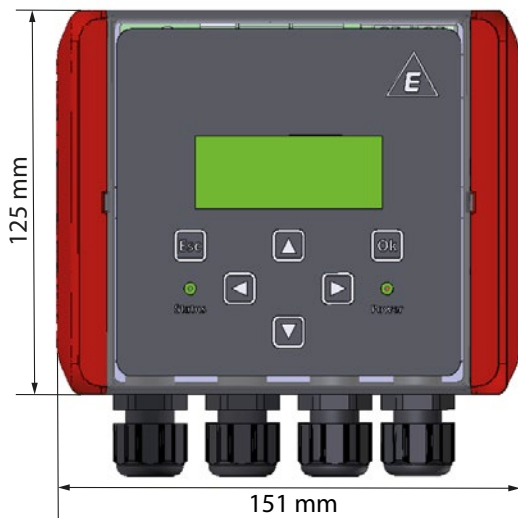
2) Fixed values can be defined without connected sensors.
3) only GDR 1501 PRO / PRO-N

Rev. no.: GDR 150xDS 324 E-V3.3 2021-10-29

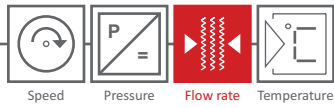


Dimensions

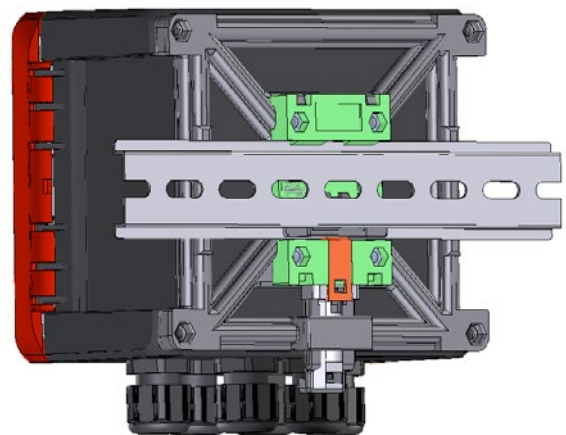
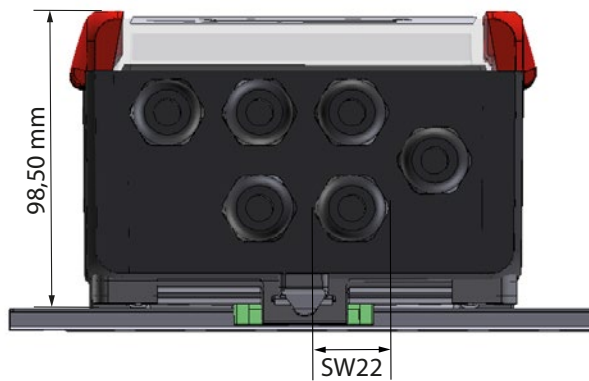
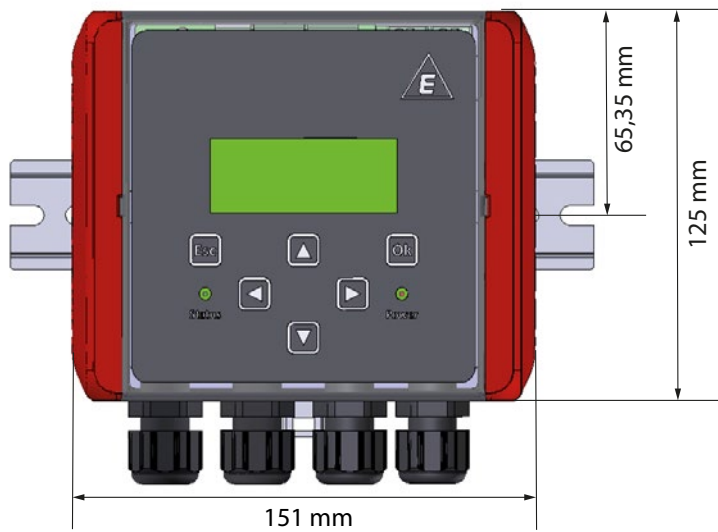
Standard case for GDR 1501 - wall mounting



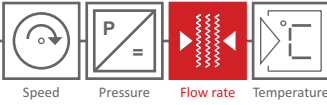
Rev-Nr.: GDR 150x-DS 324 E-V3.3 2021-10-29



Standard case for GDR 1501 - DIN rail mounting (option HT)



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Fluidistor Gas Flowmeter GD 300 Ex

The Fluidistor Gas Flowmeter measures all technical and medical gases with a nominal width of DN 25 to DN 400 and a measurement range of 0,2 ... 20 ... 16.000 m³/h. Process connection: Wafer/ sandwich of flange
 Pressure: PN 10 - PN 25 - PN 40
 Accuracy: ± 1,5 %

For further information see datasheet DS 312 E.



Compact Fluidistor Gas Flowmeter GD 500 Ex

The Compact Fluidistor Gas Flowmeter (stainless steel 1.4571) measures all technical and medical gases with a measurement range of 0,21 - 16,8 m³/h. Process connection G 1/2", G 1".
 Pressure: PN 10 - PN 25 - PN 40
 Accuracy: ± 1,5 %

For further information see datasheet DS 312 E.

Your local contact: