



OPTICAL BEAM DETECTION

SECURITON SecuriBeam ILIA



SECURIBEAM ILIA DETECTORS & CONTROL UNIT

DESCRIPTION

The ILIA Beam Smoke Detector is used for detecting smoke and fire and is suitable for standard interior applications.

A special dust variant (ILIA-PRO) should be used in certain harsh environments. A simple serial loop circuit connects the control unit to a maximum of eight systems for a maximum line length of 2400 m. With this control unit the detectors can be set automatically. Applications of more than 20 m in height can also be implemented. When this is the case, there must be two detection levels one above the other. Depending on the geometry of the space, it is also possible to position the beam smoke detectors diagonally or vertically in the space.

DESIGN

The ILIA Beam Smoke Detector consists essentially of three components: the transmitter, the receiver, and a remote control unit. All adjustment, testing and maintenance work can be simply and reliably performed on the easily accessible control unit.

FUNCTION

An infrared beam from the transmitter passes through the monitored area, registers the information of a developing fire and reaches the receiver, which performs the analysis. The effects of a fire change the amplitude and the frequency of the light beam. Any influence is detected by the receiver and analysed. The evaluation is oriented not only to the development of the absorption (beam attenuation), as with conventional detectors of this type to date, but also includes (by means of the typical spectral frequency analysis) the typical modulation frequencies which arise when a fire starts and spreads.

The optimal evaluation of many parameters permits a reliable statement about the presence of smoke and fire. The system is extremely insensitive to disturbances caused by dust or vapour. A very slow increase of the base signal is corrected to some extent by the system (soiling compensation). If the threshold is exceeded within a given time, an alarm is triggered (very slow smouldering of, for example, cotton bales).

In order to achieve optimum signal strength and stability, the system uses a unique dual transmitter (redundancy) in the overlapping area. This overlapping area of the two transmitters results in a work area of unique 12 dB. The large dispersion angle of up to 3° guarantees high reserves; this ensures trouble-free operation when building movements and operational vibrations are an issue.

PLANNING

On one control unit, a maximum of two transmitters and receiver systems can be connected. With the expansion module there can be up to eight systems connected to a loop.

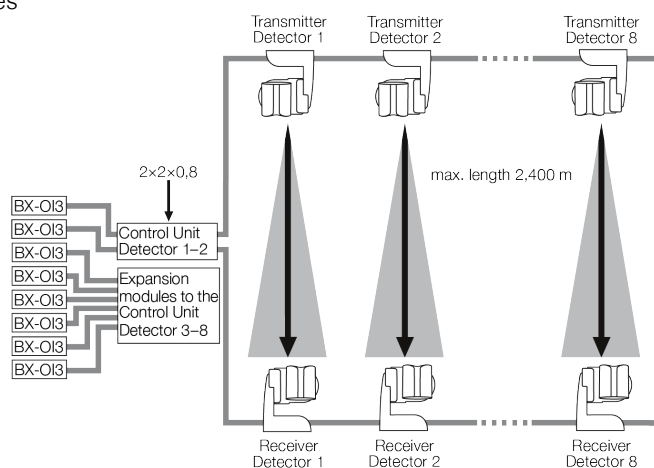
Thanks to the linear design with transmitter and receiver, the ILIA is used wherever structural situations prevent the installation of conventional point detectors or where the latter can no longer guarantee optimal protection.

FEATURES

- Loop with up to 8 systems possible
- Maximal loop length 2,400 m
- Main Control Unit – simple commissioning and maintenance
- Normative check-out and maintenance in accordance with EN with the remote control unit
- Monitored areas up to 3,000 m²
- Monitoring length 10–200 m
- Very high sensitivity to both smoke and fire
- Suited to demanding applications
- Special ILIA-PRO variants for very harsh environments
- Easy installation and adjustment
- Simple maintenance
- Simple alignment of the optical axes using integrated precision gears
- Soiling-resistant thanks to nano-coated lenses
- Event memory (only ILIA-PRO)
- Pre-signal setting (only ILIA-PRO)

APPLICATIONS

- Industrial plants
- Warehouses
- Archives
- Department stores
- Cinemas
- Theatres





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COMMISSIONING

When commissioning the ILIA, the following steps must be performed in the given sequence:

1. Configure system version (basic settings)
2. Orientate transmitter
3. Orientate receiver
4. Adjust aperture (if needed)
5. Adjust signal strength (automatic)
6. Orientation plausibility test
7. Adjust signal strength (manual)
8. Adjust sensitivity
9. Conduct tests (alarm and fault)
10. Fill out commissioning protocol
11. Change password

MAINTENANCE

The following points must be performed for maintenance:

- Check signal strength
- Transmit alarm and fault to the FACP
- Perform visual inspection

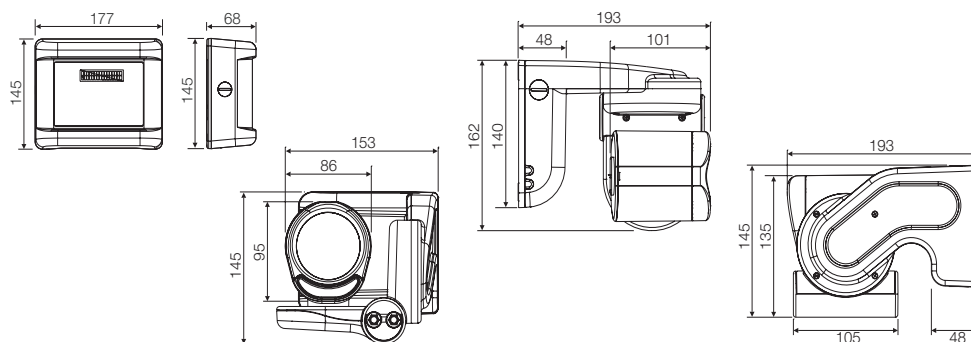
Since all checks can be performed from the ground via the control unit, the ILIA is extremely fast, easy and reliable to maintain. The nano-sealing of the panes also minimises maintenance considerably.

SPECIFICATIONS

Operating Voltage	9.6 to 32 VDC
Dimensions Detector (WxHxD)	162x145x193 mm
Dimensions Control Unit (WxHxD)	177x145x68mm
Weight Detector	± 780g
Weight Control Unit	± 375g
Permitted Ambient Temperature	-20 to +65 °C
Protection Class	IP65
VdS Approval	G 209195
Homologation CPD	0786-CPD-20925
Standards	EN 54-12

Area monitored and system distances – the following limits must be adhered to:

Monitoring length (L)	10–200m
Maximum monitored area per detector (according to EN54-14)	3,000m ² (1,600m ²)
Maximum monitoring width according to EN54-14	15m



ORDERING INFORMATION

Product Code	Product Description	Product Code	Product Description
ST-ILIA	Linear Smoke Detector ILIA T/R	ST-ILIA-CON-PRO	Control Unit for 2 ILIA PRO
ST-ILIA-CON	Control Unit for 2 ILIA	ST-ILIA-EXT6	Extension Module to CSRLS, 6 ILIA
ST-ILIA-PRO	Linear Smoke Detector ILIA PRO T/R	ST-ILIA-TFIL	Test Filter to Beam Smoke Detector

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