



### Model Number

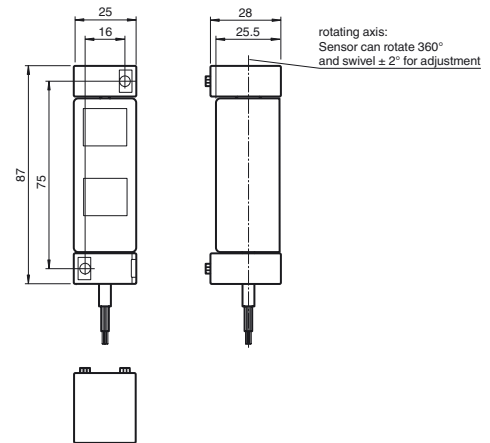
**RL80-54/25/76b/103/115**

Retroreflective sensor  
2 m fixed cable

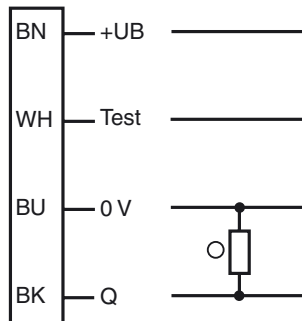
### Features

- Retroreflective sensor with polarization filter and foreground suppression for suppressing reflective objects
- PNP version
- Test input

### Dimensions



### Electrical connection



**Technical data****General specifications**

|                           |                                                      |
|---------------------------|------------------------------------------------------|
| Effective detection range | REF-H88x25 0 ... 6 m<br>REF-H88x50 0 ... 12 m        |
| Reflector distance        | REF-H88x25 2.6 ... 10 m<br>REF-H88x50 2.5 ... 15.5 m |
| Threshold detection range | REF-H88x25 10 m<br>REF-H88x50 15.5 m                 |
| Reference target          | REF-H88x25                                           |

|                            |                                      |
|----------------------------|--------------------------------------|
| Light source               | LED                                  |
| Light type                 | modulated visible red light , 640 nm |
| Diameter of the light spot | approx. 200 mm at a distance of 6 m  |
| Angle of divergence        | 3 °                                  |
| Ambient light limit        | EN 60947-5-2 10000 Lux               |

**Functional safety related parameters**

|                          |      |
|--------------------------|------|
| Mission Time ( $T_M$ )   | 20 a |
| Diagnostic Coverage (DC) | 0 %  |

**Indicators/operating means**

|                    |            |
|--------------------|------------|
| Function indicator | LED yellow |
|--------------------|------------|

**Electrical specifications**

|                                |       |             |
|--------------------------------|-------|-------------|
| Operating voltage              | $U_B$ | 10 ... 30 V |
| Ripple                         |       | 10 %        |
| No-load supply current         | $I_0$ | ≤ 10 mA     |
| Time delay before availability | $t_v$ | < 300 ms    |

**Input**

|            |                                                                   |
|------------|-------------------------------------------------------------------|
| Test input | emitter deactivation at 0 V and if test input is left unconnected |
|------------|-------------------------------------------------------------------|

**Output**

|                   |                                                                                                                      |         |
|-------------------|----------------------------------------------------------------------------------------------------------------------|---------|
| Switching type    | light on                                                                                                             |         |
| Signal output     | 1 PNP, short-circuit protected, open collector                                                                       |         |
| Switching voltage | max. 30 V DC                                                                                                         |         |
| Switching current | max. 100 mA                                                                                                          |         |
| Voltage drop      | U <sub>d</sub>                                                                                                       | ≤ 1.5 V |
| Response time     | Light beam unobstructed to light beam interrupted: 10 ms<br>Light beam interrupted to light beam unobstructed: 80 ms |         |

**Directive conformity**

|                               |                                        |
|-------------------------------|----------------------------------------|
| Electromagnetic compatibility |                                        |
| Directive 2014/30/EU          | EN 60947-5-2:2007 EN 60947-5-2/A1:2012 |

**Standard conformity**

|           |                                                                                    |
|-----------|------------------------------------------------------------------------------------|
| Standards | EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012 |
|-----------|------------------------------------------------------------------------------------|

**Ambient conditions**

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -30 ... 60 °C (-22 ... 140 °F) |
| Storage temperature | -40 ... 70 °C (-40 ... 158 °F) |

**Mechanical specifications**

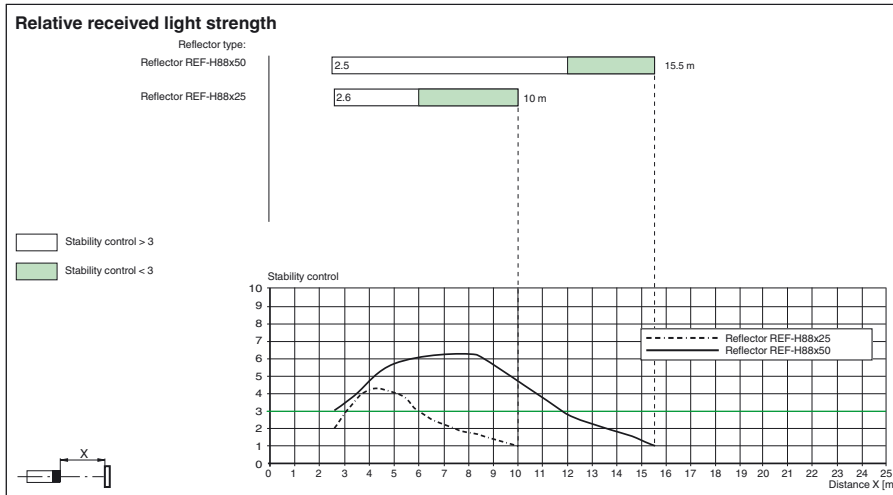
|                      |                   |
|----------------------|-------------------|
| Degree of protection | IP65              |
| Connection           | 2-meter PVC cable |
| Material             |                   |
| Housing              | Polycarbonate     |
| Optical face         | PMMA              |
| Mass                 | approx. 155 g     |

**Approvals and certificates**

|              |                                                              |
|--------------|--------------------------------------------------------------|
| CCC approval | CCC approval / marking not required for products rated ≤36 V |
|--------------|--------------------------------------------------------------|

Other suitable accessories can be found at  
[www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

## Curves/Diagrams



## Function display

| LED yellow                          | Stability control | Description                                                                    |
|-------------------------------------|-------------------|--------------------------------------------------------------------------------|
| < 15 min after power up (set-up)    |                   |                                                                                |
| off                                 | SC > 3            | light beam free, sensor ideal aligned or positioned for longest operating time |
| flashes 2 Hz                        | 1 < SC < 3        | sensor not properly aligned, sensor or reflector dirty                         |
| on                                  | SC < 1            | sensor misaligned or light beam interrupted                                    |
| > 15 min after power up (operating) |                   |                                                                                |
| off                                 | SC > 1,5          | light beam free                                                                |
| flashes 4 Hz                        | 1 < SC < 1,5      | sensor or reflector dirty                                                      |
| on                                  | SC < 1            | light beam interrupted                                                         |