



Contrast sensors  
KT6, KT6-2

KT6W-2N5116



**Model Name** > [KT6W-2N5116](#)  
**Part No.** > [1046010](#)



**At a glance**

- 3-color RGB LED technology
- 2-point teach-in (mark and background)
- Tough, metal housing
- Automatic gloss adjustment for highly reflective materials
- 10 mm sensing distance
- Light exits at end or side, based on model
- Common mounting footprint

**Your benefits**

- 3-color RGB LED for all registration mark applications - one sensor fits all
- Tough, metal housing for long service life
- Reliable operation, even with high-gloss reflective and jittering materials
- Easy setup - detect all marks with one sensor



**Features**

Sensing distance:	10 mm
Sensing distance tolerance:	± 3 mm
Light source <sup>1)</sup> :	LED
Wave length:	470 nm, 525 nm, 640 nm
Light emission:	Short side of housing
Light spot size:	1.5 mm x 6.5 mm
Light spot direction <sup>2)</sup> :	Vertical
Type of light:	Visible blue light, Visible green light, Visible red light
Dimensions (W x H x D):	30.4 mm x 53 mm x 80 mm
Housing design (light emission):	Rectangular
Teach-in mode:	Static 2-point teach-in

<sup>1)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C <sup>2)</sup> In relation to long side of housing

**Mechanics/electronics**

Ripple <sup>1)</sup> :	≤ 5 Vpp
Power consumption <sup>2)</sup> :	< 40 mA
Switching frequency <sup>3)</sup> :	5 kHz
Response time:	100 µs
Output type:	NPN: HIGH = approx. VS / LOW ≤ 2 V
Switching mode:	NPN

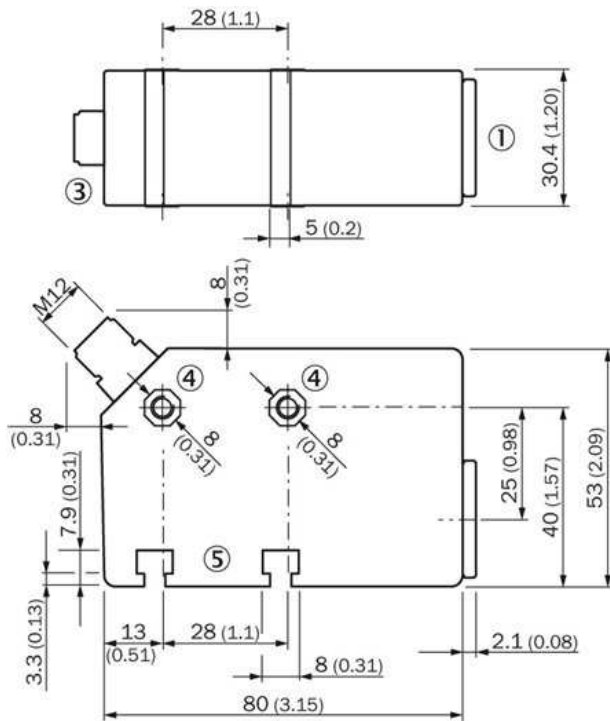
Retention time (ET):	25 ms, non-volatile memory
Connection type:	Connector M12, 4-pin
Protection class <sup>4)</sup> :	II
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Enclosure rating:	IP 67
Weight:	400 g
Housing material:	Metal, Zinc diecast
Output current I <sub>max.</sub> :	100 mA
Supply voltage:	10 V DC ... 30 V DC <sup>5)</sup>
Fieldbus interface:	-

1) May not exceed or fall short of V<sub>S</sub> tolerances 2) Without load 3) With light/dark ratio 1:1 4) Reference voltage DC 50 V 5) Limit values; operation in short-circuit protected network max. 8 A

### Ambient data

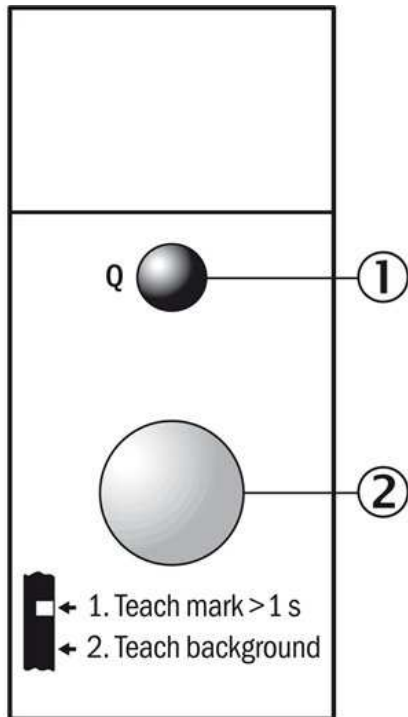
Shock load:	According to IEC 60068
Ambient operating temperature:	-10 °C ... +55 °C
Ambient storage temperature:	-25 °C ... +75 °C

### Dimensional drawing



- |1| Lens (light transmission), edge side
- |3| Connector M12
- |4| SW8 mounting hole for M5 nut
- |5| SW8 T-slot for M5 nut

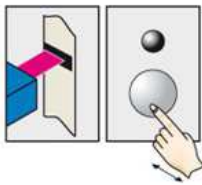
## Adjustments



- |1| Function signal indicator
- |2| Teach-in button

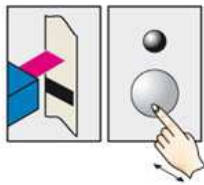
## Bedienhinweis

### 1. Position mark



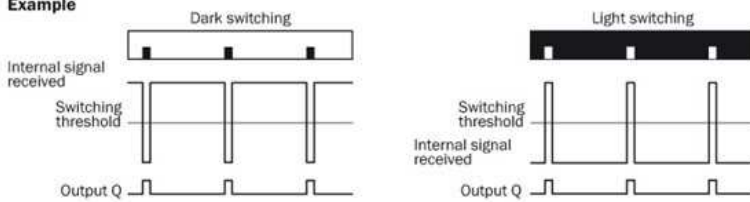
Press and hold teach-in button > 1 s.  
Red emitted light flashes.

### 2. Position background



Press and hold teach-in button > 1 s.  
Yellow LED will illuminate, when emitted light is on the mark.

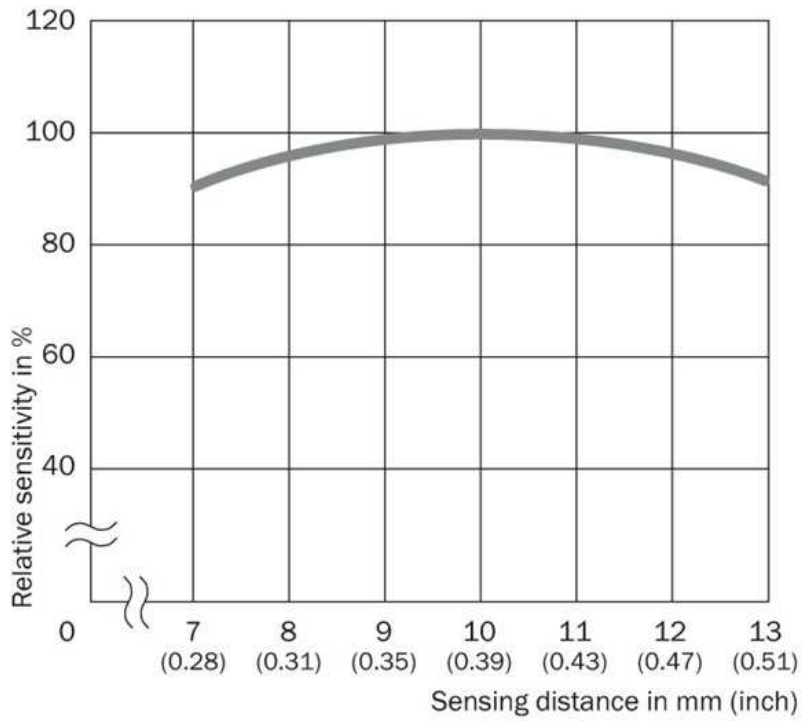
### Example



### Switching characteristics

The optimum emitted light is selected automatically.  
Light/dark setting is defined using teach-in sequence.  
The switching threshold is set in the center between the background and the mark.

## Sensing distance



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