



Photoelectric sensors
Z1, Photoelectric proximity sensor, energetic

ZT1-P4221



Model Name > [ZT1-P4221](#)
Part No. > [1045583](#)



Illustration may differ

At a glance

- Sensing distances of 50 mm, 60 mm, 100 mm or 155 mm, which are non-adjustable
- Infrared LED emitter
- Compact, transparent housing with 360° status indication
- M18 front mount and 24-25.4 mm slotted side through holes compatible with competitor devices

Your benefits

- Low-cost sensor for standard applications with small sensing distances
- Suitable for applications where the light spot needs to be invisible
- Clear housing provides 360° status indication, which simplifies troubleshooting
- Simple and unique mounting options lower installation costs
- Small size fits applications with limited space
- Compatibility with competitor products for easy integration into existing systems



Features

Sensor/detection principle:	Photoelectric proximity sensor, energetic
Dimensions (W x H x D):	13.6 mm x 34.8 mm x 23 mm
Housing design (light emission):	Hybrid
Thread diameter (housing):	M18 x 1
Sensing range max.:	1 mm ... 100 mm ¹⁾
Sensing range:	1 mm ... 100 mm
Type of light:	Infrared light
Light source:	LED ²⁾
Light spot (distance):	20 mm (100 mm)
Wave length:	880 nm

¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life 100,000 h at Ta = +25 °C

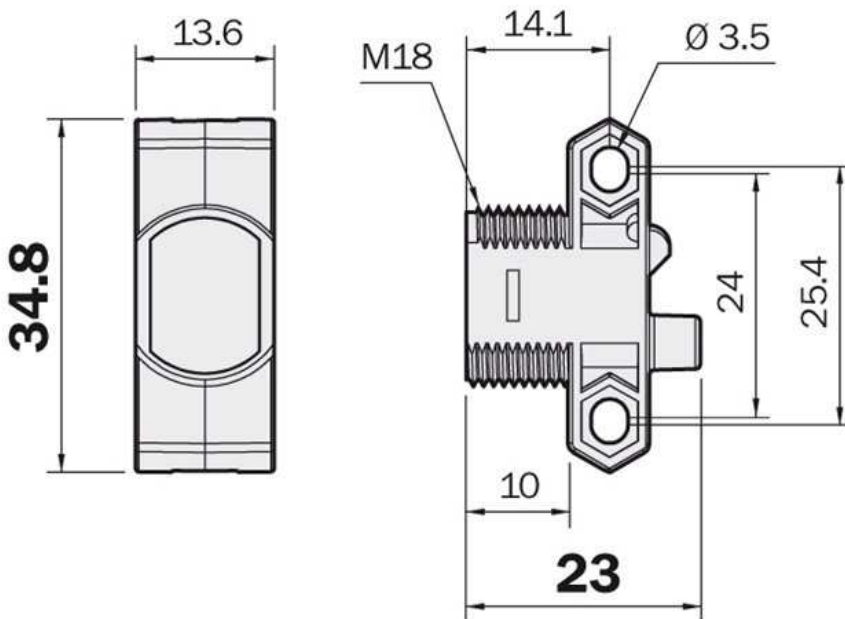
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	< 20 mA ³⁾
Output type:	PNP, Light-switching
Output current I _{max.} :	50 mA
Switching frequency:	200 Hz ⁴⁾

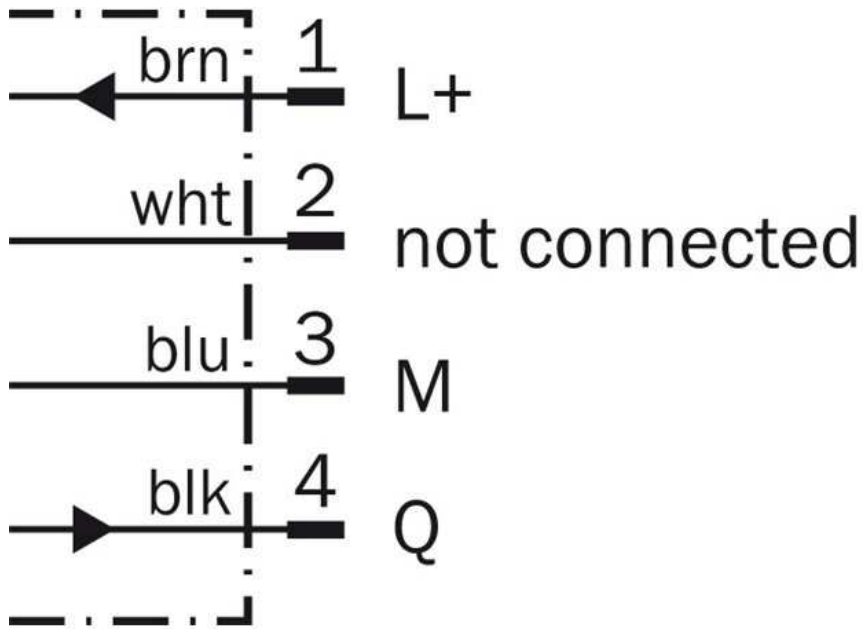
Connection type:	Cable with plug, M12, 4-pin, 150 mm ⁵⁾
Circuit protection:	A, D ^{6) 7)}
Protection class:	III ⁸⁾
Housing material:	Glass fiber reinforced ABS plastic
Enclosure rating:	IP 67
Items supplied:	Mounting nut M18
Ambient operating temperature:	-25 °C ... 50 °C
Ambient storage temperature:	-40 °C ... 70 °C

1) Limit values 2) May not exceed or fall short of V_S 3) Without load 4) With light/dark ratio 1:1 5) Do not bend below 0 °C 6) A = V_S connections reverse-polarity protected 7) D = outputs overcurrent and short-circuit protected 8) Reference voltage 50 V DC

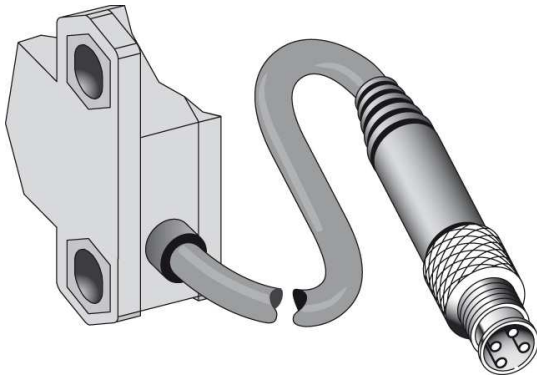
Dimensional drawing



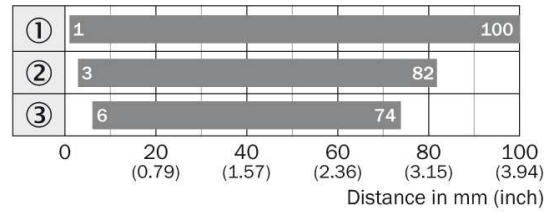
Connection diagram: receiver



Connection type



Sensing range diagram



■ Sensing range ■ Sensing range typ. max.

- ① Sensing range on white, 90 % remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on black, 6 % remission

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