



Contrast sensors KT5, KT5-2 Teach-in

KT5W-2N1213



Model Name > [KT5W-2N1213](#)
Part No. > [1016716](#)



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

Dimensions (L x W x H):	80 mm x 30.4 mm x 53 mm
Sensing distance ¹⁾ :	20 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:	1.5 mm x 5.5 mm
Light spot direction ⁴⁾ :	Vertical
Adjustment:	Dynamic teach-in

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⁾ :	< 80 mA
Switching frequency ⁴⁾ :	10 kHz
Response time ⁵⁾ :	50 µs
Output type:	NPN: HIGH = approx. V _S / LOW ≤ 2 V
Switching mode:	NPN

Input, teach-in (ET):

Input, light/dark (L/D):

Retention time (ET):

Connection type:

Protection class ⁶⁾:

Circuit protection:

Enclosure rating:

Weight:

Housing material:

Output current I_{max}..:

NPN:

Teach: $U < 2 \text{ V}$

Run: $U = 10 \text{ V} \dots < U_V$

NPN:

light: $U = U$

dark: $U = 0 \text{ V}$

25 ms, non-volatile memory

Connector M12, 5-pin

II

Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected

IP 67

Ca. 400 g

Zinc diecast

100 mA

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

Ambient data

Ambient temperature:

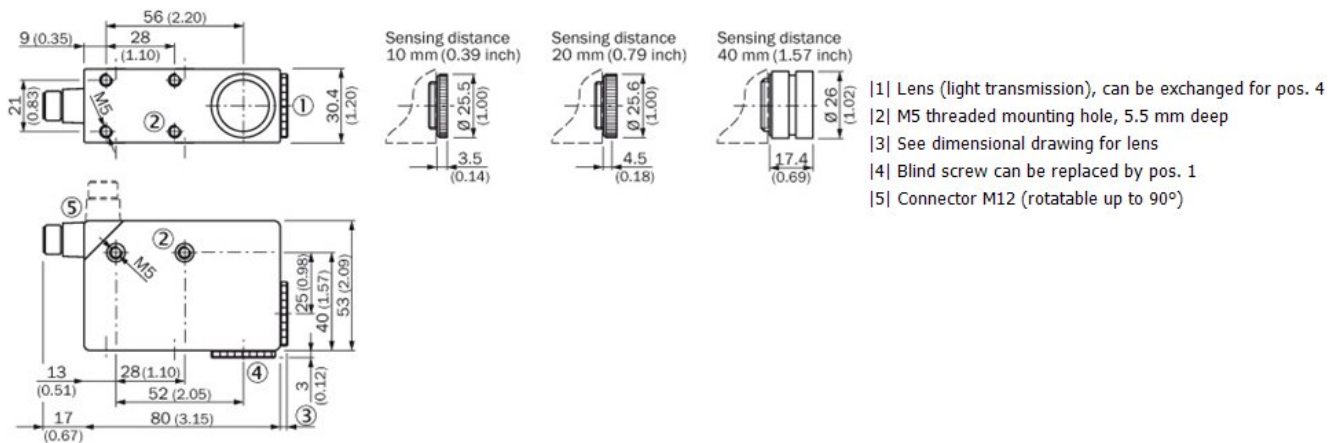
Operation: $-10 \dots 55 \text{ }^\circ\text{C}$

Storage: $-25 \dots 75 \text{ }^\circ\text{C}$

Shock load:

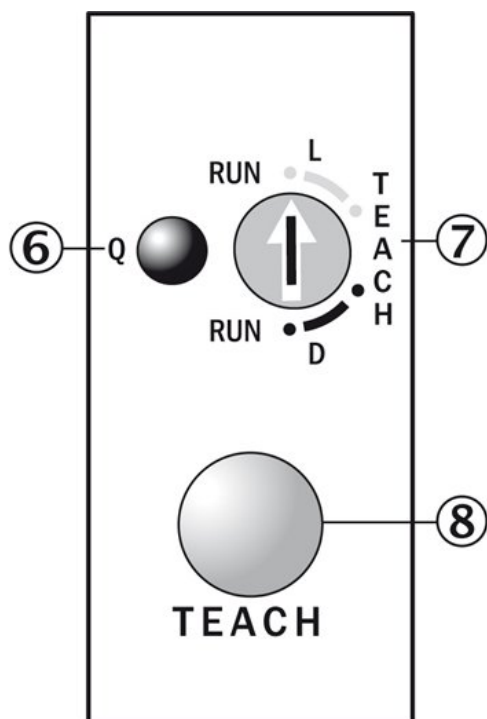
According to IEC 60068

Dimensional drawing



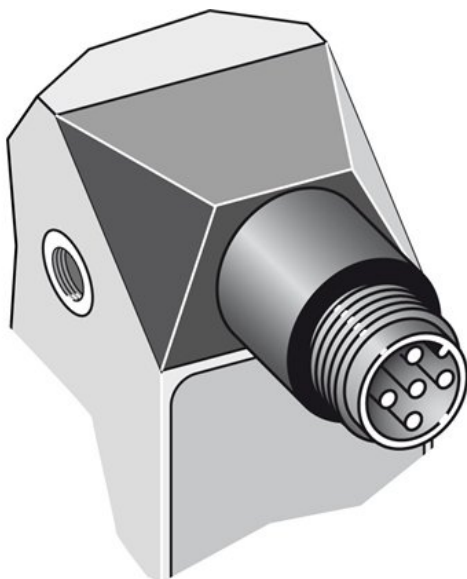
All dimensions in mm (inch)

Adjustments

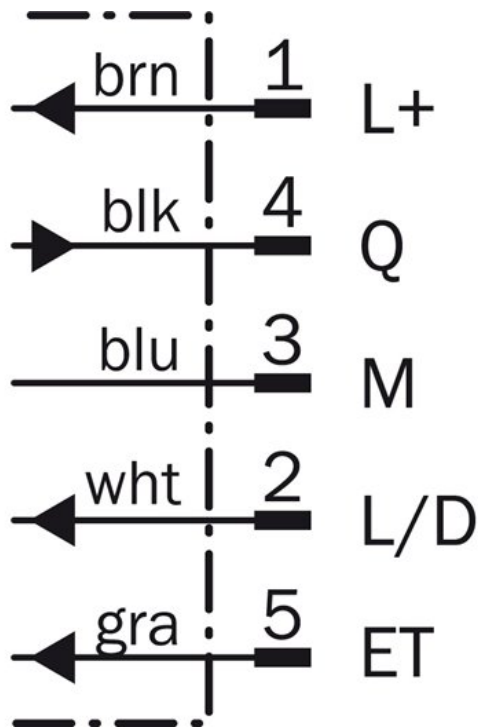


- |6| Function signal indicator (yellow)
- |7| Pre-selection switch
- |8| Teach-in button

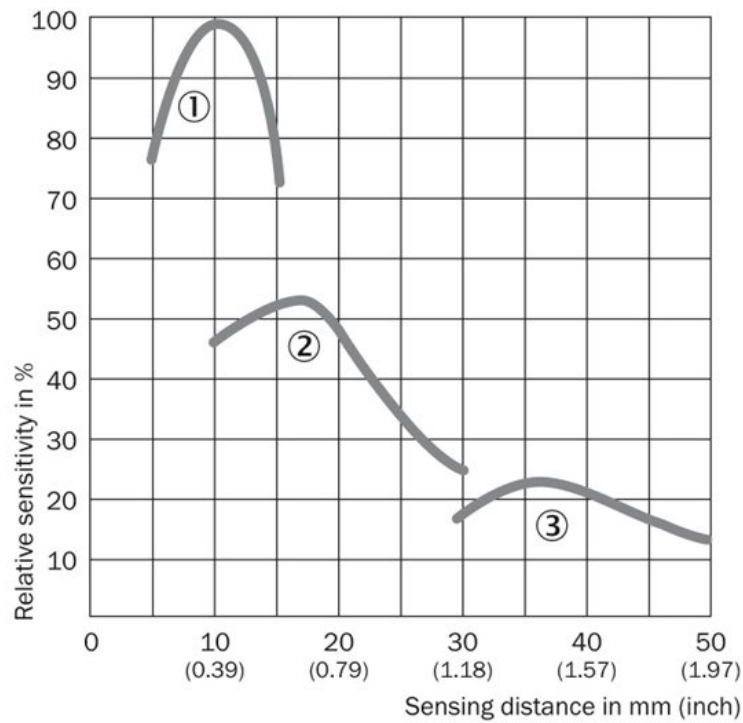
Connection type



Connection diagram



Sensing distance



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

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