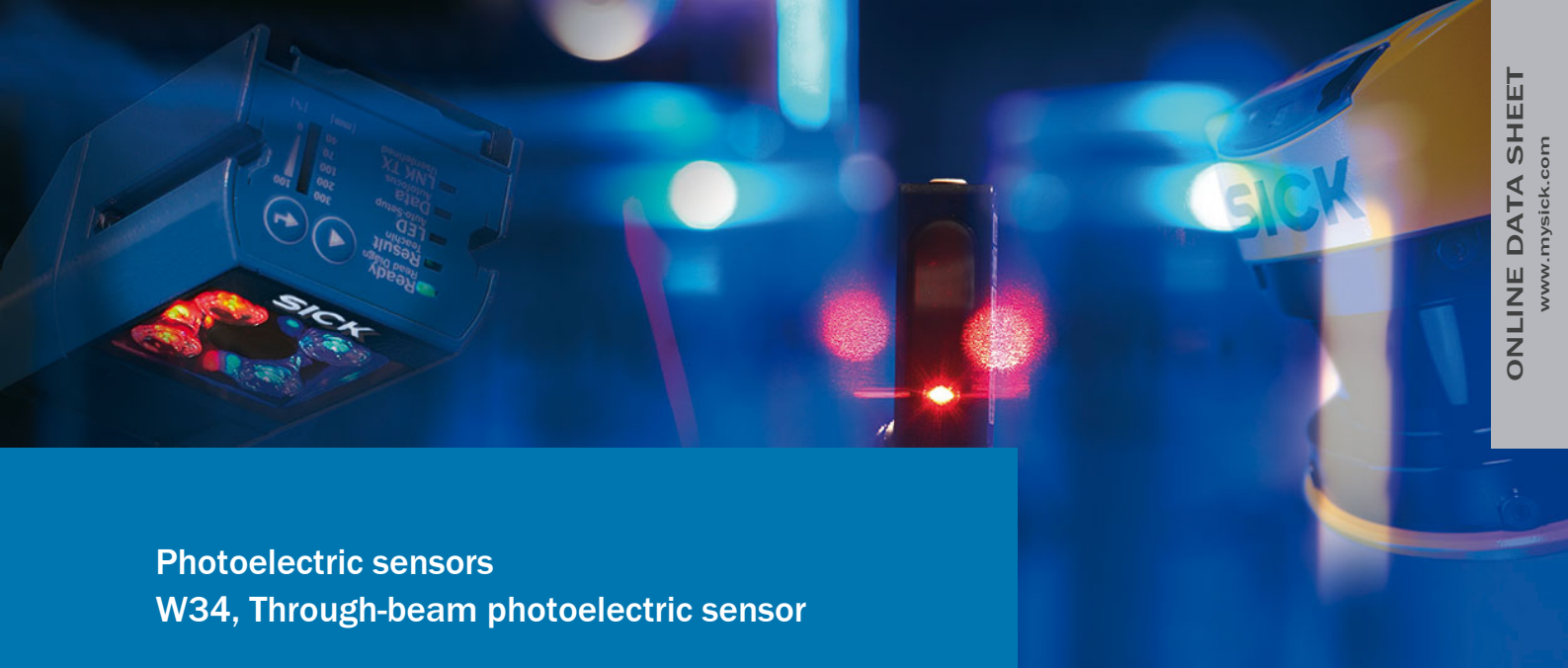




## Photoelectric sensors W34, Through-beam photoelectric sensor

WS/WE34-B430S01



**Model Name** > [WS/WE34-B430S01](#)  
**Part No.** > [1025626](#)



*Illustration may differ*

#### At a glance

- High operating reserve at a long range
- Switch selectable PNP or NPN output and light/dark switching
- Versions with DC voltage (10...30V) or universal AC/DC voltage (12 ... 240 V DC / 24 ... 240 V AC)
- Optional test input, adjustable ON and OFF time delays, alarm output
- M12 or terminal chamber connection: 90° rotatable
- UL approval

#### Your benefits

- High operating reserve at a long range minimizes downtime
- Alarm output provides early warning that maintenance may be needed
- Test input allows users to validate that the sensor is operating as expected
- The sensor cover protects configuration components against environmental hazards
- Adjustable time delay, alarm output, test input, and universal AC/DC voltage provide additional flexibility and reduce the number of part numbers needed



#### Features

|                                  |                                   |
|----------------------------------|-----------------------------------|
| Sensor/detection principle:      | Through-beam photoelectric sensor |
| Dimensions (W x H x D):          | 27 mm x 92 mm x 70 mm             |
| Housing design (light emission): | Rectangular                       |
| Sensing range max.:              | 0 m ... 60 m                      |
| Sensing range:                   | 0 m ... 50 m                      |
| Type of light:                   | Visible red light                 |
| Light source:                    | LED <sup>1)</sup>                 |
| Wave length:                     | 660 nm                            |
| Sensitivity adjustment:          | Potentiometer                     |
| Angle of dispersion:             | Ca. 1 °                           |
| Light spot size (distance):      | Ø 700 mm (50 m)                   |

<sup>1)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

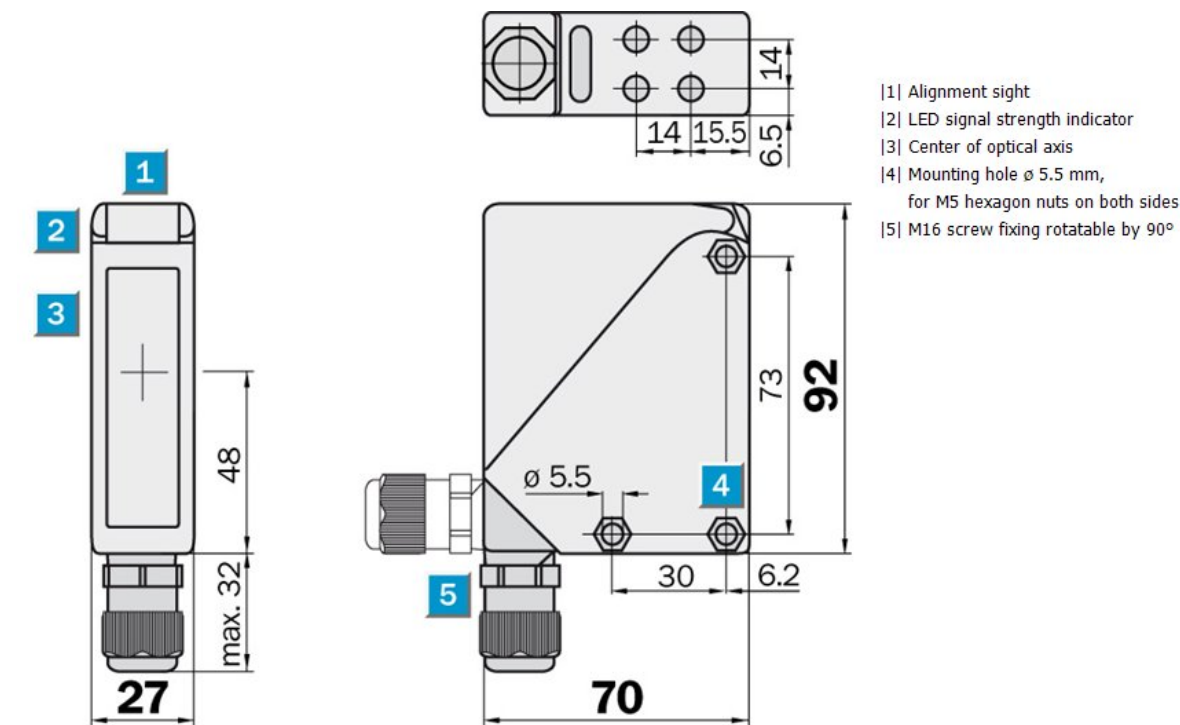
#### Mechanics/electronics

|                            |                                   |
|----------------------------|-----------------------------------|
| Supply voltage:            | 10 V DC ... 30 V DC <sup>1)</sup> |
| Ripple:                    | < 5 Vpp <sup>2)</sup>             |
| Power consumption, sender: | 50 mA                             |

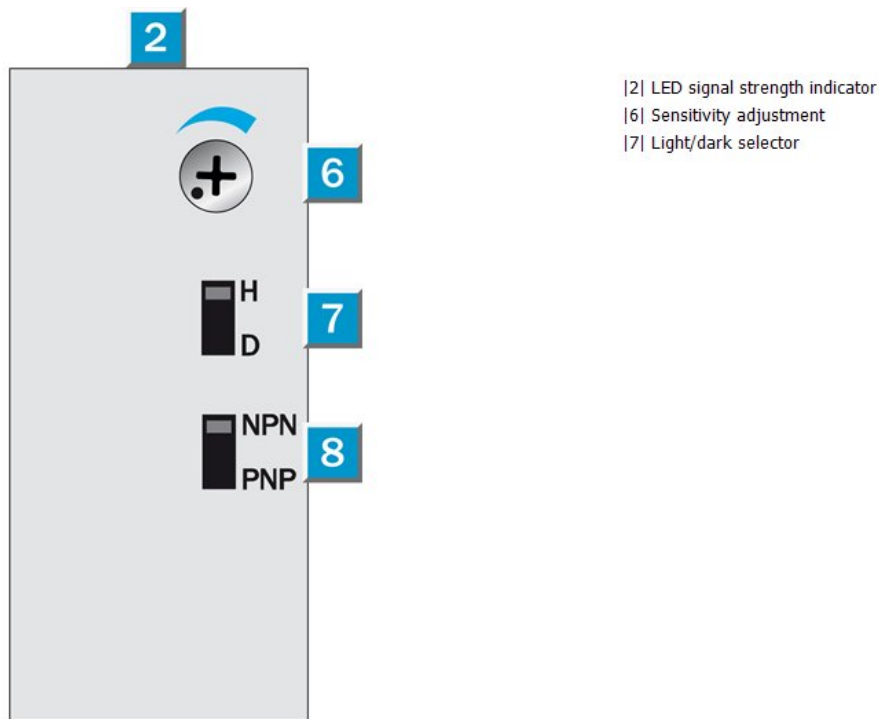
|                                       |                                                                                                   |
|---------------------------------------|---------------------------------------------------------------------------------------------------|
| Power consumption, receiver:          | 40 mA                                                                                             |
| Output type:                          | NPN, PNP                                                                                          |
| Switching mode:                       | Dark-switching, Light switching                                                                   |
| Switching mode selector:              | Dark-switching (pre-setting), Selectable via light/dark selector, Selectable via PNP/NPN selector |
| Output current I <sub>max</sub> :     | 100 mA                                                                                            |
| Response time:                        | ≤ 500 μs <sup>3)</sup>                                                                            |
| Switching frequency:                  | 1,000 Hz <sup>4)</sup>                                                                            |
| Angle of reception:                   | Ca. 2.5 °                                                                                         |
| Connection type:                      | Connector M12, 4-pin <sup>5)</sup>                                                                |
| Circuit protection:::                 | A, C, D <sup>6) 7) 8)</sup>                                                                       |
| Protection class:                     | II <sup>9)</sup>                                                                                  |
| Weight:                               | 280 g                                                                                             |
| Special device:                       | ✓                                                                                                 |
| Housing material:                     | ABS, Plastic                                                                                      |
| Enclosure rating:                     | IP 67                                                                                             |
| Special features:                     | Dark-switching (pre-setting)                                                                      |
| Test input sender off:                | TE to 0 V                                                                                         |
| Ambient operating temperature:        | -40 °C ... 60 °C                                                                                  |
| Ambient storage temperature:          | -40 °C ... 75 °C                                                                                  |
| UL File-No.:                          | UL No. NRKH.E181493 & cUL No. NRKH7.E181493                                                       |
| Part number of individual components: | Receiver, WE34-B430S01, 2029521, Sender, WS34-D430, 2022819                                       |

<sup>1)</sup> Limit values   <sup>2)</sup> May not exceed or fall short of V<sub>S</sub> tolerances   <sup>3)</sup> Signal transit time with resistive load   <sup>4)</sup> With light/dark ratio 1:1   <sup>5)</sup> Connection rotatable by 90°   <sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity protected   <sup>7)</sup> C = interference suppression   <sup>8)</sup> D = outputs overcurrent and short-circuit protected   <sup>9)</sup> Reference voltage 50 V DC

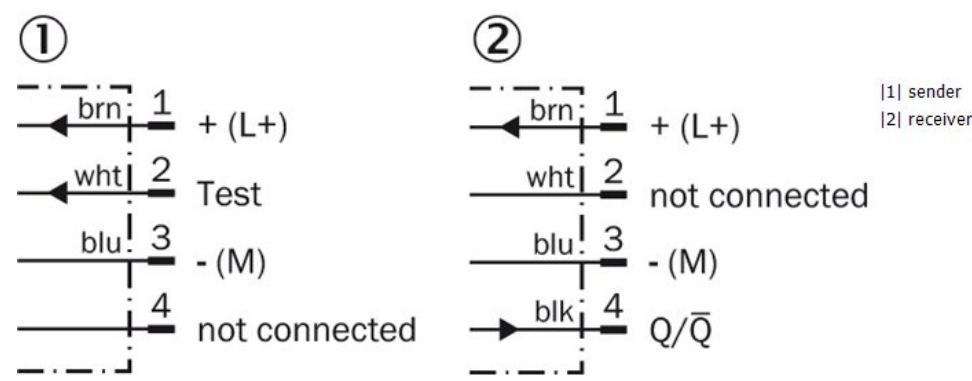
Dimensional drawing



Adjustments possible



Connection diagram



②

brn

1

+

(L+)

wht

2

not connected

blu

3

- (M)

blk

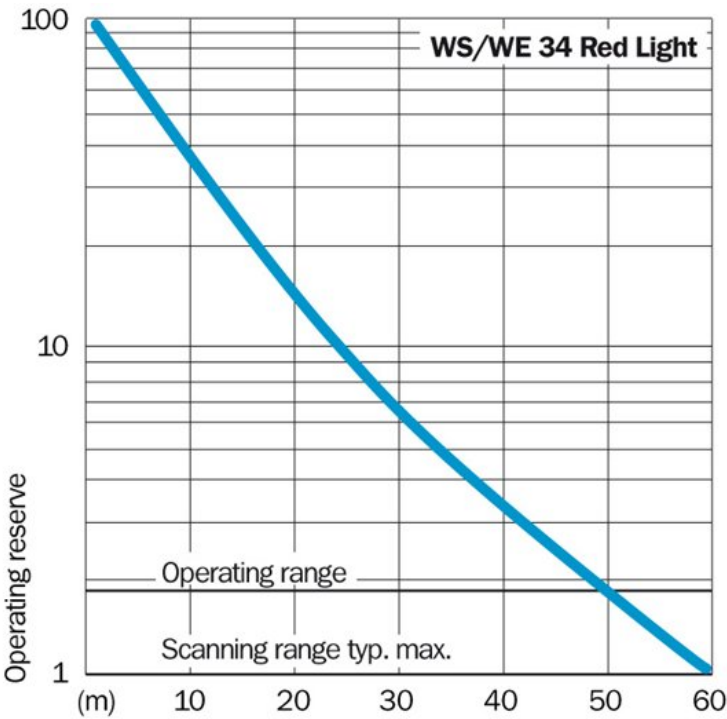
4

Q/ $\bar{Q}$

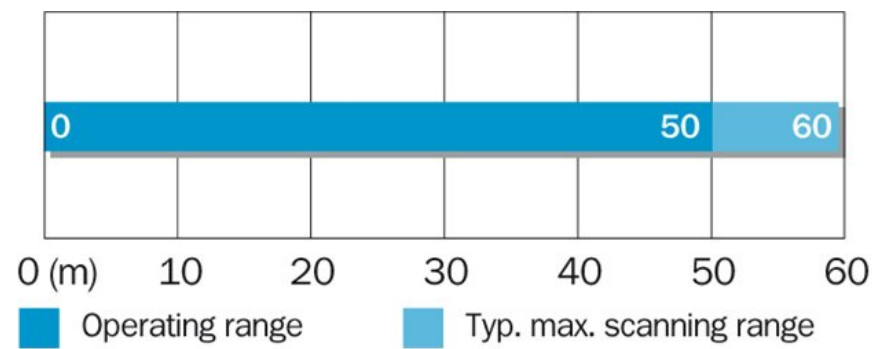
|1| sender

|2| receiver

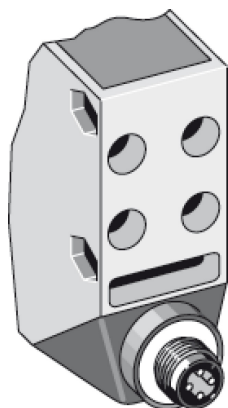
Characteristic curve



**Sensing range diagram**



**Connection type**



**Australia**

Phone +61 3 9457 0600  
1800 334 802 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail sac@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Ceská Republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail kundenservice@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6801000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 3358 1341  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederlands**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail admin@sicksgp.com.sg

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886-2-2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 8865 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 800-325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)