1 input module

TFM10

1 LOGICAL UNIT | 1 INPUT | ABS V0 BOX

Addressable module consisting of a supervised physical/logic unit: 1 input.
Programmable functions - 4 operation criteria: generates alarm, generates acknowledgement, generates reset, none. 2 input connection modes: Alarm or Fault. Input state repeater output. 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 mounting.
Degree of protection IP40. ABS V0 enclosure.
Dimensions (L x H x P) 69.5 x 49.8 x 17mm. (the dimension L may be reduced to 49.8 mm.). White.
EN 54-18: 2005/AC: 2007 - **EN 54-17**: 2005. Homologation certificate 1293-CPR-0490.

Item no. TF4TFM10

OBLIGATIONS AND NOTICES

The module TFM10 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.

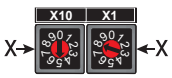
LOGIC UNITS

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

ADDRESSING

The physical address for module identification is set using two decimal rotary switches located frontally at the top of the enclosure. The two rotary switches allow to set the two digits that make up the device address number. 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 LOGICAL UNIT

Logic unit 1	Physical address
Input 1	

1 input module

INPUT USE MODE

The module has 1 input to which it is possible to assign one of the four operational criteria:
Generates alarm - The activation of the input generates an alarm.
Generates acknowledgement - The activation of the input acknowledges the ongoing event.
Generates reset - The activation of the input causes system reset.
None - The activation of the input does not cause any direct action; its activation can be used in an operational formula.

The connection of the input can be made in either Generate Alarm mode or Balanced (Fault) mode.
The input can take the functional state of standby or signalling, the input state is displayed using the dedicated LED. The module has an input state repeater output with which it is possible to control a remote repeater.

Inputs use mode	Operational criteria			
	Generates alarm	Generates acknowledgement	Generates reset	None
	Connection mode			
	Generates alarm		Balanced (faulty)	

Connection mode "Generates alarm" functional states
Fault (short circuit)
Alarm
Standby
Fault (open line)

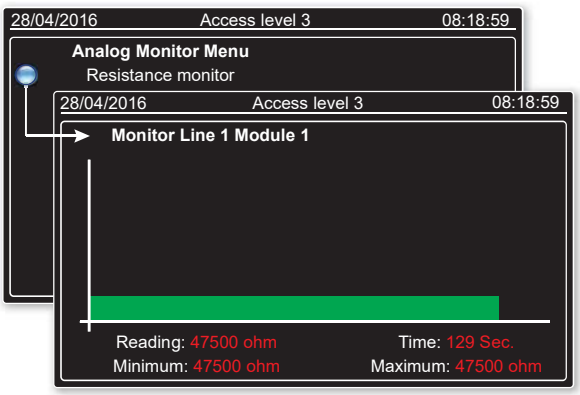
"Balanced (Fault)" connection mode functional states
Fault (short circuit)
Generic fault
Standby
Fault (open line)

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 input modules allow to:
- Physically identify the module.
- Identify the type of module, the HW and FW version.
- Measure the electric data of operation.
- Monitor the termination resistance value.
- Read the statistics from the communication monitor



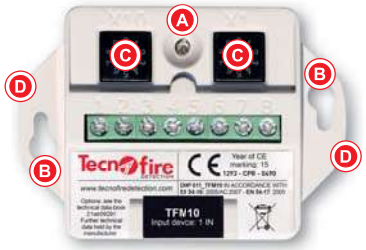
Diagnostic functions of the module	
Identification	Turns on the Leds of the device for its identification
Self declaration	Self declaration of the module type
Hardware version	Self declaration of the hardware version
Firmware version	Self declaration of the firmware version
Level measurement	Measurement of the electric values of operation
Analog monitor	Monitor of line termination resistance value
Statistics	Statistic/functional values related to communication

Frames sent
Errors
Success Rate
Error rate
Latency time

Draw
Supply level
Zero level
Draw level
Line resistance

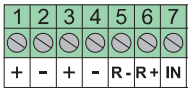
1 input module

OVERVIEW

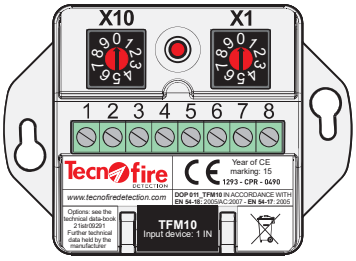


A	LED indicating input state	Flashing in standby
		Lit when signalling
B	Fastening slots	
C	Addressing switch	
D	Breakable fixing lugs	

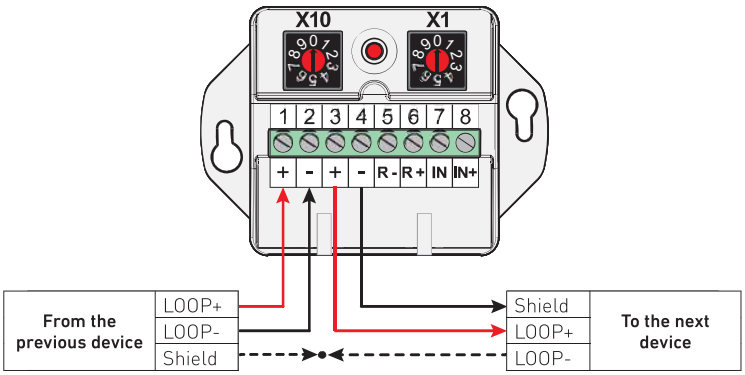
TERMINAL PANEL DESCRIPTION



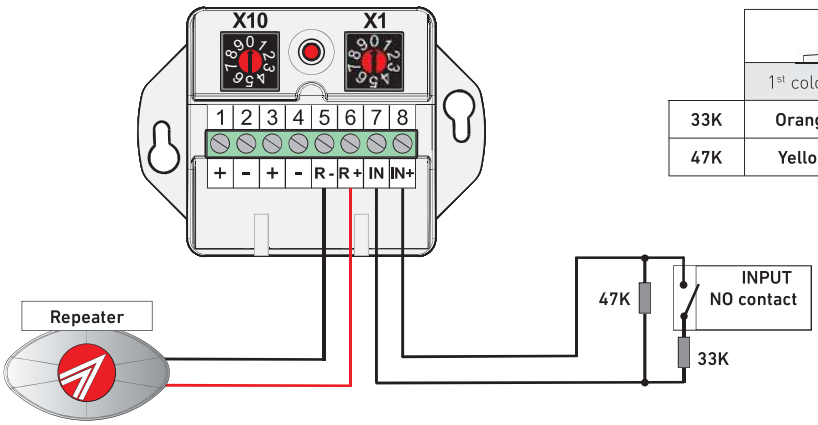
1	LOOP+ input
2	LOOP- input
3	LOOP+ output
4	LOOP- output
5	- repeater reference
6	+ repeater power supply
7	INPUT
8	+ INPUT reference

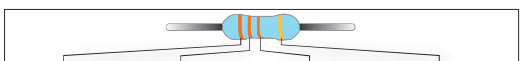


CONNECTION TO THE LOOP



INPUT CONNECTION





	1st colour	2nd colour	3rd colour	Tolerance
33K	Orange	Orange	Orange	Gold
47K	Yellow	Violet	Orange	Gold

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

TFM10

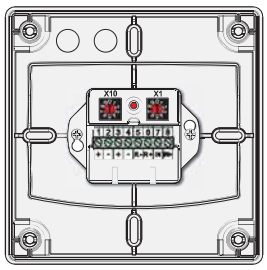
1 input module

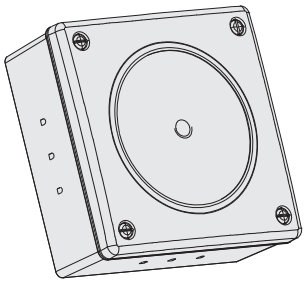
Moduli indirizzati - Addressable peripheral devices - Périphériques adressables - Periféricos direccionables

DEDICATED ACCESSORIES

TFRIP-R	Red luminous repeater
Code: TF3TFRIPR	
TFRIP-V	Green luminous repeater
Code: TF3TFRIPV	
TFRIP-G	Yellow luminous repeater
Code: TF3TFRIPG	

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





TFM10 - Technical data and functions

Overview	Device Name	**TFM10**
	Description	**1 input module**
	Communication protocol	***FIRE-SPEED***
	Addressing	**2 rotary switches**
Setup	Polling frequency	**2 levels**
	Transmission LED	**Excludable signal**
	Operational criteria	**4**
	Type of inputs	**Alarm or fault**
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	**2.3mA @ 24V DC**
	Output for repeater	**9.4V DC 3mA (protected)**
	Line splitter	**Intelligent breaker (without loss of devices)**
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)	**69.5 (or 49.8) x 49.8 x 17mm**
	Weight	**33g**
Conformity	Standards	**EN 54-18: 2005/AC: 2007 - EN 54-17: 2005**
	Approval certificate	**1293-CPR-0490**
	Year of CE marking	**15**
	Number of the declaration of performance	**011_TFM10**
	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

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