



### Model Number

**UB2000-30GM-H1**

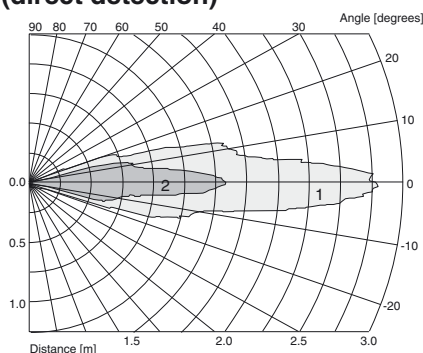
Multi-head system

### Features

- **Very small unusable area in direct detection mode with UB2000-30GM-H2**
- **Separate evaluation**
- **Emitter for direct detection or through-beam mode**

### Curves

#### Characteristic response curves (direct detection)



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

### Technical data

#### General specifications

|                       |                 |
|-----------------------|-----------------|
| Sensing range         |                 |
| Direct detection mode | 50 ... 2000 mm  |
| Through-beam mode     | 10 ... 5000 mm  |
| Unusable area         |                 |
| Direct detection mode | 0 ... 50 mm     |
| Through-beam mode     | 0 ... 10 mm     |
| Standard target plate | 100 mm x 100 mm |
| Transducer frequency  | approx. 175 kHz |

#### Electrical specifications

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

#### Input

|              |                                                                                                                              |
|--------------|------------------------------------------------------------------------------------------------------------------------------|
| Input type   | 1 pulse input for transmitter pulse, activation through open collector npn<br>< 1 V: emitter active, > 4 V: emitter inactive |
| Pulse length | 20 ... 200 μs                                                                                                                |
| Pause length | ≥ 50 x pulse length                                                                                                          |

#### Standard conformity

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

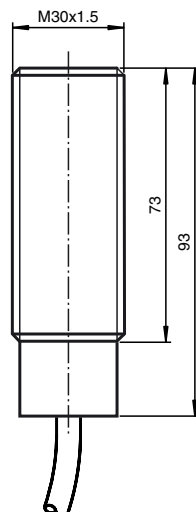
#### Ambient conditions

|                     |                               |
|---------------------|-------------------------------|
| Ambient temperature | -25 ... 70 °C (248 ... 343 K) |
| Storage temperature | -40 ... 85 °C (233 ... 358 K) |

#### Mechanical specifications

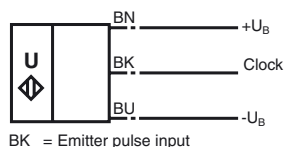
|                   |                                                            |
|-------------------|------------------------------------------------------------|
| Protection degree | IP65                                                       |
| Connection        | 2 m, PVC cable 0.75 mm <sup>2</sup>                        |
| Material          |                                                            |
| Housing           | brass, nickel-plated, plastic components PBT               |
| Transducer        | epoxy resin/hollow glass sphere mixture; polyurethane foam |
| Mass              | 290 g                                                      |

## Dimensions



## Electrical Connection

Standard symbol/Connection:  
Emitter



## Description of the sensor functions

The sensing range is determined in the downstream evaluation electronics (e. g. the units UH3-KHD2-4E5, UH3-KHD2-4I or UH3-T1-KT). PLC modules or other existing evaluation units can also be substituted for these units offered by Pepperl+Fuchs. The sensing range is determined on the basis of the echo time of a transmitted pulse in pulse-echo mode.

In addition to the evaluation electronics, a measuring system always consists of at least one emitter (UB...-H1) and one receiver (UB...-H2).

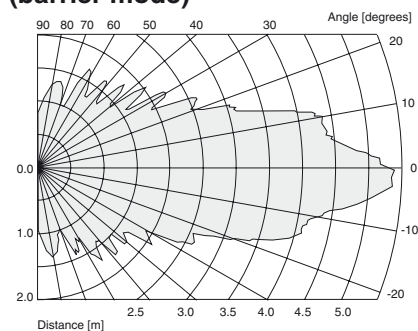
The pulse input on ultrasonic receivers (types UB...-H2) can be used to reduce the system amplification during transmission. This reduces crosstalk between the emitter and receiver in direct-detection mode.

## Mounting conditions

If the sensor is installed in places where the operating temperature can fall below 0 °C, the BF30, BF30-F or BF 5-30 fixing clamp must be used.

## Additional Information

### Characteristic response curve (barrier mode)



## Accessories

**BF 30**  
Mounting flange

**BF 30-F**  
Mounting flange

**BF 5-30**  
Mounting flange

**M-105**  
Sensor well

**UVW90-M30**  
Ultrasonic -deflector

**UVW90-K30**  
Ultrasonic -deflector

**UH3-KHD2-4E5**  
Evaluation unit

**UH3-KHD2-4I**  
Evaluation unit

**UH3-T1-KT**  
Evaluation unit