![EsiWelma logo - a Navim Group Company]

Sensigas®

EW40 Gas Detection Systems

MED/3.54 (IEC 60092-504) certified

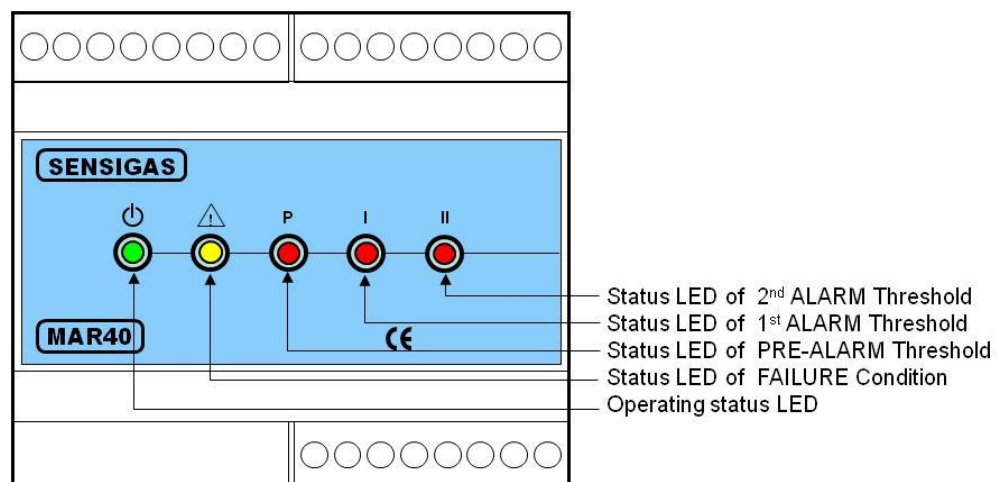# MAR40
Remote Relay Module
for EW40 System

Remote Relay Module connected to UCE40MPA.. via BUS.
12Vdc power supply.
N.4 relays for driving remote devices.
Front panel LEDs for module operating status and relays status indication.

Use

Relay Modules are used to drive signalling and switching devices in the plant (gas cut-off solenoid valves, extractors, fans, hooters, blinkers, etc.).

Four control relays: one associated with module fault status and three associated with the three alarm thresholds from remote sensors or alarm modules.

Ordering

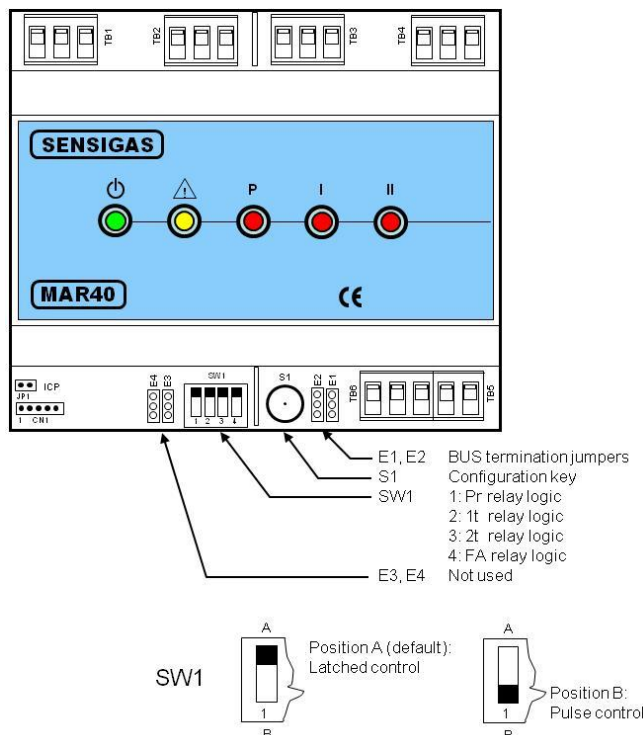When ordering only indicate product code: **MAR40**

Operation

When a sensor detects a gas concentration exceeding one of pre-set thresholds, or alarm module inputs go on, they send the alarm information to the Central Unit, that activates its built-in relay (MR0) and relevant Relay Modules in accordance with pre-set associations. The MAR40 can work under a positive (default) or negative logic, selectable from Central Unit.

Status LED of 2nd ALARM Threshold
Status LED of 1st ALARM Threshold
Status LED of PRE-ALARM Threshold
Status LED of FAILURE Condition
Operating status LED

Technical data	Power supply	10…14Vdc
	Power consumption	2,5W max
	Environmental conditions	
	Transportation	Temperature -20°C... +70°C Humidity < 90% R.H.
	Operation	Temperature -20...+55°C Humidity < 90% R.H., non condensing
	Protection degree	IP20 (IP40 if mounted in electric board)
	Relay outputs	N. 4 SPDT voltage free contact 250Vac 8(5)A for: - Pre-alarm - 1st alarm threshold - 2nd alarm threshold - Fault conditions.
	Operation logic	By UCE40MPA Central Unit: - Positive (factory preset): normally energized relays - Negative (selectable): normally de-energized relays. By local dip switch SW1 for each relay: - Position A (factory preset) = Latched control - Position B: Pulse control (Ton = 1s, Toff = 5s).
	Optical signals	GREEN LED = Module status - Fast blinking = module not configured - Slow blinking = module configured (1 pulse every 5s) - LED can be forced steady on to visually the module in the plant. YELLOW LED = Fault relay status (ON = energized relay, also when the relay module comes in this operating condition). RED LEDs = Alarms Relay status (ON = energized relay)
	User interface and configuration	

E1, E2   BUS termination jumpers
S1   Configuration key
SW1   1: Pr relay logic
        2: 1t relay logic
        3: 2t relay logic
        4: FA relay logic
E3, E4   Not used

SW1

Position A (default): Latched control

Position B: Pulse control

CE Conformity

0474 / xxxx (manufacturing year)
CERTIFICATE n. MED327120CS

| MED Directive / Standards	MED 2014/90/EU / IEC 60092-504
EMC Directive / Standards	EMC 2014/30/EU / EN50270 / EN 61326-1
LVD Directive / Standards	LV 2014/35/EU / EN60730-1
Product Standard	EN60079-29-1

Installation   The MAR40 (RM) relay modules must be mounted on DIN rails, whether they are fitted to a mounting plate or panel mounted.

In the latter case, the detector must be wired before fixing, since it is no longer possible to access the terminal boards after the panel is fixed.

Wall mounting   Prepare and horizontally attach a DIN rail no shorter than 100 mm to the wall. Then place the module at the top of the rail and slowly but firmly push downwards until it clicks into place.
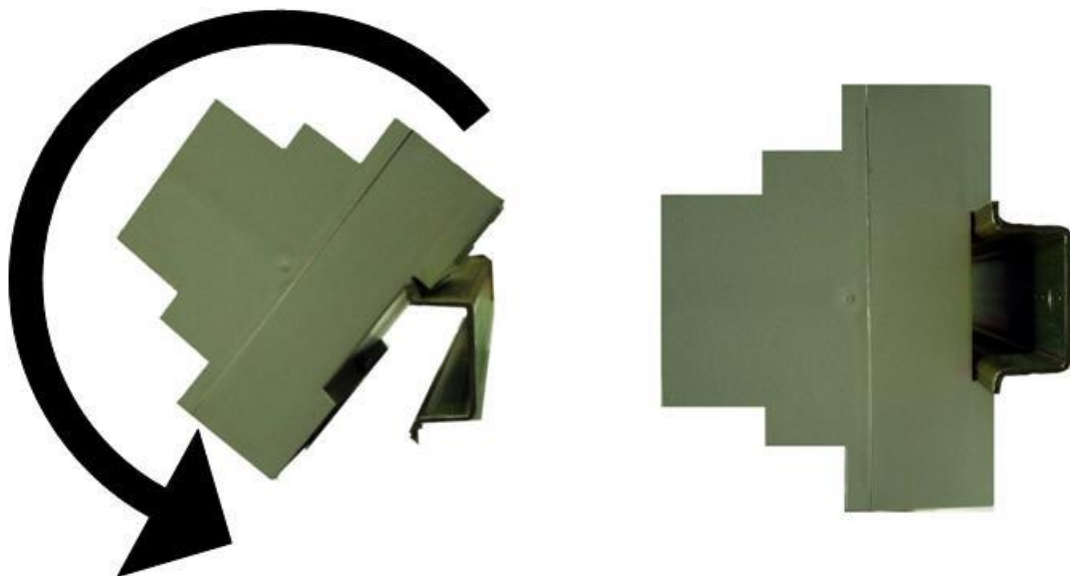

To unhook the devices from the support rail, insert a small screwdriver into the slot of the spring situated at the bottom of the enclosure.

Flush panel mounting

Mount as follows:
- Prepare a piece of DIN rail no shorter than 160 mm with holes on the side to pass through dedicated tie rods
- Knock out a 46x106 mm opening on the front panel of the electric board and drill two holes on the sides for the tie-rods to pass through (line them up with the DIN rail holes)
- Fit the module on to the DIN rail as previously shown
- Use the dedicated tie rods to fix the whole thing to the panel.
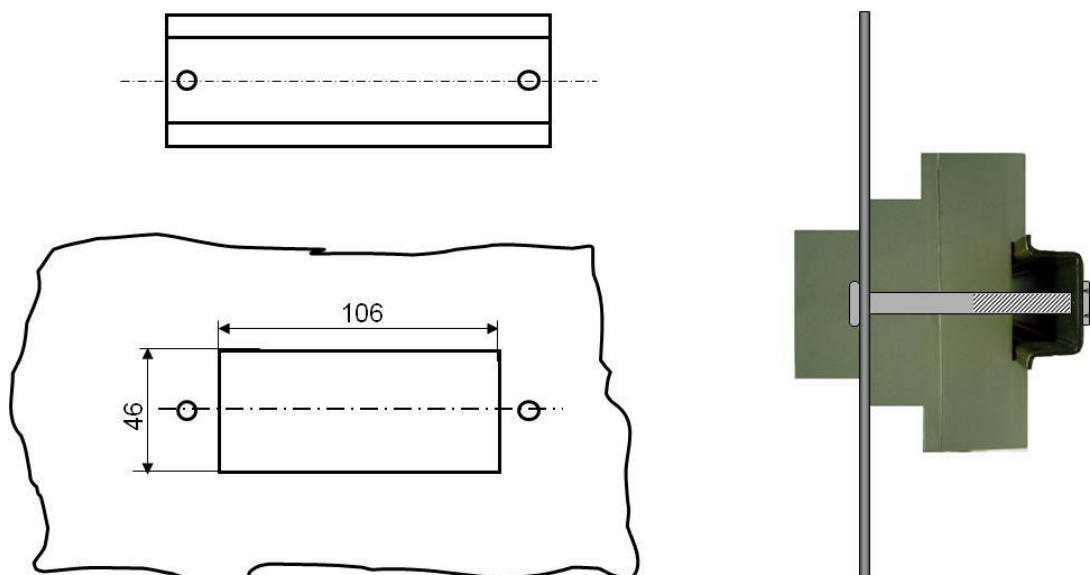
Wiring

The FA relay energises for a fault of a peripheral assigned to it, and for the fault of the module itself.

As regards the connection of the devices, served by the relays of the RM, make the electrical connections after identifying the terminals of the exchange contact (C = Common, NC = Normally Closed contact, NO = Normally Open contact) and after configuring the management mode of each relay (pulsed or steady command) using the SW1 DIP switches.
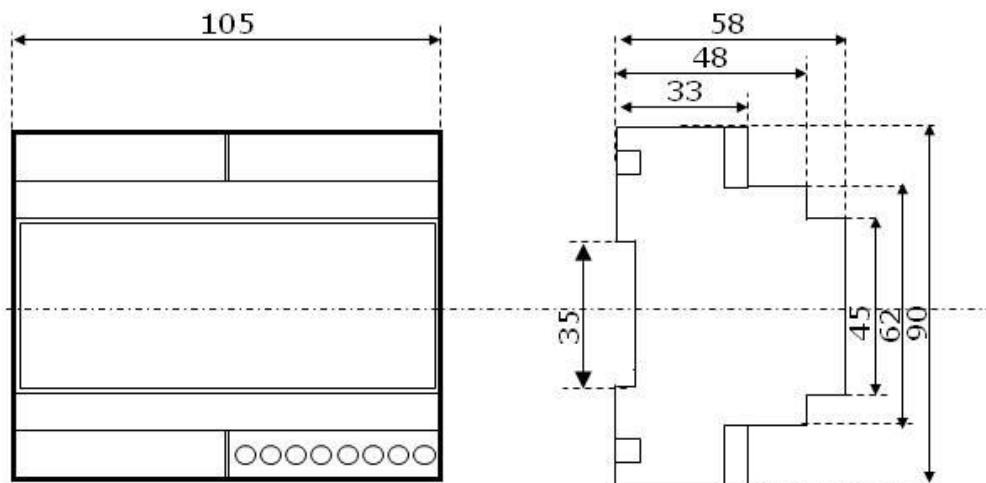
Notes:
There are no limits of the number of Relay Module in the plant:
Extreme plant example: N.1 Gas Detector and N.98 Relay Modules.
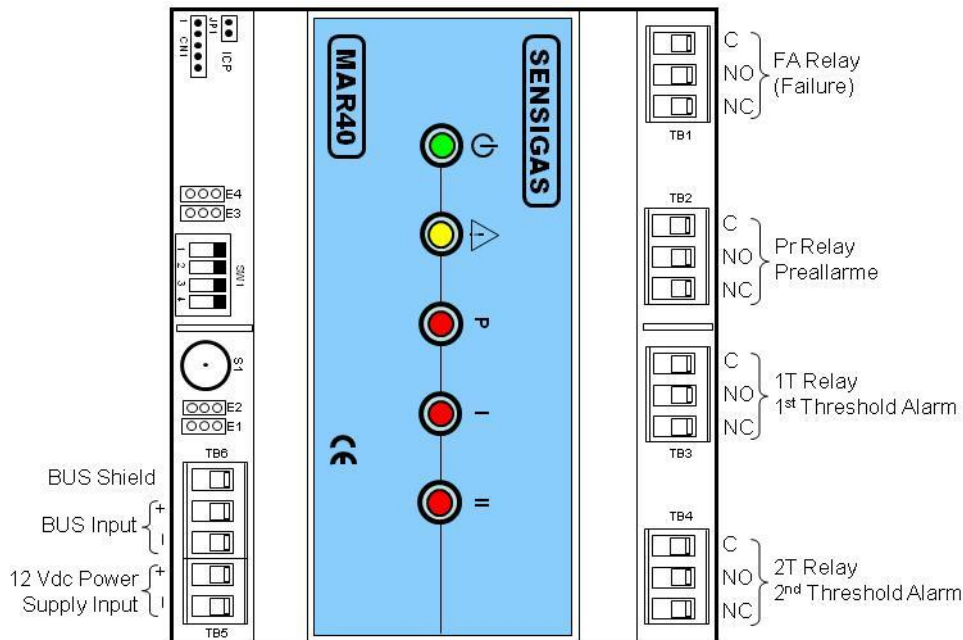
Dimensions and Weight

Weight 0,2Kg / dimensions (in mm) as follow:

Environmental Compatibility and Disposal

This product has been developed and built using materials and processes that take into account the environmental issue. Refer to the following notes for disposal of the product at the end of its life, or in case of its replacement:

- for the purpose of disposal, this product is classified as an electrical and electronic device: do not dispose of it as household waste, in particular as regards the printed circuit
- comply with all local laws in force
- facilitate the reuse of basic materials as much as possible in order to minimize the environmental impact
- use local depots and waste recycling companies, or refer to the supplier or manufacturer, to return used products or to obtain further information on environmental compatibility and waste disposal

The product packaging is reusable. Keep it for possible future use or in case of returning the product to the supplier.

Due to our policy of continuous product improvement, specifications are subject to change without notice.