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Addressable 200-series I/O-modules for Esa/Mesa fire detection systems

The 200 series of Input/Output-modules (I/O-modules) offers several features for a variety of monitoring and control functions in a Esa/Mesa fire detection system.

Compact construction enables more units to be mounted in installation boxes.

The module has a wide range of input/output combinations. Built in short circuit isolators save installation costs as separate isolator units are not needed.

Tri-colour LEDs for status indication, separate for each input/output indicates the status at a glance



Single Input Module EM210E and Dual Input Module EM220E

The EM210E and EM220E input modules provide one or two contact monitoring circuits for supervision of devices external to the fire detection system. Applications include monitoring of automatic extinguishing systems, smoke ventilation shutters, fire doors. Action on activation can be selected with the WinEsa configuration tool. The modules have built-in short circuit isolators.

Single Output Module EM201E

The EM201E output module provides a single output circuit for controlling various fire safety related devices with the ESA/MESA fire detection system. Applications include controlling alarm devices, extinguishing systems, fire doors and other fire restricting devices in buildings. Cause-effect can be selected with the WinEsa configuration tool. The modules have built-in short circuit isolators.

Dual Input – Single Output Module EM221E

The EM221E dual input – single output module provides two contact monitoring circuits and one control circuit for supervision of fire safety related devices with the ESA/MESA system. The combination of the two inputs and one output makes the installation very cost-effective. Applications include monitoring/control of extinguishers, smoke ventilation, public announcement and alarm devices. Action on input activation and cause-effect on output control are selected with the WinEsa configuration tool. The modules have built-in short circuit isolators.

Short Circuit Isolator Module EM200XE

The EM200XE short circuit isolator module limits the effect of a short circuit on the detection circuit to the devices between the nearest isolators thus enabling all other devices to continue normal operation. This enables taking

full advantage of the address capacity of an ESA/MESA detection circuit.

Address setting

All modules except the isolator module EM200XE are addressable. The address setting is done with two rotary switches, accessible either on the wide side or the front edge, depending on means of mounting. The dual input and dual input – single output modules are automatically assigned to two and three consecutive addresses.

Mechanical fitting

The 200-series of modules can be fitted in three different ways:

- in a surface mounting box M200-SMB
- with a DIN rail mounting clip M200-DIN
- with a panel mounting clip M200-PMB

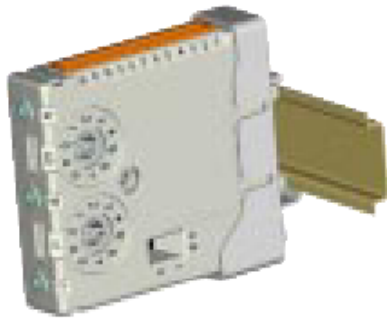
The surface mounting box has a transparent cover that enables verification of address setting and visibility of LEDs, without cover removal.

The DIN rail clip clips to one side of the module, enabling several modules to be mounted right next to each other on a DIN rail. The address switches are accessible through the slots in the front edge, next to the indicators.

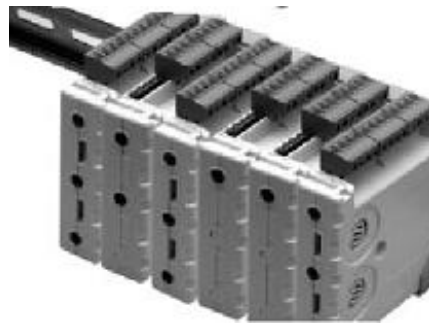
The panel mounting clip clips to one side of the module as the DIN rail clip and enables the modules to be mounted next to each other on the back plane of an installation box.

Electrical connections

The modules have plug-in terminals for easy connection / disconnection. Please see table overleaf for terminal numbering and installation instructions for schematics of connections



Module mounted in a M200-DIN



Several modules in DIN rail mounting



Module mounted in M200-SMB

Terminals

| Terminal | EM210E / EM220E | EM201E with fault monitored output | EM201E with non-monitored output | EM221E | EM200XE |
|----------|----------------------------------|------------------------------------|----------------------------------|----------------------------------|--------------|
| 1 | Loop (-) out | Loop (-) out | Loop (-) out | Loop (-) out | Loop (-) out |
| 2 | Loop (+) out, note ¹⁾ | Loop (+) out, note ¹⁾ | Loop (+) out, note ¹⁾ | Loop (+) out, note ¹⁾ | Loop (+) out |
| 3 | Loop (-) in | Loop (-) in | Loop (-) in | Loop (-) in | Loop (-) in |
| 4 | Loop (+) in | Loop (+) in | Loop (+) in | Loop (+) in | Loop (+) in |
| 5 | Loop (+) out, note ¹⁾ | Loop (+) out, note ¹⁾ | Loop (+) out, note ¹⁾ | Loop (+) out, note ¹⁾ | Not used |
| 6 | Monitoring circuit 1 | Linked to term. 7 | Not used | Monitoring circuit 1 | Not used |
| 7 | Monitoring circuit 1 | Linked to term. 6 | Relay contact NC | Monitoring circuit 1 | Not used |
| 8 | Mon. circ. 2 (EM220E) | Control output (-) | Relay contact C | Monitoring circuit 2 | Not used |
| 9 | Mon. circ. 2 (EM220E) | Control output (+) | Not used | Monitoring circuit 2 | Not used |
| 10 | Not used | External power (+) | Not used | Relay contact NC | Not used |
| 11 | Not used | External power (-) | Relay contact NO | Relay contact C | Not used |
| 12 | Not used | Ext. power fault (-) | Not used | Relay contact NO | Not used |

Note ¹⁾. If short circuit isolation is not needed, the 'Loop (+) out' is connected to terminal 5, otherwise to terminal 2

Technical data

| Modules | EM210E | EM220E | EM201E | EM221E | EM200XE |
|---------------------------|---------------------|-------------|--------------------|-------------|--------------|
| Dimensions (HxLxW) | 24x94x94 mm | | | | |
| Weight | 100 g | 110 g | 62 g | 110 g | 62 g |
| Operating temperature | - 20°C .. +60°C | | | | |
| Max. relative humidity | 5% .. 95% RH | | | | |
| Operating voltage range | 15 Vdc .. 30 Vdc | | | | |
| Max. standby current | 500 µA | 600 µA | 500 µA | 660 µA | 200 µA |
| Max. allowed load current | NA | NA | 2A/30Vdc resistive | | NA |
| Max. terminal wire size | 2,5 mm ² | | | | |
| Esmi product number | FFS06717010 | FFS06717020 | FFS06717001 | FFS06717021 | FFS06717051E |

NA = Not Applicable

Technical data

| Accessories | M200-SMB | M200-DIN | M200-PMB |
|--------------------------|---------------|-------------|-------------|
| Dimensions (HxLxW) | 40x134x139 mm | NA | NA |
| Ingress protection class | IP 20 | NA | NA |
| Esmi product number | FFS06717061 | FFS06717062 | FFS06717063 |

NA = Not Applicable