

SensoIRIS MIO40 IP65

Intelligent analogue addressable fire alarm module with 4 inputs with built-in isolator module

CE 23
1293
DoP No: 042
Tested by EVPU

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EN 54-18:2005
EN 54-18:2005/AC:2007
EN 54-17:2005
EN 54-17:2005/AC:2007

ATTENTION: Read carefully this installation Instructions before installing the device! This manual is subject to change without notice! The addressable module SensoIRIS MIO40 IP65 must be connected only to fire panels supporting TTE communication protocol!

SensoIRIS MIO40 IP65 is an addressable module with 4 analogue inputs. The module is powered on from the fire panel and can be controlled via the communication protocol. The module has a built-in isolator module which when used allows continuous operation of the loop in case of module's failure and without need of using additional isolator modules.

TECHNICAL SPECIFICATIONS

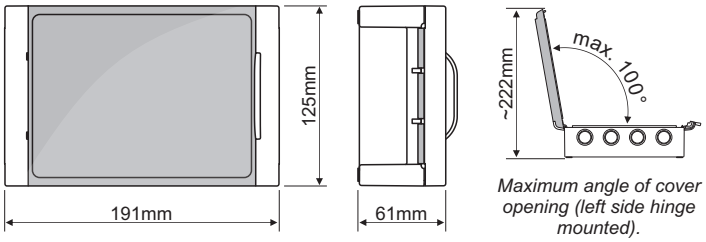
Operating voltage	16 ÷ 32 VDC
Consumption stand-by mode	300µA@27VDC
Nom. current consumption	330µA@27VDC
Current consumption with 1 LED on	4mA
Current consumption with 2 LEDs on	7mA
Communication protocol	TTE
Material - cover/enclosure	PC/ABS
Color - cover/enclosure	black transparent/white

ISOLATOR MODULE TECHNICAL SPECIFICATIONS

Maximum line voltage - Vmax	32V
Nominal line voltage - Vnom	28V
Minimum line voltage - Vmin	16V
Maximum voltage at which the device isolates - Vso max*	7.5V
Minimum voltage at which the device isolates - Vso min*	5.9V
Maximum voltage at which the device reconnects - Vsc max**	6.7V
Minimum voltage at which the device reconnects - Vsc min**	5V
Maximum rated continuous current with the switch - Ic max	0.7A
Maximum rated switching current (e.g. under short circuit) - Is max	1.8A
Maximum leakage current with the switch open (isolated state) - Il max.	16mA
Maximum series impedance with the switch closed - Zc max	0.12Ω@28VDC; 0.15Ω@16VDC

** Note: Switches from closed to open*
*** Note: Switches from open to closed*

! Dimensions



Maximum angle of cover opening (left side hinge mounted).

! Installation

IP65*

** The declared IP65 protection is achieved when using the rubber gasket sealant (factory mounted on the back side of the front cover - see section 5) and IP65 or higher rated cable glands for cable running (not included).*

After ending the installation, the unused openings for cable running must be closed with the provided plastic caps for IP65 complete protection of the box.

-10°C ÷ +60°C
(93±3)%@+40°C

~161g

0.4-2.0mm²

Indoor and Outdoor use

! Included spare parts

x 8 Plastic caps Ø20mm, see section 3.

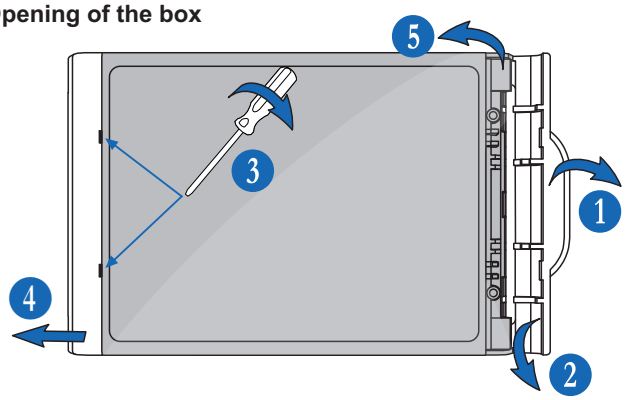
x 4 Securing screws 2.9x13 DIN 6954, see section 6.

x 9 Resistors 56k ±5% 0.25W, see section 8.

x 1 Sticker (transparent base and white symbols), 70x15mm, with description of the module's type:
MIO40 - "4" Inputs / "0" Outputs

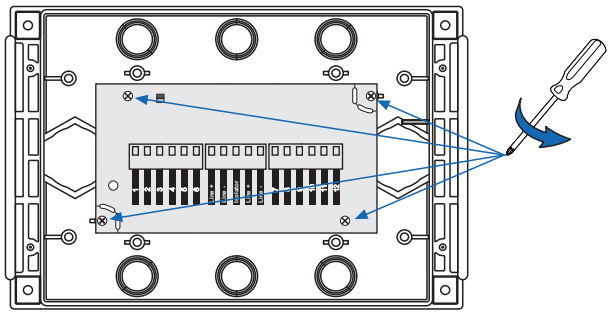
x 1 Rubber sealant, round cross section Ø2.5mm, length ~580mm, factory mounted on the back side of the front cover - see section 5

1 Opening of the box



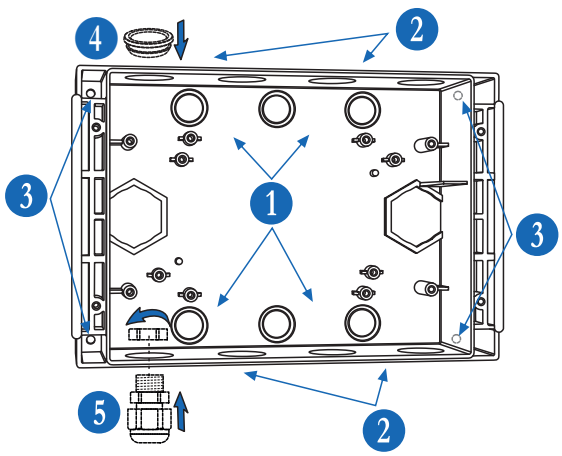
1. Press the handle of the right side hinge and open it.
2. Press lightly downwards to dismantle the hinge from the box bottom.
3. Use a flat screwdriver to open the left side hinge - put it in the openings and rotate.
4. Pull aside the left hinge to dismantle it from the box bottom.
5. Open the front cover and dismantle it from the box bottom.

2 PCB location



It is recommended to dismantle the PCB from the box bottom during installation of the module. Use a suitable crossed-slot screwdriver to undo the fixing screws. Keep the PCB in a safe place to avoid any damages, away from dust and dirt during the installation.

3 Cable openings and wall mounting



1. 6 x M16 knockout openings for running cables (for built-in wiring installation systems). To remove the plastic caps use a suitable drilling or breaking tool. Remove the knockouts just for the openings you are going to use.

2. 8 x M20 openings for running cables (for surface wiring installation systems). The unused openings must be closed with the provided plastic caps. For outdoor installations or mounting in aggressive environments use IP65 or higher rated cable glands for cable running.

3. 4 x Ø3.5mm openings for surface mounting of the box bottom. Use suitable fixing elements according the mounting surface.

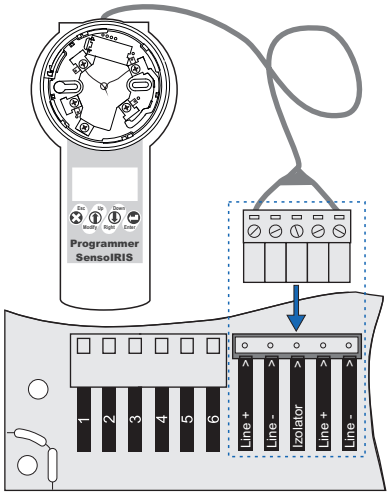
4. Plastic caps for protection of the unused M20 openings*.

5. Optional mounting of IP65 or higher rated cable glands for running cables (not included in the supplied equipment)*.

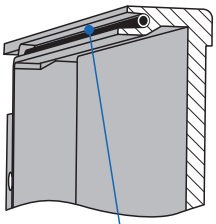
** The picture is illustrative. The number and position of the mounted elements may differ according the type, size and organization of the installation system.*

4 Address programming

Set the module address using SensoIRIS Programmer (use the cable with 5-pin terminal) or directly from the addressable fire panel.
The address must be in the range from 1 to 250.
The set address is one for the entire module.



5 Closing the box



1. Mount the PCB back to the box bottom.

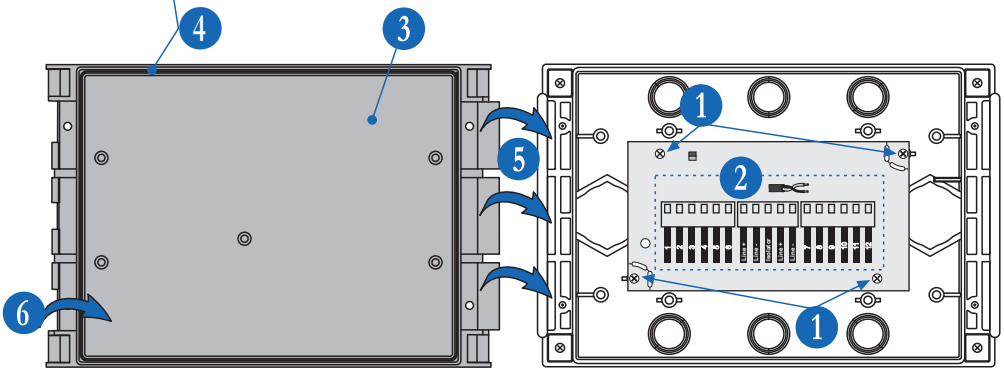
2. Power off the loop circuit! Run the cables to the module's loop and inputs terminals. Connect the cables to the loop and inputs terminals of the module according the shown Connection diagrams.

3. Take the front cover and turn it to the back side as shown.

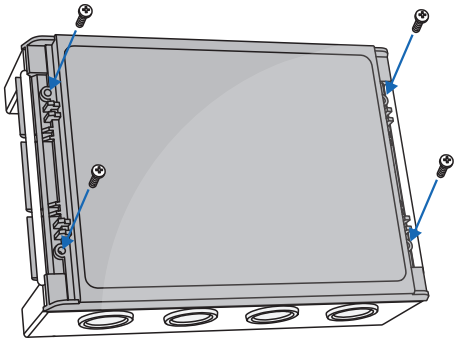
4. Check the rubber sealant for IP65 protection - it must be placed along the whole channel on the back side without any damages or cutting.

5. Attach the front cover to the left side of the box bottom (left hinge junction).

6. Close the front cover to the right and press until a click is heard (right hinge junction).

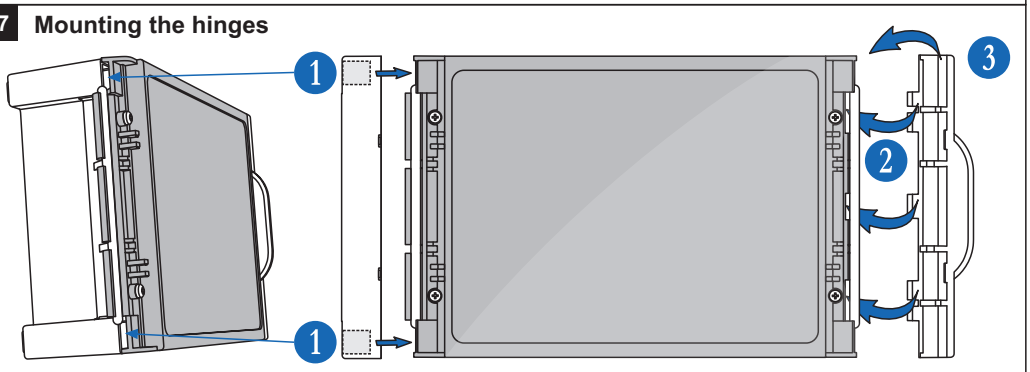


6 Security screws



Use the supplied with the module screws for fixing the front cover to the box bottom.

7 Mounting the hinges



1. Match the ribs on the back side of the left hinge with the cavities formed between the front cover and the bottom. Press the left hinge towards until a click is heard.

2. Attach the spherical ribs of the right hinge to the box bottom as shown.

3. Rotate the right hinge to close and press until a click is heard.

8 Connection diagrams

SensoIRIS MIO40 IP65 is connected and powered directly from the loop line. The module is equipped with a built-in isolator module, which can be used or not, according the requirements of the fire alarm installation.

Attention: The connection of the module to the loop line must be done with switched off main and back-up power supply of the fire alarm panel!

The module is equipped with one 5-position plug terminal for easy connection to the loop line and two 6-position plug terminals for inputs connection. To connect the wires just pick up the plug terminal to dismantle it from the PCB terminal. Make the electrical connections observing the polarity. Then mount back the plug terminal to the PCB terminal.

Status LED Indication

- The RED LED Lights on, when at least one of the inputs is turned on (state ON)
- The YELLOW LED Lights on, when at least one of the inputs is in SHORT or OPEN condition, i.e. there is an input in fault condition
- The RED LED is blinking when communication between the module and fire panel is running on

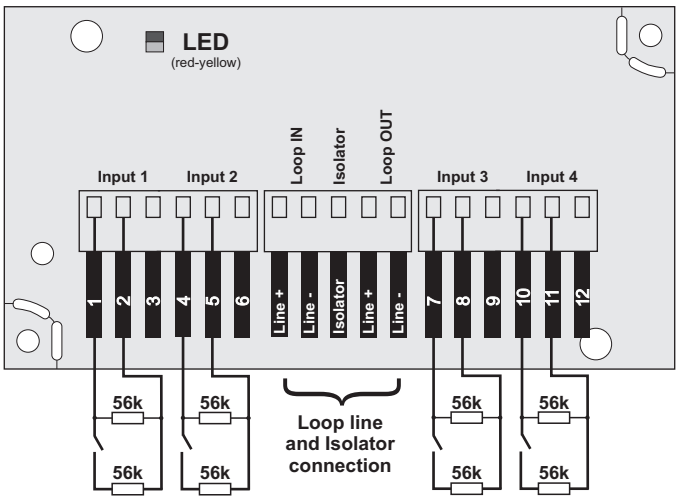
NOTE: *In situations when both the red and yellow LEDs are lighting on the actual color is recognized as orange*

INPUTS Status

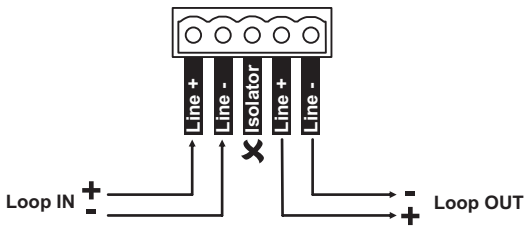
Status	Description	R*	I**
SHORT	Short circuit	<13k	>54μA
ON	Activation	13k - 36k	38μA - 54μA
NORMAL	Stand-by mode	36k - 90k	23μA - 38μA
OPEN	Open circuit	>90k	<23μA

** **R** - resistance between the input and GND*
*** **I** - current at the input*

Connection of the Inputs



Connection to the loop without using the built-in isolator



Connection to the loop with using the built-in isolator

