

PIEZORESISTIVE PRESSURE TRANSMITTERS

FOR INDUSTRIAL APPLICATIONS / COMPACT VERSION

These piezoresistive silicon pressure transmitters are produced on the new KELLER automatic brazing lines, making possible the mass production of high quality pressure transmitters at low cost. This new technology allows the crevice-free construction of the pressure port without using seals or O-rings. In the brass sensor line (Series 21 MC), a steel insert and a nickel diaphragm is brazed into a brass housing. In the steel sensor line (Series 21 SC), all parts are of stainless steel (AISI 316 L). The header with the silicon pressure sensor and glass lead-through pins is welded to the steel insert underneath the oil filling. The tiny chip-on-board amplifier (weight ≈ 1 gram) with the KELLER-specific "PROGRES" circuit is mounted directly on the glass feed-through pins. It is then encapsulated in silicone compound for humidity and vibration protection.

Note: The cable version of the transmitters has exceptionally high RFI protection.

SPECIFICATIONS

PA Sealed Gauge (zero at 1 bar abs.)	Pressure Ranges (FS)						
Overpressure	5	10	20	50	100	200	bar
	10	20	40	100	200	300	bar
Output (ratiometric@Excitation)	2-Wire		3-Wire		4-Wire		
Excitation	4...20 mA		0,5...4,5 V@5 V		0...100 mV@10 V		
	8...28 V		4,75...5,25 V		5...15 V		
	SERIES 21 SC				SERIES 21 MC		
Total Accuracy at RT	± 0,5% FS				± 1% FS		
T.C. of Zero	± 0,03% FS / °C				± 0,04% FS / °C		
T.C. of Sensitivity	± 0,03% / °C				± 0,04% / °C		
Long Term Stability, typ.	< 0,2% FS				< 0,5% FS		
Operating Temperature	-25...+80 °C						
Compensated Temperature Range	0...+50 °C						
Protection	IP 65						
Vibration	20 g (5...2000 Hz, max. amplitude ± 3 mm), according to IEC 68-2-6						
Shock	20 g (11 ms)						
CE-Conformity	EN 50081-1, EN 50082-2						
Insulation	> 100 MΩ / 500 V						
Pressure Port	G 1/4" male, Eolastic®-seal						
Cable / Connector	2 m / mPm (option DIN 43650)						
Weight (Connector Version)	≈ 60 g						



Series 21 MC

Brass Sensor Head, Steel Body

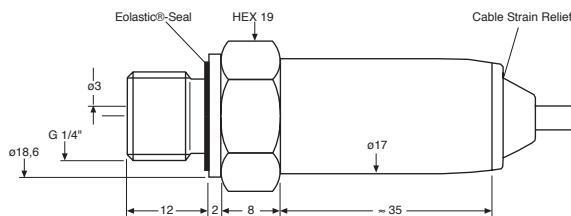
Series 21 SC

Steel Sensor Head, Steel Body



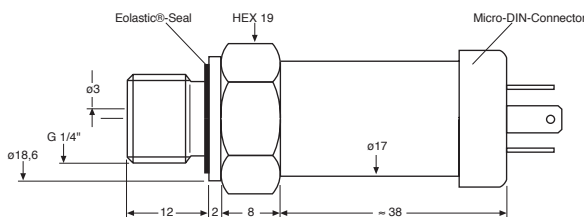
Series 21 MC Series 21 SC

Cable Version



Series 21 MC Series 21 SC

Connector Version



ELECTRICAL CONNECTIONS

Connector	2-Wire	Cable	3-Wire	Cable	4-Wire	Cable
1	OUT/GND	white	GND	green	GND	white
2			+OUT	white	+OUT	red
3	+VCC	brown	+VCC	brown	+VCC	black
4 (E)			-OUT		-OUT	blue

Subject to alterations

6/02