



Contrast sensors KT5, KTL5-2 Fiber Optic

KTL5W-2P23



Model Name > [KTL5W-2P23](#)
Part No. > [1019551](#)



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 ¹⁾ , ²⁾ :	LED red, green, blue
Light spot size:	Dependent on the fiber-optic cable
Adjustment:	Dynamic teach-in
Output function:	Light/dark switching

¹⁾ Average service life of 100,000 h at $T_A = +25\text{ °C}$ ²⁾ Wave length: 470 nm, 525 nm, 640 nm

Mechanics/electronics

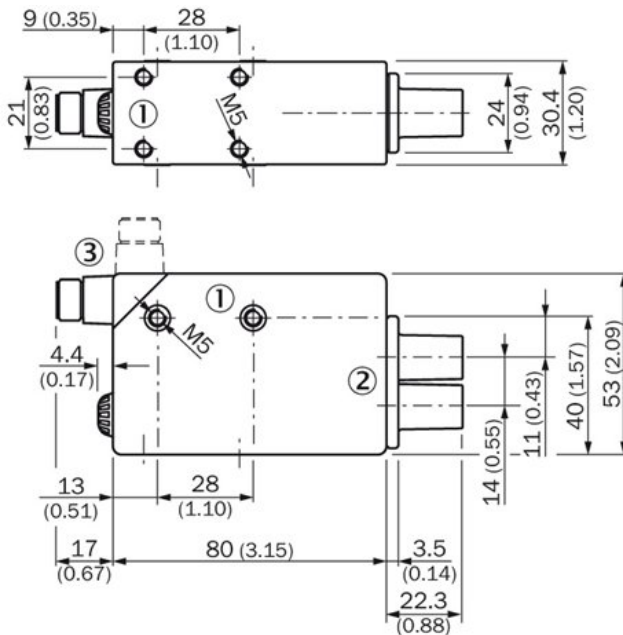
Supply voltage V_s ¹⁾ :	DC 10 V ... 30 V
Ripple ²⁾ :	$\leq 5\text{ Vpp}$
Power consumption ³⁾ :	$< 80\text{ mA}$
Switching frequency ⁴⁾ :	10 kHz
Response time ⁵⁾ :	50 μs
Output type:	PNP: HIGH = $V_s - \leq 2\text{ V}$ / LOW approx. 0 V
Switching mode:	PNP
Input, teach-in (ET):	PNP: Teach: $U = 10\text{ V} \dots < U_V$ Run: $U < 2\text{ V}$

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
Time delay:	20 ms
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
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 ... 55 °C Storage: -25 ... 75 °C
Shock load:	According to IEC 60068

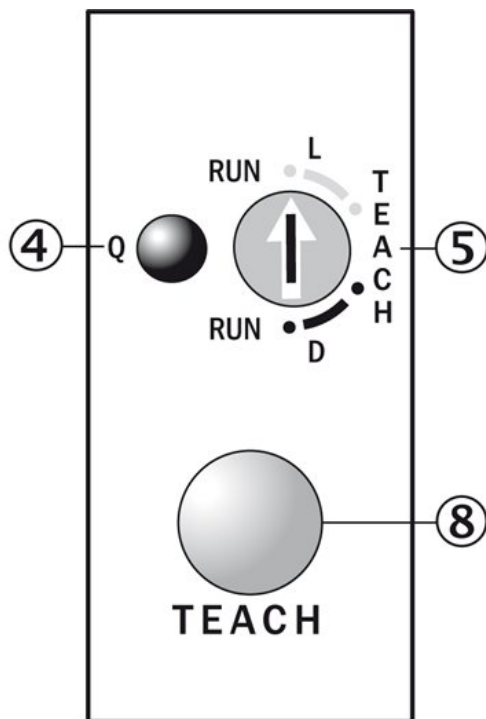
Dimensional drawing



- [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°)

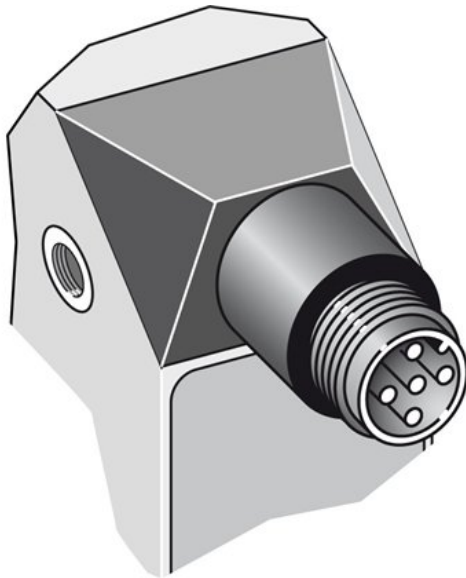
All dimensions in mm (inch)

Adjustments

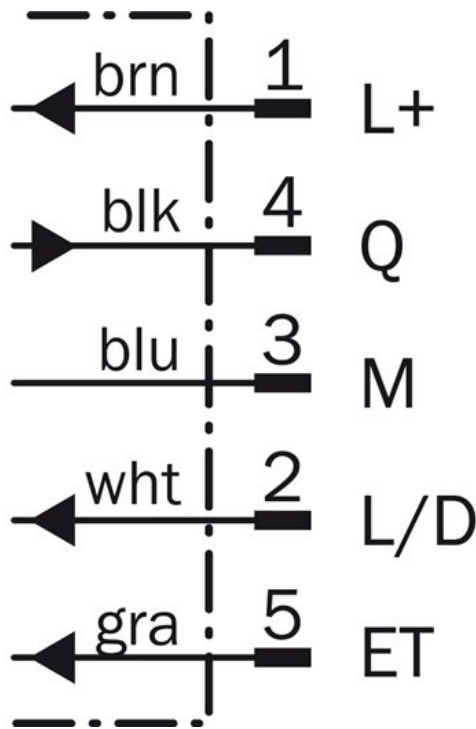


- |4| Function signal indicator (yellow)
- |5| Pre-selection switch
- |8| Teach-in button

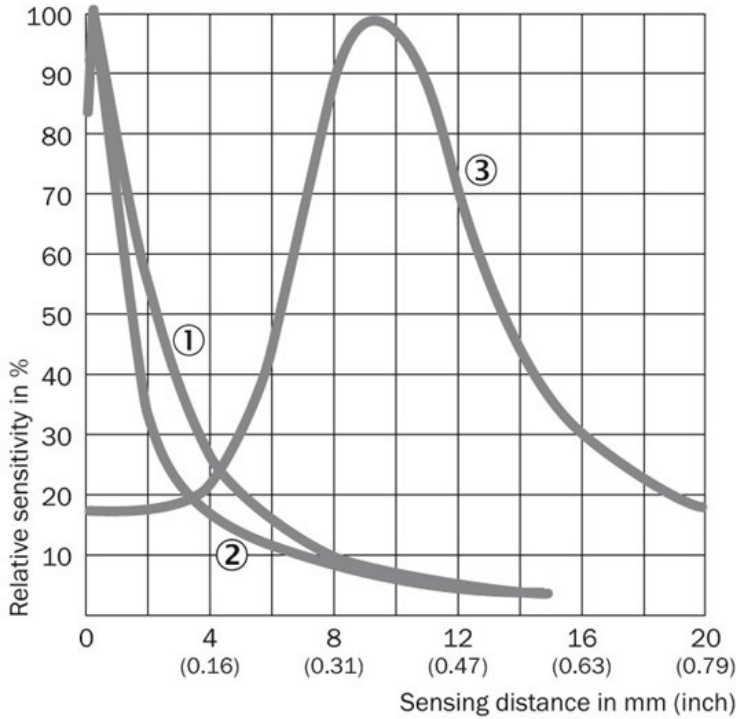
Connection type



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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