Installation Quick Guide

Esmi Fire

O2014GB3

Esmi Impresia 2 Inputs/2 Monitored Outputs Module

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.

Esmi Impresia 2 Inputs/2 Monitored Outputs Module

Esmi Impresia 2 Input/2 Monitored Outputs Module (FFS06741008) is an addressable input-output module, designed for installing in addressable fire alarm systems with Esmi ELC loop controller supporting Schneider Electric communication protocol. The module monitors two analogue input signals and controls two relay outputs. The outputs can be set to be monitored or non-monitored via jumpers on the module's PCB. Approvals EN 54-18/17 for indoor and outdoor use. The address setting is done by the panel, QR code or handheld addressing device. The address range is 1-250.
For more technical information visit www.se.com.

DANGER

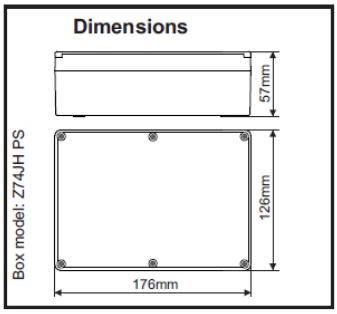
HAZARD OF ELECTRIC SHOCK
Ensure that the correct terminals are used for the loop and switched voltage connections. Do not exceed the relay ratings. High voltages may be present on the relay terminals. Always turn off all power supplying this device before working inside the device enclosure.
Failure to follow these instructions will result in death or serious injury.

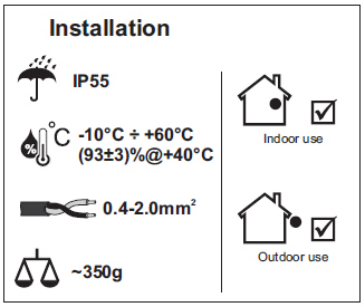
Installation Instructions

Note: Collect the QR code stickers from the devices if QR codes are used for addressing of the devices.

1. Choose the proper place for installation of the module.
2. Turn the power off the loop circuit before installing the module.
3. Set the module address using programmer or directly from addressable fire panel.
4. Set the operation mode of the outputs:
   Monitored output (set by default) – at terminal Jmp1/ Jmp2 is set a jumper*.
   Non-monitored output – no jumper* is set at terminal Jmp1/ Jmp2.
5. Run the cables to the module terminals.
6. Connect the cables to the loop and input-output terminals of the module according the shown connection diagrams.
7. Power on the module.
8. Test the module for proper operation and LED indication.
9. Close the cover of the plastic box.

** 3-position jumper-block.* ***Note:*** *The correct position of the jumper is when all terminal ends are covered! The incorrect position of the jumper may affect on the operation of the module and cause trouble fault.*





Technical Specifications

Operating voltage . . . . . 16 ÷ 32VDC
Outputs, electrical characteristics (max) . . . . . DC 30V/2A; AC 125V/0.5A
Consumption - two non-monitored outputs:
- Nom. current consumption . . . . . .< 0.87mA@27VDC
- Current consumption with 1 LED on. 3.9mA
- Current consumption with 2 LEDs on. 7.2mA
Consumption - two monitored outputs:
- Nom. current consumption . . . . . .< 1.03mA@27VDC
- Current consumption with 1 LED on. 4.15mA
- Current consumption with 2 LEDs on. 7.2mA
Material (plastic) . . . . . .PS
Color . . . . . Grey
EOL. 56k
Supported communication protocol . . . . . Esmi ELC

Isolator Module Technical Specifications

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

Notes:
** Switches from closed to open*
*** Switches from open to closed*

CE 21
1293
DoP No: DP20024
Made in Bulgaria
EN 54-18:2005
EN 54-18:2005/AC:2007
EN 54-17:2005
EN 54-17:2005/AC:2007

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Technical Specifications for Monitored Output

External power supply (Uext) . . . . . 18 ÷ 30VDC
Monitored (potential) output voltage . . . . . Uext - 0.5V
Max. current consumption at activation 2A
Max. switching power 60W, 62.5VA

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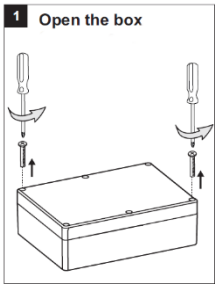
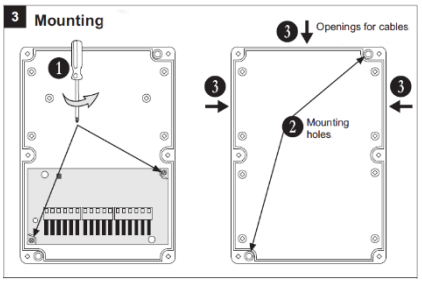


2. Device will be software addressed from Fire panel. The address must be in the range from 1 to 250.

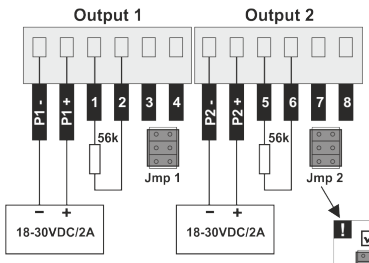


3 Connection diagrams

a) Outputs connection

ATTENTION: The monitored outputs mode is set by default - at terminals Jmp1 and Jmp2 are set jumpers. Every setting or removing of the jumpers must be provided with POWERING OFF the module from the loop line and external power supply.

MONITORED OUTPUTS MODE



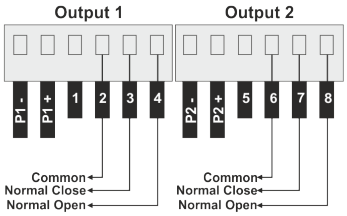
Terminals		Description
OUT 1	OUT 2	
P1 -	P2 -	Ext. power supply "-"
P1 +	P2 +	Ext. power supply "+"
1	5	Monitored output "-" *
2	6	Monitored output "+" *
3, 4	7, 8	Not used

** A 56k resistor must be connected at the end of the output circuit.*

***Note:** You can use also one external power supply unit for powering of both monitored outputs, with 4A or higher max. current consumption at activation.*

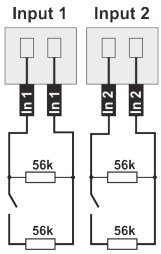
NON-MONITORED OUTPUTS MODE

ATTENTION: NO JUMPERS SET TO Jmp1 and Jmp 2 terminals.



Terminals		Description
OUT 1	OUT 2	
2	6	Common
3	7	Normal close relay contact
4	8	Normal open relay contact
P1 -, P1 +, 1	P2 -, P2 +, 5	Not used

b) Inputs connection

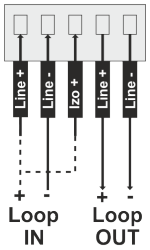


***In 1** - Terminals for INPUT 1*

***In 2** - Terminals for INPUT 2*

Use the 56k balancing resistors from the spare parts kit for realizing connection of control devices to the module inputs.

c) Loop connection



***Line +** - Connect the positive loop line/*

***Line -** - Connect the negative loop line*

***Izo +** - When you use the integrated short circuit isolation module connect one of the "**+Loop**" loop lead to the "**Izo**" terminal of the module.*

OUTPUTS Status

Status	Description	R
OPEN	Open circuit	>105k
NORMAL	Normal	4.7k < R < 105k
SHORT*	Short circuit	< 4.7k
Ext. power supply fault	Missing or low external power supply	-
Type error, Output x	Wrong output type	-

** **Attention:** In case of a short circuit at energized monitored output, the power of the output is off until the normal condition is restored.*

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*

Monitored output				
Polarity	Normal	Normal	Inverted	Inverted
State	OFF	ON	OFF	ON
Voltage at the output	No	Yes	Yes	No
Red LED	OFF	ON	OFF	ON

2. INPUTS

Status		Red
INPUT 1	INPUT 2	LED
Normal	Normal	OFF
Normal	ON	ON
ON	Normal	ON
ON	ON	ON

Status		Yellow
INPUT 1	INPUT 2	LED
Normal/ON	Normal/ON	OFF
Short/Open	Normal/ON	ON
Normal/ON	Short/Open	ON
Short/Open	Short/Open	ON

LED Indication

The yellow LED is lighting on in case of output fault: Open, Short circuit, External power supply fault, Type error-Output x.
The red LED is lighting on in case of output activation.

Note: The monitored outputs could be programmed for operation in Normal or Inverted mode from the Esmi ELC loop controller. When the Inverted operation mode is set for a monitored output, the red LED indication will follow the output logical state. This means, that when the output is in Inverted mode and it is activated - no voltage presence on the terminals 1 and 2 (Output 1), and 5 and 6 (Output 2) - then the red LED will lights ON, because the logical function of the output is "TRUE" (activated).

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