



Model Number

UB300-18GM-U-V1

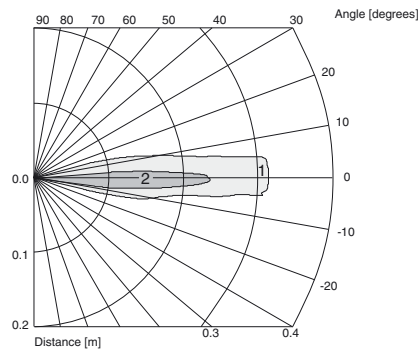
Single head system

Features

- Analog output
- Measuring window adjustable
- V1 plug connection
- Temperature compensation

Diagrams

Characteristic response curve



Curve 1: flat surface 100 mm x 100 mm
Curve 2: round bar, Ø 25 mm

Technical data

General specifications

Sensing range	65 ... 300 mm
Unusable area	0 ... 65 mm
Standard target plate	100 mm x 100 mm
Transducer frequency	400 kHz
Response delay	≤ 50 ms

Electrical specifications

Operating voltage U_B	20 ... 30 V DC , ripple 10 % _{SS}
No-load supply current I_0	25 mA

Output

Output type	1 analog output 0 ... 10 V
Resolution	1 mm
Deviation of the characteristic curve	1.5 %
Repeat accuracy	± 1 mm
Load impedance	≥ 10 kOhm
Temperature influence	± 5 mm

Standard conformity

Standards	EN 60947-5-2
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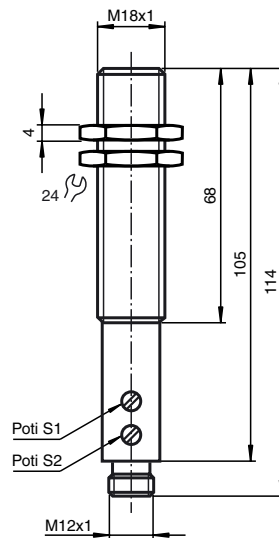
Ambient conditions

Ambient temperature	0 ... 50 °C (32 ... 122 °F)
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)

Mechanical specifications

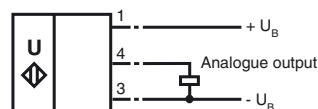
Connection type	Device connector M12 x 1 , 4-pin
Protection degree	IP65
Material	
Housing	brass, nickel-plated
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Mass	160 g

Dimensions



Electrical Connection

Standard symbol/Connection (Connector V1):



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Pinout

Connector V1



Function

The measurement of the distance is realised using the echo time of the ultrasonic pulse. The μ processor calculates the distance on the basis of the echo time and the speed of sound. A measuring window can be set with the potentiometers S1 and S2 (15 turns max.). S1 adjusts the near window limit, S2 the far window limit. The analogue value increases continuously from 0 V ... 10 V between the window limits.

Note:

To prevent mutual interference, identical sensors should be installed with a minimum lateral distance of ≥ 0.2 m. A minimum distance of ≥ 1.5 m is required for opposed installation.

Installation conditions

If the sensor is installed at places, where the environment temperature can fall below 0 °C, for the sensors fixation, one of the mounting flanges BF18, BF18-F or BF 5-30 must be used.

In case of direct mounting of the sensor in a through hole using the steel nuts, it has to be fixed at the middle of the housing thread. If a fixation at the front end of the threaded housing is required, plastic nuts with centering ring (accessories) must be used.

Additional Information

Analogue output

