

High-quality pressure sensor with mounted diaphragm seal

With threaded connection, welded design

Model DSS34T

WIKA data sheet DS 95.16

Applications

- For aggressive, contaminated or hot media
- Process industry
- Water treatment

Special features

- Process connection with thread to provide for direct threaded connection
- Version with internal diaphragm
- Diaphragm seal parts all welded
- Universal application



Diaphragm seal system, model DSS34T

Description

Diaphragm seal systems are used to protect the pressure measuring instrument from aggressive, adhesive, crystallising, corrosive, highly viscous, environmentally hazardous or toxic media. The diaphragm made of stainless steel provides for the separation from the medium. The pressure is transmitted to the measuring instrument via the system fill fluid which is inside the diaphragm seal system.

Due to its design, the DSS34T can be used universally and offers the end user the advantage of being able to transmit the measuring signal directly and to combine it with a variety of electrical connections.

The DSS34T is ideally suited for demanding measuring tasks and achieves a very high accuracy. It is characterised by its robust design and can be used for a multitude of applications.

Mounting of the diaphragm seal to the measuring instrument is made via direct mounting as standard.

The DSS34T is particularly well suited for aggressive, contaminated or hot media. This instrument is mainly geared to applications in the chemical and petrochemical industries.

Specifications

Model DSS34T	
Design	High-quality pressure sensor, welded to diaphragm seal, welded design
Current output	4 ... 20 mA (2-wire)
Power supply	DC 8 ... 35 V
Accuracy at reference conditions	≤ ±0.5 % of span
Permissible load in Ω	Current output ≤ (power supply - 7.5 V) / 0.023 A
Current supply	Max. 25 mA
Dissipation loss	828 mW
Reference conditions (per IEC 61298-1)	Temperature: 15 ... 25 °C [59 ... 77 °F] Atmospheric pressure: 860 ... 1,060 mbar [12.5 ... 15.4 psi] Humidity: 45 ... 75 % r. h. Power supply: DC 24 V Mounting position: Calibrated in vertical mounting position with pressure connection facing downwards.
Pressure limitation	< 10 bar [150 psi]: 3 times ≥ 10 bar [150 psi]: 2 times
Permissible temperature range	
Medium	-10 ... 150 °C [14 ... 302 °F]
Ambient	10 ... 40 °C [50 ... 104 °F]
Storage	10 ... 60 °C [50 ... 140 °F]
Ingress protection	IP65 per IEC/EN 60529
Material	
wetted	Diaphragm: Stainless steel 1.4435 [316L], Hastelloy C276 Diaphragm seal: Stainless steel 1.4435 [316L]
non-wetted	Case: Stainless steel 1.4571 [316Ti] Zero adjustment ring: PBT/PET GF30 Angular connector: PBT/PET GF30
Level of cleanliness of wetted parts	Oil and grease free per ASTM G93-03 level F and ISO 15001 (< 1,000 mg/m ²)
System fill fluid	Silicone oil KN 2 for general applications
Permissible humidity (per IEC 68-2-78)	≤ 67 % r. h. at 40 °C [104 °F] (in accordance with 4K4H per EN 60721-3-4)

Measuring ranges in bar [psi]


Gauge pressure				
0 ... 1 [0 ... 15]	0 ... 1.6 [0 ... 25]	0 ... 2.5 [0 ... 40]	0 ... 4 [0 ... 60]	0 ... 6 [0 ... 100]
0 ... 10 [0 ... 160]	0 ... 16 [0 ... 250]	0 ... 25 [0 ... 300]	0 ... 40 [0 ... 600]	0 ... 60 [0 ... 1,000]
Vacuum and +/- measuring range				
-1 ... +5 [-30 inHg ... +70]	-1 ... +9 [-30 inHg ... +130]		-1 ... +10 [-30 inHg ... +145]	

Electrical connection

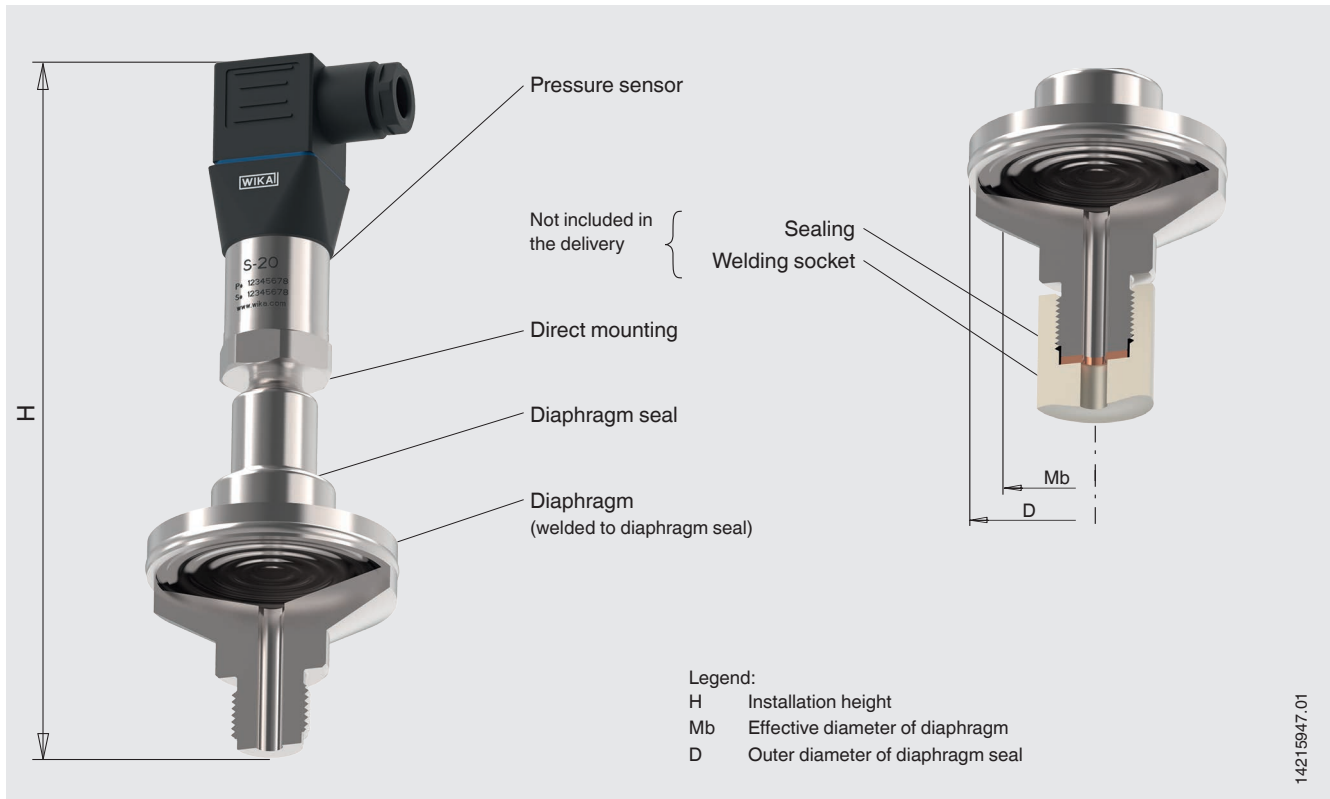
Angular connector DIN 175301-803 A				
Electrical connection	Ingress protection ¹⁾	Wire cross-section	Cable Ø	Permissible temperature
with mating connector	IP65	max. 1.5 mm ²	6 ... 8 mm	-30 ... +100 °C [-22 ... +212 °F]

1) Only applies when plugged in using a suitable mating connector that has the appropriate ingress protection.

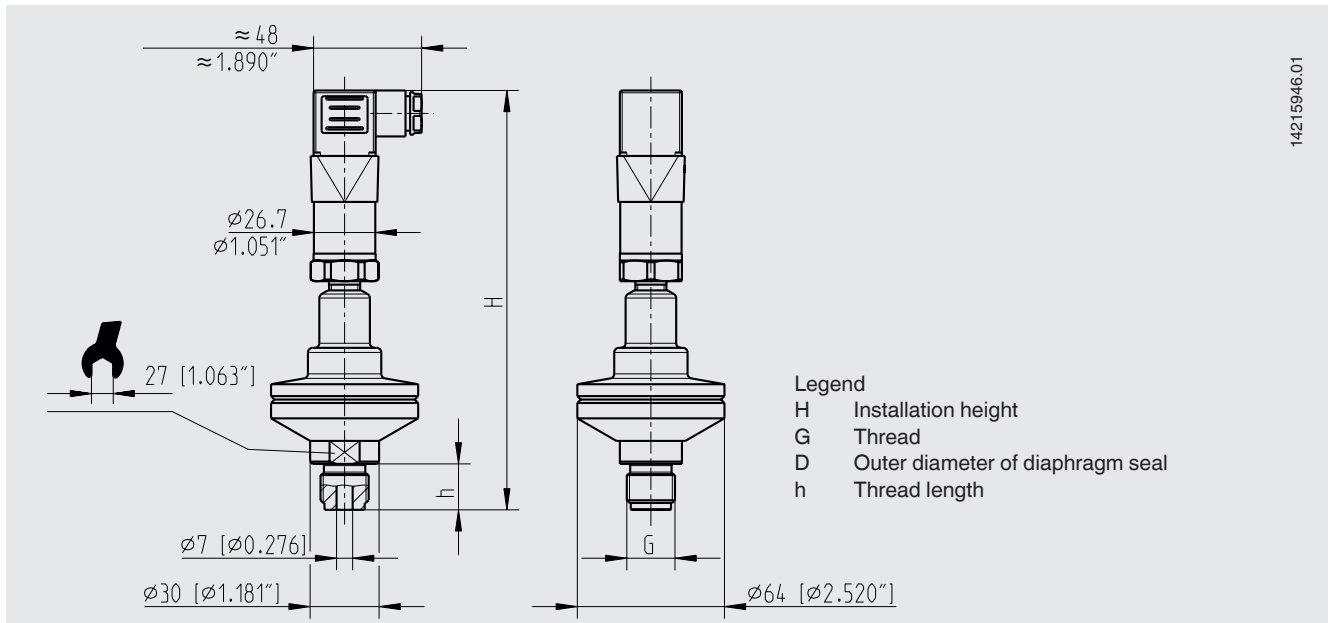
Connection diagram

Angular connector DIN 175301-803 A, 2-wire		
	U+	1
	U-	2

Model DSS34T illustrated on a pipe socket



Dimensions in mm [in]



Type of process connection: Threaded connection, threaded design

Wetted parts	G	Dimensions in mm [in]			
		H	D	Mb	h
Stainless steel 1.4404/1.4435 [316L]	G ½	182.5 [7.185]	64 [2.52]	52 [2.047]	20 [0.787]
	½ NPT	181.5 [7.146]			19 [0.748]
Hastelloy C276	G ½	198.5 [7.815]	64 [2.52]	52 [2.047]	20 [0.787]
	½ NPT	199.5 [7.854]			19 [0.748]

Certificates (option)

3.1 inspection certificate per EN 10204 (e.g. material proof for wetted metallic parts, calibration certificate)

Approvals and certificates, see website

Ordering information

Scale range / Process connection (type of process connection, pipe standard, pipe dimension) / Parts / Certificates

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