



## Contrast sensors KT5, KT5-2 Teach-in

KT5G-2P1122



**Model Name** > [KT5G-2P1122](#)  
**Part No.** > [1017976](#)



#### 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)</sup> , <sup>3)</sup> : | LED green                                    |
| 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> :         | Vertical                                     |
| Adjustment:                                  | 1-point-teach-in                             |
| Function:                                    | Off delay 20 ms                              |

<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: 520 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 |

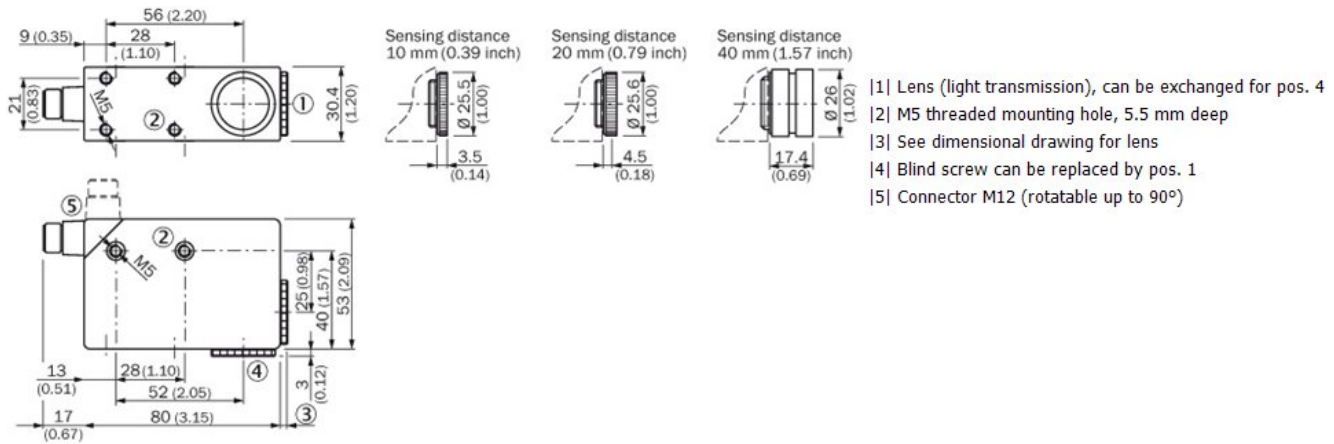
|                                   |                                                                                                       |
|-----------------------------------|-------------------------------------------------------------------------------------------------------|
| Switching mode:                   | PNP                                                                                                   |
| Input, teach-in (ET):             | PNP: Run: $U < 2 \text{ V}$ , Teach: $U = 10 \text{ V} \dots < U_V$                                   |
| Input, fine/coarse (F/C):         | Coarse: $U > 10 \text{ V} \dots < U_V$ , PNP: fine: $U = 0 \text{ V}$                                 |
| 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 |
| 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

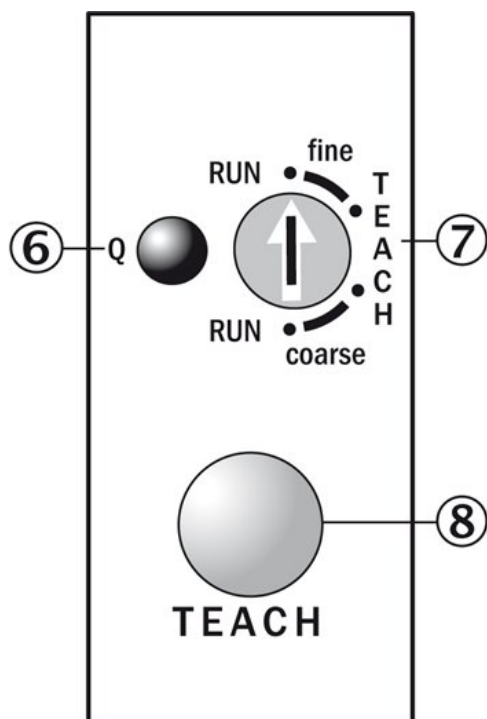
|                      |                                                  |
|----------------------|--------------------------------------------------|
| Ambient temperature: | Operation: -10 ... 55 °C, Storage: -25 ... 75 °C |
| Shock load:          | According to IEC 60068                           |
| UL File-No.:         | UL No. NRKH.E181493 & cUL No. NRKH7.E181493      |

### Dimensional drawing



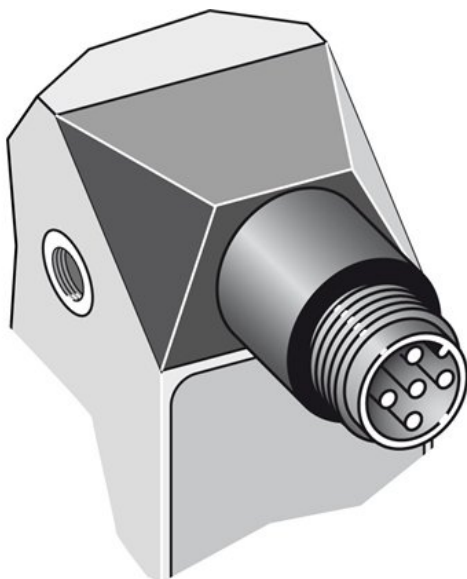
All dimensions in mm (inch)

## Adjustments

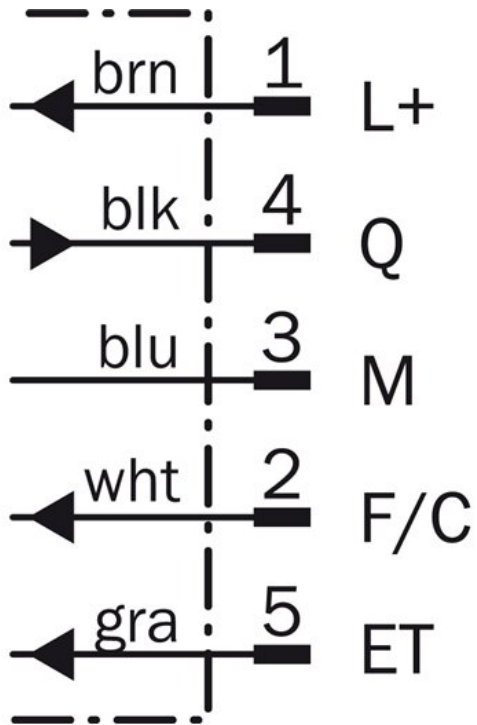


- |6| Function signal indicator (yellow)
- |7| Pre-selection switch for minimum contrast
- |8| Teach-in button

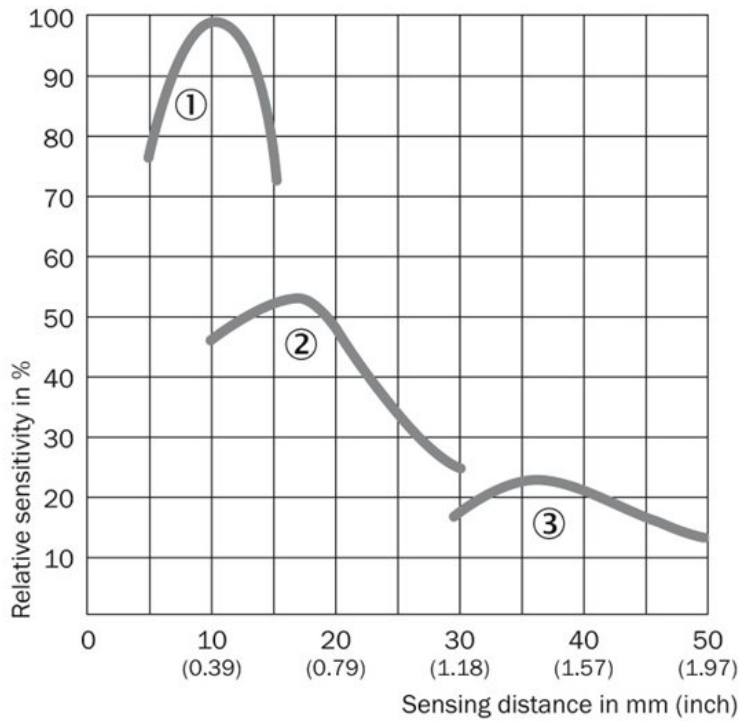
## Connection type



## Connection diagram



## Sensing distance



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