

Light barriers

OSS 2 and OSS 4



Opto-electronic protective equipment from BERNSTEIN safely and reliably protects the operator against workplace injuries that occur in dangerous installations and systems.

An EC-type examination certificate was issued for the light barriers by the Experts Committees for Iron and Metal III, the Workers Compensation Board (Berufsgenossenschaft), the Examination and Certification Body (Prüf- und Zertifizierungsstelle).

Examination basis: Council Directive 98/37/EC, EN 61496-1 issued 02.1998 and IEC 61496-2 issued 44/208/FDIS 11.1997

The main fields of use for the light barriers OSS2 and OSS4 are:

- Protective equipment for operating personnel on machines and installations
- Protection of the working area of a robot, entire production lines or of loading and handling systems, storage and feeding systems, paletting and depalleting, pallet and packaging installations ...
- Protection of entrances
- Building a safety area
- Additional protection with light barriers
- Prevention of collisions

The light barriers are divided into two categories: commensurate with the risk analysis of a machine or installation, light barriers type 2 from the OSS2 range or light barriers type 4 from the OSS4 range may be required.

OSS2

Light barrier type 2 consisting of a control device OSS2, a transmitter OSS2-01SE and a receiver OSS2-01EE

Functions

Two independent safety relays with positively driven contacts
Both contacts are open if the IR beam is interrupted.

Two different means of restarting after the IR beam is again intact

Possibility of programming wiring on the control device

Automatic restart

The outputs are closed once the IR beam is again intact.

Restart protection

The contacts remain closed after first being turned on as well as whenever the IR beam is intact.

This function is also named 'manual release'.

The release is realised through an external start button.

OSS4

Light barrier type 4, consisting of a transmitter and a receiver, placed together in one delivery unit OSS4-01ES

Possibility of selecting a variety of devices upon ordering

Light barrier OSS2

Type 2 according to EN 61496-1

EC-type examination certificate
EN 61496-1/IEC 61496-2
BG Iron and Metal III
No. 01 021



| Technical Data | |
|-------------------|--|
| Supply voltage | 24 VDC, 24 VAC, 115 VAC, 230 VAC |
| Output | Two safety relays with positively driven contacts, contact rating (resistive load) max 2A, 250 VAC |
| Temperature range | Operating temperature -10 °C ... +50 °C Storage temperature -25 °C ... +85 °C |
| Response time | ≤ 40 ms |
| Sensing distance | max. 20 m |
| Protection class | Control device IP 20 Transmitter and receiver: plug connection IP 65, cable connection IP 67 |
| Dimensions | Control device 75 x 100 x 110 mm Transmitter and receiver 80 x 89 x 25.4 mm |

| Designation | | Part number |
|-----------------|-----------------------|--|
| Transmitter | Cable connection area | |
| Transmitter | plug M12 | OSS2-01SE-20-0000-PA 654.6101.001 OSS2-01SE-20-0000-PS 654.6101.002 |
| Receiver | Cable connection area | |
| Receiver | plug M12 | OSS2-01EE-20-0000-PA 654.6201.001 OSS2-01EE-20-0000-PS 654.6201.002 |
| Control devices | | Control device OSS2 24 VAC 656.2322.006 Control device OSS2 115 VAC 656.2322.008 Control device OSS2 230 VAC 656.2322.007 Control device OSS2 24 VDC 656.2322.005 |

Sensors

Light barrier OSS4

Type 4 according to EN 61496-1

EC type examination certificate
EN 61496-1/IEC 61496-2
BG Iron and Metal III
No. 01019 and 01020



Technical data

| | |
|-------------------|--|
| Supply voltage | 24 VDC, 24 VAC, 110 VAC, 230 VAC |
| Output | Two safety relays with positively driven contacts, contact rating (resistive load) max 2A, 250 VAC |
| Temperature range | Operating temperature -20 °C ... +50 °C Storage temperature -25 °C ... +85 °C |
| Response time | 15 ms |
| Sensing distance | max. 40 m |
| Protection class | Transmitter and receiver IP 65 |
| Dimensions | Transmitter 78 x 104 x 211 mm Receiver 78 x 104 x 219 mm |

Light barrier with automatic restart

| Supply voltage | Designation | Part number |
|----------------|-----------------------|--------------|
| 24 V AC | OSS4-01ES-40-AUTO-ARS | 654.6313.001 |
| 48 V AC | OSS4-01ES-40-AUTO-ARS | 654.6313.002 |
| 110 V AC | OSS4-01ES-40-AUTO-ARS | 654.6313.003 |
| 230 V AC | OSS4-01ES-40-AUTO-ARS | 654.6313.004 |
| 24 V DC | OSS4-01ES-40-AUTO-DRS | 654.6323.001 |

Light barrier with restart protection/manual release

| Supply voltage | Designation | Part number |
|----------------|-----------------------|--------------|
| 24 V AC | OSS4-01ES-40-MANU-ARS | 654.6313.005 |
| 48 V AC | OSS4-01ES-40-MANU-ARS | 654.6313.006 |
| 110 V AC | OSS4-01ES-40-MANU-ARS | 654.6313.007 |
| 230 V AC | OSS4-01ES-40-MANU-ARS | 654.6313.008 |
| 24 V DC | OSS4-01ES-40-MANU-DRS | 654.6323.002 |

