MANOTHERM

MT-P110EC

PRESSURE GAUGE WITH OUTPUT SIGNAL 4-20mA

FEATURES

• The pressure gauge is equipped with 4-20mA output signal created by a piezo resistive stainless steel measuring cell. This current output can be used for digital local indicator or the recording of the output signal. When there is power outage it is still possible to have local reading.

STANDARD PARAMETERS

Accuracy	1.0% (sensor accuracy 0.15%)	
Ambient temperature	Dry: -40°C …+60°C	Filled: -20°C …+60°C
Medium temperature	Dry: 0°C…+70°C	Filled: 0°C…+70°C
Standard	EN837-1	

MATERIAL OF CONSTRUCTION

Case & Bezel	AISI 304
Connection*	AISI 316
Sensing element*	TP316
Measuring cell*	AISI 316
Movement	Stainless steel
Pointer & Dial	Aluminium
Window gasket	NBR
Blow out	AISI 304 with NBR compensation
Fill plug	NBR (HNBR for filled gauges)
Sensor seal*	FKM
Cable box	Polyamide 6
Mounting flanges	AISI 304
Window	Safety glass

*wetted materials

STANDARD SPECIFICATIONS

Dial size	100mm (4″) / 160mm (6″)
Range	0…1 to 0...60 bar
Mounting pattern	Direct, Bottom connection
Process connection	½" NPT (M) / ½" BSP (M)
Ingress protection	IP65 / IP66 / IP67
Execution	Dry / Silicon oil

PRESSURE LIMITATIONS

PRESSURE GAUGE

Dial size	Steady	Fluctuating	Short time
100mm	0.75 x FSV	0.67 x FSV	FSV
160mm	FSV	0.9 x FSV	1.3 x FSV

PRESSURE SENSOR

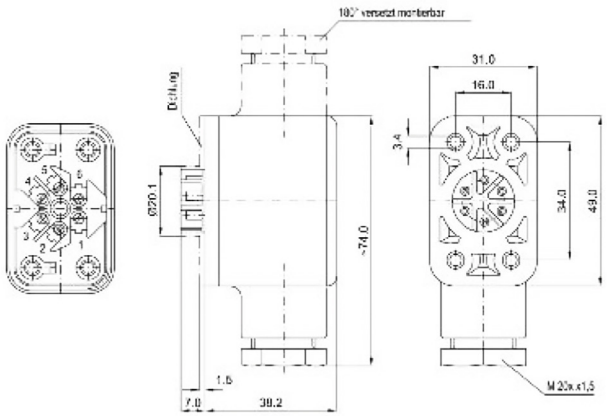
Measuring range	Over pressure	Burst pressure	Long term stability
0.5…2 bar	3x FSV	200 bar	<0.5% FSV / <4 mbar
>2…25 bar	3x FSV	200 bar	<0.1% FSV / 0.2% FSV

TEMPERATURE EFFECT

The variation of indication caused by the effect of temperature shall not exceed:
Pressure gauge: ± 0.4% / 10K FSV
Piezo resistive sensor: 0.15% / 10 K FSV

CABLE TERMINAL BOX

The cable terminal box is fitted on the circumference of the case, This terminal box houses the terminals for the external wiring. The connector can be removed by unloosen the Philips screw. The male and female connector are sealed by an NBR gasket. Standard this is an IP65 Universal Cable Box type B with an M20x1.5 cable gland suitable for electrical cables 7…13mm in diameter.



PRESSURE TRANSDUCER

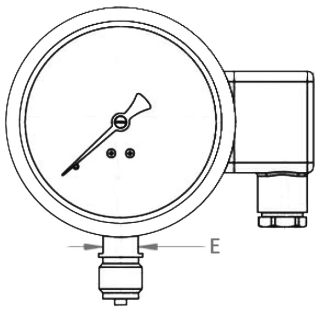
The pressure transducer is a piezo resistive sensor. The output signal is 4-20 mA with a 2 wire system or a digital RS485 signal. The supply voltage is 10-30 VDC.

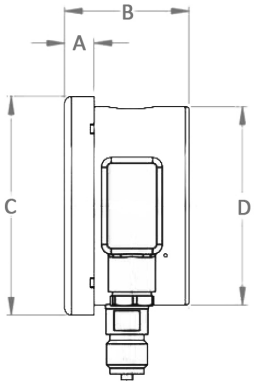
Type	Input	Output	
2 wire	10…30 VDC	4…20 mA / RS485	With zero/span correction
2 wire	10…30 VDC	4…20 mA	-

RESTRICTOR SCREW

All gauges can be executed with a restrictor of 0.8 or 0.3 orifice in AISI316(L). For the Alloy 400 internal the orifice is 0.8mm.

Type A





DN	A	B	C	D	I
100	15	63	110	100	sq17
160	16	63	160	150	sq17

ORDERING CODES

1. DIAL SIZE	05
05	100 mm / 4"
07	160 mm / 6"

2. RANGE	XXX
XXX	Refer "Range Table"

3. ACCURACY	CL5
CL4	0.6
CL5	1.0

4. MOUNTING PATTERN	A
A	Direct, Bottom connection
C	Wall/Surface/mounting, Bottom connection

5. PROCESS CONNECTION	13B
13B	3/8" BSP (M)
14B	½" BSP (M)
14N	½" NPT (M)
14M	M20 x 1.5 mm (M)

6. INGRESS PROTECTION	ER
ER	IP 65
ES	IP 66
ET	IP 67

7. EXECUTION	EA
EA	Dry
EH	Silicon oil

8. TUBE & SOCKET MATERIAL	MG
MG	AISI 316L
CM	Alloy 400

9. CASE/BEZEL MATERIAL	MC
MC	AISI 304
MF	AISI 316

10. OTHER OPTIONS	TN
TN	NACE standards
TC	Material test certificate
TA	Calibration certificate
EM	Dampening screw, Monel
EN	Dampening screw, AISI 316 SS
TO	Use for Oxygen service

Ordering Example :
MT-P110EC-05-XXX-CL5-A-13B-ER-EA-MG-MC-TN

STANDARD RANGES

RANGE	"bar"	"kg/cm2"	"bar / psi"	RANGE	"psi"	RANGE	"kPa"	RANGE	"MPa"
0...0.6	B01	K01	N01	0...10	S01	0...60	E01	-	-
0...1	B02	K02	N02	0...15	S02	0...100	E02	0...0.1	M02
0...1.6	B03	K03	N03	0...25	S03	0...160	E03	0...0.16	M03
0...2.5	B05	K05	N05	0...35	S05	0...250	E05	0...0.25	M05
0...4	B06	K06	N06	0...60	S06	0...400	E06	0...0.4	M06
0...6	B07	K07	N07	0...100	S07	0...600	E07	0...0.6	M07
0...10	B09	K09	N09	0...150	S09	0...1000	E09	0...1	M09
0...16	B11	K11	N11	0...235	S11	0...1600	E11	0...1.6	M11
0...25	B13	K13	N13	0...365	S13	0...2500	E13	0...2.5	M13
0...40	B16	K16	N16	0...600	S16	0...4000	E16	0...4	M16
0...60	B17	K17	N17	0...870	S17	0...6000	E17	0...6	M17
0...100	B19	K19	N19	0...1500	S19	0...10000	E19	0...10	M19
0...160	B21	K21	N21	0...2300	S21	0...16000	E21	0...16	M21
0...250	B24	K24	N24	0...3600	S24	0...25000	E24	0...25	M24
-0.6...0	B35	K35	N35	-	-	-60...0	E35	-0.06...0	M35
-1...0	B37	K37	N37	-	-	-100...0	E37	0.1...0	M37
-1...0.6	B38	K38	N38	-	-	-100...60	E38	-0.1...0.06	M38
-1...1.5	B39	K39	N39	-	-	-100...150	E39	-0.1...0.15	M39
-1...3	B42	K42	N42	-	-	-100...300	E42	-0.1...0.3	M42
-1...5	B43	K43	N43	-	-	-100...500	E43	-0.1...0.5	M43
-1...9	B45	K45	N45	-	-	-100...900	E45	-0.1...0.9	M45
-1...15	B47	K47	N47	-	-	-100...1500	E47	-0.1...1.5	M47
-1...24	B49	K49	N49	-	-	-100...2400	E49	-0.1...2.4	M49

NOTES
1. Other scales & measurement units are available.
2. Equivalent scales available in kg/cm^2, psi, kPa, MPa, bar/psi, kPa/bar, kPa/psi or any other special scales.
3. Primary scales shall be in «BLACK» and secondary scales shall be «RED».
4. Special scales, custom dial design, OEM/private logo printing is available, details contact our marketing team.