

## S5 series

- Multivoltage from 15 to 264 Vac
- DC versions (10 to 30 Vdc)
- Green stability LED
- Light/dark selection
- Sensitivity control
- Straight or 90° optics
- Connection via cable or M12 connector
- Test input models
- Fibre optics versions
- Plastic casing - IP67

### TECHNICAL DESCRIPTION

The **S5** 18 mm tubular photoelectric sensor series is available in the following versions:

- |  |                                    |
|--|------------------------------------|
| ■ <i>Retroreflex</i>                   | ■ <i>Limited proximity scanner</i> |
| ■ <i>Polarised retroreflex</i>         | ■ <i>Fibre optics</i>              |
| ■ <i>Proximity scanner</i>             | ■ <i>Emitter/receiver</i>          |
| ■ <i>Fixed focus proximity scanner</i> |                                    |

The **S5** versions operating from 10 to 30 Vdc have dual NPN/PNP output and light/dark operation selection. These units are also short-circuit and reverse polarity protected. The multivoltage versions accept any voltage from 15 to 264 Vac and are supplied with SCR + bridge output.

A red output LED indicator is standard in all models. The DC versions of the series are provided with a green stability LED to control alignment and display the level of the received signal, a sensitivity control trimmer and test input function.

**S5** sensors are enclosed in plastic casing, protection class IP67, straight or 90° optics. Electrical connection may be with a cable or using the M12 connector. Two or more sensors may be connected to activate simple logic configurations: AND, NOR, OR and NAND.

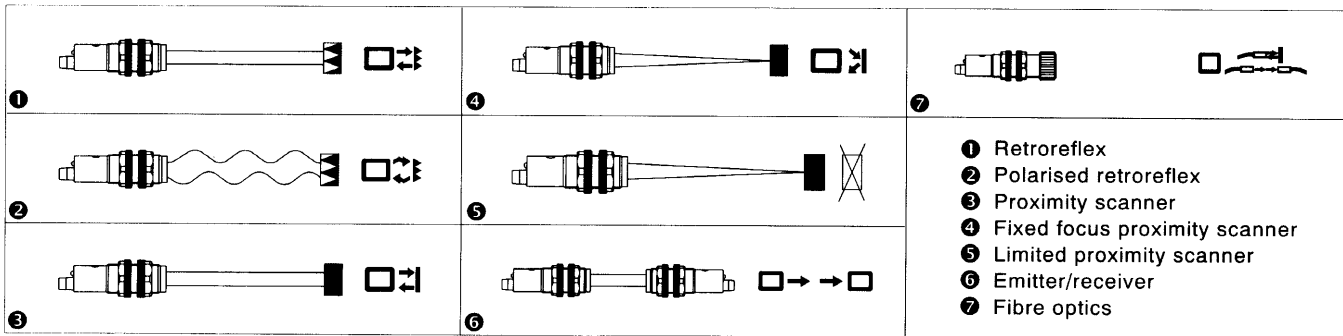
The wide range of models available suits these sensors to a variety of industrial applications requiring solutions to critical space and difficult access situations.

A MEK 18 mm glass filter is available to protect the lens when used in the presence of corrosive substances.

### APPLICATIONS

- Automatic packaging machines
- Presence detection, counting
- Transport and conveyor lines
- Robotics and FMS applications
- Small object detection
- Space critical situations

**FUNCTIONS**



**SPECIFICATIONS**

**Emission:** Infrared LED 880 nm  
Red LED 660nm for fixed focus, proximity scanner and fibre optics versions

**Lenses:** PMMA Methacrylate

**Indicators:** red output LED  
green stability LED (DC versions with sensitivity control only)

**Housing:** plastic

**Protection class:** IP67

**Weight:** approx. 100 g. (3.53 oz)

**Connections:** 2 m cable or M12 connector

**Operating temperature:** -15 to +55°C (+5 to 131°F)

**Storage temperature:** -20 to +70°C (-4 to 158°F)

**Humidity:** 35 to 85% (non-condensing)

**Ambient light rejection:** 3,000 lux max., incandescent lamp  
10,000 lux max., sunlight

**Vibration:** 10 to 55 Hz, amplitude 1.5 mm (0.06 in) in each axes X, Y, Z for 2 hours

**Shock resistance:** 500 m/s (approx. 50 G)  
3 shocks in each 3 axes

**Hysteresis:** 10% max. (proximity versions only)

**Light/dark selection:** standard in all DC models, excluding limited proximity version (selectable by inverting the power supply wires)

**AC versions**

**Power supply:** 15 to 264 Vac, 48 to 62 Hz

**Current consumption:** 10 mA max.

**Output:** SCR + bridge rectifier - 264 Vac

**Output current:** 100 mA max.

**Output leakage current:** 1 mA max. at 264 Vac

**Response time:** 20 ms max.

**Switching frequency:** 25 Hz max.

**DC versions**

**Power supply:** 10 to 30 Vdc  
ripple: 2 Vpp max.

**Current consumption:** 30 mA max.

**Output:** NPN/PNP selectable 30Vdc max (excluding limited proximity version)

**Output current:** 150 mA max.

**Short circuit protection:** active at 200 mA

**Saturation voltage:** 2.5 V max. - NPN or PNP output  
1.2 V max. - limited proximity

**Output leakage:** 50 µA at 30 Vdc

**Response time:** 1 ms max. - standard  
2 ms - emitter/receiver  
6 ms - limited proximity

**Switching frequency:** 500 Hz max. - standard  
250 Hz - emitter/receiver  
175 Hz - limited proximity

**AC VERSIONS: MODELS SELECTION TABLE**

TYPE	FUNCTION OPERATING DISTANCE	DARK LIGHT PULSE	SENSITIVITY TRIMMER	Straight optic with standard cable	Straight optic with 90° cable	Straight optic with M12 connector	90° optic with standard cable	90° optic with M12 connector
S5-1-A2-10		dark		G5110210				
S5-1-A2-11		dark			G5110211			
S5-1-A2-12		dark				G5110212		
S5-1-A2-15	retroreflex	dark					G5110215	
S5-1-A2-17		dark						G5110217
S5-1-A2-20		light		G5110220				
S5-1-A2-21	0.1 to 2 m	light			G5110221			
S5-1-A2-22	(0.33 to 6.6 ft)	light				G5110222		
S5-1-A2-25		light					G5110225	
S5-1-A2-27		light						G5110227

