OEM Pressure Transmitter PTD
For Use Under Harsh Conditions

CERTIFICATIONS

CE RoHS COMPLIANT

DESCRIPTION

The compact OEM pressure transmitter PTD has been designed to be used under harsh conditions., e.g. chiller, booster pump, compressor and in the refrigeration industry.
Due to its cost-efficiency and technical feature, like robustness and long-term stability this pressure transmitter offers suitable engineering solution for OEM applications.

Condensation tightness under toughest operating conditions and excellent chemical resistance against aggressive medium characterize the pressure transmitter PTD. Mechanical shock and vibration resistance are achieved by welding of stainless steel measuring cell and mechanical connection, which makes sealing elements obsolete. The compact design allows the use in limited space applications.

Various electrical and mechanical connections are available and thereby offer the optimal solution to diverse application, e.g. chiller, booster pump, compressor and refrigeration technology.

The pressure transmitter PTD complies with electromagnetic compatibility requirements (EMC) as per EN 61326.

MEASURING RANGES / OPTIONS

Gauge pressure:

- Positive: 0....0.1 bar to 0....700 bar
- Compound: -1...0 bar to -1...60 bar

Absolute: 0...1 bar to 0...50 bar

FEATURES

- Stainless steel wetted parts
- Compatible with all common refrigerants
- Compatible with air and water under drastic pressure changes
- Vibration and shock resistance by compact design
- Dynamic and static pressure measurement possible
- Cost efficient design
- CE, RoHS-conform

APPLICATIONS

- Chiller
- Booster Pump
- Coolant
- Compressor
- Purging Unit

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SPECIFICATIONS

Model	PTD		Options
Pressure Type	Positive Gauge	Compound Gauge	Absolute
Pressure Range	0...0.1 bar to 0...700 bar	-1...0 bar to -1...59 bar	0...1 bar to 0...50 bar
Overpressure Limit	X 2		
Burst Pressure	X 3		
Accuracy[1]	± 1.0% of FS		± 0.5% of FS (optional)
Response Time	≤ 5 ms		
Measuring Rate	200 Hz		
Output Signal 2-wire (A): 4...20 mA 3-wire (A): 0...20 mA 3-wire (V): 0...10 VDC 0...5 VDC 1...5 VDC 0.5...4.5 VDC	Power Supply 7...36 VDC 6....36 VDC 14...30VDC 10....30 VDC 10....30 VDC 4.5...5.5 VDC	Maximum Load R_A $R_A \leq (Ub - 10\ V) / 0.02\ A$ $R_A \leq (Ub - 3\ V) / 0.02\ A$ R_A > max. Output Signal / 1 mA $R_A > 4.5\ k\Omega$	Other Signals on Request
Sensor Element	Piezoresistive: ≤ 200 bar	Thin Film: > 200 bar (> 50 bar optional)	
Long-term Stability	≤ ±0.2 % of FS / year at Reference Conditions according to IEC 61298-2		
Case	Stainless Steel 304		
Pressure Connection	7/16-20 UNF-2A 7/16-20UNF-2B Schrader	G ¼ B G ¼ A R ¼ NPT ¼	Other Pressure Connections Feasible
Wetted Parts	Piezoresistive: Stainless Steel 304/316L, FKM/NBR	Thin Film: Stainless Steel 17-4PH	
Electrical Connection / IP Rating	M12x1 (4-pin): IP67	Metri Pack Serie 150: IP67	Cable Outlet: IP67 / 68
Electrical Protection	Short-Circuit (S+ vs. 0V)	Overvoltage (max. DC 36V)	Reverse Polarity (Ub vs. 0V)
Insulation Voltage	500 VDC		1000 VDC (optional)
Thermal Error on Compensated Range	≤ 0.3 % of FS / 10K in Compensated Range -20 ....80 °C		
Thermal Error on Zero	≤ 0.5 % of FS / 10 K		
Permissible Temperatures	Storage -40....100 °C	Medium -40....125°C	Environment -25....85 °C
MTTF	> 100 years		
Conformity Pressure Equipment Directive EMC Directive Shock Resistance Vibration Resistance	CE, RoHS 97/23/EC 2004/108/EEC, EN 61326 Emission (Group 1, Class B) 500g according to IEC 60068-2-27 10g according to IEC 60068-2-6		
Weight	Piezoresistive: approx. 0.20 kg	Thin Film: approx. 0.25 kg	

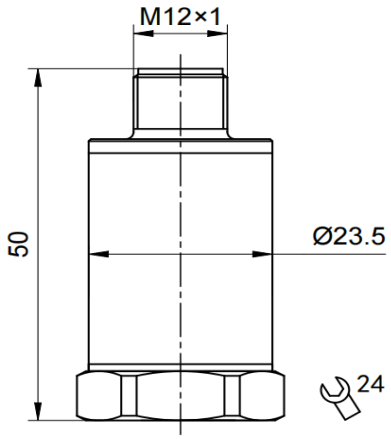
[1]Including Non-Linearity, Hysteresis, Zero Point and Full Scale Error
(Corresponds to Error of Measurement per IEC 61298-2)

FS = Full Scale

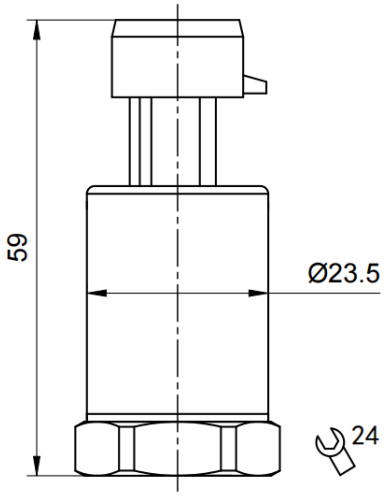
DIMENSIONS (mm)

CASE

Circular Connector
M12x1 – 4 -Pin

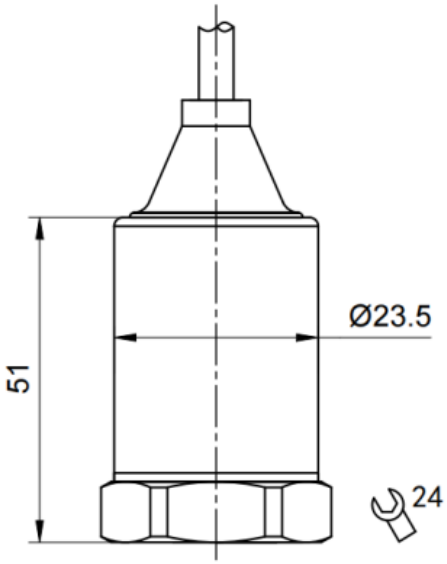


Metri Pack
Serie 150

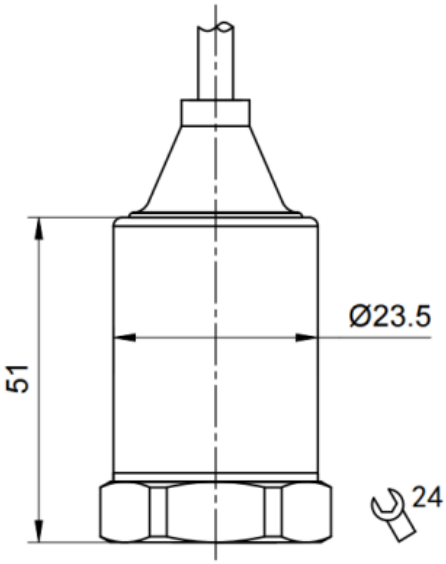


Cable Outlet With Free Ends

IP 67



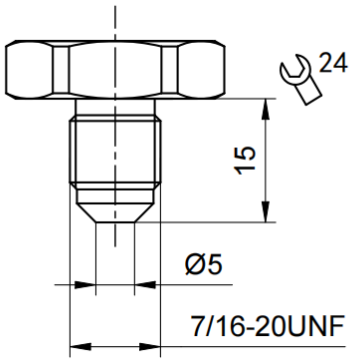
IP 68



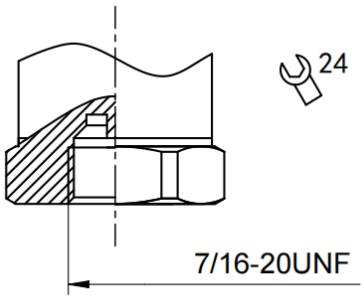
DIMENSIONS (mm)

PRESSURE CONNECTIONS

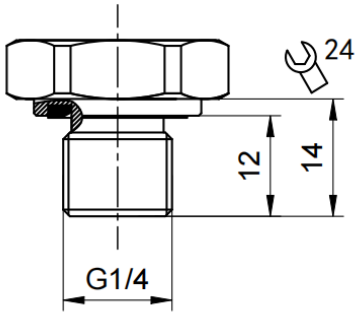
7/16-20UNF-2A
90° Cone



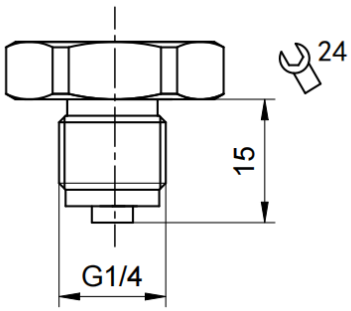
7/16-20UNF-2B Schrader Inside
With Deflector Pin



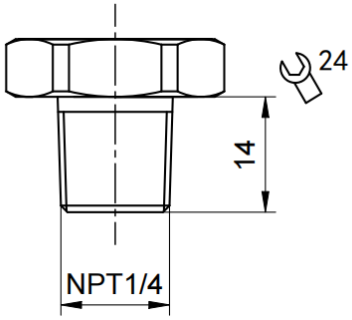
G¼ B
G¼ EN 837



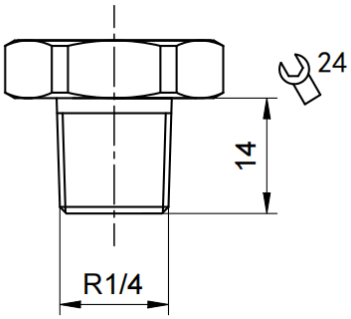
G¼ B
G¼ DIN 3852



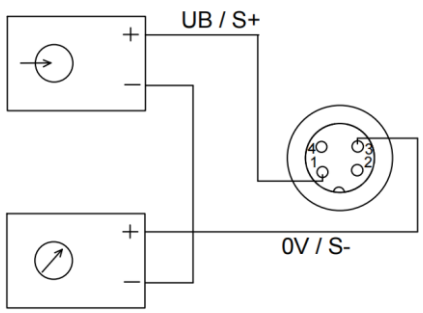
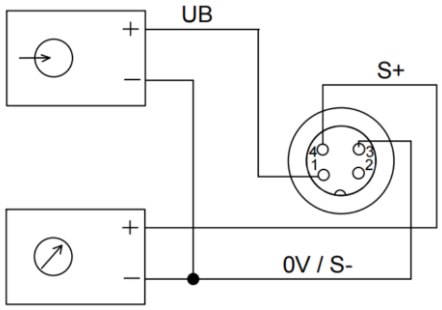
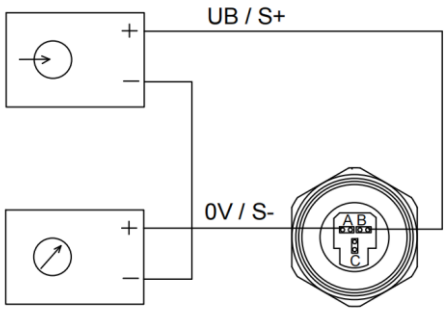
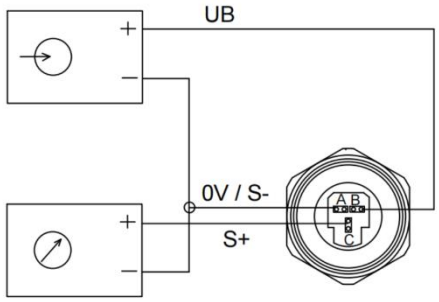
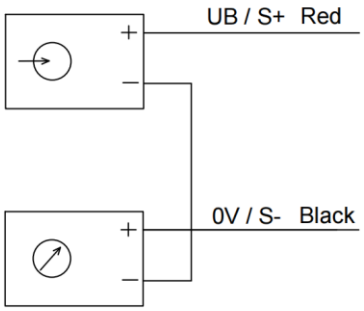
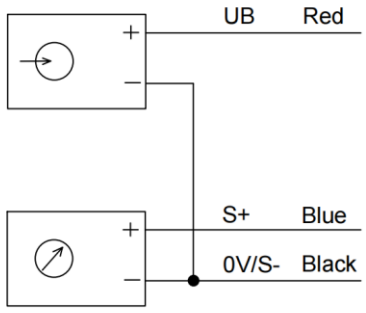
NPT ¼ ANSI/ASME



R ¼ ISO 7



ELECTRICAL CONNECTION

	2-wire	3-wire
Circular Connector M12x1 - 4-Pin		
Metri Pack Serie 150 3 - Pin		
Cable with Free Ends IP67 / IP68		

ORDERING CODE PTD

PTD-**A-BBBB-C-DD-EEE-FF-GGG**

A	Pressure	
	1	Absolute
	2	Relative

BBBB	Pressure Range (bar)							
	1000	0.10	1002	10	Z101	-1...+1	Y500	-0.05...+0.05
	1600	0.16	1602	16	Z161	-1...+1.6	Y101	-0.1...+0.1
	2500	0.25	2502	25	Z251	-1...+2.5	Y251	-0.25...+0.25
	6000	0.60	4002	40	Z401	-1...+4.0	Y401	-0.4...+0.4
	1001	1.0	6002	60	Z601	-1...+6.0	Y601	-0.6...+0.6
	1601	1.6	1003	100	Z102	-1...+10	Others on request	
	2501	2.5	1603	160	Z162	-1...+16		
	4001	4.0	2503	250	Z402	-1...+40		
	6001	6.0	6003	600	Z602	-1...+60		

C		
	1	4...20 mA, 2-wire (8-36 VDC)
	2	0...10 V, 3-wire (12-36 VDC)
	3	0.5...4.5 V, 3-wire (8-36 VDC)
	4	0.5...4.5 V, 3-wire (5 VDC)
	5	0...5 V, 3-wire (8-36 VDC)
	6	1...5 V, 3-wire (8-36 VDC)
	Others on request	

DD	Accuracy (% FS)	
	05	0.5
	10	1.0
	Others on request	

EEE	Pressure Connection			
	G4A	G1/4A	G4B	G1/4B
	NP4	NPT1/4	NP8	NPT1/8
	PT4	R1/4	PT8	R1/8
	U2A	7/16-20 UNF-2A		
	U2B	7/16-20 UNF-2B Schrader		
	Others on request			

FF	Electrical Connection	
	MP	Metri Pack Serie 150
	M1	M12x1, 4-pin
	C1	Cable version IP 67
	C2	Cable version IP 68
	Others on request	

GGG	Customized	
	111	Standard version
	XXX	Customer specific

Modifications reserved