ONLINE DATA SHEET
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Contrast sensors
KT3, KT3

KT3W-P1116

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Model Name > KT3W-P1116
Part No. > 1019338

At a glance

- Very small housing
- 3-color RGB technology or white LED
- Simple teach-in (when machine is stopped or during operation)
- Integrated switching threshold adjustment for high-gloss objects
- Reliable operation for jittering materials
- Switching frequency of 10 kHz

Your benefits

- Compact design fits in applications with limited space
- 3-color RGB technology enables universal operation with an extremely wide range of weak contrast combinations
- White LED model detects several different marks
- Simple teach-in to optimally set transmission color, switching point and surface shine
- Very good contrast resolution for detecting print marks, even where the variation between the mark and the background is minimal
- Automatic adaptation for high-gloss objects ensures high throughput
- Reliable operation for jittering materials
- Accurate positioning in rapid production processes

The product is currently being phased out and can be ordered until December 31, 2015. Please contact your SICK sales representative for more information about a replacement product. For new projects please select a product out of the KTM family.

Features

Sensing distance:	12.5 mm
Sensing distance tolerance:	± 2 mm
Light source [1]:	LED
Wave length:	470 nm, 525 nm, 640 nm
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):	12 mm x 40 mm x 22 mm
Housing design (light emission):	Rectangular
Teach-in mode:	Static 2-point teach-in

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[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
Current consumption [2]:	< 35 mA
Switching frequency [3]:	10 kHz
Response time [4]:	50 µs
Output type:	PNP: HIGH = VS- ≤ 2 V/LOW approx. 0 V
Switching mode:	PNP
Input, teach-in (ET):	PNP:, Run: U < 2 V, Teach: U = 10 V ... < U_V
Retention time (ET):	25 ms, non-volatile memory
Connection type:	Connector M12, 4-pin
Protection class [5]:	II
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Enclosure rating:	IP 67, IP 67
Weight:	11 g
Housing material:	ABS, Plastic
Output current Imax.:	100 mA
Supply voltage:	12 V DC ... 24 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: DC 12 V (-10 %) ... DC 24 V (+20 %). Operation in short-circuit protected network max. 8 A

Ambient data

Shock load:	According to IEC 60068
UL File No.:	NRKH.E181493 & NRKH7.E181493
Ambient operating temperature:	-10 °C ... +55 °C
Ambient storage temperature:	-20 °C ... +75 °C

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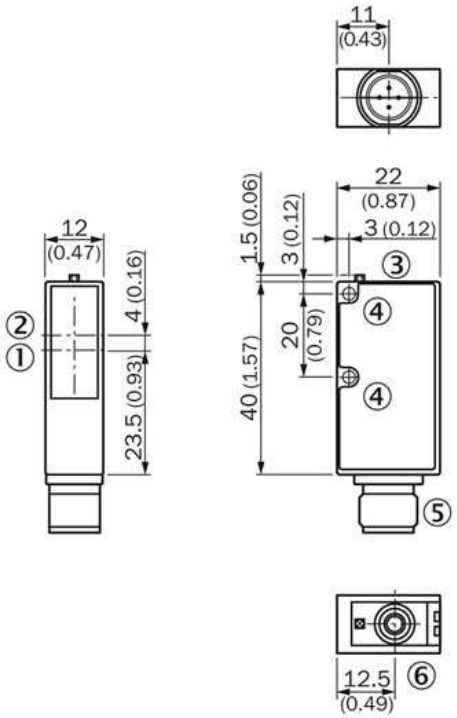
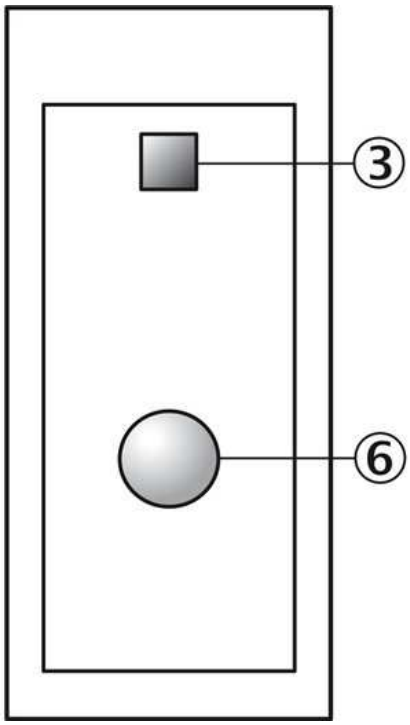
Dimensional drawing



|1| Center of optical axis, sender
|2| Center of optical axis, receiver
|3| LED signal strength indicator
|4| Mounting hole, Ø 3 mm
|5| Connector M12
|6| Teach-in button

Adjustments



|3| LED signal strength indicator
|6| Teach-in button

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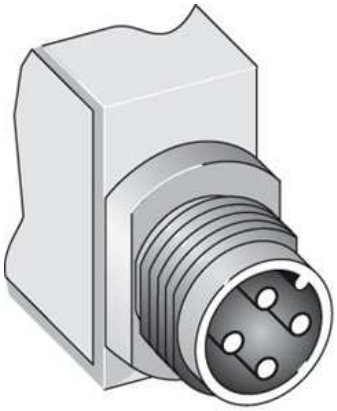
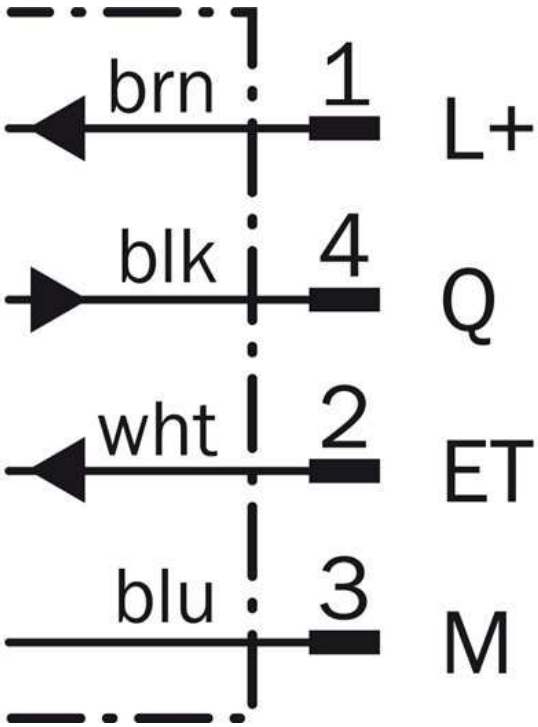
Connection type



Connection diagram



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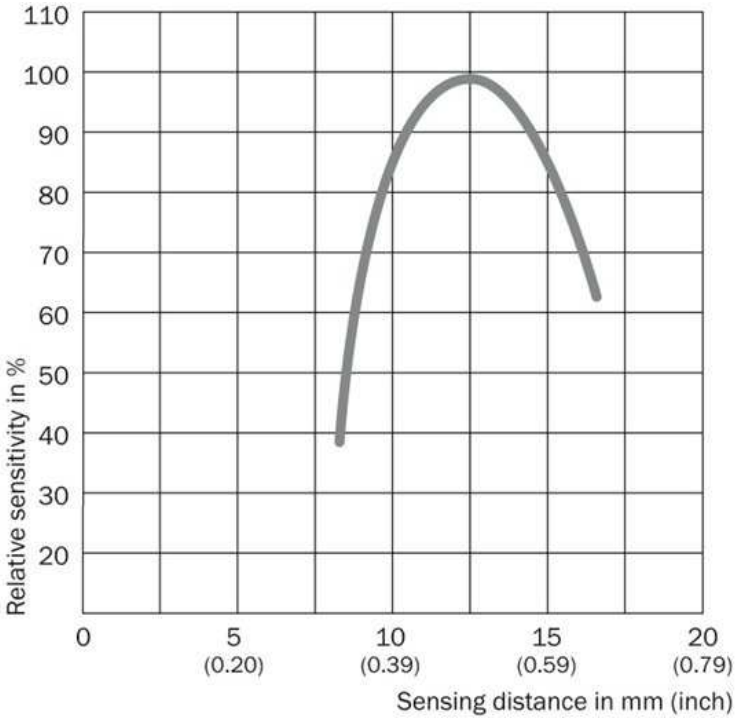
Sensing distance



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