



Contrast sensors
KT6, KT6-2

KT6W-2N6116



Model Name > [KT6W-2N6116](#)
Part No. > [1046012](#)



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 ¹⁾ : | LED |
| Wave length: | 470 nm, 525 nm, 640 nm |
| Light emission: | Long side of housing |
| Light spot size: | 1.5 mm x 6.5 mm |
| Light spot direction ²⁾ : | 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 |

¹⁾ Average service life of 100,000 h at T_A = +25 °C ²⁾ In relation to long side of housing

Mechanics/electronics

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

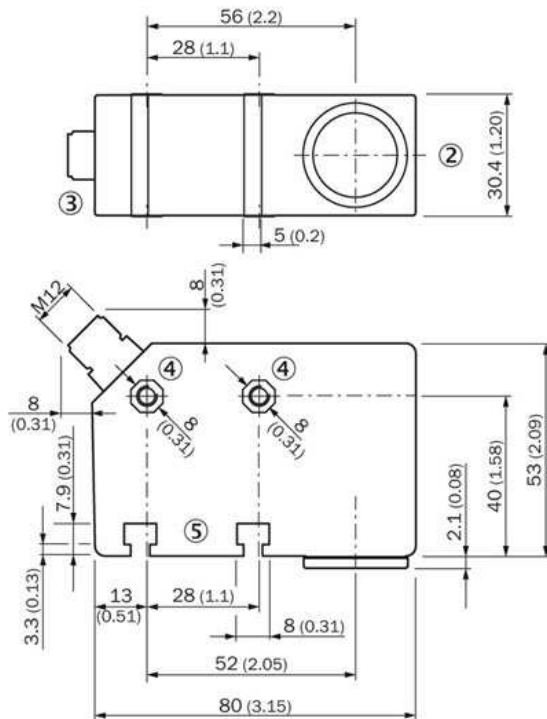
| | |
|------------------------------------|---|
| Retention time (ET): | 25 ms, non-volatile memory |
| Connection type: | Connector M12, 4-pin |
| Protection class ⁴⁾ : | II |
| Circuit protection: | Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected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

1) May not exceed or fall short of V_S 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

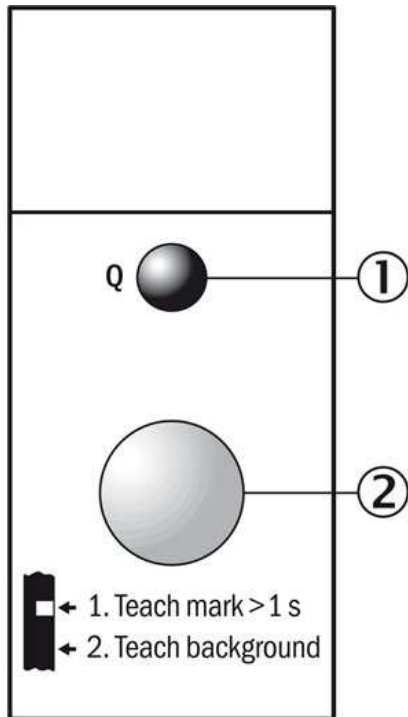
| | |
|--------------------------------|------------------------|
| Shock load: | According to IEC 60068 |
| Ambient operating temperature: | -10 °C ... +55 °C |
| Ambient storage temperature: | -25 °C ... +75 °C |

Dimensional drawing



- [2] Lens (light transmission), length side
- [3] Connector M12
- [4] SW8 mounting hole for M5 nut
- [5] SW8 T-slot for M5 nut

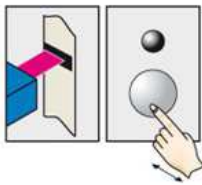
Adjustments



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

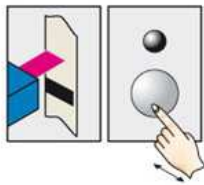
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1. Position mark



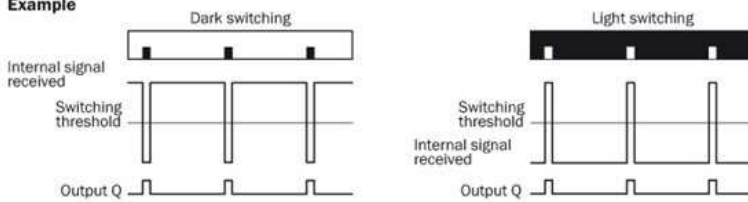
Press and hold teach-in button
> 1 s.
Red emitted light flashes.

2. Position background



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

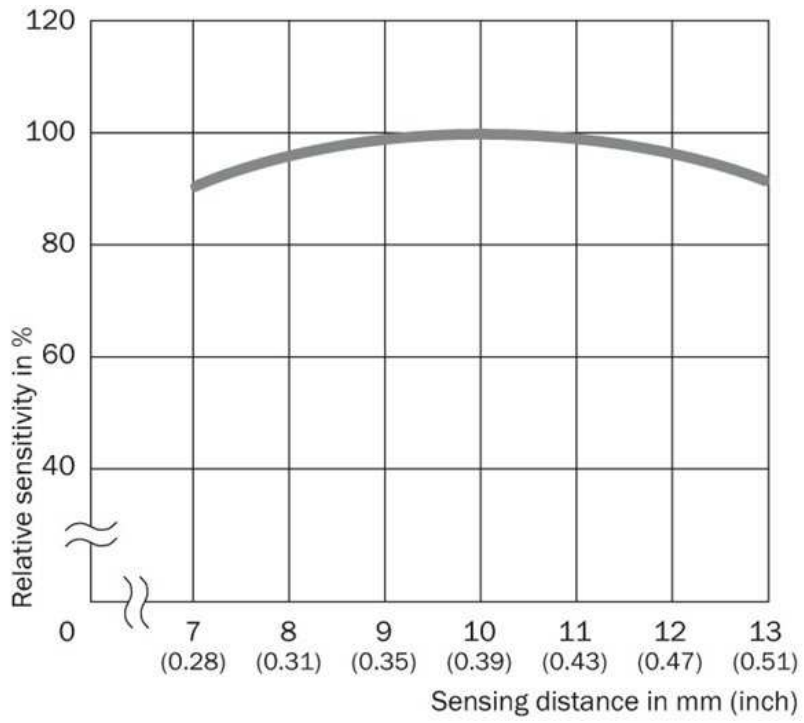
Example



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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