Baumer
Passion for Sensors

Radar distance measuring sensors

RR30.DAF0-IGPI.9CF/E029_P043

Article number: 11230002

Overview

- Small blind range 0.2 m
- IO-Link and analog output (current 4–20 mA)
- Wide beam 12° opening angle
- Suitable for structured surfaces (e.g. stones)
- Ideal for level measurement in small containers
- Economy version with adapted performance

Picture similar

Technical data

General data	
Scanning range Sd	0.2 … 6 m
Scanning range close limit Sdc	0.2 … 6 m
Scanning range far limit Sde	0.2 … 6 m
Repeat accuracy	< 4 mm
Response time ton	< 40 ms, adjustable via IO-Link to 12 ms
Release time toff	< 40 ms, adjustable via IO-Link to 12 ms
Temperature drift	<± 10 mm (Full Scale)
Power-up drift	< 2 mm compensated after 20 min.
Adjustment	IO-Link
Carrier frequency	122 GHz
Band width	1 GHz
Range resolution	500 mm
Hysteresis typ.	5 % (adjustable via IO-Link)
Linearity error	< ± 10 mm (<1m) < ± 3 mm (>1m)
Modulation type	FMCW
Transmitting power (EIRP)	< +20 dBm
Aperture angle	12 °
MTTF	> 126 years
Approvals/certificates	FCC / CFR-47 part 18 (USA) RSS-210 Issue 10 (Canada) EN 305 550-1 V.1.2.1 (European Union) EN 305 550-2 V.1.2.1 (European Union)
Electrical data	
Voltage supply range +Vs	12 … 30 VDC
Current consumption max. (no load)	220 mA
Short circuit protection	Yes

Electrical data	
Reverse polarity protection	Yes, Vs to GND
Output circuit	Current output / push-pull
Output signal	4 ... 20 mA / 20 ... 4 mA
Output current	< 100 mA
Voltage drop Vd	< 2.5 VDC
Mechanical data	
Type	Cylindrical threaded
Housing material	Brass nickel plated
Material (sensing face)	Plastics (PEI)
Width / diameter	30 mm
Height / length	97 mm
Connection types	Connector M12
Ambient conditions	
Operating temperature	-40 … +65 °C
Storage temperature	-40 … +85 °C
Protection class	IP 68/69K
Communication interface	
Interface	IO-Link V1.1
Baud rate	230,4 kBaud (COM 3)
Cycle time	≥ 4 ms
Process data length	208 Bit
Process data structure	Bit 0 = SSC1 (distance) Bit 1 = SSC2 (distance) Bit 2 = quality Bit 3 = alarm Bit 5 = SSC4 (counter) Bit 8-15 = scale factor Bit 16-47 = 32 Bit measurement Bit 48-207 = 5 Peak data (16Bit distance; 16Bit amplitude)

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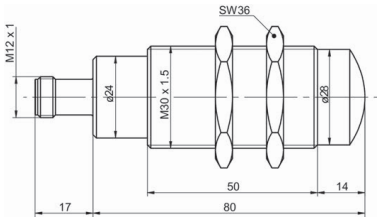
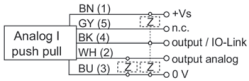
Technical data

Communication interface	
IO-Link port type	Class A
Adjustable parameters	Switching point Switching window definition Switching hysteresis Measured value filtering Measuring range Time filters Signal sensitivity Signal selection (1. / 2. / strongest / last) Tracking mode Output logic Output circuit Counter Analog output characteristic LED-function Deactivate sending antenna Find Me function

Dimension drawing



Connection diagram



Pin assignment