

Radarcont® RU4SR

Electronic Radar filling level sensor with freely radiating 122GHz FMCW signal

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Technical data



Frequency range
Range
Resolution
Output signal



122 - 123GHz
up to 10.000mm
1mm
RS485 Modbus-RTU
IO-Link, current 4-20mA,
6/9 up to 35V DC
8°
Thread ISO 228-1: G 1", G ¾", G ½"
Others upon request
-40°C up to +85°C (-40°F bis 185°F)
IP69K/IP67 (EN/IEC 60529)

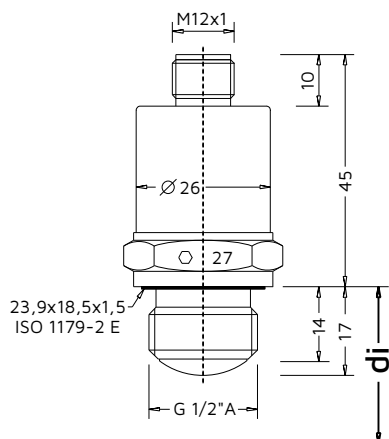


Operating voltage
Radiation angle
Process connection

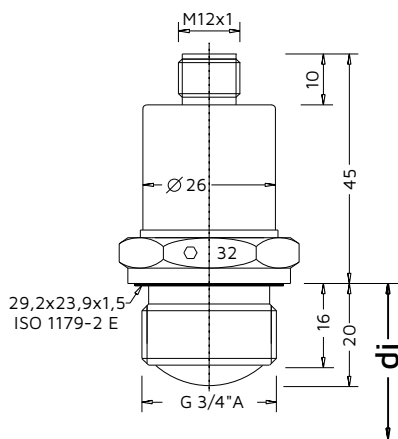
Environmental temperature
Protection



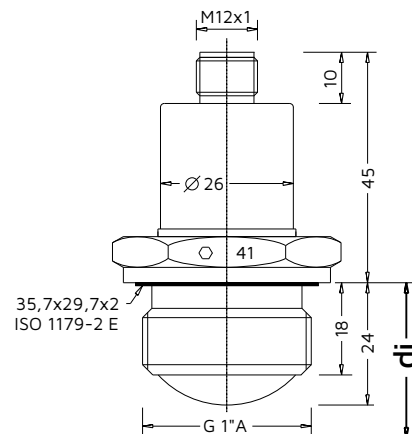
Thread ISO 228-1 - G1/2", ISO 1179-2 E [04-9]
Process pressure Pmax = -1...10 bar
Torque Mmax = 50Nm



Thread ISO 228-1 - G3/4", ISO 1179-2 E [04-8]
Prozessdruck Pmax = -1...10 bar
Torque Mmax = 50Nm



Thread ISO 228-1 - G1", ISO 1179-2 E [04-5]
Process pressure Pmax = -1...20 bar
Torque Mmax = 50Nm



Application

Our RADARCONT® is the right sensor when level measurements with ultrasound reach their limits. The 122 GHz radar sensor has excellent signal focusing and is insensitive to dirt and temperature fluctuations.

- Provides all-weather capability
- Tolerates extreme heat and cold
- Works even in darkness
- Resistant to moisture, dirt and temperature
- Radiates through materials
- 122 GHz Radar
- Plug and Play
- Remote monitoring / Parameter setting via IO-Link
- Maintenance-free

The device is an electronic radar filling level sensor for continuous measurement of filling levels in liquid media. The device operates with a pulsed FMCW radar (Frequency Modulated Continuous Wave) and detects contactless the distance to motionless objects.

The sensor outputs a periodic radar signal with linear frequency which varies upwards and downwards. The rate of change of frequency over time remains constant. Objects in the detection range reflect the transmitted signal. The change in the signal delay and frequency of the reflected signal are used to determine the distance to the object.

The device is suitable for applications in virtually all industries, optimally for use within container up to 10m. Due to the small opening angle especially disturbances by foreign objects or internals will be reduced.

It is advisable for applications, where optical or ultrasonic sensors are unsuitable because of disruptive factors like temperature, gas or dust stratification, under or over-pressure resp. vacuum, dust, wind or incidence of light. The Radar technology allows depending on the application:

- Measurement of liquids, also at gas stratification (e.g. ammonia) or foaming
- Measurement of bulk materials
- Measurement through the container wall, e.g. IPC container or through a protection window, e.g. PTFE or PP

The RADARCONT® is designed for use in liquids.

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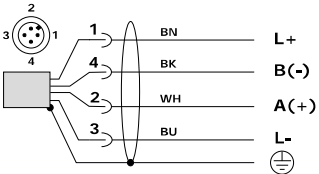
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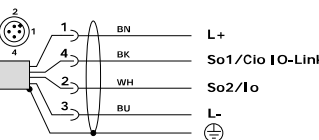
Basic price					447,00 €	
Application type					Price group B	
S	Standard					0,00 €
Sensor						
R	Radar FMCW					0,00 €
Approval						
S	Standard					0,00 €
Process connection						
9	Thread ISO 228-1 – G ½"A (measurement range up to 5m)					0,00 €
8	Thread ISO 228-1 – G ¾"A, ISO 1179-2 E					90,00 €
5	Thread ISO 228-1 – G1"A, ISO 1179-2 E					134,00 €
Electronic output						
V	RS485 Modbus-RTU, 4-wire				0,00 €	
L	IO-Link, current 0/4...20mA / 2x Sout PP, 4-wire				0,00 €	
Electrical connection						
S	Plug M12x1				0,00 €	

Connection

RS485 Modbus-RTU



IO-Link



Order code

Radarcont® RU4

S

R

S

S

Equipment

Order information	Model	
	Connection cable 5 m, 4-pole, shielded	27,50 €
	Connection cable 10 m, 4-pole, shielded	34,00 €
	Matching cable socket, VA-nut	22,50 €