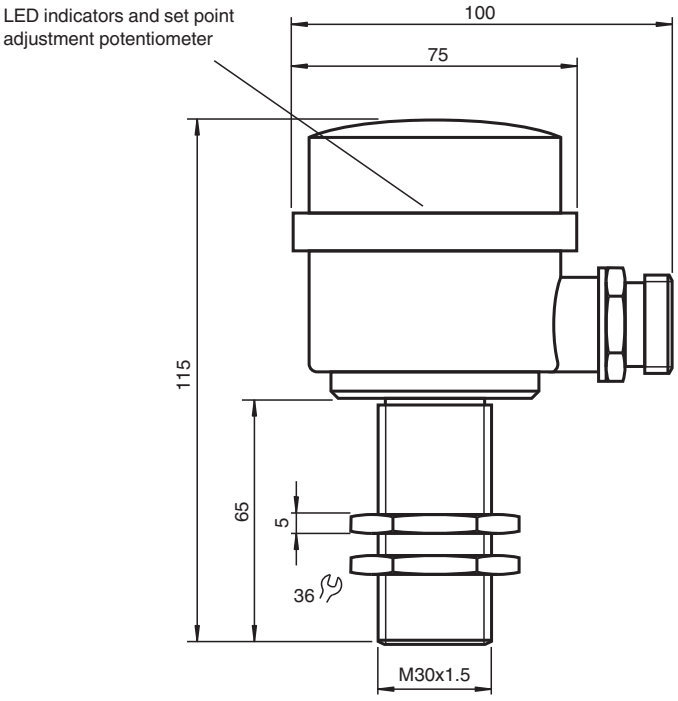
Ultrasonic sensor

UB500-30GM65-WS3-BHMS5

- AC switchpoint output
- 330° high visibility LEDs
- Fingertip range adjustability

Single head system

Dimensions



Technical Data

General specifications		
Sensing range		70 ... 500 mm
Dead band		0 ... 70 mm
Standard target plate		100 mm x 100 mm
Transducer frequency		400 kHz
Response delay		≤ 45 ms
Indicators/operating means		
LED green		power
LED red		output
Electrical specifications		

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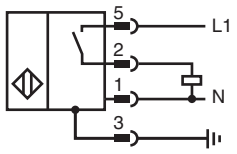
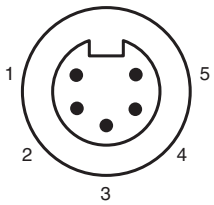
Technical Data

Operating voltage	U_B	90 ... 140 V AC
Power consumption	P_0	≤ 75 mA
Output		
Output type		Thyristor , 1 NO
Rated operating current	I_e	700 mA
Voltage drop	U_d	≤ 1.5 V AC
Repeat accuracy		≤ 5 mm
Switching frequency	f	15 Hz
Range hysteresis	H	approx. 15 mm
Temperature influence		< 2 % of far switch point
Standard conformity		
Standards		EN 60947-5-2
Approvals and certificates		
UL approval		cULus Listed, General Purpose
CSA approval		cCSAus Listed, General Purpose
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		5-pin , V95 connector
Degree of protection		IP65
Material		
Housing		nickel plated brass; plastic components: PBT
Transducer		epoxy resin/hollow glass sphere mixture; polyurethane foam

Connection



Connection Assignment



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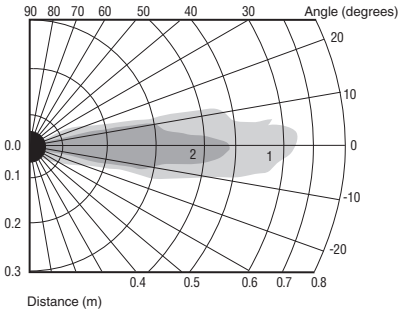
Characteristic Curve

Characteristic response curve



Curve 1: Flat surface 100 mm x 100 mm
Curve 2: Round bar, ⌀ 25 mm

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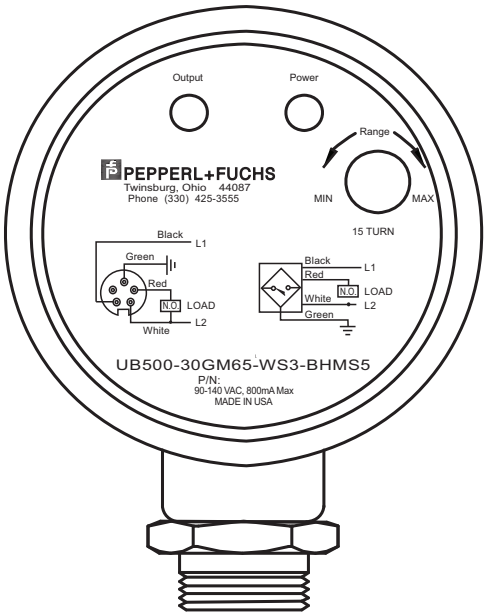
Configuration

Adjustment procedure

The UB500 provides an N.O. switch point output between 70 mm (non-adjustable) and the potentiometer configured end point (70 - 500 mm). The sensing window end limit is adjusted as follows:

Programming

1. Place the target at the desired distance
2. Turn the sensing potentiometer (on the back of the unit) counterclockwise until the red output LED turns off.
3. Slowly turn the potentiometer clockwise. The sensing range is set when the red output LED turns on.



Installation Conditions

If the sensor is installed in an environment where the temperature can fall below 0 °C, one of these mounting flanges must be used for mounting: BF30, BF30-F, or BF 5-30.
If it is intended to operate the sensor at - 25 °C, we recommend discussing the mounting situation with a Pepperl + Fuchs application specialist to ensure a trouble-free operation.
If the sensor is mounted in a through hole using the included steel nuts, it must be mounted at the middle of the threaded housing. If it must be mounted at the front end of the threaded housing, plastic nuts with centering ring (optional accessories) must be used.

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