



Photoelectric sensors
ZoneControl, Photoelectric retro-reflective sensor

IRL-P211E50



Model Name > [IRL-P211E50](#)
Part No. > [1063186](#)

At a glance

- All-in-one ZoneControl solution: sensor, logic and actuator
- Single accumulation or single accumulation with sleep
- Ideal for pneumatic actuators or motor-driven rollers
- Daisy chain connection cable included for zone lengths of 1 m and 2 m
- Output options with flying leads, M12 or integrated valve
- Integrated with SICK's patented optical ASIC: SIRIC
- IP 65 housing for harsh wash down environments

Your benefits

- 30% lower current draw reduces the size of the power supply and yearly electric costs
- Next-generation SIRIC optical ASIC provides ambient light immunity, which eliminates false trips and ensures high productivity
- Variety of features and choices ensure application requirements are met
- Background suppression reduces mounting effort since no reflector is required
- Daisy chain connectivity ensures changes or additions to the system can be made quickly
- Sleep mode, which switches the rollers off after 9 s of inactivity, dramatically reduces power costs
- Mounting between the rollers prevents damage and sensor interference
- The all-in-one solution with sensor, logic and valve reduces wiring and programming costs



Illustration may differ



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor
Dimensions (W x H x D):	50 mm x 125.3 mm x 48.9 mm
Sensing range:	60 mm ... 600 mm
Type of light:	Visible red light
Light source:	LED ¹⁾
Angle of dispersion:	7 °
Adjustment:	Potentiometer, 9 turns
Light spot size (distance):	Ø 20 mm (500 mm)
Actuator:	Pneumatic, valve on board
Max. number of sensors::	Ca. 30, Ca. 50 ^{2) 3)}
Logical principle of operation:	Single accumulation
Type of Release:	Block (slug) release, Single release

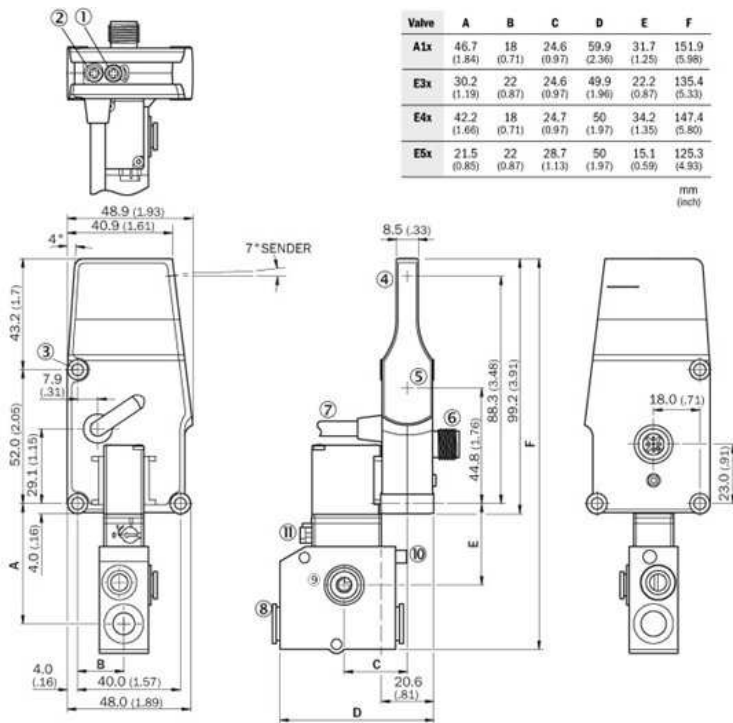
1) Average service life of 100,000 h at $T_A = +25\text{ °C}$ 2) When power from the end of the IR daisy chain 3) When power from center of the IR daisy chain

Mechanics/electronics

Supply voltage:	19.2 V DC ... 27.6 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	< 20 mA ³⁾
Output type:	PNP
Output current I _{max.} :	≤ 100 mA
Response time:	2 ms
Switching frequency:	± 250 Hz
Connection type:	Connector M12, 4-pin ⁴⁾
Circuit protection:::	A, C, D ^{5) 6) 7)}
Protection class:	III
Weight:	175 g
Enclosure rating:	IP 65
Ambient temperature operation:	-10 °C ... +50 °C
Ambient storage temperature:	-40 °C ... +75 °C
Shock and vibration resistance:	According to IEC 68
UL File No.:	NRKH.E189383 & NRKH7.E189383
Signal voltage PNP HIGH/LOW:	Approx. V _S - 0.5 V / 0 V
Connection type for daisy chain:	Cable with receptacle, M12, 4-pin 1.2 m
Medium for valves:	Compressed air or neutral gases filtered, Non-lubricated or lubricated
Design solenoid valve:	3/2-way valve
Mode of operation solenoid valve:	Air to Drive (NC)
Connection type solenoid valve:	Control line 8 mm diameter, Compressed air 2 x 8 mm diameter
Coil ratings:	24 V DC 2 W
Air flow rate:	Ca. 20 NI/min
Ventilation capacity:	Ca. 100 NI/min
Operating pressure range:	4 bar ... 7 bar
Housing material:	ABS, Plastic

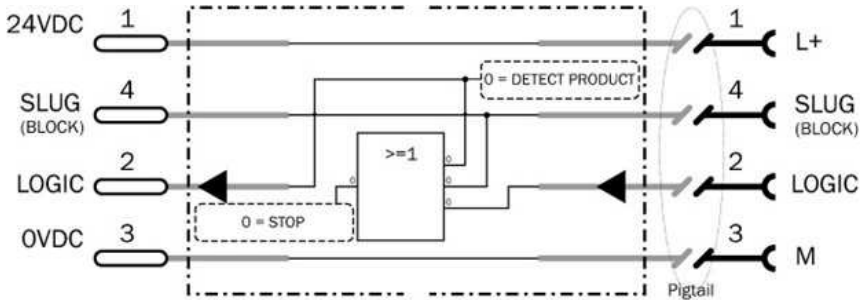
1) Limit values 2) May not exceed or fall short of V_S tolerances 3) Without load and valve deenergized 4) Do not bend below 0 °C 5) A = V_S connections reverse-polarity protected 6) C = interference suppression 7) D = outputs overcurrent and short-circuit protected

Dimensional drawing

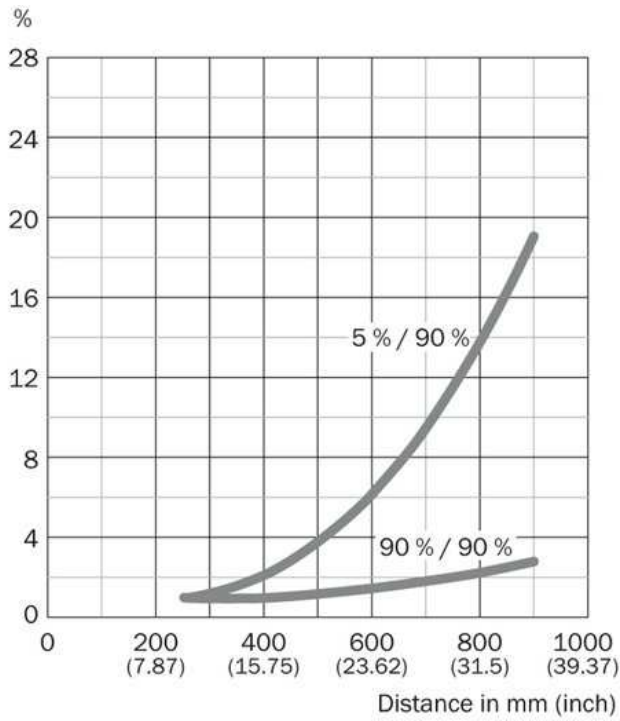


- |1| Potentiometer
- |2| LED
- |3| Mounting hole
- |4| Center of optical axis, sender
- |5| Center of optical axis, receiver
- |6| Connector M12, 4-pin
- |7| Daisy chain, cable with female connector

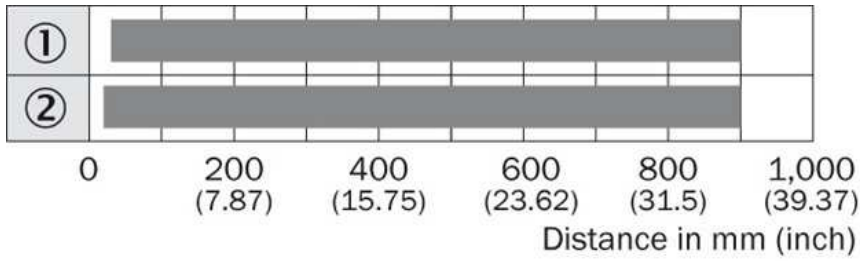
Connection diagram



Characteristic curve



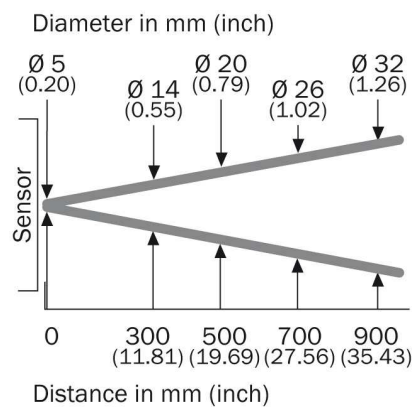
Sensing range diagram



|1| Sensing range on black, 5 % remission
 |2| Sensing range on white, 90 % remission

■ Sensing range max.

Light spot size



Australia

Phone +61 3 9457 0600
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail marketing@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Česká republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail info@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6881000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederland

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail sick@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886 2 2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 88 65 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 (800) 325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com