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EM201EA

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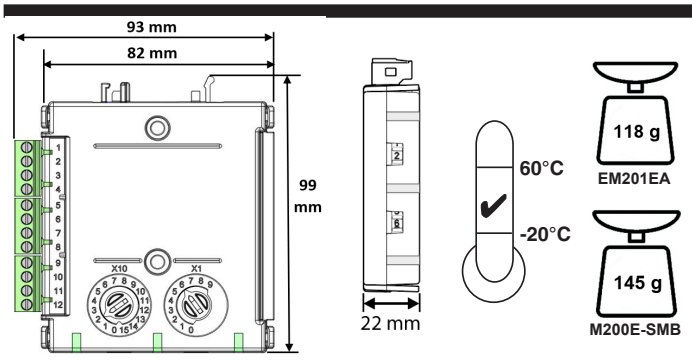
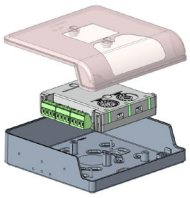


Fig./Abb. 1

1:1 M200E-SMB



1:2 DIN

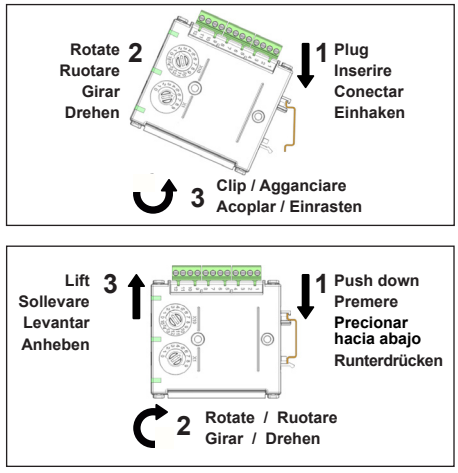


Fig./Abb. 2

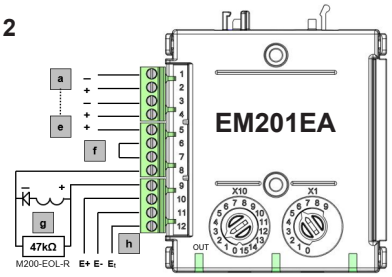
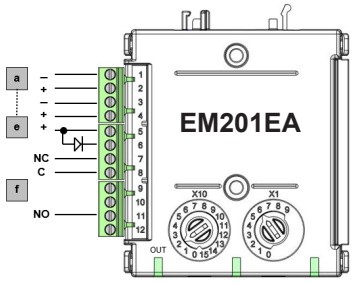


Fig./Abb. 3



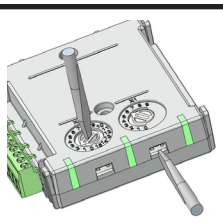


Fig./Abb. 4

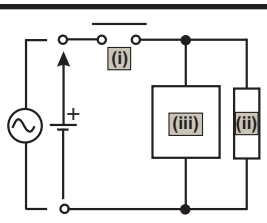


Fig./Abb. 5

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EN INSTALLATION INSTRUCTIONS FOR THE EM201EA OUTPUT MODULE

This manual is intended as a quick reference installation guide. Please refer to the control panel manufacturers installation manual for detailed system information.

The EM200 series of modules are a family of microprocessor controlled interface devices permitting the monitoring and/or control of auxiliary devices. The EM201EA is an output module that allows the control of auxiliary devices such as fire shutters or sounders.

A single tri-colour LED indicates the status of the module. In normal conditions, the LED can be set by command from the control panel to blink green when the module is polled. When the control panel switches the relay to the energised state the LED can be set to continuous green.

SPECIFICATIONS

Operating Voltage Range:	15 to 32VDC (Min 16.5VDC for LED operation)
Maximum Standby Current	160 µA - No Communication
LED Current (Red):	1.5 mA
LED Current (Yellow):	5.5 mA
Isolator features:	see S00-7100
Humidity:	5% to 95% relative humidity (non-condensing)
Maximum Wire Gauge	2.5 mm²

INSTALLATION

Note: These modules must only be connected to control panels using compatible proprietary analogue addressable communication protocols for monitoring and control.

EM200 series modules can be mounted in several ways (See **Figure 1**):

1:1 An M200E-SMB custom low profile surface-mounting box. The SMB Base is affixed to mounting surface, and then the module and cover are screwed onto the base using the two screws supplied. Box dimensions: 132 mm (H) x 137 mm (W) x 40 mm (D)

1:2 The DIN bracket on top allows mounting onto standard 35 mm x 7.5 mm "Top Hat" DIN rail inside a control panel or other suitable enclosure. Install and remove as shown in **Figure 1:2**.

Wiring to all series EM200 modules is via plug in type terminals capable of supporting conductors up to 2.5 mm²

CAUTION

Disconnect loop power before installing modules or sensors.

The module address is selected by means of rotary decade address switches (see **Figure 4**). A screwdriver should be used to rotate the wheels to select the desired address, either from the front or the top of the module. (Note: The number of addresses available will be dependent on panel capability, check the panel documentation for information on this.)

Short Circuit Isolators

All EM200 series modules are provided with short circuit monitoring and isolators on the intelligent loop. If required the isolators may be wired out of the loop to facilitate the use of the modules on high current loaded loops, for example if sounders are used. To achieve this, the loop out positive should be wired to terminal 5 rather than terminal 2. See the relevant wiring diagram for details.

EM201EA WIRING

The EM201EA can be wired for either **Supervised (Figure 2)** or **Non-Supervised (Figure 3)** operation respectively.

CAUTION

Electrostatic Sensitive Device
Observe precautions when handling and making connections

EM201EA Single Output Module with Supervised Output

When the module is used in supervised mode and power is supplied to the module, a switched negative input on terminal 12 can be used to signal an external fault condition, such as a power supply fault. Loss of power is also supervised in this mode such that if the supply voltage falls below 7V a fault indication is achievable. Note that the use of this fault mode is dependant on panel software. Please contact the panel manufacturer for further details.

PSU monitoring is not available when the module switches the output to ***Alarm***.

Wire as follows (see **Figure 2**):

a: **T1** Loop Output -. **b:** **T2** Loop Output +. **c:** **T3** Loop Input -. **d:** **T4** Loop Input +

e: **T5** Loop Output +. 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.

f: To enable output circuit supervision, the link supplied must be fitted across terminals 6 and 7, and the load must be polarised.

h: External power supply max. 32 V DC, min. 7 V DC. In supervised mode, the module monitors the power supply voltage across terminals 10 and 11 to ensure it does not drop below 7V, and also monitors for a switched negative fault signal from the power supply to terminal 12 (optional). If a fault is seen the yellow LED will blink, and a fault may be indicated at the panel. The use of these fault warnings is dependant on panel software; please refer to your panel supplier.

EM201EA Single Output Module with Unsupervised Output

To use the module in unsupervised mode, connect terminal 6 to Loop + (for example terminal 5) through the provided diode with anode on terminal 5 and cathode on terminal 6 and wire as follows (see **Figure 3**):

a: T1 Loop Output -. **b: T2** Loop Output +. **c: T3** Loop Input -. **d: T4** Loop Input +

e: T5 Loop Input +. 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.

f: Relay contact rating: 30V DC, 2A resistive load.

WARNING: SWITCHING INDUCTIVE LOADS

See **Figure 5**. Inductive loads can cause switching surges, which may damage the module relay contacts **(i)**.

To protect the relay contacts, connect a suitable Transient Voltage Suppressor **(iii)** - for example 1N6284CA - across the load **(ii)** as shown in figure 5.

Alternatively, for unsupervised DC applications, fit a diode with a reverse breakdown voltage greater than 10 times the circuit voltage.

SAFETY INFORMATION

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.