

# Dual Input – Single Output Module EM221E

Instruction Sheet  
R10117GB0



## **Schneider Electric Fire & Security Oy**

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# 1 Dual Input – Single Output Module EM221E

The EM221E dual input – single output module (FFS06717021) provides two contact monitoring circuits and one control circuit for supervision of fire safety related devices with the FXNET 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 WinFXNet configuration tool. The modules have built-in short circuit isolators.

## 1.1 Addressable AP200-series I/O-modules

The AP200 series of Input/Output-modules (I/O-modules) offers several features for a variety of monitoring and control functions in Esmi Sense FDP and FX 3NET fire detection system.

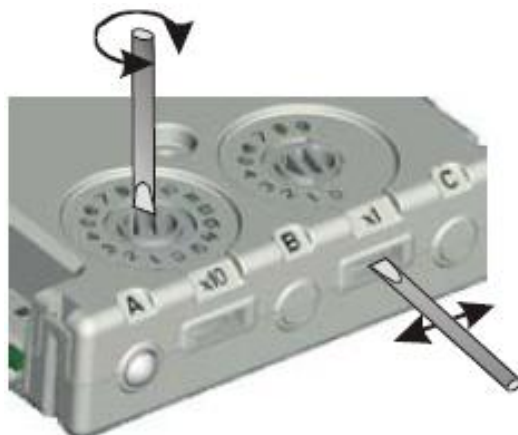
Compact construction enables more units to be mounted in installation boxes.

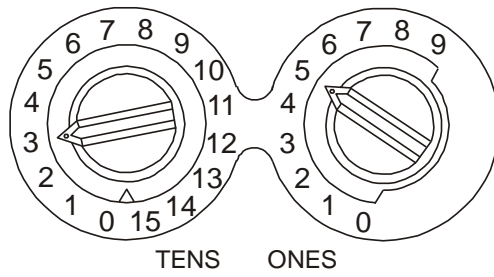
The module has a wide range of input/output combinations. Built in short circuit isolators save installation costs as separate isolator units are not needed.

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

## 1.2 Address setting

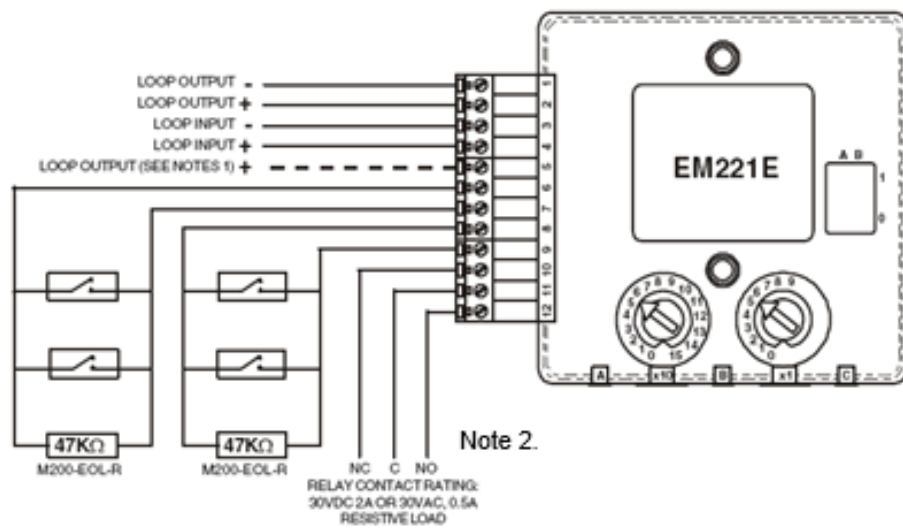
All modules are addressable. The address setting is done with two rotary switches, accessible either on the wide side or the front edge, depending on means of mounting. The dual input and dual input – single output modules are automatically assigned to two and three consecutive addresses.





Rotary switches

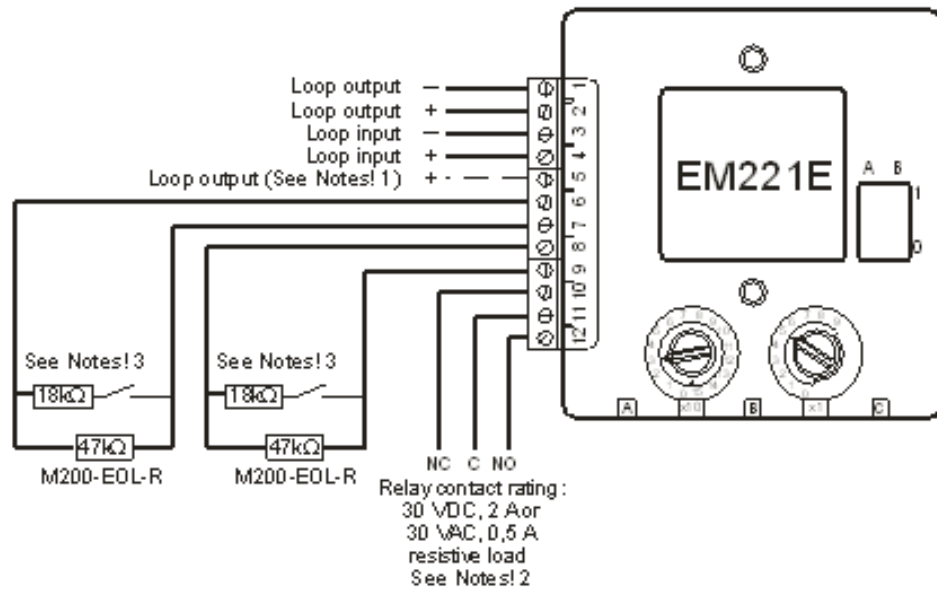
### 1.3 EM221E Dual Input and Single Output Module Wiring



**Notes!**

1. If short circuit isolation is not required, loop output+ should be wired to terminal 5 and not 2. Terminal 5 is internally connected to terminal 4.
2. Output cannot be monitored.

## 1.4 EM221E Dual Input and Single Output Module with short circuit monitoring



### Notes!

1. If short circuit isolation is not required, loop output+ should be wired to terminal 5 and not 2. Terminal 5 is internally connected to terminal 4.
2. Output cannot be monitored.
3. If the input is short circuit monitored, 18kΩ resistor is connected in series with the input switch.

## 1.5 Configuration of the short circuit monitored input

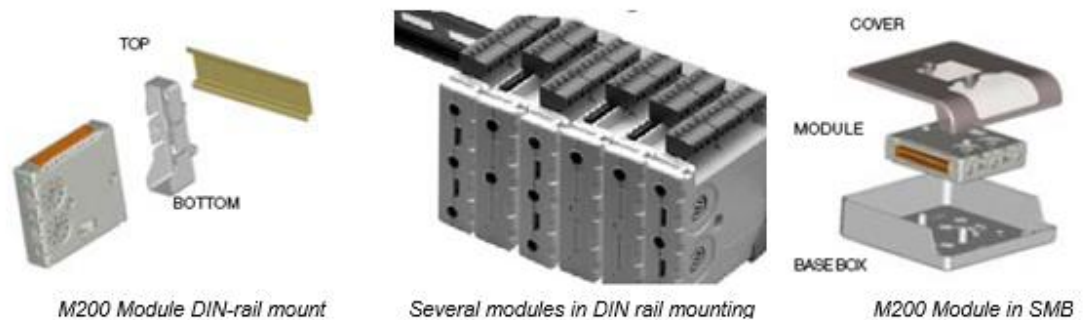
Address	D-Zone	Ctrl A	Ctrl B	Type	Input funct.	ScMon	Fire	Prew	D-Fire	D-Prew	Mode	InDel.	InFilt.	DayM	ZDis	Ctrl Groups
001	0001			Not in use												
002	0001			Not in use												
003	0001			Not in use												
004	0001			AP200 Single input	Fire Alarm Input	Yes					Normal	0	0	0	0	
005	0001			Not in use												
006	0001			Not in use												
007	0001			Not in use												

## 1.6 Mechanical fitting

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

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

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



## 1.7 Electrical connections

The modules have plug-in terminals for easy connection/disconnection. Please see table overleaf for terminal numbering. Installation instructions for schematics of connections above are also found with the product.

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.

## 1.8 Terminals

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

**Note!** <sup>1)</sup> If short circuit isolation is not needed, the 'Loop (+) out' is connected to terminal 5, otherwise to terminal 2