

ZLD18-FHZAЕ2Р51

Z18 Simple Sense

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
ZLD18-FHZAЕ2Р51	1127068

Included in delivery: BEF-MU-M18*1 (2)Other models and accessories → www.sick.com/Z18_Simple_Sense

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	With minimum distance to reflector (dual lens system)
Dimensions (W x H x D)	14.4 mm x 18 mm x 23 mm
Housing design (light emission)	Hybrid
Mounting system type	M18, head/dovetail mounting
Housing color	Transparent
Sensing range max.	0 m ... 7.8 m ¹⁾
Sensing range	0 m ... 6.8 m ¹⁾
Type of light	Visible red light
Light source	PinPoint LED
Light spot size (distance)	Ø 25 mm (1,000 mm)
Wave length	625 nm
Special features	Special mounting: pre-mounted on customer-specific sensor bracket

¹⁾ Reflector PL80A.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC
Ripple	< 10 %
Current consumption	≤ 15 mA ¹⁾
Switching output	PNP
Switching mode	Light switching
Switching output detail	

¹⁾ Without load.²⁾ Open Collector.³⁾ Signal transit time with resistive load.⁴⁾ With light/dark ratio 1:1.⁵⁾ A = V_S connections reverse-polarity protected.⁶⁾ B = inputs and output reverse-polarity protected.⁷⁾ D = outputs overcurrent and short-circuit protected.

	Switching output Q1	PNP, Light switching ²⁾
	Switching output Q2	Not connected
Output current I_{max.}		100 mA
Response time		≤ 500 µs ³⁾
Switching frequency		1,000 kHz ⁴⁾
Connection type		Cable with connector RJ11, 6-pin, 1 m
Cable material		Plastic, PVC
Conductor cross section		0.13 mm ²
Circuit protection		A ⁵⁾ B ⁶⁾ D ⁷⁾
Protection class		III
Weight		3.6 g
Polarizing filter		✓
Housing material		Plastic, ABS
Optics material		Plastic, PMMA
Enclosure rating		IP67
Ambient operating temperature		-40 °C ... +55 °C
Ambient temperature, storage		-40 °C ... +70 °C
UL File No.		E189383

¹⁾ Without load.

²⁾ Open Collector.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ B = inputs and output reverse-polarity protected.

⁷⁾ D = outputs overcurrent and short-circuit protected.

Connection type/pinouts

Connection type	Cable with connector RJ11, 6-pin, 1 m	
Connection type Detail	Cable material	Plastic
	Conductor cross section	0.13 mm ²
Pinouts	BN 2	+ (L+)
	BK 3	Q ₁
	WH 4	Not connected
	BU 5	- (M)

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓

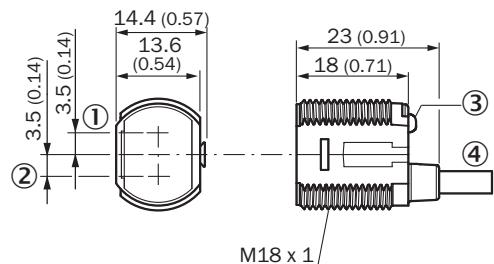
China RoHS



Classifications

ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

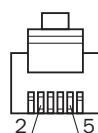
Dimensional drawing



Dimensions in mm (inch)

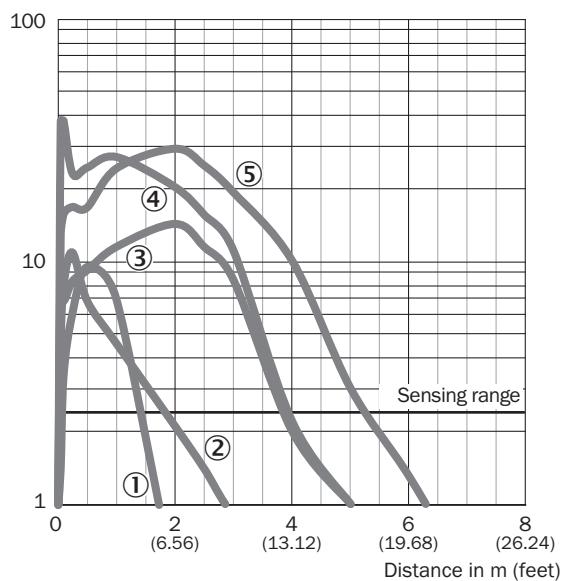
- ① optical axis, sender
- ② optical axis, receiver
- ③ LED status indicator
- ④ Connection

Pinouts, see table Technical data: Connection type/pinouts



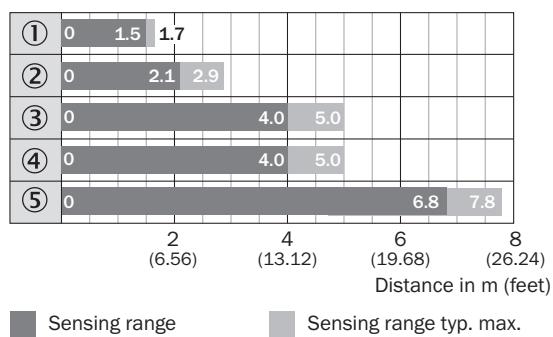
Characteristic curve

Function reserve



- ① Reflector PL23 FT
- ② Reflector PL20A
- ③ Reflector P250
- ④ Reflector PL40A
- ⑤ Reflector PL80A

Sensing range diagram



- Sensing range
- Sensing range typ. max.

- ① Reflector PL23 FT
- ② Reflector PL20A
- ③ Reflector P250
- ④ Reflector PL40A
- ⑤ Reflector PL80A

Recommended accessories

Other models and accessories → www.sick.com/Z18_Simple_Sense

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> Description: Universal mounting bracket for reflectors Dimensions (W x H x L): 85 mm x 90 mm x 35 mm Material: Steel Details: Steel, zinc coated Suitable for: C110A, P250, PL20, PL30A, PL40A, PL80A 	BEF-WN-REFX	2064574
	<ul style="list-style-type: none"> Description: Mounting bracket for M18 sensors Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware Suitable for: GR18, V180-2, V18, W15, Z1, Z2 	BEF-WN-M18	5308446
reflectors and optics			
	<ul style="list-style-type: none"> Description: Rectangular, screw connection Dimensions: 51 mm x 61 mm Ambient operating temperature: -30 °C ... +65 °C 	P250	5304812

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

WORLDWIDE PRESENCE:

Contacts and other locations www.sick.com