1 conventional input module

TFMC1

1 LOGICAL UNIT

1 INPUT CONVENTIONAL DETECTORS

ABS V0 BOX

Addressable module consisting of a supervised physical/logic unit: 1 input for conventional sensors.
Service input for conventional sensors power supply. Opto-isolated conventional sensors power supply.
Programmable functions: Alert signal. 1 LED indicating input state.
Full RSC® management of the device: setup, remote management and control of all functional parameters.
Line splitter with dual insulator. Connection on LOOP.
Proprietary high speed communication protocol ***FIRE-SPEED***.
Surface or omega DIN rail mounting (accessory TFDIN).
Degree of protection IP40. ABS V0 enclosure. Dimensions (L x H x P) 112 x 78 x 25mm.
White. **EN 54-18**: 2005/AC: 2007 - **EN 54-17**: 2005.
Homologation certificate 1293-CPR–0492.

Item no. TF4TFMC1

OBLIGATIONS AND NOTICES

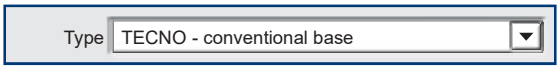
The module TFMC1 can be used only if connected to a detection loop of the Tecnofire control units models: TFA1-298, TFA2-596, TFA4-1192.
During design and installation, it is necessary to observe and apply the applicable regulations.

LOGIC UNITS

The module consists of a functional physical/logic unit: 1 input. The logic unit is assigned a corresponding ID address.

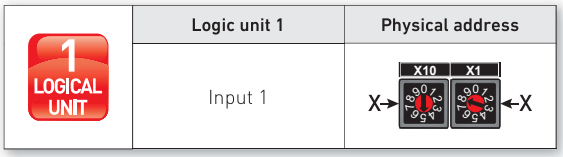
NOTES ON SETUP

The module must be set in the sensor category as Type "TECNO - conventional base" but being an interface module the range of addresses used for it is from 1 to 99.



ADDRESSING

The physical address for module identification is programmed by two decimal rotary switches located under the top cover. The two switches enable to set the two digits which make up the physical address number of the device. The switches are marked by writings which define the position of the digit to set: X10 for tens and X1 for units. The numeric range of the allowed addresses is 01 to 99.
Note: setting the address 00 excludes the module from operation, yet it draws power from the loop.



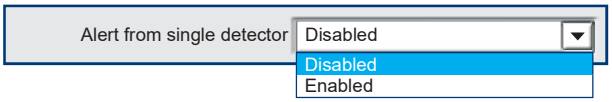
1 conventional input module

INPUT USE MODE

The addressable module TFMC1 manages a line of conventional detectors composed of a maximum of 31 units, the detector line must be terminated with a 3K9 ohm resistance placed in parallel to the last detector.
The electrical interface features are given in the technical data table.
Attention: the power supply of the conventional sensors is optically isolated from the loop.

ALERT FROM SINGLE DETECTOR

According to the setup, the detection line can only report Alarm or Alert + Alarm.
The Alert function can be disabled.
With the function enabled, the alarm detection by a single detector generates the alert signal, the detection by two or more detectors generates the alarm signal.
With the function disabled, the alert signal is not generated.
Warning - The function "alert by single detector" can only be used with Tecnofire conventional detectors.

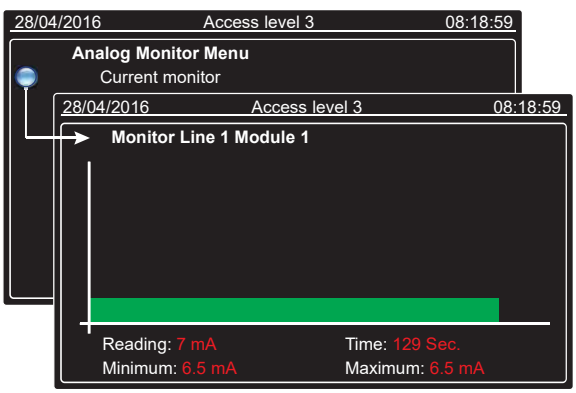


LINE SPLITTER

The module is provided with a line splitter with dual breaker. In case of short circuit of the Loop line, the splitter activates, switching off the faulty section of the line, safeguarding the correct operation of the devices connected upstream and downstream. The activation of the splitter ensures the correct operation of the module. At the same time the detection unit is sent the faulty notice "Splitter open".

DIAGNOSTIC FUNCTIONS

The control unit manages a set of diagnostic functions specialized for the different types of module. The diagnostic functions that are available for the interface module for conventional detectors allow to:
- Physically identify the module.
- Identify the type of module, the HW and FW version.
- Measure the electric data of operation.
- Monitor the current drawn by the line sensors.
- Read the statistics from the communication monitor



Diagnostic functions of the module	
Identification	Turns on the Leds of the device for its identification
Self declaration	Self declaration of the module type
Hardware version	Self declaration of the hardware version
Firmware version	Self declaration of the firmware version
Level measurement	Measurement of the electric values of operation
Analog monitor	Current drawn by the line of the conventional sensors
Statistics	Statistic/functional values related to communication
Maintenance	Feature not available

Draw
Supply level
Zero level
Draw level
Line resistance

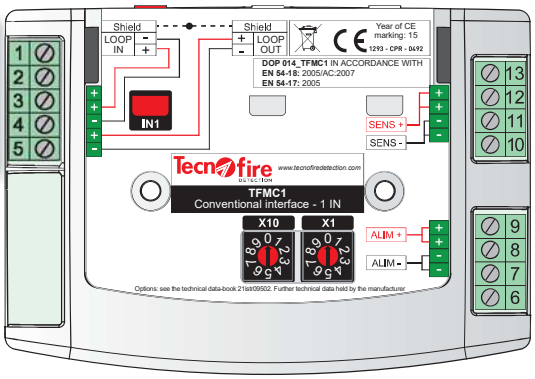
Frames sent
Errors
Success Rate
Error rate
Latency time

TFMC1

1 conventional input module

EQUIPMENT

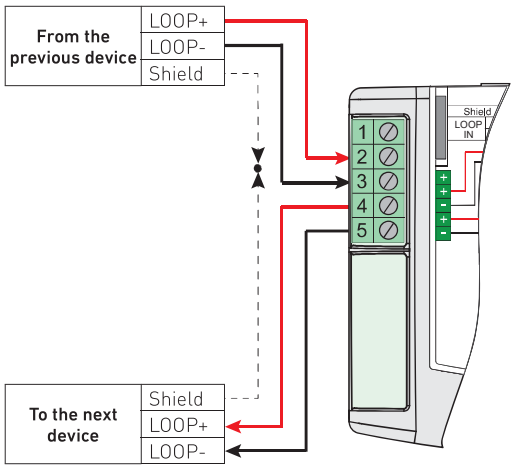
1	LOOP + input (no breaker)
2	LOOP+ input
3	LOOP- input
4	LOOP+ output
5	LOOP- output



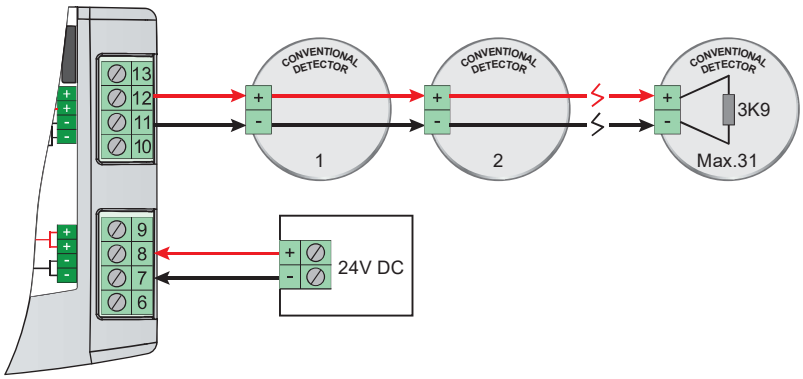
+ detector line power supply	13
+ detector line power supply	12
- detector line power supply	11
- detector line power supply	10
+ supply for load	9
+ supply for load	8
- supply for load	7
- supply for load	6

IN1	LED indicating input state	Flashing in standby
		Lit when signalling

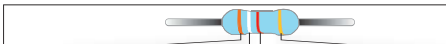
CONNECTION TO THE LOOP



INPUT CONNECTION



NB The connection line of conventional detectors must be terminated with a 3K9 ohm resistance, connected in parallel to the power supply of the last detector.
The maximum number of detectors connectable to the line is 31 units



	1st colour	2nd colour	3rd colour	Tolerance
3K9	Orange	White	Red	Gold

TFMC1

1 conventional input module

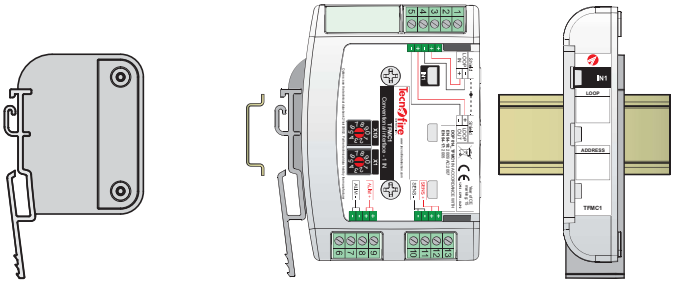
Moduli indirizzati - Addressable peripheral devices - Périphériques adressables - Periféricos direccionables

DEDICATED ACCESSORIES

TFDIN

Support accessory for mounting the module on omega DIN rail.

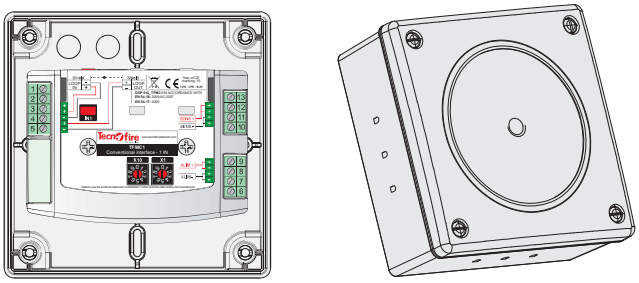
Code: TF5TFDIN



TFBOX-M

Junction box with mounting footprints to house the interface modules. ABS V0 enclosure.
Dimensions (L x H x P) 136 x 136 x 63mm.
White.

Code: TF5TFBOXM



TFMC1 - Technical data and functions

Overview	Device Name	**TFMC1**
	Description	**Module 1 input for conventional detectors**
	Communication protocol	**FIRE-SPEED**
	Addressing	**2 rotary switches**
Setup	Polling frequency	**2 levels**
	Transmission LED	**Excludable signal**
	Alert from single detector	**Programmable**
Electrical specifications	Power supply	**From loop**
	Rated Voltage	**24V DC**
	Operating voltage	**18V...30V DC**
	Draw (idle)	**450µA @ 24V DC when non transmitting**
	Power requirements in alarm	**2.5mA @ 24V DC**
	Line splitter	**Intelligent breaker (without loss of devices)**
Interface line features	External power supply	**Range from 18 to 30V DC**
	Power supply output SENS+	**Max. total draw 500mA**
	Line draw (standby)	**Max. 18mA**
	Sensors line available current	**Imax. 70mA ±5mA**
Physical specifications	Operating temperature:	**-15°C...+70°C**
	Relative Humidity	**10% ... 93% (non-condensing)**
	Protection Degree	**IP40**
	Enclosure	**ABS V0**
	Dimensions (L x H x D)	**112 x 78 x 25mm**
	Weight	**165g**
Conformity	Standards	**EN 54-18: 2005/AC: 2007 - EN 54-17: 2005**
	Approval certificate	**1293-CPR-0492**
	Year of CE marking	**15**
	Number of the declaration of performance	**014_TFMC1**
	Certification body	**EVPU**

N.B. The declarations of conformity and performance can be found at: www.tecnofiredetection.com

Via Ciriè, 38 - 10099 - San Mauro T. se - Torino (Italy) - Production Unit: Strada del Cascinotto, 139/54 10156 Torino (Italy)
Tel. +39 011 22 35 410 - Fax +39 011 27 35 590 - info@tecnofiredetection.com - www.tecnofiredetection.com

21ISTR09924 - DATA SHEET - REL. 1.0