

HD2004T...; HD20V4T...



HD2004T..., HD20V4T... PASSIVE PRESSURE TRANSMITTERS WITH DIN 43650 CONNECTOR

HD2004T and **HD20V4T** are microprocessor pressure transmitters, with current output (4÷20 mA) the first and voltage output (0÷5V, 1÷5V or 0÷10V) the second.

The sensitive element consists of a jumper of piezoresistive resistors deposited on a ceramic membrane. At the variation of pressure, the bending of this membrane causes a linear and proportional variation of the bridge resistances. The stainless steel case (30 mm diam.) includes both the sensor and the electronics. For the connection to the pressure there will be a part threaded 1/4 "BSP and a tax on container for a key 27 mm. For the electrical connection is present on the side, a male connector pin Faston three or four (depending on model) with the corresponding female socket and PG7 cable gland to DIN 43650.

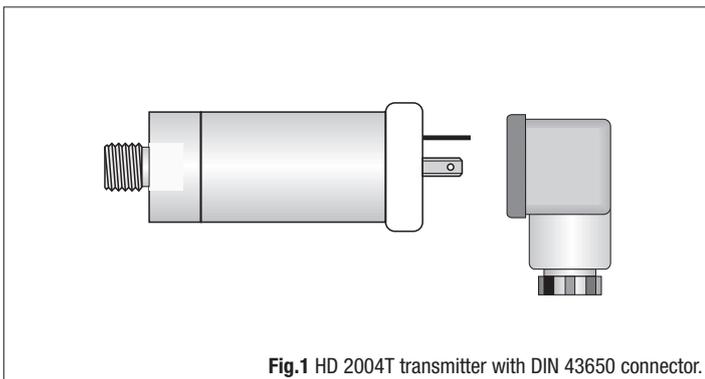


Fig.1 HD 2004T transmitter with DIN 43650 connector.

Technical Specifications

Output Signal	Current	4...20 mA (HD 2004T...)
	Voltage	0...5V (HD20V4T... 1), 1...5V (HD20V4T... 2), 0...10V (HD20V4T... 3)
Full scale pressure		200, 400, 600 relative mbar 1, 2.5, 4, 6, 10, 16, 25, 40, 60, 100, 160, 250, 400 and 600 absolute bar 1, 2.5, 4, 6, 10, 16, 25, 40, 60 relative bar
Overpressure limit	Up to 250 bar	Twice the rated value
	400 bar	750 bar
	600 bar	750 bar
Sensor		Piezoresistive
Material in contact with the measuring fluid		Alumina, stainless steel for models up to 1bar.
Fluid in contact with the diaphragm		Gas or liquids
Operating temperature		-30...+80°C
Power supply voltage		10...30Vdc (15...30Vdc for models having 0...10Vdc output)
Accuracy (linearity, hysteresis and repeatability)		≤ ±0.25%F.S.
Gain sensitivity to temperature changes (@ 25°C)		≤ ±0.008%F.S. between 0 and 70°C ≤ ±0.012%F.S. between -30°C and 0°C and between 70°C and 80°C
Zero sensitivity to temperature changes (@ 25°C)		≤ ±0.04%F.S.
Connection to plant under pressure		1/4" BSP male
Electrical connection		3/4 -pole faston male connector + DIN 43650A female connector (outlet)
Housing		AISI 304 stainless steel
Size		Ø 30x100 mm (included DIN 43650 connector)
Weight		190 g
Load resistance for HD 2004T models... (see Fig.2)		$R_{Lmax} = 636 \Omega$ a 24 Vdc $R_{Lmax} = \frac{(Vdc - 10)}{22mA}$
Load resistance for HD 20V4T models...		$R_L \geq 10k\Omega$
Response time		5 ms (Time required to achieve the 63% of the final variation)
Protection class		IP54

Installation and connections

HD2004T... and HD20V4T... transmitters can be installed in any position. Open the female connector to make the electrical connections (see fig.3).

Transmitter Calibration

The transmitter output is factory-calibrated, thus no user's operation is generally requested. Current output transmitters supply 4 mA on the start of scale and 20 mA at full scale;

0...5V, 1...5V and 0...10V voltage output transmitters generate 0V or 1V at start of scale pressure and 5V or 10V at full scale pressure.

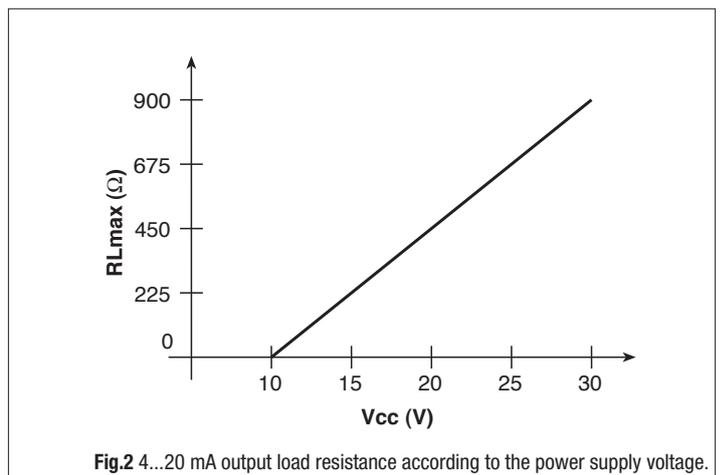


Fig.2 4...20 mA output load resistance according to the power supply voltage.

HD 2004T... and HD 20V4T... series pressure transmitters can be connected to Delta OHM HD 9022 single input configurable indicators / regulators, to DO 9404 double input ones or led indicator HD2601V.1.

Warnings

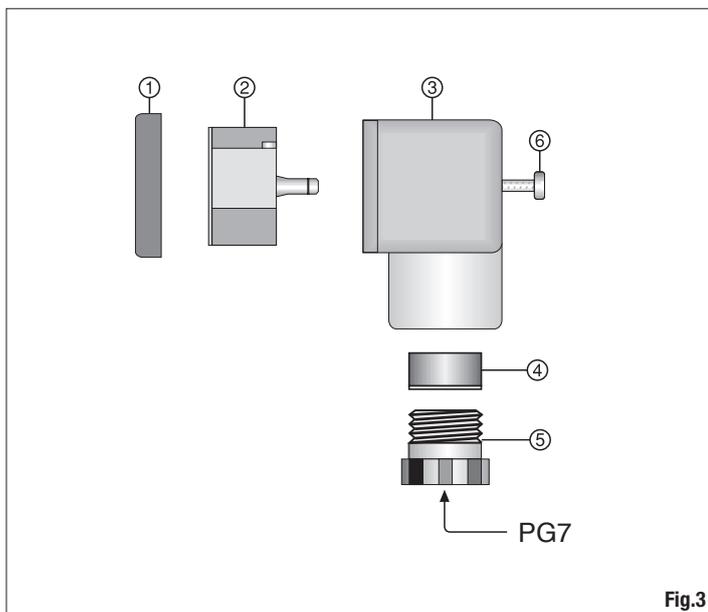
The pressure transmitter has a male threaded 1/4" BSP. During installation, take special care to the pressure resistance of the junction. Use any appropriate seals.

Great attention must be placed in the installation of transmitters in the pressure vessel or piping. Attention must be paid to the choice of full scale flow rate for an error, in addition to permanently damage the transmitter, can cause personal injuries and property also severe. Always insert, before the first transmitter, a key stop and make sure that the plant will not occur abnormal and unexpected peaks or surges of fluid under pressure.

ORDER CODES

HD 20x4T - x x x x

- Output:**
 - 1 = 0...5V
 - 2 = 1...5V
 - 3 = 0...10V
 - none = 4...20 mA
- A = Absolute pressure**
G = Relative pressure
- B = bar**
MB = mbar
- Nominal full scale (bar)**
 - 100-200-400-600 relative mbar
 - 1-2.5-4-6-10-16-25-40-60 relative or absolute bar
 - 100-160-250-400-600 absolute bar
- Type of output**
 - 0 = Current**
 - V = Voltage**



Remove the gasket 1. Unscrew the cable gland 5 and take the gasket 4 away. Using a screwdriver, lever and remove the terminal carrier 2. Follow the indications shown on figure 4 to make the connections: the ground terminal has to be connected with the braid of the screened cable. After carrying out the connections, close again the connector. Mount the HD 2004T... or the HD 20V4T... : the transmitters have a 1/4" BSP male threaded connection. By mounting, take care that the fitting is properly pressure-sealed and, if necessary, use adequate seals. Apply the connector to the transmitter and fix it with the provided 6 screw.

FULL SCALE	RELATIVE Ref.: atmospheric pressure	ABSOLUTE Ref.: vacuum	ABSOLUTE Ref.: 1 bar s.g.
100 mbar	HD20...4T-100MBG		
200 mbar	HD20...4T-200MBG		
400 mbar	HD20...4T-400MBG		
600 mbar	HD20...4T-600MBG		
1 bar	HD20...4T- 1 BG...	HD20...4T- 1 BA...	
2.5 bar	HD20...4T- 2 B5G...	HD20...4T- 2 B5A...	
4 bar	HD20...4T- 4 BG...	HD20...4T- 4 BA...	
6 bar	HD20...4T- 6 BG...	HD20...4T- 6 BA...	
10 bar	HD20...4T- 10 BG...	HD20...4T- 10 BA...	
16 bar	HD20...4T- 16 BG...	HD20...4T- 16 BA...	
25 bar	HD20...4T- 25 BG...	HD20...4T- 25 BA...	
40 bar	HD20...4T- 40 BG...	HD20...4T- 40 BA...	
60 bar	HD20...4T- 60 BG...	HD20...4T- 60 BA...	
100 bar			HD20...4T- 100 BA...
160 bar			HD20...4T- 160 BA...
250 bar			HD20...4T- 250 BA...
400 bar			HD20...4T- 400 BA...
600 bar			HD20...4T- 600 BA...

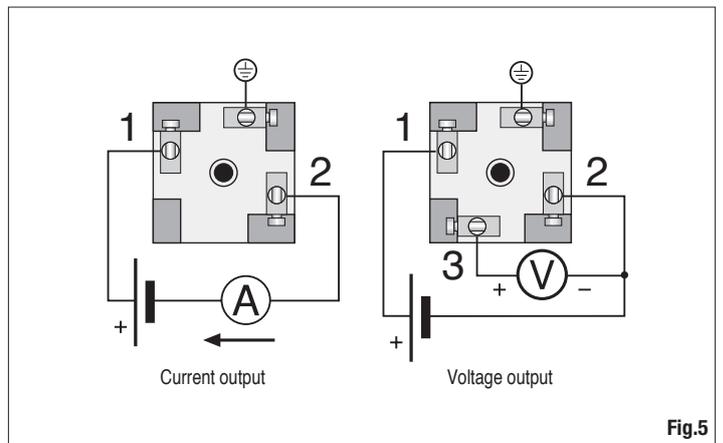
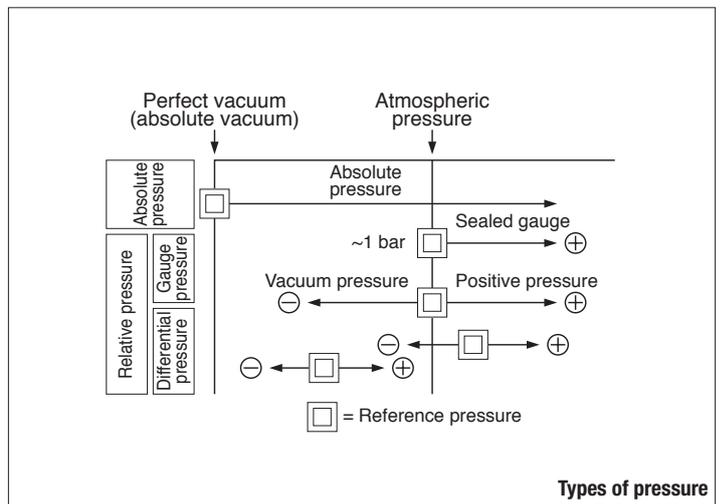


Fig.5



Types of pressure

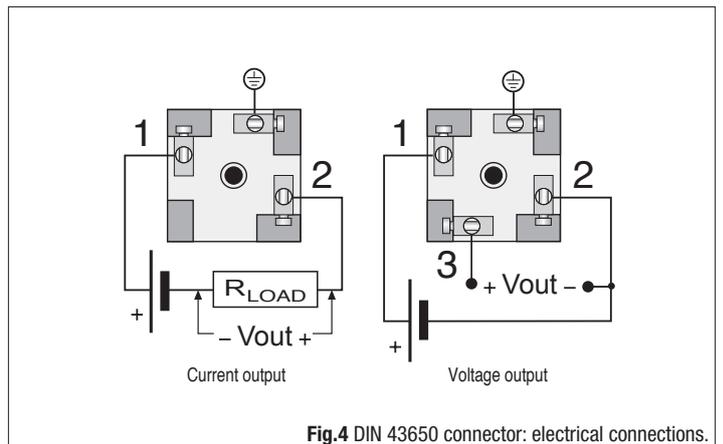


Fig.4 DIN 43650 connector: electrical connections.