

Devices for Hazardous Areas for the Apollo/Discovery Loop

- **ADM loop technology with Apollo/Discovery protocol**
- **Optical smoke detector**
- **Thermal detector**
- **Safety barrier with galvanic isolation**
- **Protocol interface for communication with the fire detection control panel**
- **ATEX certified**



IS Optical Smoke Detector AOEX-55000-640

The addressable Intrinsically Safe Optical Smoke Detector AOEX-55000-640 (fig. A) uses the scattered light principle and was developed for the detection of smoke particles in hazardous areas. The smoke detector must always be connected via a safety barrier, which has been approved for this detector, and a protocol interface. Furthermore, the relevant country specific regulations always have to be observed.

The proven ADM loop technology with Apollo/Discovery protocol establishes a permanent communication between the fire detection control panel and the detector. That ensures a periodical function testing of the detector. In the control panel all types of fires are detected by continuously comparing fire patterns. Intelligent evaluation algorithms use the current condi-

tion of the sensing chamber to predict the likely time of the next maintenance. Thus the alarm threshold is automatically adjusted within the permissible range, depending on the contamination. With that, the constant response sensitivity of the detector is ensured for a long time.

The two LEDs with 360° visibility indicate the activated condition of the detector. The detector address is selected by means of a code card in the detector base. Therefore the detector can be changed without additional tools.

The detector is inserted into the IS Detector Base ASEX-45681-215 (not illustrated) and it can be protected against theft.

Specifications

Ignition protection	intrinsically safe
Ex classification	EEx ia IIC T5
Operating voltage	Supply through loop voltage
Current consumption	typ. 340µA (quiescent)
Ambient temperature	-20°C to +40°C (no condensation or icing)
Relative humidity	0 – 95% (no condensation)
Dimensions ø × H	100 × 42 (mm)
Colour	white
Weight	100g



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Approval	EECS ATEX 0073 LPCB 010q
Order number	241024
Order name	IS Optical Smoke Detector/Anal./XP95/Apo AOEX-55000-640

IS Thermal Detector AWEX-55000-440

The addressable Intrinsically Safe Thermal Detector AWEX-55000-440 (fig. B) uses the heat principle and was developed for the fire detection in hazardous areas. The heat detector must always be connected via a safety barrier, which has been approved for this detector, and a protocol interface. Furthermore, the relevant country specific regulations always have to be observed.

The detector is assigned to Class A2S and can be used up to a room height of 6m. Depending on the parameter setup in the fire detection control panel, the detector can operate either as maximum heat detector with an alarm temperature of 55°C, or as rate-of-rise heat detector with a maximum temperature of 55°C.

The proven ADM loop technology with Apollo/Discovery protocol establishes a permanent communication between the fire detection control panel and the detector. That ensures a periodical function testing of the detector. Fires are safely detected in the control panel by continuously analysing the measured values.

The two LEDs with 360° visibility indicate the activated condition of the detector. The detector address is selected by means of a code card in the detector base. Therefore the detector can be changed without additional tools.

The detector is inserted into the IS Detector Base ASEX-45681-215 (not illustrated) and it can be protected against theft.

Specifications

Ignition protection	intrinsically safe
Ex classification	EEx ia IIC T5
Operating voltage	Supply through loop voltage
Current consumption	typ. 300µA (quiescent)
Ambient temperature	-20°C to +40°C (Class T5, no condensation or icing) -20°C to +60°C (Class T4, no condensation or icing)
Relative humidity	0 – 95% (no condensation)
Dimensions ø × H	100 × 42 (mm)
Colour	white
Weight	100g
Approval	EECS ATEX 0073 LPCB 010p
Order number	242036
Order name	IS Thermal Detector/Anal./XP95/Apo AWEX-55000-440

IS Detector Base ASEX-45681-215

The IS Detector Base ASEX-45681-215 is designed to accommodate intrinsically safe intelligent fire detectors Series XP95 for use in ADM loops with Apollo/Discovery protocol.

Due to its robust multi-wire screw terminals, the detectors can be wired with ease, thus achieving a secure and durable connection.

The detector address is selected by means of a code card in the detector base. Therefore the detector can be changed without additional tools.

The base is designed for surface mounting in hazardous areas. A mechanical theft protection of the detector can optionally be activated at the detector base.

Specifications

Ambient temperature	-20°C to +60°C (no condensation or icing)
Relative humidity	10 – 95% (no condensation)
Dimensions ø × H	100 × 15 (mm)
Colour	white
Weight	50g
Order number	246027
Order name	IS Detector Base/Anal./Apo ASEX-45681-215

Safety Barrier AES-29600-098

The Safety Barrier AES-29600-098 (fig. C) is used for intrinsically safe electric circuits. The built-in zener barrier and the safe galvanic isolation allow the connection of fire detectors in hazardous areas. Due to the galvanic isolation, the earth leakage monitoring can remain activated in the fire detection control panel.

Specifications

Ignition protection	intrinsically safe
Ex classification	EEx ia IIC T5
Operating voltage	Supply through loop voltage
Ambient temperature	-10°C to +60°C
Colour	green
Approval	EECS ATEX 0073
Order number	228004
Order name	Safety Barrier/Anal./XP95/Apo AES-29600-098

Protocol Interface API-55000-855

The Protocol Interface API-55000-855 (fig. D) serves for the design of an intrinsically safe electric circuit in ADM loop technology. It allows the bidirectional data traffic between fire detection control panel and detectors in hazardous areas, via an ADM loop with Apollo/Discovery protocol. The interface is always used together with the Safety Barrier AES-29600-098.

Specifications

Ignition protection	intrinsically safe
Ex classification	EEx ia IIC T5
Operating voltage	Supply through loop voltage
Current consumption at 24V	1mA
Ambient temperature	-10°C to +60°C
Relative humidity	10 – 95% (no condensation)
Dimensions W × H × D	93 × 110 × 20 (mm)
Weight	100g
Order number	228005
Order name	Protocol Interface/Anal./XP95/Apo API-55000-855

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