

## Piezoresistive Pressure Transmitters

### Automotive and industrial applications

Series 22 offers a reliable cost effective solution for customers requiring medium to high quantities, of mass produced transmitters. Utilising the KELLER automatic brazing lines, this new technology allows crevice-free construction of the pressure port with no internal seals or O-rings, making possible high volumes at low cost. In the brass 22 M, a steel insert and a nickel diaphragm are brazed into a brass housing. In the steel 22 S, all parts are stainless steel (AISI 316 L). The glass feed-through header and silicon pressure sensor are welded to the steel insert underneath the oil filling.

The electronic circuit is fitted to the Packard plug. EMC-protection-components are mounted on the plug side, the amplifier on the sensor side. A flexible printed circuit "TAB" connects the sensor with the electronics. The transmitters are designed to have exceptionally good EMC ratings and operate over a wide temperature band, ideal for automotive, hydraulic and refrigeration control applications.

#### Specifications

|                     | 5  | 10 | 20 | 30 |                     |
|---------------------|----|----|----|----|---------------------|
| PAA-22 M / PAA-22 S | 5  | 10 | 20 | 30 | bar                 |
| PA-22 M / PA-22 S   | 5  | 10 | 20 | 30 | 50 100 200 250 bar  |
| Overpressure        | 15 | 30 | 60 | 90 | 150 250 300 300 bar |

PAA: Absolute. Zero at vacuum PA: Sealed Gauge. 1000 mbar absolute

|                     |  |                           |
|---------------------|--|---------------------------|
| Type                | 2-Wire   | 3-Wire                    |
| Supply              | 8...28 V   | 5 V $\pm$ 0,25 V          |
| Output              | 4...20 mA  | 0,5 V...4,5 V ratiometric |
| Accuracy            | $\pm$ 1 %FS (0...50 °C)  |                           |
| (Comp. Temp.-Range) | $\pm$ 2 %FS (0...80 °C)  |                           |
|                     | $\pm$ 4 %FS (-40...125 °C)   |                           |
| Isolation           | > 10 M $\Omega$ @ 50 VDC   |                           |
| Vibration / Shock   | 10 g / 5...2000 Hz, axes X/Y/Z / 20 g sine 11 ms                                   |                           |
| Response Time       | (0...99%) < 10 msec  |                           |
| Pressure Connection | 3/8"-24 UNF-2A (with O-ring*), 7/16"-20 UNF (female), G1/4" (with O-ring*)         |                           |
| EMC                 | EN 61000-6-1 to -6-4 / EN 61326-2-3  |                           |
| Homologation        | E4-110R, E4-10R<br>(Homologation applies only to selected and authorised products) |                           |
| Protection          | IP67   |                           |
| Weight              | $\approx$ 40 g   |                           |
| Options             | Intermediate ranges, customer-specific housings, mating plug with cable            |                           |

\*oil and water resistant

## Series 22 M (Brass)

## Series 22 S (Steel)



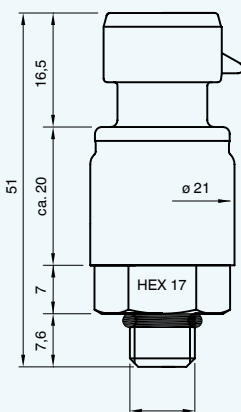
Series 22 M  
3/8"-24 UNF-2A



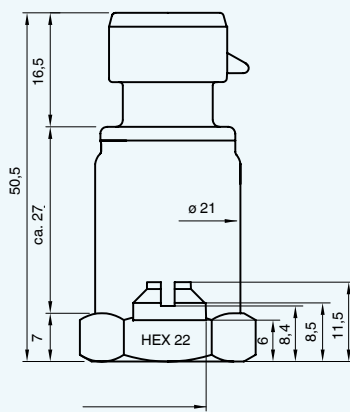
Series 22 S  
7/16"-20 UNF



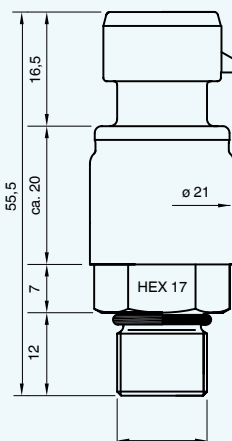
Series 22 S  
G1/4"



Series 22 M  
3/8"-24 UNF-2A



Series 22 S  
7/16"-20 UNF



Series 22 S  
G1/4"

**Electrical Connections**  
Compatible with Packard-Plug  
Type 12065286

