

ONLINE DATA SHEET
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Contrast sensors
KT6, KT6-2

KT6W-2N5116



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KT6, KT6-2

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 [1]:	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 [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

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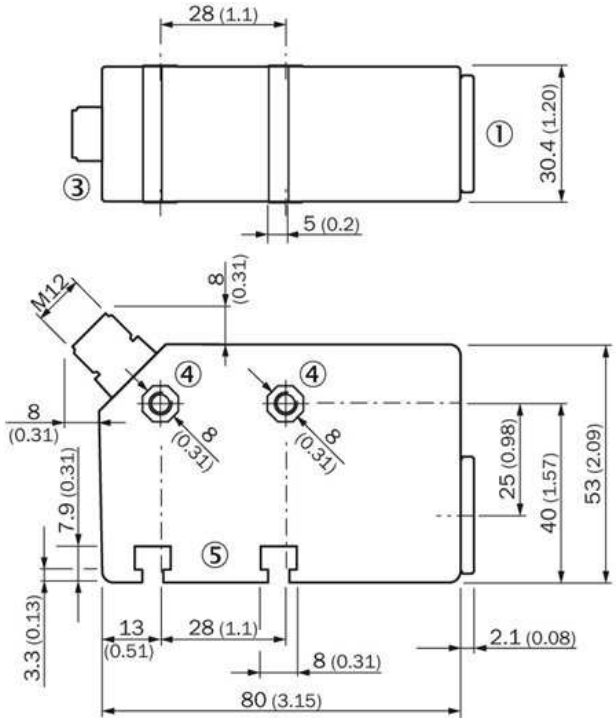
Retention time (ET):	25 ms, non-volatile memory
Connection type:	Connector M12, 4-pin
Protection class [4]:	II
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Enclosure rating:	IP 67
Weight:	400 g
Housing material:	Metal, Zinc diecast
Output current Imax.:	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

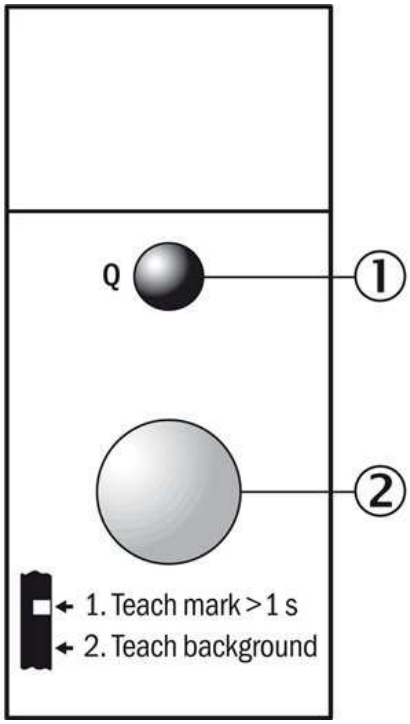
Dimensional drawing



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

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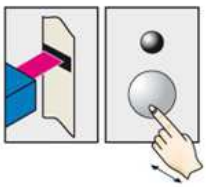
Adjustments



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

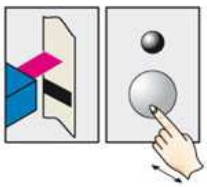
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1. Position mark



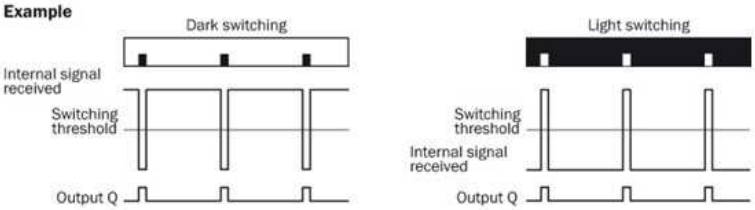
Press and hold teach-in button > 1 s.
Red emitted light flashes.

2. Position background



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

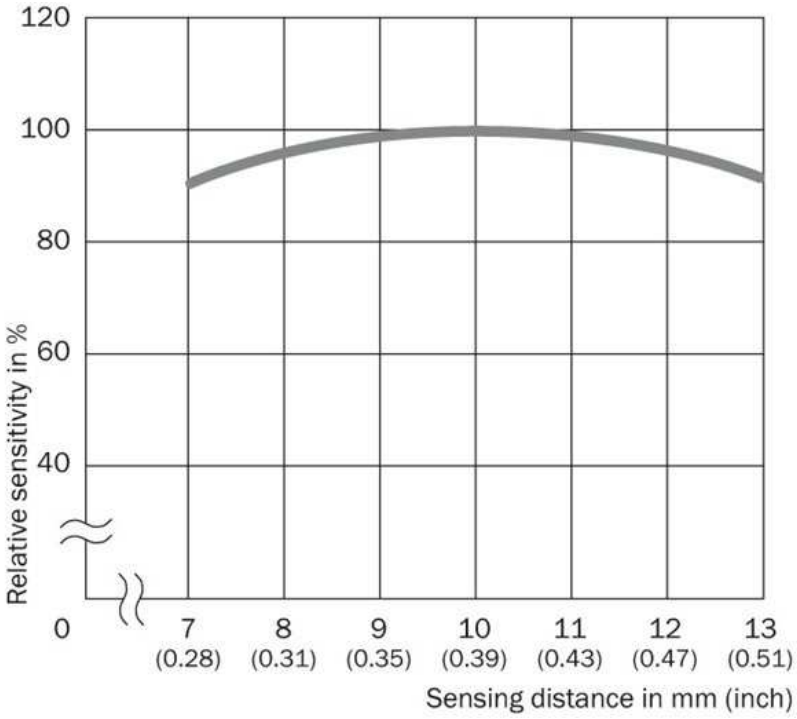
Example



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.

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Sensing distance



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