



Contrast sensors  
KT5, KT5-2 Teach-in

KT5W-2P2113



**Model Name** > [KT5W-2P2113](#)  
**Part No.** > [1018043](#)



**At a glance**

- Tough, metal housing
- Various teach-in methods via control panel or control cable
- Maximum detection reliability due to 3-color RGB LED technology
- Switching frequency of 10 kHz
- Various sensing distances and light spot directions
- M12 plug can be rotated 90°

**Your benefits**

- All print marks and color combinations are reliably detected, ensuring high machine throughput
- Reliable operation, even with jittering webs and high-gloss materials
- High positioning accuracy improves packaging quality
- Various sensing distances, light spot directions and light emissions make individual configuration and simple integration into the production process possible



**Features**

Dimensions (L x W x H):	80 mm x 30.4 mm x 53 mm
Sensing distance <sup>1)</sup> :	10 mm
Sensing distance tolerance:	± 3 mm
Light source <sup>2), 3)</sup> :	LED red, green, blue
Light emission:	Long and short side of housing, exchangeable
Light spot size:	1.2 mm x 4.2 mm
Light spot direction <sup>4)</sup> :	Horizontal
Adjustment:	Dynamic teach-in

<sup>1)</sup> From front edge of lens    <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C    <sup>3)</sup> Wave length: 470 nm, 525 nm, 640 nm    <sup>4)</sup> In relation to long side of housing

**Mechanics/electronics**

Supply voltage V <sub>s</sub> <sup>1)</sup> :	DC 10 V ... 30 V
Ripple <sup>2)</sup> :	≤ 5 Vpp
Power consumption <sup>3)</sup> :	< 80 mA
Switching frequency <sup>4)</sup> :	10 kHz
Response time <sup>5)</sup> :	50 μs
Output type:	PNP: HIGH = V <sub>S</sub> - ≤ 2 V / LOW approx. 0 V
Switching mode:	PNP

Input, teach-in (ET):

PNP:  
Teach:  $U = 10\text{ V} \dots < U_V$   
Run:  $U < 2\text{ V}$

Input, light/dark (L/D):

PNP:  
light:  $U = 0\text{ V}$   
dark:  $U > 10\text{ V} \dots < U_V$

Retention time (ET):

25 ms, non-volatile memory

Connection type:

Connector M12, 5-pin

Protection class <sup>6)</sup>:

II

Circuit protection:

Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected

Enclosure rating:

IP 67

Weight:

Ca. 400 g

Housing material:

Zinc diecast

Output current I<sub>max.</sub>:

100 mA

<sup>1)</sup> Limit values: operation in short-circuit protected network max. 8 A <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4)</sup> With light/dark ratio 1:1 <sup>5)</sup>  
<sup>6)</sup> Reference voltage DC 50 V  
Signal transit time with resistive load

### Ambient data

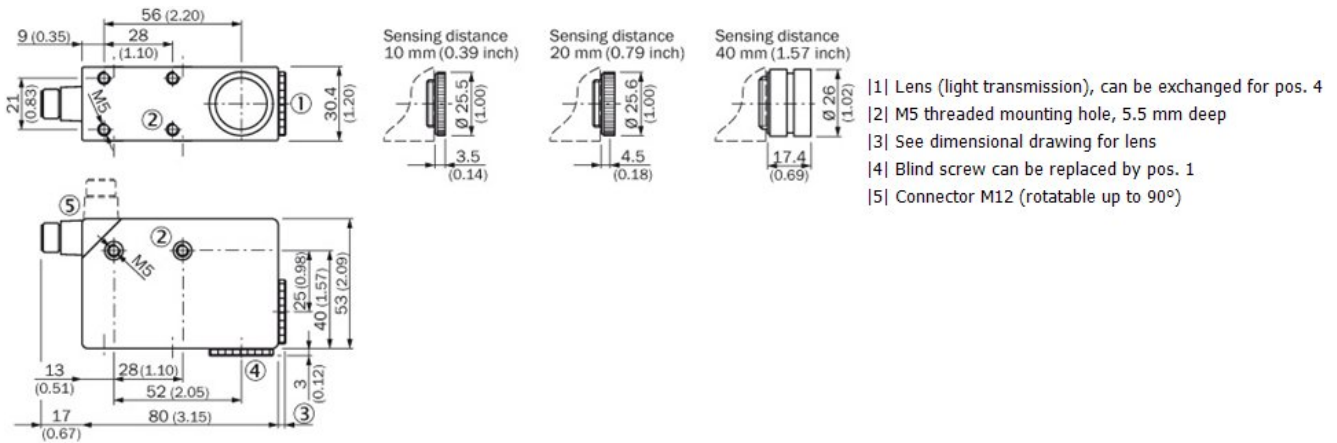
Ambient temperature:

Operation: -10 ... 55 °C  
Storage: -25 ... 75 °C

Shock load:

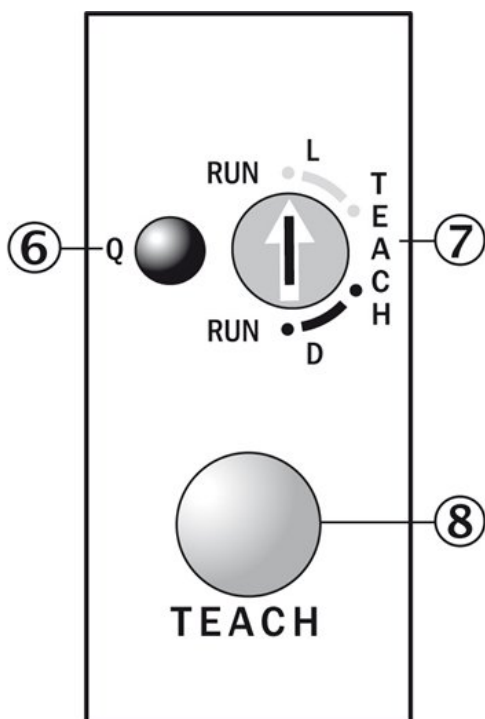
According to IEC 60068

### Dimensional drawing



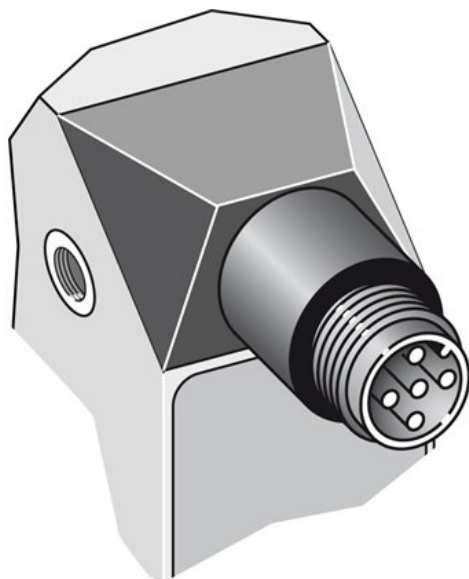
All dimensions in mm (inch)

## Adjustments

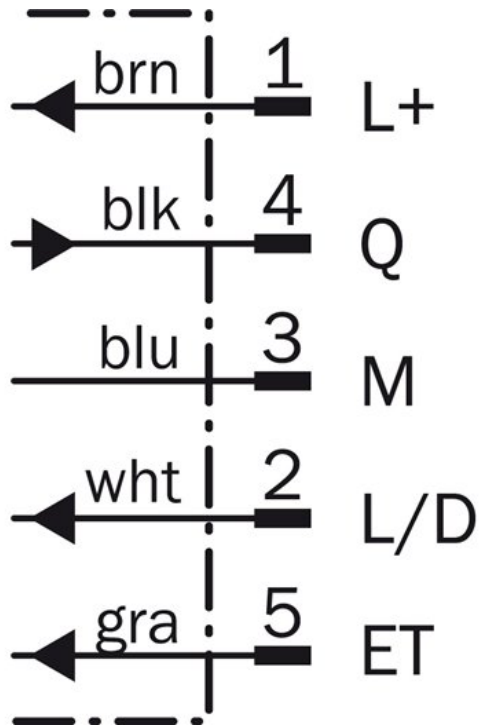


- |6| Function signal indicator (yellow)
- |7| Pre-selection switch
- |8| Teach-in button

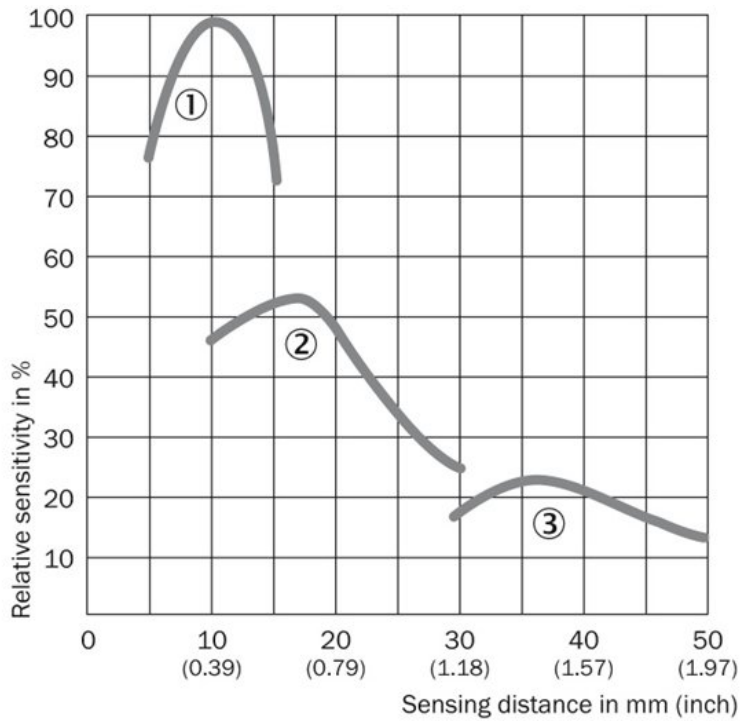
## Connection type



Connection diagram



Sensing distance



- [1] Sensing distance 10 mm
- [2] Sensing distance 20 mm
- [3] Sensing distance 40 mm

**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)