



Contrast sensors
KT5, KT5-2 Teach-in

KT5W-2P1156S41



Model Name > [KT5W-2P1156S41](#)
Part No. > [1053258](#)



At a glance

- Tough, metal housing
- Teach-in of switching threshold via control panel or control cable
- Maximum detection reliability due to 3-color RGB LED technology
- Switching frequency of 10 kHz
- Analog output 0 V ... 5 V
- Transmission color adjustable
- 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
- Flexible start up: light source can be adjusted via external teach or manually
- Contrast mark or background receiving signal is displayed via the analog output



Features

Dimensions (L x W x H):	80 mm x 30.4 mm x 53 mm
Sensing distance ¹⁾ :	10 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:	1.2 mm x 4.2 mm
Light spot direction ⁴⁾ :	Vertical
Adjustment:	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⁾ Wave length: 470 nm, 525 nm, 640 nm ⁴⁾ In relation to long side of housing

Mechanics/electronics

Supply voltage V _s ¹⁾ :	DC 24 V, ± 20 %
Ripple ²⁾ :	≤ 5 V _{pp}
Power consumption ³⁾ :	< 80 mA
Switching frequency Q:	10 kHz
	4)
Response time Q:	50 μs ⁵⁾
Output type:	PNP: HIGH = V _S - ≤ 2 V / LOW approx. 0 V

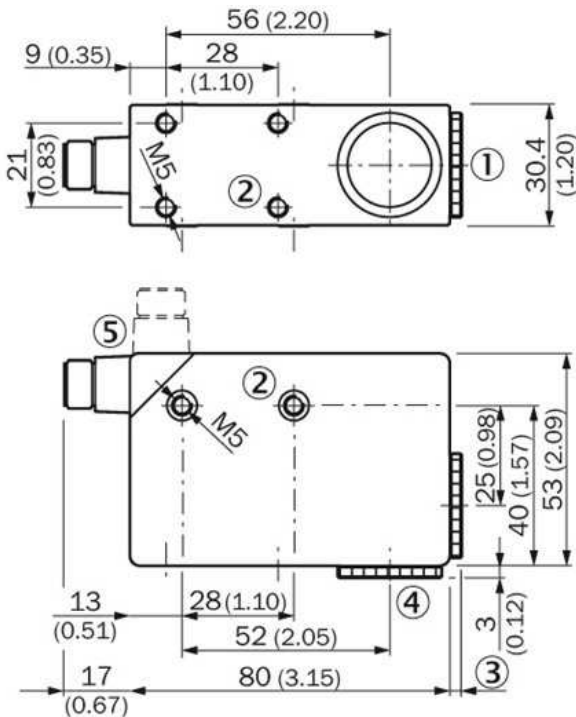
Switching mode:	PNP
Analog output QA:	0 V ... 5 V
Input, teach-in (ET):	PNP:; Run: $U < 2 V$, Teach: $U = 10 V \dots < U_V$
Retention time (ET):	25 ms, non-volatile memory
Protection class ⁶⁾ :	II
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Enclosure rating:	IP 67
Weight:	Ca. 400 g
Housing material:	Zinc diecast
Output current I _{max.} :	100 mA

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 32 V

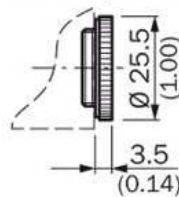
Ambient data

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

Dimensional drawing

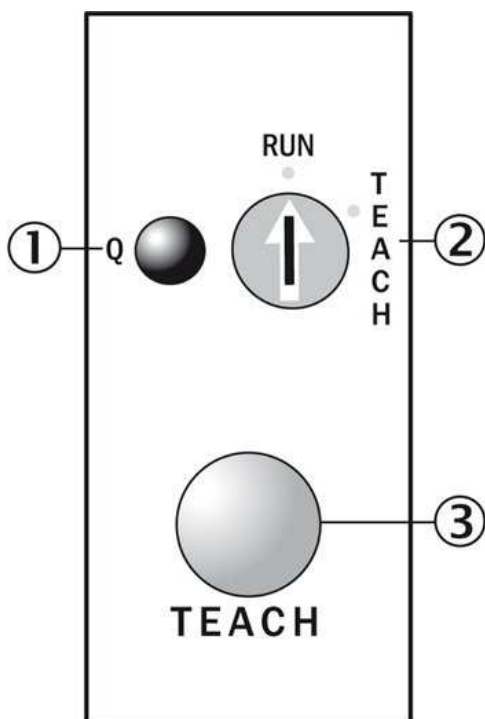


Sensing distance
10 mm (0.39 inch)



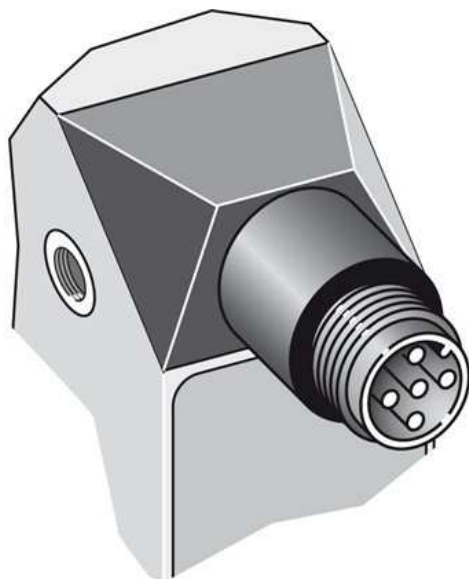
- [1] Lens (light transmission), can be exchanged for pos. 4
- [2] M5 threaded mounting hole, 5.5 mm deep
- [3] See dimensional drawing for lens
- [4] Blind screw can be replaced by pos. 1
- [5] Connector M12 (rotatable up to 90°)

Adjustments

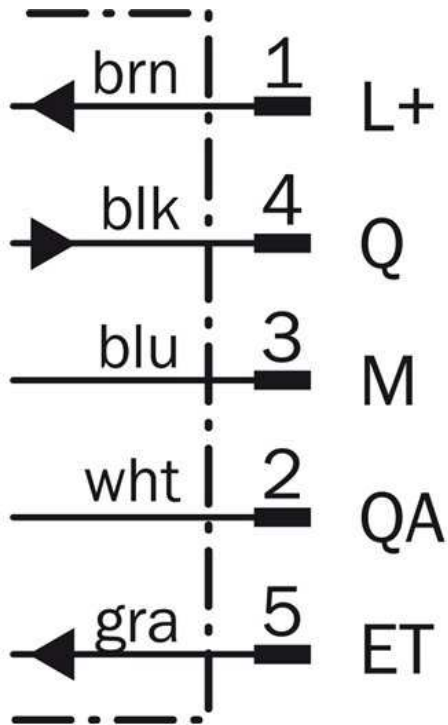


- |6| Function signal indicator (yellow)
- |7| Pre-selection switch
- |8| Teach-in button

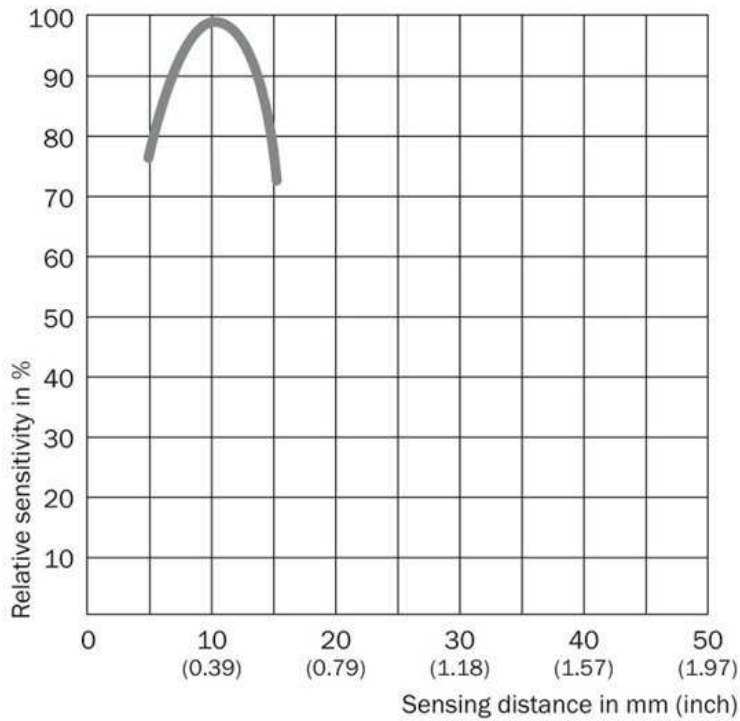
Connection type



Connection diagram



Characteristic curve



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