

# Pressure Sensor

## FFAP012

Part Number

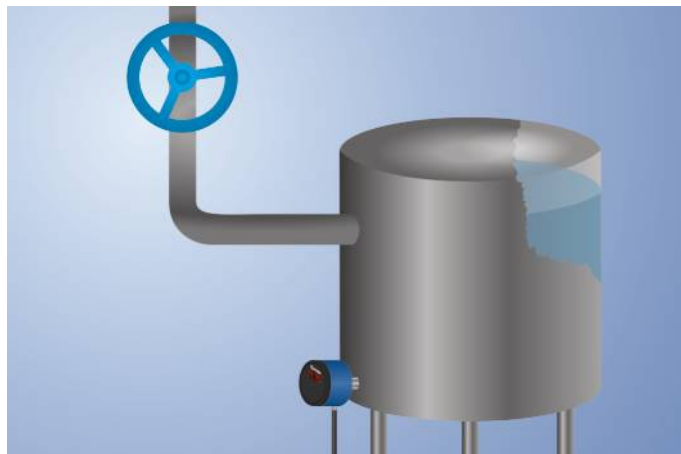
UniBar



- Highly visible output indicator
- Simple operation via the display

UniBar pressure sensors measure the relative pressure in closed systems of any medium in the range -1...600 bar.

UniBar pressure sensors are very easy to use thanks to the integrated display. The highly visible switching status display enables the rapid localization of affected sensors for maintenance processes.



### Technical Data

#### Sensor-specific data

|                           |                |
|---------------------------|----------------|
| Measuring Range           | 0...0,1 bar    |
| Measurement Type          | relative       |
| Maximum overload pressure | 1 bar          |
| Bursting pressure         | 1,5 bar        |
| Setting Range             | 4...100 %      |
| Medium                    | Liquids, gases |
| Switching Hysteresis      | 2 %            |
| Measuring error           | < ± 0,5 %      |
| Temperature Drift         | 0,025 %/K      |

#### Environmental conditions

|                                            |                     |
|--------------------------------------------|---------------------|
| Temperature of medium                      | -25...80 °C         |
| Ambient temperature                        | -25...80 °C         |
| EMC                                        | DIN EN 61326-2-3    |
| Shock resistance per DIN IEC 68-2-27       | 30 g / 11 ms        |
| Vibration resistance per DIN IEC 60068-2-6 | 20 g (10...2000 Hz) |

#### Electrical Data

|                                             |              |
|---------------------------------------------|--------------|
| Supply Voltage                              | 16...32 V DC |
| Current Consumption (U <sub>b</sub> = 24 V) | < 60 mA      |
| Number of Switching Outputs                 | 1            |
| Response Time                               | 30 ms        |
| Switching Output/Switching Current          | < 250 mA     |
| Switching Output Voltage Drop               | < 2 V        |
| Analog Output                               | 4...20 mA    |
| Signal source                               | Pressure     |
| Resolution                                  | 10 bit       |
| Current Output Load Resistance              | < 500 Ohm    |
| Short Circuit Protection                    | yes          |
| Reverse Polarity Protection                 | yes          |
| Protection Class                            | III          |

#### Mechanical Data

|                                |                |
|--------------------------------|----------------|
| Setting Method                 | Menu           |
| Housing Material               | PBT; PC; FKM   |
| Material Control Panel         | Polyester      |
| Material in contact with media | 1.4435; 1.4404 |
| Degree of Protection           | IP65 *         |
| Connection                     | M12 × 1; 4-pin |
| Process Connection             | G 1/2"         |

#### Safety-relevant Data

|                        |           |
|------------------------|-----------|
| MTTFd (EN ISO 13849-1) | 1201,51 a |
|------------------------|-----------|

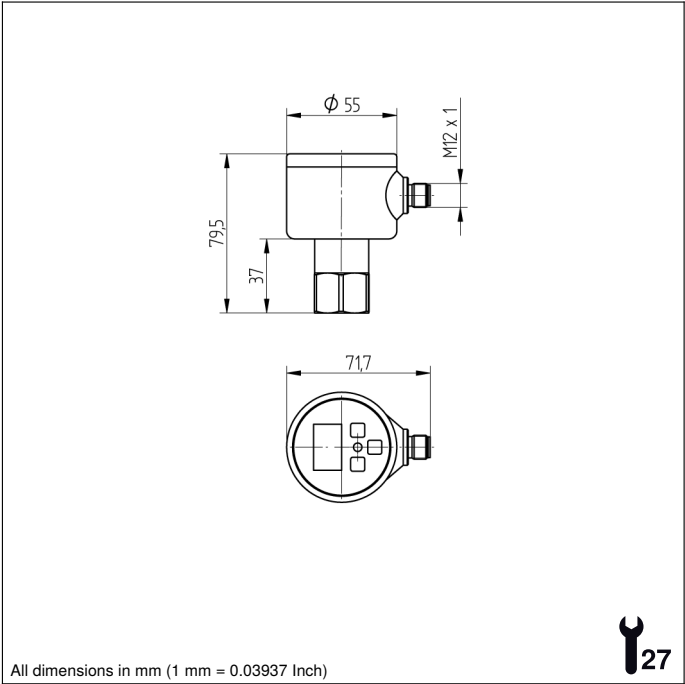
|               |   |
|---------------|---|
| Analog Output | ● |
| PNP NO        | ● |

|                                   |     |
|-----------------------------------|-----|
| Connection Diagram No.            | 533 |
| Control Panel No.                 | A05 |
| Suitable Connection Equipment No. | 2   |

\* Certified by wenglor

### Complementary Products

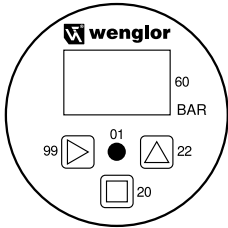
Seal G1/2" ZH5G002



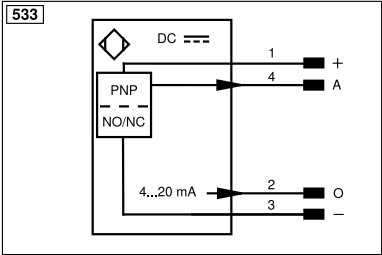
All dimensions in mm (1 mm = 0.03937 Inch)

## Ctrl. Panel

A05



01 = Switching Status Indicator  
20 = Enter key  
22 = Up key  
60 = display  
99 = Right button



| Legend    |                                            |                                        |                                |
|-----------|--------------------------------------------|----------------------------------------|--------------------------------|
| +         | Supply Voltage +                           | nc                                     | Not connected                  |
| -         | Supply Voltage 0 V                         | U                                      | Test Input                     |
| ~         | Supply Voltage (AC Voltage)                | Ů                                      | Test Input inverted            |
| A         | Switching Output (NO)                      | W                                      | Trigger Input                  |
| Ā         | Switching Output (NC)                      | W-                                     | Ground for the Trigger Input   |
| V         | Contamination/Error Output (NO)            | O                                      | Analog Output                  |
| Ȳ         | Contamination/Error Output (NC)            | O-                                     | Ground for the Analog Output   |
| E         | Input (analog or digital)                  | BZ                                     | Block Discharge                |
| T         | Teach Input                                | Amv                                    | Valve Output                   |
| Z         | Time Delay (activation)                    | a                                      | Valve Control Output +         |
| S         | Shielding                                  | b                                      | Valve Control Output 0 V       |
| RxD       | Interface Receive Path                     | SY                                     | Synchronization                |
| TxD       | Interface Send Path                        | SY-                                    | Ground for the Synchronization |
| RDY       | Ready                                      | E+                                     | Receiver-Line                  |
| GND       | Ground                                     | S+                                     | Emitter-Line                   |
| CL        | Clock                                      | ±                                      | Grounding                      |
| E/A       | Output/Input programmable                  | SnR                                    | Switching Distance Reduction   |
| IO-Link   | IO-Link                                    | Rx+/-                                  | Ethernet Receive Path          |
| PoE       | Power over Ethernet                        | Tx+/-                                  | Ethernet Send Path             |
| IN        | Safety Input                               | Bus                                    | Interfaces-Bus A(+)/B(-)       |
| OSSD      | Safety Output                              | La                                     | Emitted Light disengageable    |
| Signal    | Signal Output                              | Mag                                    | Magnet activation              |
| BL_D+/-   | Ethernet Gigabit bidirect. data line (A-D) | RES                                    | Input confirmation             |
| ENo RS422 | Encoder 0-pulse 0/Ů (TTL)                  | EDM                                    | Contact Monitoring             |
| PT        | Platinum measuring resistor                | ENARs422                               | Encoder A/Ā (TTL)              |
|           |                                            | ENBRs422                               | Encoder B/Ĥ (TTL)              |
|           |                                            | ENA                                    | Encoder A                      |
|           |                                            | ENb                                    | Encoder B                      |
|           |                                            | AMIN                                   | Digital output MIN             |
|           |                                            | AMAX                                   | Digital output MAX             |
|           |                                            | AOK                                    | Digital output OK              |
|           |                                            | SY In                                  | Synchronization In             |
|           |                                            | SY OUT                                 | Synchronization OUT            |
|           |                                            | OLt                                    | Brightness output              |
|           |                                            | M                                      | Maintenance                    |
|           |                                            | rsv                                    | Reserved                       |
|           |                                            | Wire Colors according to DIN IEC 60757 |                                |
|           |                                            | BK                                     | Black                          |
|           |                                            | BN                                     | Brown                          |
|           |                                            | RD                                     | Red                            |
|           |                                            | OG                                     | Orange                         |
|           |                                            | YE                                     | Yellow                         |
|           |                                            | GN                                     | Green                          |
|           |                                            | BU                                     | Blue                           |
|           |                                            | VT                                     | Violet                         |
|           |                                            | GY                                     | Grey                           |
|           |                                            | WH                                     | White                          |
|           |                                            | PK                                     | Pink                           |
|           |                                            | GNYE                                   | Green/Yellow                   |