GL-R18L

KEYENCE CORPORATION · GL-R series

FEATURES

Robust Type 4 safety light curtain, body protection type, 18 beam axes, 720 mm total length.

Hardware

Safety light curtain:
Transmitter + Receiver set (Type 4 ESPE / AOPD)

Synchronization:
Optical synchronization or Wire synchronization (determined by wiring)

Light source:
Infrared LED (870 nm)

Effective aperture angle:
Max. ±2.5° (when operating distance is 3 m or more)

Detection mode:
Turns ON when no interruption is present in the detection zone

Interference prevention:
Up to 2 GL-R systems (Channel A/B switch for optical; automatic for wire)

Protection type:
Body protection

Detection capability:
ø45 mm

Beam axes:
18

Beam axis spacing:
40 mm

Detection height:
680 mm

Total length:
720 mm

Detecting distance:
0.2 to 15 m

Response time (OSSD, channel 0, ON→OFF):
max. 6.6 ms

Communication

Built-in ports:
None

Protocols:
None

Communication expansion:
None

Electrical

Supply voltage:
24 VDC ±20%, ripple (P-P) 10% or less, Class 2

Control output (OSSD):
2 transistor outputs (PNP or NPN determined by cable type), max. load 500 mA

Residual voltage (ON):
max. 2.5 V (5 m cable); OFF-state voltage: max. 2.0 V (5 m cable)

Leakage current:
max. 200 µA; max. capacitive load: 2.2 µF; load wiring resistance: max. 2.5 Ω

Supplemental output (non-safety):
AUX / error / muting-lamp transistor output (PNP/NPN by cable); load max. 50 mA

Safety standards:
IEC61496-1/-2 (Type 4 ESPE/AOPD), IEC61508 (SIL3), IEC62061 (SIL CL3), EN ISO13849-1 (Category 4, PLe), UL508, UL1998

EMC:
IEC/EN61496-1, EN55011 Class A, FCC Part15B Class A, ICES-003 Class A

Protection circuit:
Reverse-current, per-output short-circuit and surge protection

Current consumption (indicator ON):
Transmitter max. 52 mA; Receiver max. 73 mA (OSSD output current not included)

Environmental

Operating temperature:
-10 to +55 °C (No freezing)

Storage temperature:
-25 to +60 °C (No freezing)

Relative humidity:
15 to 85 % RH (Operating, no condensation); 15 to 95 % RH (Storage)

Ambient light:
Incandescent lamp 3,000 lux or less; Sunlight 20,000 lux or less

Protection rating:
IP65/IP67 (IEC60529)

Overvoltage category:
II

Physical

Material:
Main unit Aluminum; upper/lower case Nylon (GF 30%); front cover Polycarbonate, SUS304

Dimensions (H×W×D):
Not available

Weight:
Transmitter 1000 g; Receiver 1000 g

Lifecycle

Active; official Keyence production status confirmed via product/spec page (Last verified:
2026-09)