

E-Series EN81-20 Compliant Elevator Light Curtains

Product Datasheet



MEMCO's E-Series lift light curtains is a versatile range with up to 36-diode versions, supporting up to 174 criss-cross beams for premium safety.

KEY FEATURES

- EN81-20 compliant
- Designed for new & existing installations.
- Suitable for dynamic or static installations.
- Reduced installation time:
 - No setting up required
 - No communication wire
 - No configuration needed
- Extended range of input voltages 11-42VDC to suit all applications
- Robust Electronics
- Timeout Software
- Diagnostic LEDs
- Diagnostic output

The 36-diode version is able to detect a 50mm target which is compliant with EN81-20 standards. The 20-diode system is a cost-effective solution to be EN81-20 compliant for certain installations. (See last page for details)

The specially developed filters, unique to MEMCO, incorporate bespoke lens designs that are used with the surface mount transmit and receive diodes. Improved circuit protection has been added which guards against common wiring errors during installation. Communication between the TX and RX diodes is now delivered optically, there is no communication wire required.

The RX has a diagnostic LED that is visible through the lens and provides an indication of a trigger or a possible system fault. In case of failure of the light curtain, the diagnostic output on the RX will inform the lift controller so that the kinetic energy of the closing doors can be limited to the required level.

The system has been designed to be tolerant to the infra-red content equivalent to 100k lux. This results in very high levels of light immunity and outstanding reliability. The Detectors are housed in a 10mm profile.

Detector Profiles

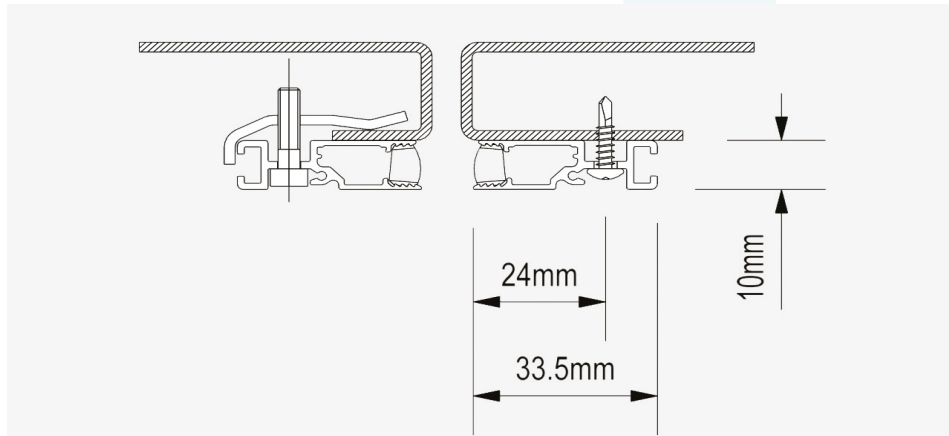


Fig 1: E10 Fixing Clamp & Self-Tapping Screw for side and centre-opening

36 Diodes	
Bottom diode from sill mounted 5mm above sill	E10 25mm
Top diode from sill mounted 5mm above sill	E10 1633mm
Detector height from sill mounted 5mm above sill	E10 2005mm

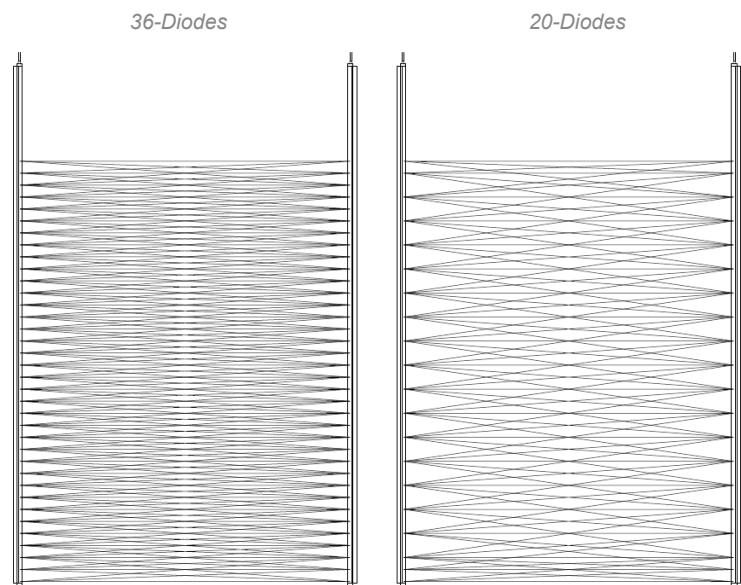


Fig 5: Diode beam pattern for 20 and 36-diode detectors

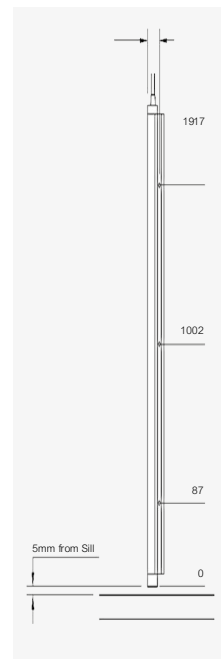


Fig 6: E10 Fixture Holes

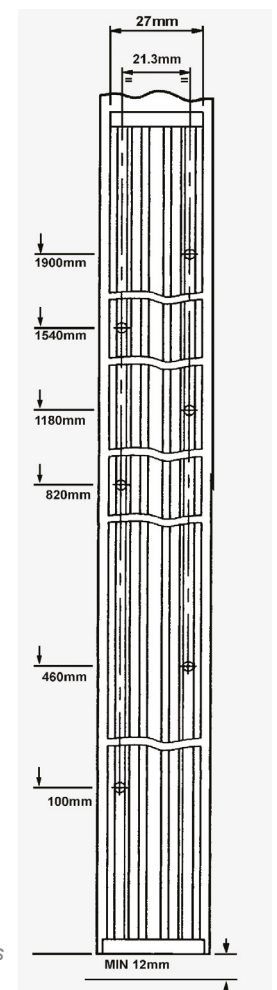


Fig 7: E32 Fixture Holes

Technical Specification

10mm Profile	E10 36
External Dimensions	10mm x 33.5mm x 2005mm (E10) 32mm x 16mm x 2105mm (E32) 40mm x 19mm x 2105mm (E40)
No. of Diodes	36
Total No. of Beams at a separation of	174 Beams >500mm 106 Beams <500mm & >200mm 36 Beams <200mm
Top Diode position from sill*	1633mm
Bottom Diode position from sill*	25mm
IP Rating	IP65 (E10), IP54 (E32), IP54 (E40)
Maximum Range	3m
Max. Response Time	100ms
Light Immunity	>100,000 lux
Input Voltage	+11VDC - +42VDC Continuous 44VDC [Max] Peak
Trigger Output	Maximum Switching Voltage=45VDC/30VAC Maximum Switching Current=350 mA Maximum on State Resistance=2 Ohms NPN,PNP,NC,NO user configurable
Diagnostic Output (optional)	Maximum Switching Voltage=45VDC/30VAC Maximum Switching Current=350 mA Maximum on State Resistance=2 Ohms NPN,PNP user configurable; NC only
Current Average	<100mA
Peak Current	<100mA
Operating Temp. Range	-10°C - 60°C as per BS2011 Part2.1 Ab & Part2.2 Bb
Storage Temperature	-25°C to 60°C
EMC Emissions	EN12015:2014 Immunity 12016:2013
Random Vibration	20-500Hz 0.002g2/Hz, 4 hours per axis
Sinusoidal Vibration	30Hz 3.6g RMS 30mins per axis
Humidity	93% BS60068-2-30:2005:Part2.1Db:1981, Variant2 @ 55°C
Cables	TX=2 Cores & RX= 5 Cores (7 Cores with diagnostic output), Length=2.7m

* Detectors are mounted 5mm from sill

*E10 36 is compliant in all installations.

Ordering Information

Part Number Code

Product	Profile*(mm)	No. of Diodes	Product Options	Custom Cables
E	10	20	1	N
E	10	36	1 = Diagnostic Output, Timeout Enabled 2 = No Diagnostic Output, Timeout Disabled 3 = No Diagnostic Output, Timeout Enabled	N = Std Cable 2.7m B = 4m Cable S = 0.4m pluggable cable

Extension cables for E10 detectors

E10 894 Set of E10 Extension cables

Fixing Kits

E10 802 Static kit, aluminium support bracket

E10 803 Clamp plate kit (per detector)

Note: Static kits need to be ordered separately for static installations.

280 000 Power Supply available upon request.

This product is designed for use in elevators with powered automatic doors where the closing energy is less than 10J in normal operation and less than 4J during de-activation of the light curtains or less as per EN81 requirements. It should be installed by qualified personnel only, therefore any use outside of this application is at the installer's own risk and should be assessed appropriately.

As a result of our policy of continual improvement, the information in this document is subject to change without notice and it is intended only as general guidance on product performance and suitability. This information shall not form part of any contract.