



Contrast sensors
KT5, KT5-2 Display

KT5W-2N1316D



Model Name > [KT5W-2N1316D](#)
Part No. > [1026581](#)



At a glance

- Intuitive 10-segment bar graph display indicates detection status
- Static 2-point teach-in of mark and background via the control cable
- Maximum detection reliability due to 3-color RGB LED technology
- Switching frequency of 10 kHz
- Automatic gloss adjustment for highly reflective materials
- A range of sensing distances and light spots for numerous applications
- M12 plug can be rotated 90°

Your benefits

- All print marks and color combinations are detected, ensuring high throughput
- Reliable operation, even with high-gloss materials
- Detects difficult marks, such as jittering and shiny materials
- High positioning accuracy improves packaging quality
- Application-specific teach-in processes reduce setup times
- Various sensing distances, light spot directions and light emissions make individual configuration and simple integration into the production system possible



Features

Dimensions (L x W x H):	80 mm x 30.4 mm x 53 mm
Sensing distance ¹⁾ :	40 mm
Sensing distance tolerance:	± 3 mm
Light source ^{2), 3)} :	LED red, green, blue
Light emission:	Long and short side of housing, exchangeable
Light spot size:	1.1 mm x 4.2 mm
Light spot direction ⁴⁾ :	Vertical
Adjustment:	Static 2-point teach-in with manual fine adjustment

¹⁾ From front edge of lens ²⁾ Average service life of 100,000 h at T_A = +25 °C ³⁾ Wave length: 470 nm, 525 nm, 640 nm ⁴⁾ In relation to long side of housing

Mechanics/electronics

Supply voltage V _s ¹⁾ :	DC 10 V ... 30 V
Ripple ²⁾ :	≤ 5 Vpp
Power consumption ³⁾ :	< 130 mA
Switching frequency ⁴⁾ :	10 kHz
Response time ⁵⁾ :	50 µs
Output type:	NPN: HIGH = approx. VS / LOW ≤ 2 V

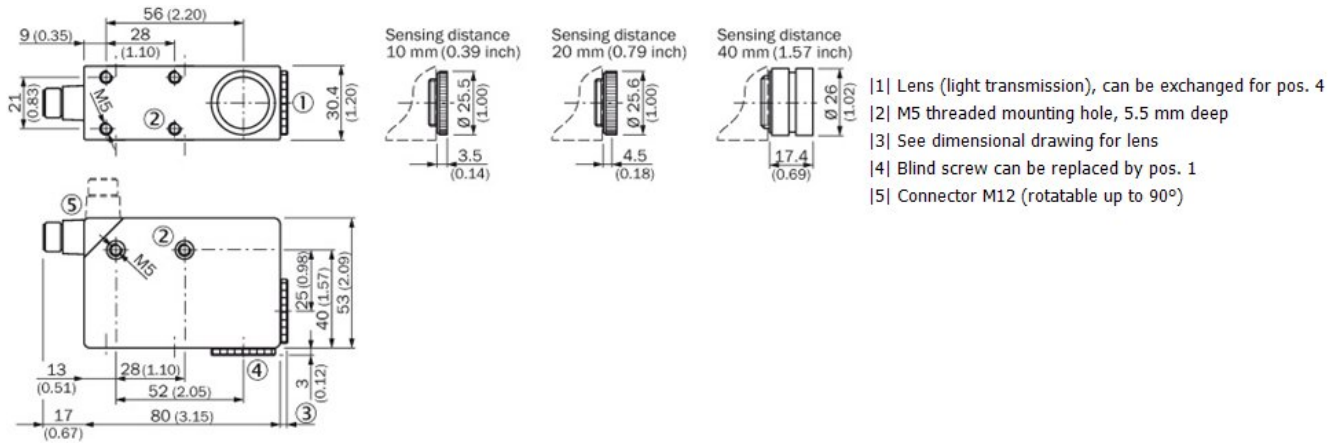
Switching mode:	NPN
Input, teach-in (ET):	NPN: Teach: $U < 2\text{ V}$ Run: $U = 10\text{ V} \dots < U_V$
Retention time (ET):	25 ms, non-volatile memory
Connection type:	Connector M12, 5-pin
Protection class ⁶⁾ :	II
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Enclosure rating:	IP 67
Weight:	Ca. 400 g
Housing material:	Zinc diecast
Output current I _{max} .:	100 mA ⁷⁾

1) Limit values: operation in short-circuit protected network max. 8 A 2) May not exceed or fall short of V_S tolerances 3) Without load 4) With light/dark ratio 1:1 5)
Signal transit time with resistive load ⁶⁾ Reference voltage DC 50 V 7) Short-circuit protected

Ambient data

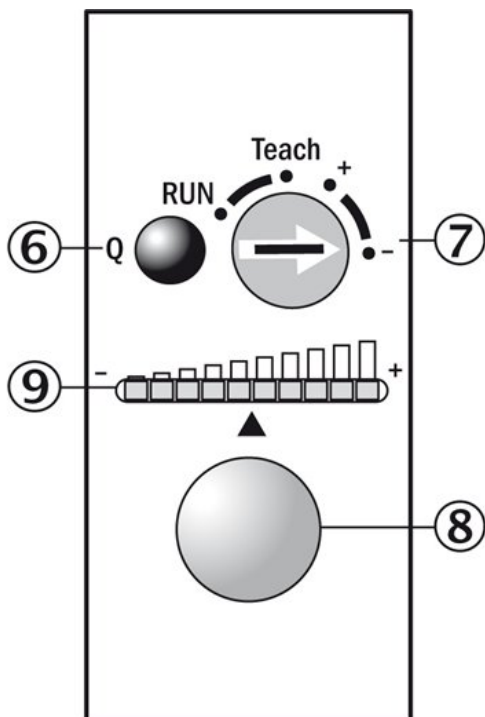
Ambient temperature:	Operation: -10 ... 55 °C Storage: -25 ... 75 °C
Shock load:	According to IEC 60068

Dimensional drawing



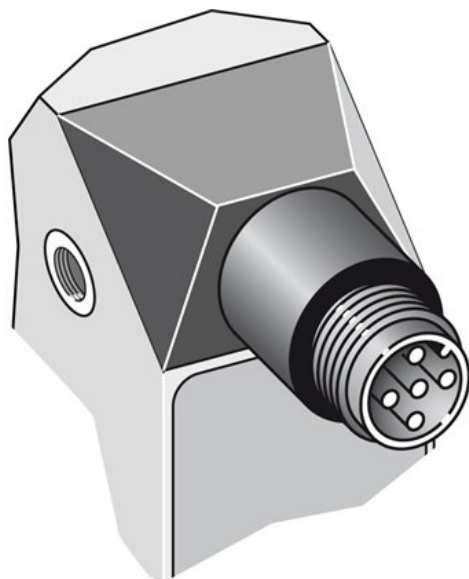
All dimensions in mm (inch)

Adjustments

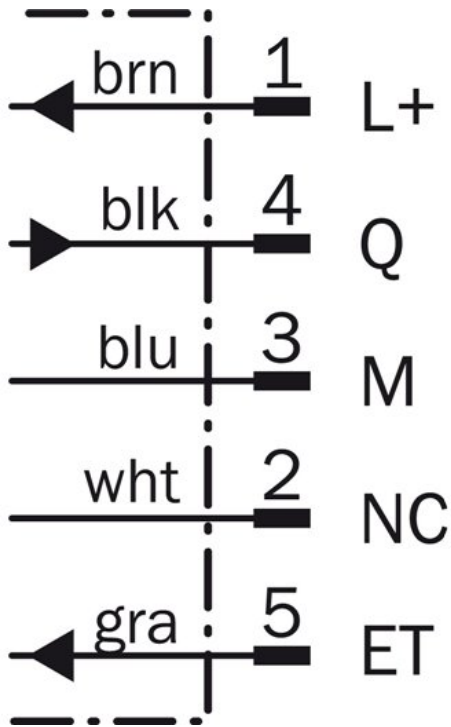


- |6| Function signal indicator (yellow)
- |7| Pre-selection switch
- |8| Teach-in button
- |9| Bar graph (green)

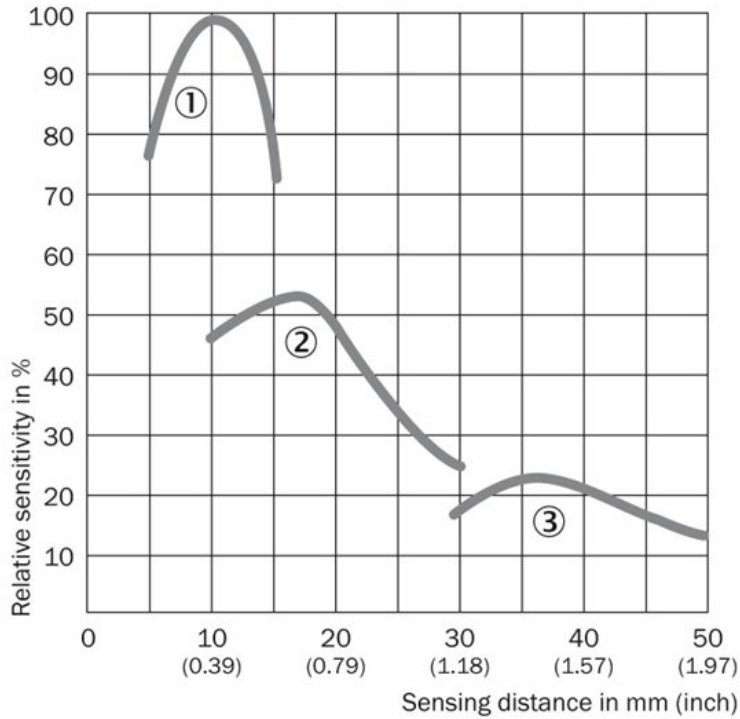
Connection type



Connection diagram



Sensing distance



- [1] Sensing distance 10 mm
- [2] Sensing distance 20 mm
- [3] Sensing distance 40 mm

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