

Easy & quick control of relative or differential pressure

The presence of very pure air, i.e. with a very low content of microparticles of suspended dust, is in some fields mandatory. In the **industrial and scientific research** and **microelectronics industry** in general, in the field of bottling and food and moreover in the **pharmaceutical field**, **cleanrooms** are used to always ensure a controlled atmosphere.

Especially in these applications, a highly precise and reliable instruments are indispensable for the measurement of differential pressure.

The series of small and compact transmitters **HD402xT...** is suitable for measuring relative pressure with respect to atmosphere or differential pressure in the range from **as low as 0-50 Pa to 0-200 kPa**.

These transmitters use a **silicon piezoresistive sensor with high accuracy** and temperature compensation, which **has excellent linearity, repeatability and stability** over the time. Thanks to the particular sensor used, the transmitters are insensitive to orientation and position. Moreover, the **high stability** of the sensor over the time and in comparison to the changes in temperature allows the elimination of the operations of maintenance typically required to **compensate for the aging and the deviation of the sensor zero**.

Depending on the needs, the wide variety of the models offer an output signal of the sensor that is converted into a **digital RS485 Modbus-RTU output** (HD402ST), into a **voltage 0...10 V or active current 0...20 mA / 4...20 mA analog output** (HD402T) or into a **2-wire (current loop) 4...20 mA analog output** (HD402AT).

Technical Specification

Output	HD402T...: Active analog 0...10 Vdc ($R_{Lmin} = 10\text{ k}\Omega$) or 0...20 or 4...20 mA ($R_{Lmax} = 500\text{ }\Omega$) HD402AT...: 2-wire (current loop) 4...20 mA ($R_{Lmax} = (Vdc-12)/0,022$) HD402ST...: Digital RS485 Modbus-RTU
Power Supply	HD402T...: 24 Vac $\pm 10\%$ or 18...40 Vdc HD402AT... and HD402ST...: 12...30 Vdc
Absorbtion	HD402T... and HD402AT...: < 1 W @ 24 Vdc HD402ST...: < 100 mW @ 12 Vdc
Pressure connection	$\varnothing 6.2\text{ mm}$ pressure inputs
Compatible media	Air and non-aggressive dry gases

Delta OHM

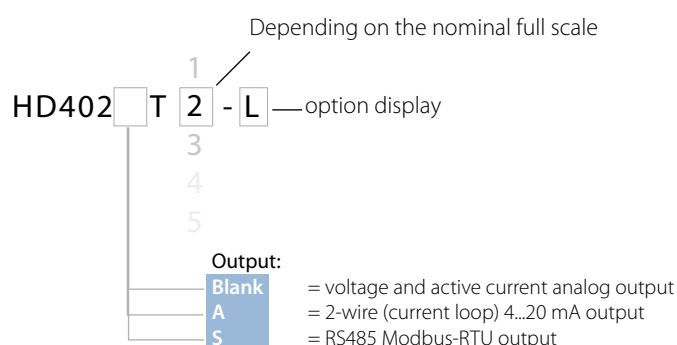
Member of GHM GROUP

Series HD402T...L
HD402AT...L
HD402ST...L

PRESSURE TRANSMITTER



- | Small and compact
- | Modbus version
- | 2-Wire version for quick and easy installation
- | Excellent long- term stability
- | IP65



	Accuracy @ 25 °C	Measuring range	Resolution
HD402T/ST/AT 1	$\pm 1.5\%$ f.s. nominal	$\pm 50/100/250\text{ Pa}$ (also in mmH ₂ O, inchH ₂ O, mbar)	0.1 Pa (also in mmH ₂ O, inchH ₂ O, mbar)
HD402T/ST/AT 2	$\pm 0.75\%$ f.s. nominal	$\pm 250/500/1000\text{ Pa}$ (also in mmH ₂ O, inchH ₂ O, mbar)	1 Pa, (also in mmH ₂ O, inchH ₂ O, mbar)
HD402T/ST/AT 3		$\pm 2.5/5/10\text{ kPa}$ (also in mmHg, PSI, mbar)	0.01 kPa, (also in mmHg, PSI, mbar)
HD402T/ST/AT 4	$\pm 1\%$ f.s. nominal	$\pm 25/50/100\text{ kPa}$ (also in mmHg, PSI, mbar)	0.1 kPa, (also in mmHg, PSI, mbar)
HD402T/ST/AT 5		$\pm 50/100/200\text{ kPa}$ (also in mmHg, PSI, mbar)	0.1 kPa, (also in mmHg, PSI, mbar)

Series HD402TR...L

LOW PRESSURE CONTROLLERS WITH ON/OFF RELAY SWITCH OUTPUT

Pa - kPa - mbar - mmH₂O - inchH₂O - mmHg - PSI



Operating condition	-10...+60 °C / 0...95% RH
Response time	0.5 seconds for the display updating
Storage temperature	-20...+70 °C
IP protection	IP65
Pressure connection	Ø 6.2 mm pressure inputs
Absorbion	< 1 W @ 24 Vdc
Power supply	24 Vac ± 10% or 15...36 Vdc
Compatible Media	Air and non-aggressive dry gases

- Rugged **technopolymer** case
- Relay output
- Configurable from your PC
- Manual setting possible with push buttons
- Visible (LED) alarm and audible alarm
- Settable thresholds, hysteresis and delay
- Auto-zeroing** feature in the low range model to ensure **highest precision** and excellent long term stability
- Clear LCD display with measured value
- Wide selection in ranges
- Selectable units of measurement
- Excellent linearity, repeatability and stability
- Very low maintenance
- Factory calibrated

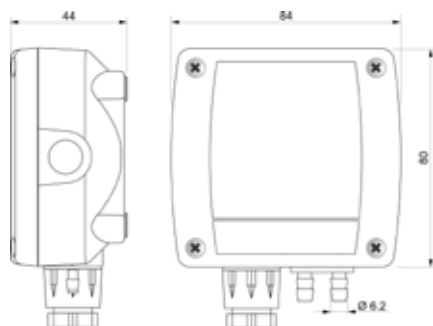
Technical specification

	Accuracy@25°C	Measuring range	Resolution
HD402TR1L	± 1.5% f.s. nominal	± 250 Pa, (also in mmH ₂ O, inchH ₂ O, mbar)	0.1 Pa, (also in mmH ₂ O, inchH ₂ O, mbar))
HD402TR2L	± 0.75% f.s. nominal	± 1000 Pa, (also in mmH ₂ O, inchH ₂ O mbar)	1 Pa, (also in mmH ₂ O, inchH ₂ O mbar)
HD402TR3L		± 10 kPa, (also in mmHg, PSI, mbar)	0.01 kPa, (also in mmHg, PSI, mbar)
HD402TR4L	± 1% f.s. nominal	± 100 kPa, (also in mmHg, PSI, mbar)	0.1 kPa, (also in mmHg, PSI, mbar)
HD402TR5L		± 200 kPa, (also in mmHg, PSI, mbar)	0.1 kPa, (also in mmHg, PSI, mbar)

Applications

- Control of HVAC
- Control of filters
- Cleanrooms monitoring
- Pneumatic control
- Respirators
- Vaporizers

Dimensions



Internal view

