

Radio Pressure Transmitter RF1-P1



- Pressure sensor with integrated radio interface for the HONSBERG RF1 system
- Flush stainless steel membrane or ceramic cell (Al₂O₃)
- Energy-saving battery operation
- Ingress protection IP 67
- Robust stainless steel housing
- Operation without registration or fees (ISM band 868 MHz)

Characteristics

The RF1-P pressure transmitter measures pressures in fluids and gases. The measured value is polled using a radio connection. If set limit values are exceeded, this can be actively notified by the sensor. To operate one or more sensors, at least one send/receive station (access point RF1-ETH or RF1-USB) is required.

The sensor is an economical ceramic cell with a temperature compensated measuring bridge using thick film technology. It is protected from damage because of its non-flush construction, and is built extremely robustly.

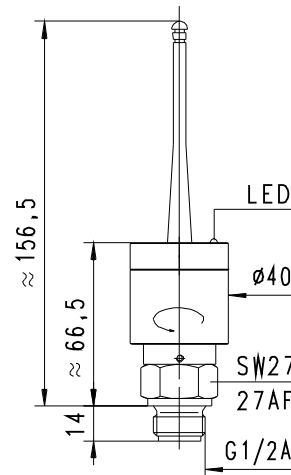
In the high temperature model with flexible gooseneck, the pressure transducer can be operated up to a media temperature of 120 °C. For this model, it should also be ensured that the head with plug is not exposed to temperatures greater than 70 °C.

Technical data

Sensor	ceramic cell with measuring bridge using thick film technology																				
Process connection	male thread G 1/2 A or G 1/4 A																				
Metering ranges	(relative pressure, differential pressure compared with environment) in bar <table border="1"> <thead> <tr> <th>Range</th><th>Burst pressure</th></tr> </thead> <tbody> <tr><td>0.. 1</td><td>4</td></tr> <tr><td>0.. 2</td><td>6</td></tr> <tr><td>0.. 5</td><td>15</td></tr> <tr><td>0.. 10</td><td>40</td></tr> <tr><td>0.. 20</td><td>60</td></tr> <tr><td>0.. 50</td><td>150</td></tr> <tr><td>0..100</td><td>280</td></tr> <tr><td>0..200*</td><td>400</td></tr> <tr><td>0..400*</td><td>1050</td></tr> </tbody> </table> * available only on request for gases	Range	Burst pressure	0.. 1	4	0.. 2	6	0.. 5	15	0.. 10	40	0.. 20	60	0.. 50	150	0..100	280	0..200*	400	0..400*	1050
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Measurement accuracy	±1 % of full scale value, plus 0.05 %/K at < 0 °C and > 60 °C																				
Repeatability	±0.5 % of full scale value																				
Pressure resistance	corresponds to metering range																				

Media temperature	-20..+80 °C (with gooseneck option max. 120 °C)
Ambient temperature	-20..+70 °C
Storage temperature	-20..+80 °C
Media	fluids and gases
Material medium-contact	probe 1.4571, Al ₂ O ₃ , FKM
Materials non-medium-contact	CW614N, PP, NBR
Supply voltage	lithium battery 1/2 AA 3.6 V (e.g. Tadiran SL750/S)
Battery life	depending on parameter settings, usually > 1 year
Radio frequency	868.9 MHz; < 10 mW (ISM band, no registration or fees)
Vibration resistance	max. 20 g
Ingress protection	IP 67
Conformity	CE (FTEG and directive 1999 / 5 / EC)

Dimensions



Product Information

Handling and Operation

Installation

The pressure sensors are screwed into a nozzle or a T-piece in the pipework, using a suitable sealing material (e.g. Klingerit). The installation of the pressure sensor should result in no significant reduction of the cross-section of the pipework. When tightening the pressure sensor, use only the hexagonal spanner (SW27) specifically provided. Avoid installation locations with high pressure surges (see burst pressure).

Avoid installation locations with high pressure surges (see overload limits).

In the high temperature model with flexible gooseneck, the pressure transducer can be operated up to a media temperature of 120 °C.

Changing battery

The sensor's battery can be changed by the user himself. For this, unscrew the lid of the housing. Take care when removing the lid: Do not tear off the wiring! Remove the battery from the battery holder, and replace it with a suitable battery (3.6 V type C, e.g. Tadiran Lithium SL-750/S).

Programming

All parameters, e.g. the setting of limit values, are programmed via the radio interface. The RF1-Control software is available for this purpose. Alternatively, software modules provided by HONSBERG can be integrated into the customer's own applications; these allow the use of the whole range of functionality.

Ordering code

RF1-P1 1. 2. 3. 4. 5. 6.

○ = Option

1. Metering range	
001	0.. 1 bar
002	0.. 2 bar
005	0.. 5 bar
010	0.. 10 bar
020	0.. 20 bar
050	0.. 50 bar
100	0..100 bar
200	0..200 bar
400	0..400 bar
2. Pressure type	
R	relative pressure
A	absolute pressure available on request
3. Connection material	
K	stainless steel
4. Connection size	
008	male thread G 1/4 A
015	male thread G 1/2 A
5. Voltage Supply	
S	external for round plug connector M12x1, 4-pole
B	internal battery
6. Option	
H	☐ model with gooseneck

Accessories

- Ethernet Access Point RF1-ETH
- USB Access Point RF1-USB
- Software RF1 Control
- Battery pack with round plug connector RF1-BAT