850 and 830 Series Fire Detectors - Generation 6 IEC 61508 Approved (SIL2)

The 850 and 830 series of fire detectors are designed to be both adaptable and flexible which means they can be used in most premises to protect against a wide range of potential fire risks. They use sophisticated digital signalling to communicate with the MZX Technology fire control panel, sending fire data from each sensing element for analysis. Because all of the sensed data is sent to the controller, powerful algorithms can be used to determine whether a fire condition is real or not. The sensitivity, mode and degree of verification can be altered by the user in response to environmental or activity changes.

A built-in line isolator incorporated into the 850 series devices means that when a single short circuit fault occurs on a loop, all the detectors will continue to operate. An on-board amber LED will give a local indication that the line isolator has operated. The 830 series detectors can be used with an isolator base to provide protection against short circuit faults.

Two way infrared communications allows the detector to work with the 850EMT Engineering Management Tool to speed up commissioning and service routines and to provide status / reports data without the need to physically access the device. Extended drift compensation reduces the lifetime cost of ownership by typically doubling the service life of the detector whilst a new insect screen and surface coating of electronics results in a robust industrial design. Both 850 series and 830 series detectors are environmentally friendly. They do not use any radioactive parts and can be returned for recycling at the end of their life.

Features

- Advanced multi-sensor designs
- Choice of heat, optical, optical and heat multi-sensor or 3oTec triple multi-sensor
- FASTLOGIC expert algorithms
- Up to 250 detectors per loop
- Built-in line isolator on 850 series
- Advanced commissioning features using the 850EMT Engineering Management Tool
- Two way infra-red communication to the 850EMT Engineering Management Tool
- Protective optical chamber screen
- Robust coated electronics
- Extended service life
- Fire, isolate and fault LED indications
- Green Passport Certified

The detectors are constructed from hard wearing flame retardant FR3010 'BAYBLEND' plastic. They are supplied with dust covers as part of the packaging which essentially prevents contamination entering the detection chambers during installation, after which they are removed.

850PH, 851PH and 830PH Photo Heat Multi-Sensor Detectors

With its ability to detect a wide range of fires from flaming to smouldering types, the combined optical and heat multi-sensor detector is the preferred choice for a range of applications including light industrial, retail and office environments.

It operates in a number of approved modes and sensitivities that can be dynamically selected to suit different environmental conditions.

Technical Information

Detector material:	Flame Retardant FR3010 'BAYBLEND'
Dimensions:	Height 43mm / Dia.109mm
Colour:	White
Weight:	76g (Excluding Base)
Voltage:	20–40 VDC
Quiescent Current:	380µA
Alarm Current:	3.3mA
Operating Temp:	-25°C to +70°C
Storage Temp:	-40°C to +80°C
Relative Humidity:	95% (non-condensing)
Approvals:	EN54-5 and EN54-7, CPD, VdS
Type Approval:	CEA4021 851PH MED Approved

Order Codes

516.850.051	850PH Photo Heat Detector with built in line isolator
516.830.051	830PH Photo Heat Detector
516.850.055	851PH Photo-Heat Detector with built in line isolator Marine

850P and 830P Photo Detectors

More benign environments where any potential fire will be slow burning can be protected using the optical detector. A choice of sensitivities and modes gives this detector a broad range of applications.

Technical Information

Detector material:	Flame Retardant FR3010 'BAYBLEND'
Dimensions:	Height 43mm / Dia.109mm
Colour:	White
Weight:	76g (Excluding Base)
Voltage:	20–40 VDC
Quiescent Current:	380µA
Alarm Current:	3.3mA
Operating Temp:	-25°C to +70°C
Storage Temp:	-40°C to +80°C
Relative Humidity:	95% (non-condensing)
Approvals:	EN54-7, CPD, VdS
Type Approval:	CEA4021 851PH MED Approved

Order Codes

516.850.052	850P Photo Detector with built in line isolator
516.830.052	830P Photo Detector

850H and 830H Heat Detectors

Complimenting the range is the heat sensor which can operate in fixed temperature and rate-of-rise modes with a number of approved sensitivities. It is most often used in areas where high levels of dust are present or where the environment precludes the use of smoke detectors.

Technical Information

Detector material:	Flame Retardant FR3010 'BAYBLEND'
Dimensions:	Height 43mm / Dia.109mm
Colour:	White
Weight:	81g (Excluding Base)
Voltage:	20–40 VDC
Quiescent Current:	335µA
Alarm Current:	3.3mA
Operating Temp:	-25°C to +70°C
Storage Temp:	-40°C to +80°C
Relative Humidity:	95% (non-condensing)
Approvals:	EN54-5, CPD, VdS
Type Approval:	MED Approved

Order Codes

516.850.053	850H Heat Detector with built in line isolator
516.830.053	830H Heat Detector

850PC and 830PC 3oTec Triple Sensor Detectors

For life protection and when the environmental conditions are challenging, the 850PC/830PC 3oTec detector provides the ultimate in detector performance and false alarm rejection. It is a multi sensor that uses optical, heat and carbon monoxide sensors in concert to accurately determine the presence of fire.

Applications include industrial, retail, transport hubs, and healthcare. Its false alarm rejection properties make it the ideal choice for hotel bedrooms where steam from bathrooms is a common source of false alarms.

Technical Information

Detector material:	Flame Retardant FR3010 'BAYBLEND'
Dimensions:	Height 43mm / Dia.109mm
Colour:	White
Weight:	94g (Excluding Base)
Voltage:	20–40 VDC
Quiescent Current:	420µA
Alarm Current:	3.3mA
Operating Temp:	-10°C to +55°C
Storage Temp:	-20°C to +55°C
Relative Humidity:	95% (non-condensing)
Approvals:	EN54-5 and EN54-7, CPD, VdS
Type Approval:	VdS2806, CEA4021 MED Approved

Order Codes

516.850.054	850PC 3oTec Triple Sensor Detector with built in line isolator
516.830.054	830PC 3oTec Triple Sensor Detector