

- Ideal for all types of compressed air dryers with different measuring ranges such as -80...+20°Ctd or -20...+50°Ctd
- Condensation-resistant sensor element
- Long-term stability and drift-resistant
- Gas-independent measurement, also suitable for other, non-corrosive gases
- Fast adjustment time, especially in the event of moisture ingress
- Protection class IP 65
- Analog output 4...20 mA and Modbus RTU (RS 485) interface
- Modbus TCP PoE (Ethernet)
- Measured values available in various units, pressure dew point [°Ctd], temperature [°C], rel. humidity [%rh], abs. humidity [g/m<sup>3</sup>], degree of humidity [g/kg], moisture content V/V [ppmV/V], water vapor partial pressure [hPa], atmospheric dew point [°Ctd.atm]



## Series DS1 Pressure Dew Point Sensor

With the DS1, you are making the right choice for maximum precision in dew point measurements. Our sensor offers a wide spectrum of measuring ranges that are perfectly matched to the needs of different compressed air dryers. With the DS1, you are also able to determine the dew point in your maintenance unit and identify if moisture is leaking into your application. Rely on our DS1 for accurate results in every situation.

## Technical data

Industry	Industrial
Measurement range	-80 ... +20 °Ctd
Precision	± 1°C at + 50 ... - 20 °Ctd ± 2°C at - 20 ... - 50 °Ctd ± 3 °C at - 50 ... - 80 °Ctd
Min. working pressure	-1 bar
Max. working pressure	50 bar
Operational voltage	24 V DC 10-30 V DC
Protection class	IP65
Certificates	EMV in according with DIN EN 61326-1
Min. ambient temperature	-40 °C
Max. ambient temperature	80 °C
Min. medium temperature	-20 °C
Max. medium temperature	70 °C
Note	ideal 0...50 °C
Display	TFT 1.8"

# Dew point sensor DS1

R412029133

Series DS1

2024-10-17

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Display	- 20 ... 50 °C
Electrical connection type	2x Socket
Electrical connection size	M12
Electrical connection number of poles	5-pin
PC Port	Modbus-RTU Interface (RS 485)
Output signal	4 ... 20 mA = - 20 ... 50 °Ctd
Resistance for analog output	< 500
Weight	0.408 kg

## Material

Housing material	Polyamide fiber-glass reinforced (PA 66 GF)
Part No.	R412029133

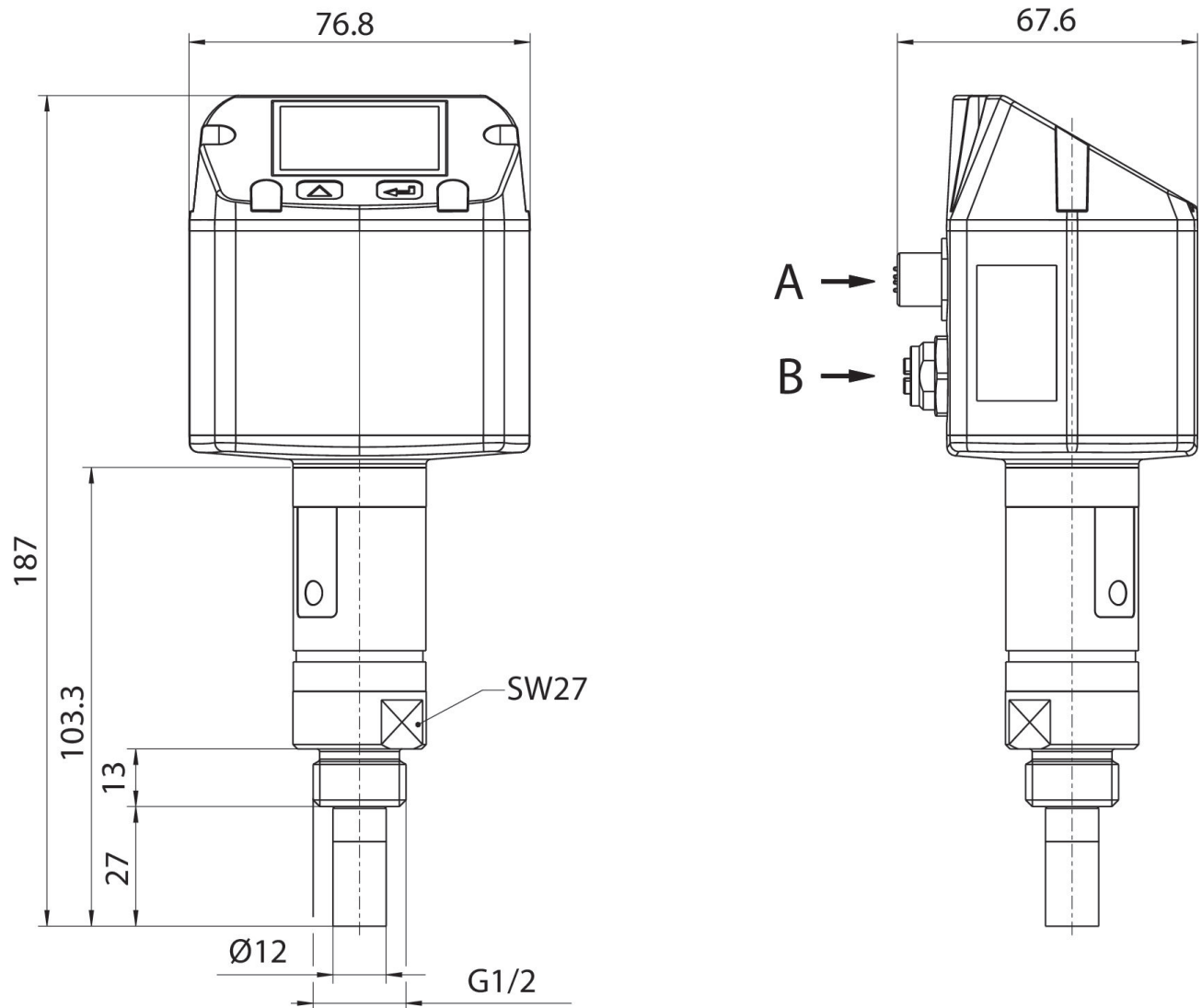
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Series DS1

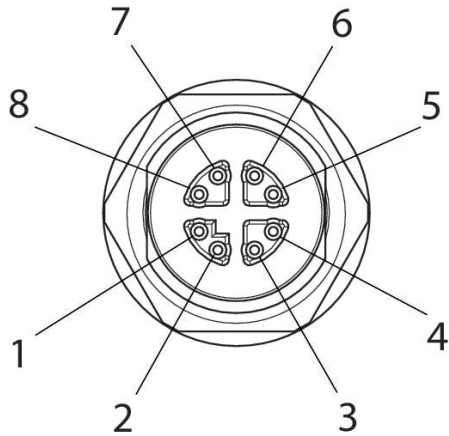
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## Dimensions



- A) M12 socket 5-pin
- B) M12 socket, 8-pin

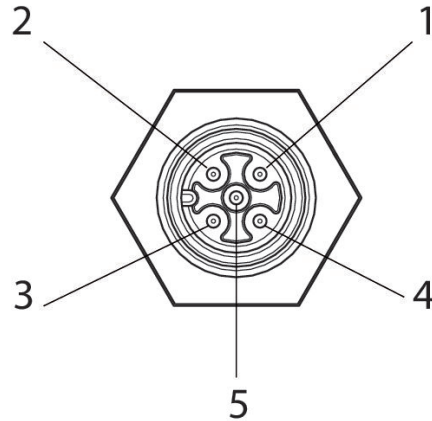
## M12 socket, 8-pin



### Pin assignments

Pin	Allocation
1	OG-WH
2	OG
3	GN-WH
4	GN
5	BN-WH
6	BN
7	BU-WH
8	BU

## M12 socket 5-pin



### Pin assignments

Pin	Allocation
1	+VB
2	RS 485 (A)
3	-VB (GND)
4	RS 485 (B)
5	I+ (4 ... 20 mA)