



**Model Number**

**UB300-18GM-E22-V1**

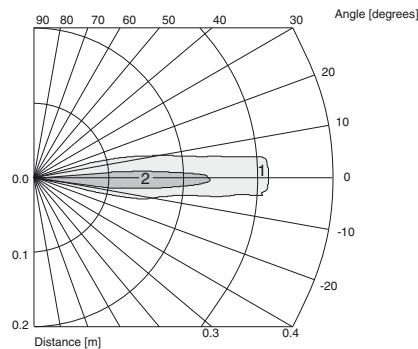
Single head system

**Features**

- 2 independent switch outputs
- Adjustable switch points
- 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

Release date: 2013-02-25 16:10 Date of issue: 2013-02-25 036193\_eng.xml

**Technical data**

**General specifications**

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

**Electrical specifications**

Operating voltage $U_B$	20 ... 30 V DC , ripple 10 % <sub>SS</sub>
No-load supply current $I_0$	25 mA

**Output**

Output type	2 switch outputs PNP, NO/NC
Rated operating current $I_e$	200 mA , short-circuit protected, reverse polarity protected
Voltage drop $U_d$	≤ 2.5 V
Repeat accuracy	± 1 mm
Switching frequency $f$	≥ 10 Hz
Range hysteresis $H$	3 mm
Temperature influence	± 5 mm

**Standard conformity**

Standards	EN 60947-5-2
-----------	--------------

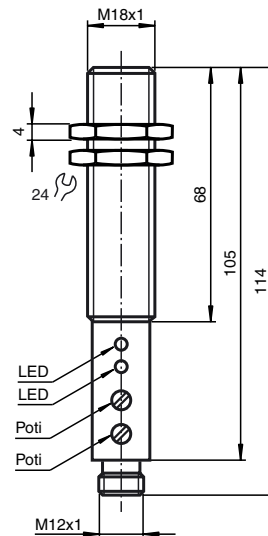
**Ambient conditions**

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

**Mechanical specifications**

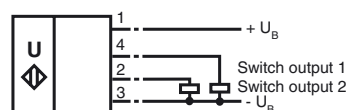
Connection type	Device connector M12 x 1 , 4-pin
Protection degree	IP65
Material	
Housing	brass, nickel-plated
Transducer	epoxy resin/hollow glass sphere mixture; polyurethane foam
Mass	74 g

**Dimensions**



**Electrical Connection**

Standard symbol/Connection:



**Pinout**

**Connector V1**



**Function**

The measurement of the distance is realised using the echo time of the ultrasonic pulse. The  $\mu$  processor calculates the distance on the basis of the echo time and the speed of sound. Two independent switching points can be set with the potentiometers S1 and S2 (15 turns max.):

S1 for output 1

S2 for output 2

Both can use the entire 65 mm ... 300 mm range.

**Note:**

To prevent mutual interference, identical sensors should be installed with a minimum lateral distance of  $\geq 0.2$  m. A minimum distance of  $\geq 1.5$  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**

**Indicating/operating means**

