



Contrast sensors  
KT5, KTL5-2 Fiber Optic

KTL5W-2P16



**Model Name** > [KTL5W-2P16](#)  
**Part No.** > [1026006](#)



*Illustration may differ*

**At a glance**

- Various heat-resistant fiber-optic cable models are available
- Various teach-in methods, including potentiometer
- Analog output
- Switching frequency of 10 kHz

**Your benefits**

- Reliable contrast detection
- Flexible integration into machines due to minimal space requirements and various fiber-optic cable versions
- Durable, glass fiber-optic cables
- Reliable operation in adverse environmental conditions, such as extreme temperatures and moisture
- Resistant to aggressive cleaning agents
- Compact design fits in applications with limited space



**Features**

Dimensions (L x W x H):	80 mm x 30.4 mm x 53 mm
Sensing distance:	Dependent on the fiber-optic cable
Light source <sup>1)</sup> , <sup>2)</sup> :	LED red, green, blue
Light spot size:	Dependent on the fiber-optic cable
Adjustment:	Static 2-point teach-in
Output function:	Light/dark switching

<sup>1)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C <sup>2)</sup> Wave length: 470 nm, 525 nm, 640 nm

**Mechanics/electronics**

Supply voltage V <sub>s</sub> <sup>1)</sup> :	DC 10 V ... 30 V
Ripple <sup>2)</sup> :	≤ 5 Vpp
Power consumption <sup>3)</sup> :	< 80 mA
Switching frequency <sup>4)</sup> :	10 kHz
Response time <sup>5)</sup> :	50 μs
Output type:	PNP: HIGH = V <sub>S</sub> - ≤ 2 V / LOW approx. 0 V
Switching mode:	PNP
Input, teach-in (ET):	PNP: Teach: U = 10 V ... < U <sub>V</sub> Run: U < 2 V

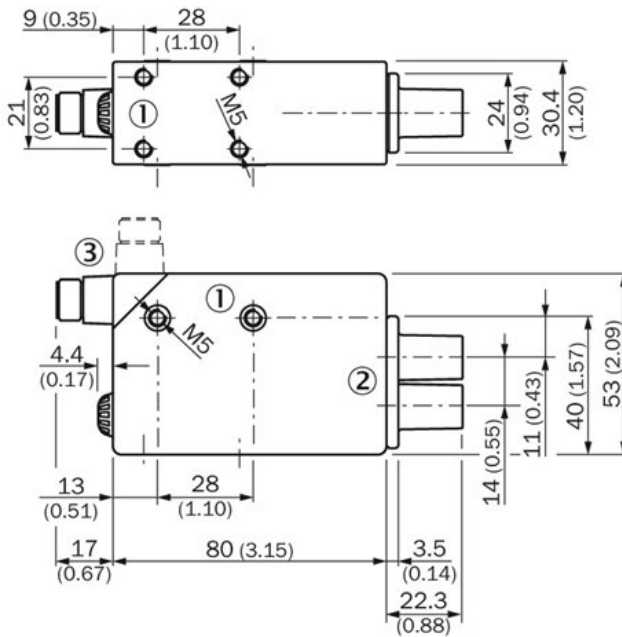
Input, light/dark (L/D):	Dark: $U > 10 \text{ V} \dots < U_V$ PNP: light: $U = 0 \text{ V}$
Retention time (ET):	25 ms, non-volatile memory
Connection type:	Connector M12, 5-pin
Protection class <sup>6)</sup> :	II
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Enclosure rating:	IP 67
Weight:	Ca. 400 g
Housing material:	Zinc diecast
Output current I <sub>max.</sub> :	100 mA

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

### Ambient data

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

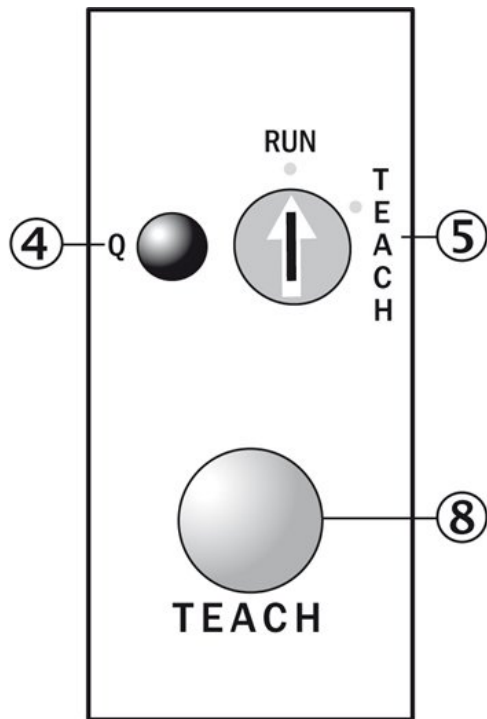
### Dimensional drawing



- [1] M5 threaded mounting hole, 5.5 mm deep
- [2] Fiber-optic adapter (M12 x 1 internal thread)
- [3] Connector M12 (rotatable up to 90°)

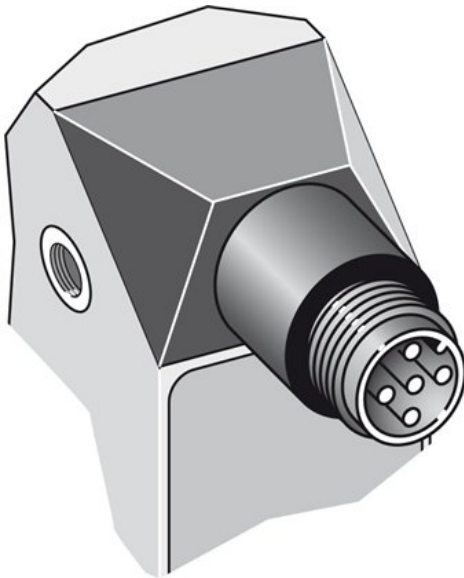
All dimensions in mm (inch)

## Adjustments

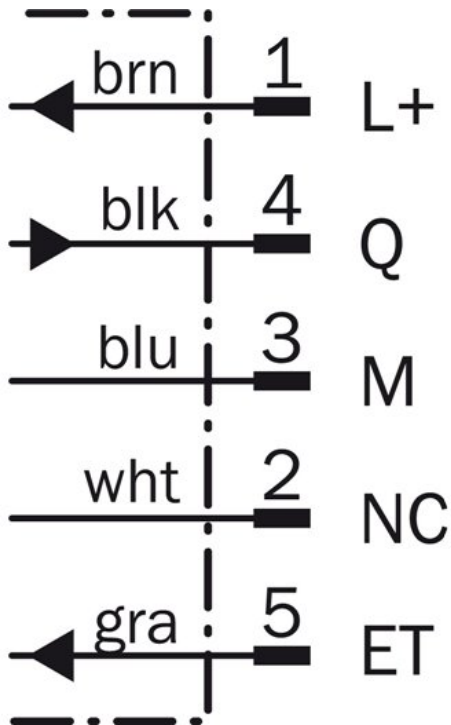


- |4| Function signal indicator (yellow)
- |5| Pre-selection switch
- |8| Teach-in button

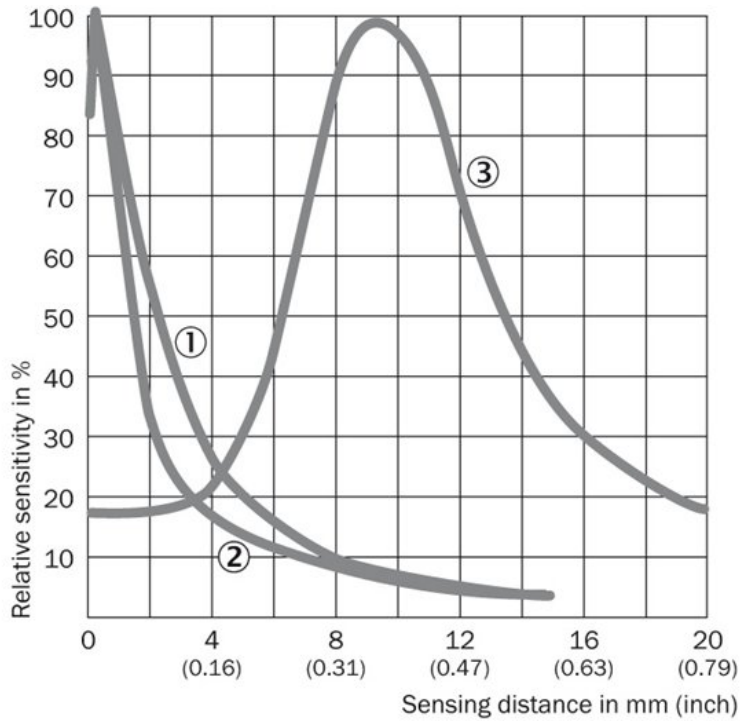
## Connection type



## Connection diagram



## Sensing distance



- [1] Fiber-optic cable LBST 32900
- [2] Fiber-optic cable LBSR 32900
- [3] Fiber-optic cable OCSL

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