ONLINE DATA SHEET
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Contrast sensors
KT5, KT5-2 Teach-in

KT5W-2N1116

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KT5, KT5-2 Teach-in

Model Name > KT5W-2N1116
Part No. > 1018045

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

Sensing distance [1]:	10 mm
Sensing distance tolerance:	± 3 mm
Light source [2]:	LED
Wave length:	470 nm, 525 nm, 640 nm
Light emission:	Long and short side of housing, exchangeable
Light spot size:	1.2 mm x 4.2 mm
Light spot direction [3]:	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] From front edge of lens [2] Average service life of 100,000 h at T_A = +25 °C [3] In relation to long side of housing

Mechanics/electronics

Ripple [1]:	≤ 5 Vpp
Power consumption [2]:	< 80 mA
Switching frequency [3]:	10 kHz
Response time [4]:	50 µs

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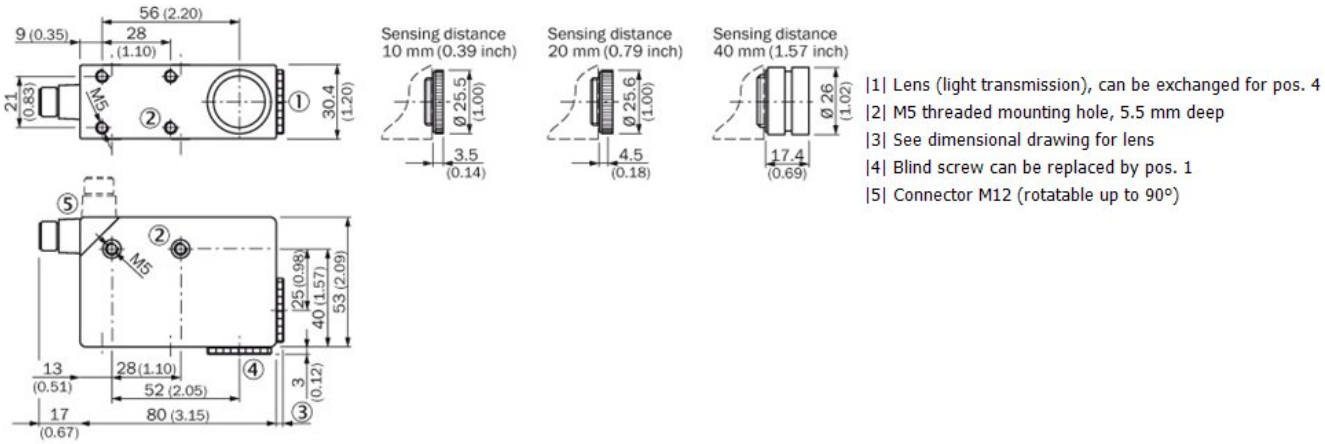
Output type:	NPN: HIGH = approx. VS / LOW ≤ 2 V
Switching mode:	NPN
Input, teach-in (ET):	NPN:, Run: U = 10 V ... < U_V, Teach: U < 2 V
Retention time (ET):	25 ms, non-volatile memory
Connection type:	Connector M12, 5-pin
Protection class [5]:	II
Circuit protection:	Output Q short-circuit protected, 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 [6]
Fieldbus interface:	-

[1] May not exceed or fall short of V_S tolerances [2] Without load [3] With light/dark ratio 1:1 [4] Signal transit time with resistive load [5] Reference voltage DC 50 V [6] 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



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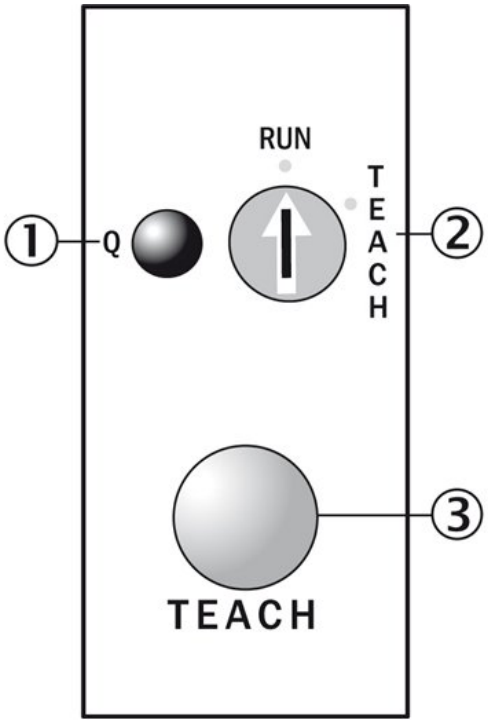
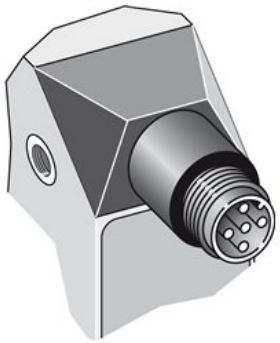
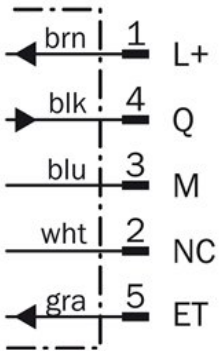
Adjustments



|1| Function signal indicator (yellow)
|2| Pre-selection switch
|3| Teach-in button

Connection type and diagram





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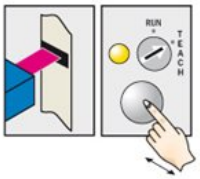
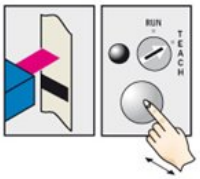
1. Position mark



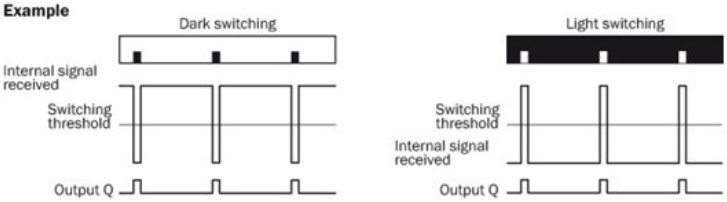
Turn rotary switch to "Teach" position. Press and hold teach-in button > 1 s.
Red emitted light and yellow LED flash.

2. Position background



Press and hold teach-in button > 1 s.
Yellow LED goes out.

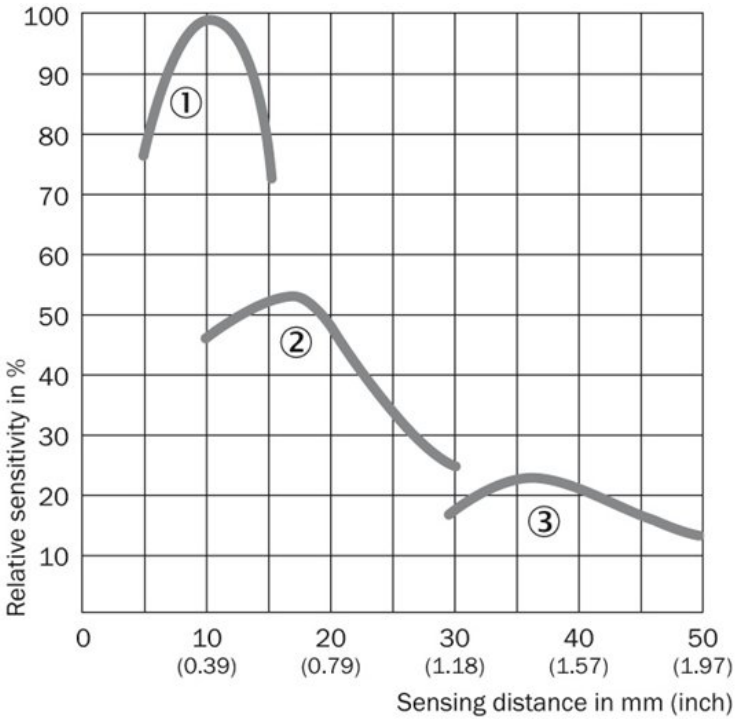
Example



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.
Teach-in can also be performed using an external control signal.

Sensing distance



|1| Sensing distance 10 mm
|2| Sensing distance 20 mm
|3| Sensing distance 40 mm

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