

# SUCO PRESSURE TRANSMITTER FOR LOW PRESSURES, VACUUM APPLICATION



## SW 22

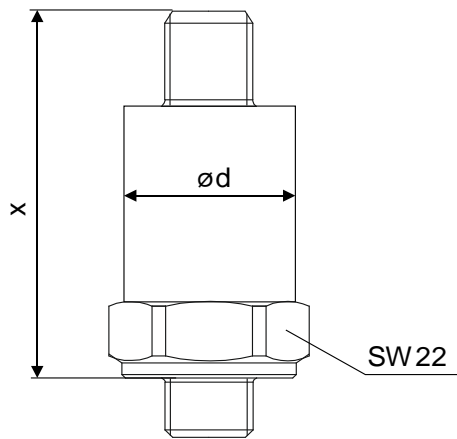
piezo-resistive sensor in the measuring cell filled with oil

Long life time even under high pressure change rates  
High overpressure protection (up to 3x)  
suitable also for seawater, chemical and process technology applications,  
high level of accuracy, repeatability and long-term



| Type                                       | 0675  |         |         | 0680             |          |          | 0690                               |           |
|--|---|---------|---------|------------------|----------|----------|------------------------------------|-----------|
| Output signal                              | 0,5-4,5 V ratiometric   |         |         | 0-10 V (3-wire)  |          |          | 4-20 mA (2-wire)                   |           |
| Supply voltage $U_B$                       | 5 VDC $\pm$ 10% max.6,5 VDC   |         |         | 12-32 VDC        |          |          | 10-32 VDC                          |           |
| Permissible loadapparatus ohmic resistance | $\geq 4,7\Omega$  |         |         | $\geq 4,7\Omega$ |          |          | $\leq (U_b - 10V) / 20 \text{ mA}$ |           |
| Idle power consumption                     | approx. 5 mA  |         |         | approx. 5 mA     |          |          | -                                  |           |
| Standard pressure ranges                   | -1-0 bar  | 0-1 bar | 0-4 bar | 0-6 bar          | 0-10 bar | 0-16 bar | 0-40 bar                           | 0-100 bar |
| Overpressure protection                    | 3 bar   | 3 bar   | 8 bar   | 12 bar           | 20 bar   | 32 bar   | 80 bar                             | 200 bar   |
| Burst pressure                             | 10 bar  | 10 bar  | 20 bar  | 30 bar           | 35 bar   | 40 bar   | 100 bar                            | 250 bar   |
|  | Static pressure, dynamic pressure 30 to 50 % lower.<br>Values refer to the hydraulic or pneumatic part of the pressure transmitter. |         |         |                  |          |          |                                    |           |
| Mechanical life expectancy                 | 10 Mio pulsations at rise rates to 1 bar/ms at standard pressure ranges   |         |         |                  |          |          |                                    |           |
| Pressure rise                              | $\leq 1 \text{ bar / ms}$   |         |         |                  |          |          |                                    |           |
| Accuracy                                   | $\pm 0,5 \%$ full scale (FS) at room temperature, $\pm 0,25\%$ BFSL   |         |         |                  |          |          |                                    |           |
| Long term stability                        | $< \pm 0,2\%$ full scale (FS) p.a.  |         |         |                  |          |          |                                    |           |
| Repeatability                              | $\pm 0,1\%$ full scale (FS) (within the compensated temperature range)  |         |         |                  |          |          |                                    |           |
| Temperature error                          | $\pm 0,02\%$ Endwert (FS) / °C, -1...1 bar 0,03% (within the compensated temperature range)   |         |         |                  |          |          |                                    |           |
| Comp. temperature range                    | -10°C...+70°C (14°F...+158°F)   |         |         |                  |          |          |                                    |           |
| Temperature range ambient                  | -40°C...+100°C (-40°F...+212°F)   |         |         |                  |          |          |                                    |           |
| Temperature range media                    | with NBR-seal: -40°C...+100°C (-40°F...+212°F)<br>with FKM-seal: -20°C...+125°C (-4°F...+257°F)                                     |         |         |                  |          |          |                                    |           |
| Case material                              | Stainless steel 1.4404 / AISI 316L  |         |         |                  |          |          |                                    |           |
| Thread                                     | G 1/4 DIN 3852  |         |         |                  |          |          |                                    |           |
| Measuring cell material                    | Stainless steel 1.4404 / AISI 316L  |         |         |                  |          |          |                                    |           |
| Seal material                              | NBR or FKM  |         |         |                  |          |          |                                    |           |
| Standard sensor oil                        | Fluorine oil (not suitable for food applications)   |         |         |                  |          |          |                                    |           |
| Insulation resistance                      | $> 100 \text{ M}\Omega$ (500 VDC, $R_i > 42 \Omega$ )   |         |         |                  |          |          |                                    |           |
| Response time 10-90 %                      | $\leq 2 \text{ ms}$   |         |         |                  |          |          |                                    |           |
| Vibration resistance                       | 20 g; at 4...2000 Hz sine wave; DIN EN 60068-2-6  |         |         |                  |          |          |                                    |           |
| Shock resistance                           | Halfe sine wave 500 m/s <sup>2</sup> , 11 ms; DIN EN 60068-2-27   |         |         |                  |          |          |                                    |           |
| Protection class                           | refer to the electrical connetions  |         |         |                  |          |          |                                    |           |
| Electromagnetic compatibility              | EMV 2014/30/EU, EN 61000-6-2:2005, EN 61000-6-3:2007  |         |         |                  |          |          |                                    |           |
| Max. length of connect. cable              | 30 m  |         |         |                  |          |          |                                    |           |
| Protection                                 | Protection against reverse polarity, short-circuit and overvoltage built-in   |         |         |                  |          |          |                                    |           |
| Weight                                     | approx. 80 g (DIN EN 175301 approx. 110 g, cable output approx. 135 g)  |         |         |                  |          |          |                                    |           |

## Dimensions and electrical connectors



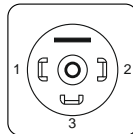
### Coupler socket DIN EN 175301-803-A

IP65

x ~ 60 mm without coupler socket

x ~ 76 mm with coupler socket

d ~ 30 mm



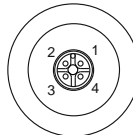
| PIN | 0645+0650        | 0660             |
|-----|------------------|------------------|
| 1   | U <sub>v+</sub>  | U <sub>v+</sub>  |
| 2   | Gnd              | I <sub>out</sub> |
| 3   | U <sub>out</sub> | nc               |

### M12-DIN EN 61076-2-101 A

IP67

x ~ 54 mm

d ~ 22 mm



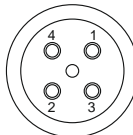
| PIN | 0645+0650        | 0660             |
|-----|------------------|------------------|
| 1   | U <sub>v+</sub>  | U <sub>v+</sub>  |
| 2   | U <sub>out</sub> | nc               |
| 3   | Gnd              | I <sub>out</sub> |
| 4   | nc               | nc               |

### Bayonet ISO 15170-A1-4.1

IP67, IP6K9K

x ~ 65 mm

d ~ 27 mm



| PIN | 0645+0650        | 0660             |
|-----|------------------|------------------|
| 1   | U <sub>v+</sub>  | U <sub>v+</sub>  |
| 2   | Gnd              | nc               |
| 3   | U <sub>out</sub> | I <sub>out</sub> |
| 4   | nc               | nc               |

### Cable connection

IP67

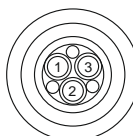
x ~ 44 mm

+20 mm Bend relief

Cable length ~ 2m

d ~ 22 mm

1 red  
2 white  
3 black



| PIN | 0645+0650        | 0660             |
|-----|------------------|------------------|
| 1   | U <sub>v+</sub>  | U <sub>v+</sub>  |
| 2   | U <sub>out</sub> | nc               |
| 3   | Gnd              | I <sub>out</sub> |