



# Ultrasonic sensor

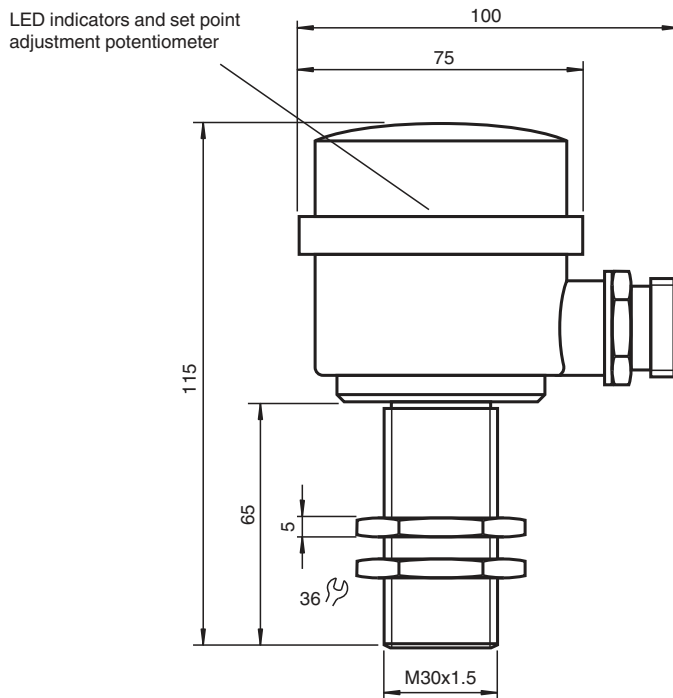
## UB500-30GM65-WS3-BHMS5

- 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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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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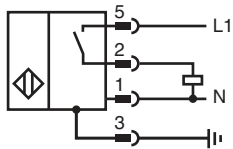
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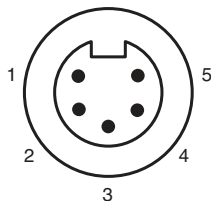
## Technical Data

Operating voltage	$U_B$	90 ... 140 V AC
Power consumption	$P_0$	≤ 75 mA
<b>Output</b>		
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
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN IEC 60947-5-2:2020 IEC 60947-5-2:2019
<b>Approvals and certificates</b>		
UL approval		cULus Listed, General Purpose
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
Connection type		5-pin , V95 connector
Housing diameter		30 mm
Degree of protection		IP65
Material		
Housing		nickel plated brass; plastic components: PBT
Transducer		epoxy resin/hollow glass sphere mixture; polyurethane foam

## Connection



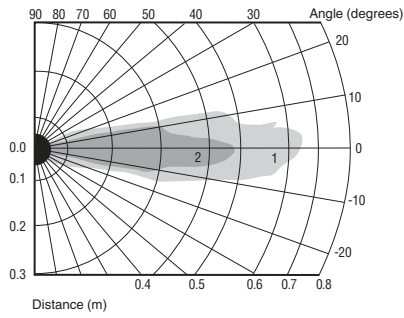
## Connection Assignment



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# Characteristic Curve

## Characteristic response curve



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

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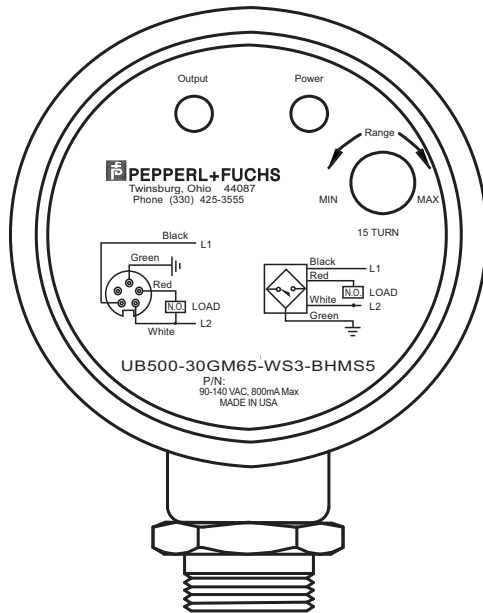
## Configuration

### 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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