Speed Pressure **Flow rate** Temperature

Flow Computer GDR 1501

Gas volume in cubic meters or liters with optional standardization

Rev. no.: GDR 150x-DS 324 E-V3.1 2020-11-02

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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 in cubic meters or liters. The counter can display up to 100 million cubic meters. The resolution is 0.1 litres.

The devices process an input signal regarding the gas flow. For connection three different types of inputs are available. The gas flow meters GD 300 / GD 500 can be connected directly to the platinum wire sensor in the NON-ATEX area. In the ATEX area, the pulse input is connected via the HB 300 Ex. An input for open collector and reed relays is integrated to connect third-party products.

The current output gives the current flow rate per hour or minute and the solid state relay passes the defined pulses to a superior PLC system.

With the **ECO** and **PRO** versions the normalized flow per hour or minute can be calculated and transfered with the current output.

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

The required values of pressure and temperature are defined in the **ECO** version with fixed values. The **PRO** version provides two additional current inputs for a pressure and temperature sensor.

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

- 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
- 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 m^3 per pulse)
- Optional Datatransfer via PROFIBUS DP, Profinet, Modbus RTU, Modbus TCP

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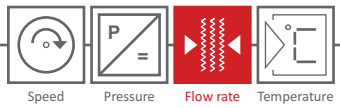

Technical details

The device series GDR 150x is based on a modular principle. This allows the inputs and outputs as well as software options to be optimally adapted to the individual requirements of the installation and application. This section provides an overview of all technical information of the series.

	Basic	Eco	Pro			
GDR 1501-**XXXX**-xyz0	0000	0048	0049	1049	2049	3049
Input						
1: Flow rate: input for platinum wire sensor (GD 300/GD 500) (only NON-ATEX) or	●	●	●	●	●	●
1: Flow rate: impulse input for HB 300-R000000/ HB 300 Ex-R000000 (GD 300 (Ex)/GD 500 (Ex)), or	●	●	●	●	●	●
1: Flow rate: Third party devices with Open-Collector, Reed relay, input frequency up to 1 kHz	●	●	●	●	●	●
2: Temperature: 4 - 20 mA, 2 wire = -100 - 999 °C (12 bit) or		v	●	●	●	●
2: Temperature (Pt100): 3 wire (12 bit)		v	●	●	●	●
3: Pressure: 4 - 20 mA, 2 wire = 0 - 1000 bar (12 bit)		v	●	●	●	●
OUTPUT						
1: 4 - 20 mA = 0 - (x) Bm³/h, l/h, Bm³/min, l/min (only Eco and Pro: Nm³/h, NL/h, Nm³/min, NL/min) flow rate (freely programmable), input resistance 500 Ohm	●	●	●	●	●	●
RELAY OUTPUT						
K1: Relay (NO) freely programmable - pulse output (0,1, 1 or 10 or 100 m³ per impulse, freely programmable), counter output quantity or - limit value or - device status	●	●	●	●	●	●
K2: Relay (NO) freely programmable according to K1	●	●	●	●	●	●
Bus interfaces						
Modbus TCP				●		
Profinet					●	
PROFIBUS DP						●

v = virtual input for freely programmable fixed values

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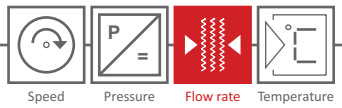

GDR 1501-xxxx-**XYZ0**	X	Y	Z	
Housing for wall mouting	0			**Housing for GDR 1501 BASIC and ECO** dimensions: 151 mm (W) x 125 mm (H) x 60 mm (D) material: polycarbonate UL 94 V0 protection class: IP 65 net weight: approx. 600 g
	1			**Standard Housing for GDR 1501 PRO** dimensions: 151 mm (W) x 125 mm (H) x 90 mm (D) material: polycarbonate UL 94 V0 protection class: IP 65 net weight: approx. 650 g
	2			**Housing for GDR 1501 PRO** material: aluminum dimensions: 159 mm (W) x 128 mm (H) x 91 mm (D) protection class: IP 65 net weight: approx. 1250 g
Power supply		0		24 V, DC ± 3 V (standard) max. 200 mA
		1		- 100 - 240 V, AC 144 mA max. 50/60 Hz und - 24 V, DC ± 3 V , max. 200 mA (only GDR 1501 PRO)
Modbus RTU			1	Interface Modbus RTU (only GDR 1501 PRO), available Q1/2021
Data logger, Modbus RTU	2		2	Integrated data logger with Webserver and e-Mail for status reports, (only GDR 1501 PRO) ,available Q1/2021
	2		3	Interface Modbus RTU, Integrated data logger with webserver and e-Mail for status reports, (only GDR 1501 PRO) ,available Q1/2021

Mounting brackets	
Mounting options	- mounting parts for DIN rail mounting (option HT) - fixing parts for direct mounting on gas flowmeter GD 300 (only NON ATEX applications)

Display	
LCD display	4 lines à 20 characters

Electrical values	
Accuracy	± 0,05 % EW ± 1 digit at 23 °C
Power supply	24 V, DC ± 3 V, max. 200 mA
	100 - 240 V, AC, 144 mA max. 50/60 Hz (option, only GDR 1501 PRO)

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

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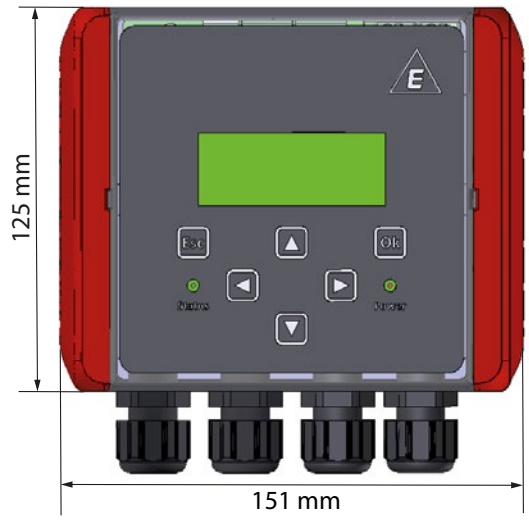
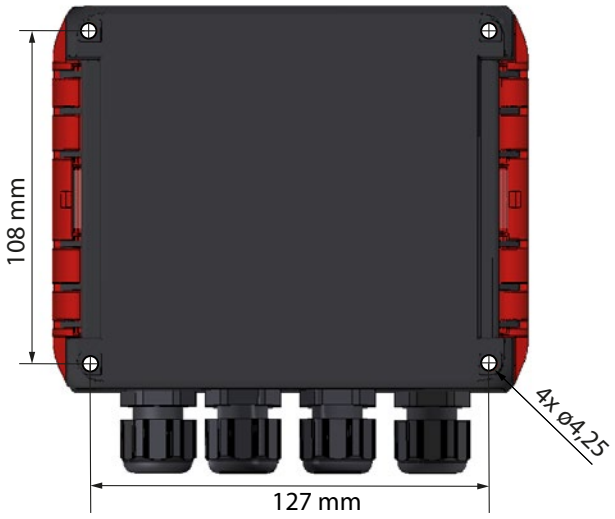
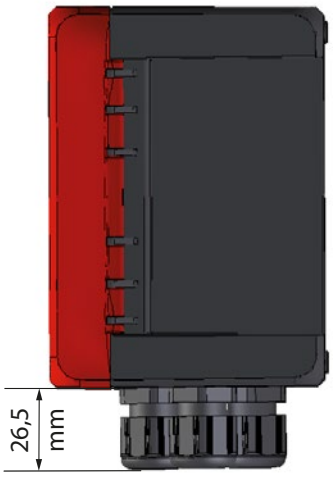
Dimensions

Standard housing for GDR 1501 PRO - wall mounting







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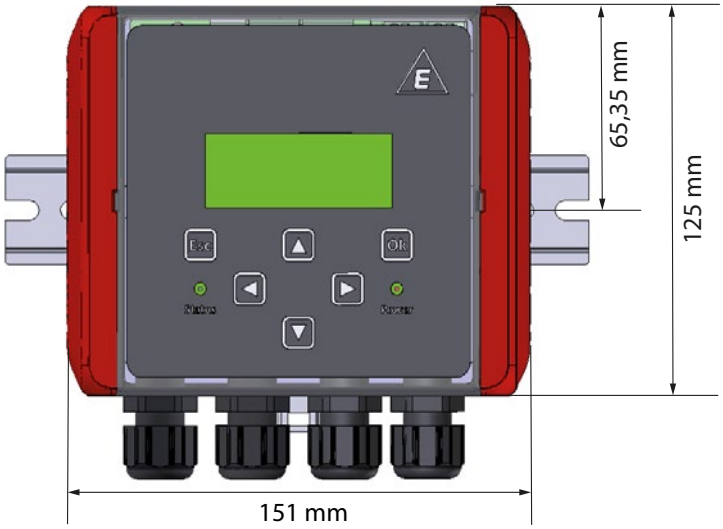
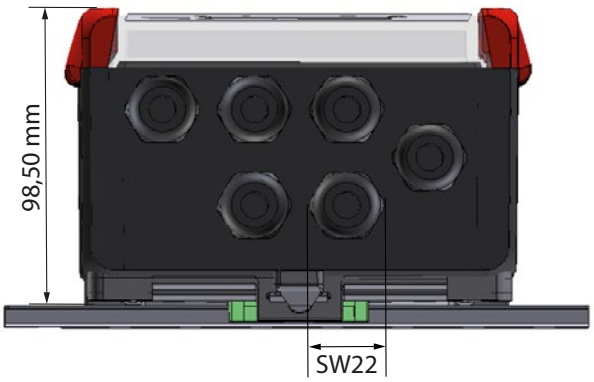
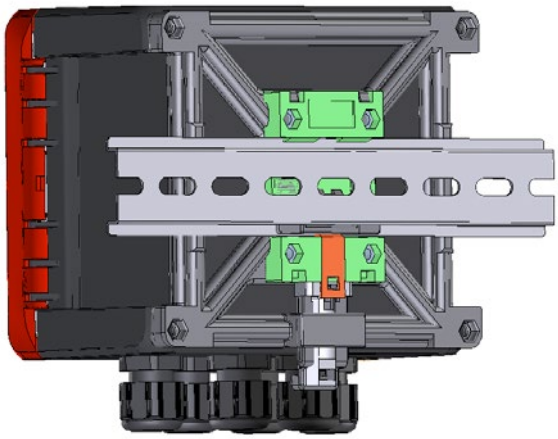
Housing for GDR 1501 PRO - DIN rail mounting (option HT)







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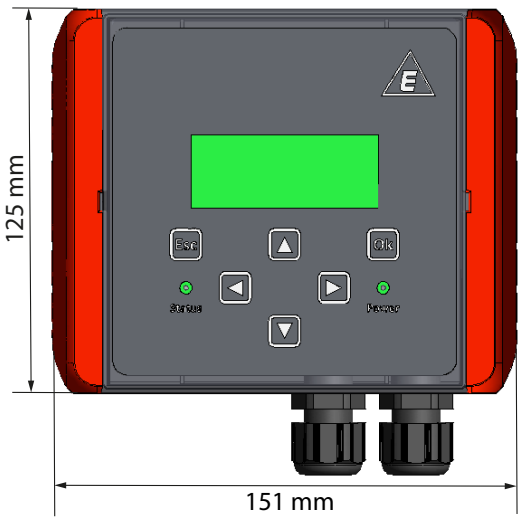
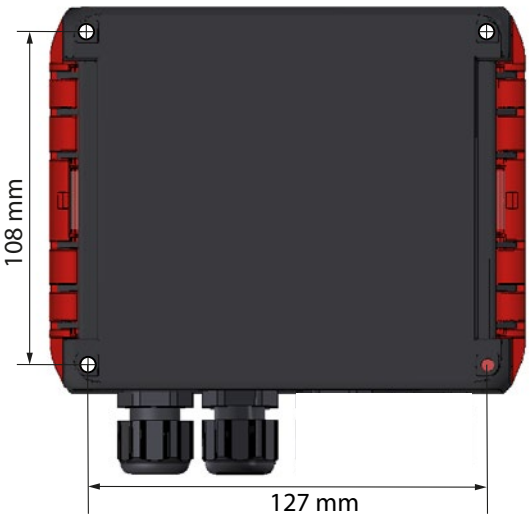
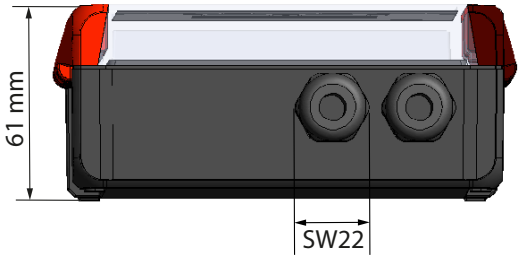
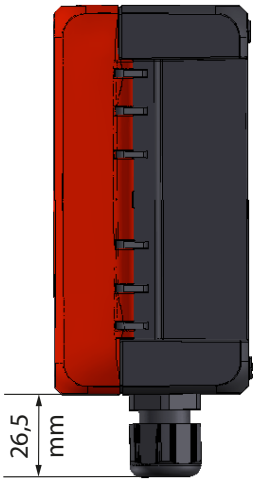
Standardhousing for GDR 1501 BASIC / ECO - wall mounting









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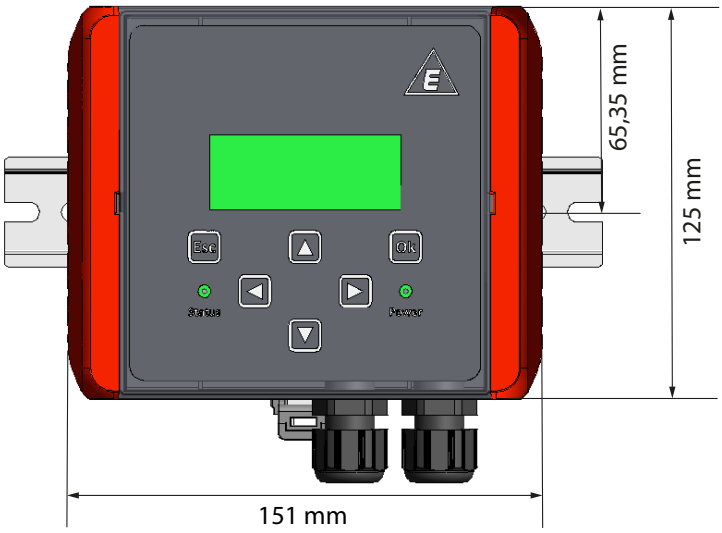
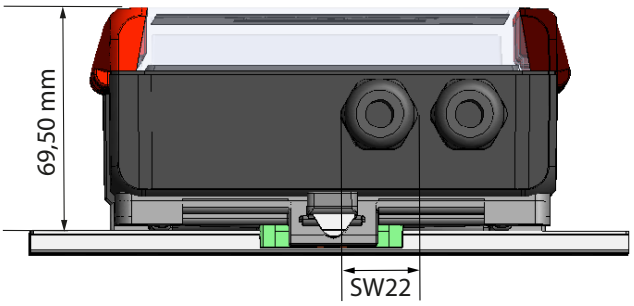
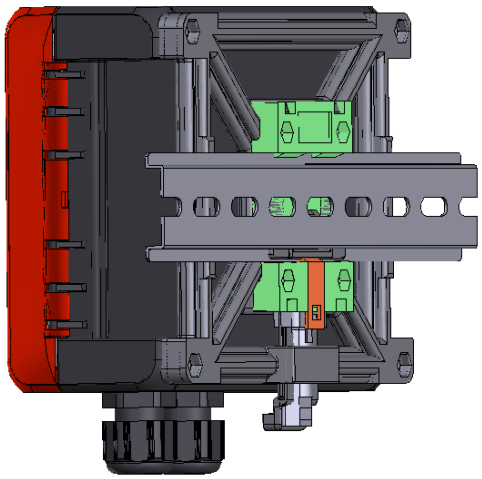
Housing for GDR 1501 BASIC / ECO - DIN rail mounting (option HT)







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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 m^3/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 m^3/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:

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