

1 input module



TFM10



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

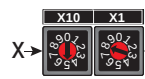
The module TFM10 can be used only if connected to a detection loop of the Tecnofire control units models: TFA1-298, TFA2-596, TFA4-1192.
 During design and installation, it is necessary to observe and apply the applicable regulations.

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	

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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)

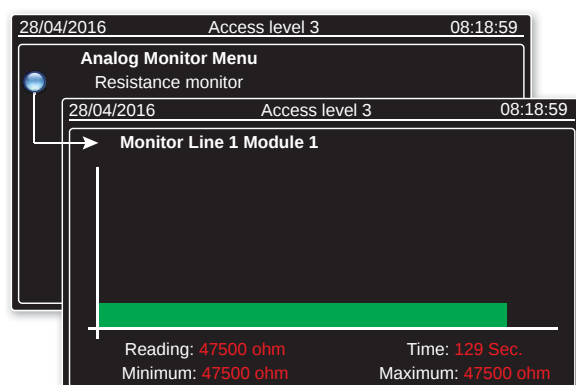
LINE SPLITTER

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

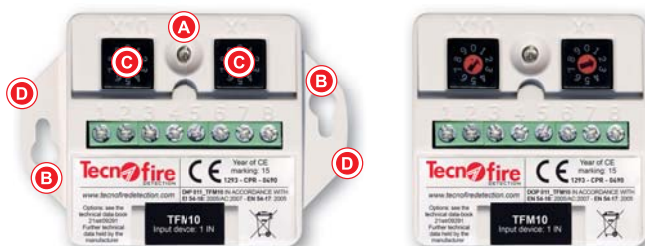


Diagnostic functions of the module	
Identification	Turns on the Leds of the device for its identification
Self declaration	Self declaration of the module type
Hardware version	Self declaration of the hardware version
Firmware version	Self declaration of the firmware version
Level measurement	Measurement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

Draw	Frames sent
Supply level	Errors
Zero level	Success Rate
Draw level	Error rate
Line resistance	Latency time

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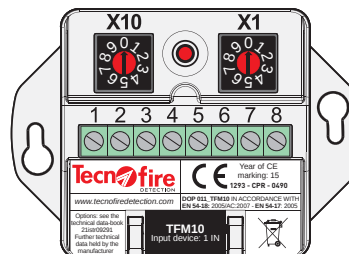
OVERVIEW



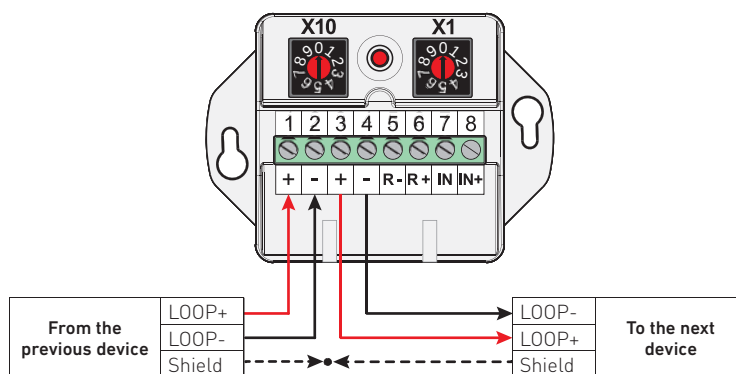
A	LED indicating input state	Flashing in standby
		Lit when signalling
B	Fastening slots	
C	Addressing switch	
D	Breakable fixing lugs	

TERMINAL PANEL DESCRIPTION

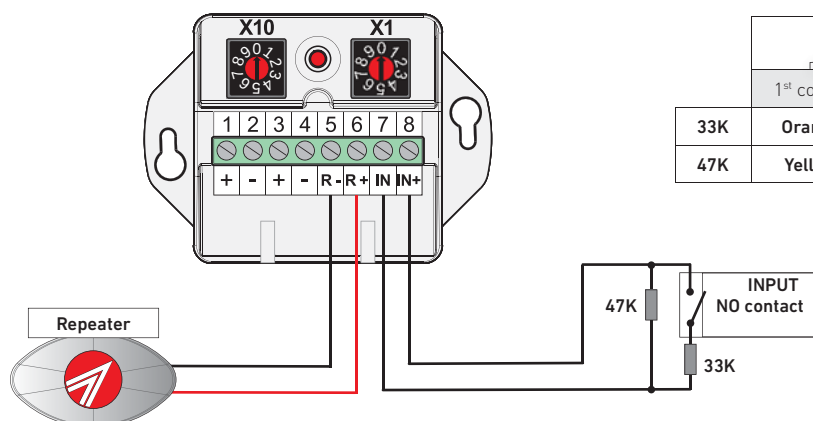
	1	LOOP+ input
	2	LOOP- input
	3	LOOP+ output
	4	LOOP- output
	5	- repeater reference
	6	+ repeater power supply
	7	INPUT
	8	+ INPUT reference



CONNECTION TO THE LOOP



INPUT CONNECTION



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

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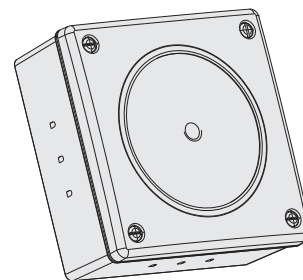
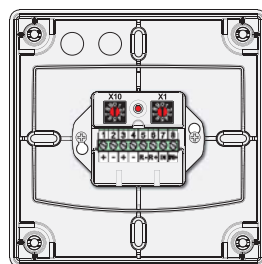
DEDICATED ACCESSORIES

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)
Physical specifications	Line splitter	Intelligent breaker (without loss of devices)
	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
Conformity	Weight	33g
	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.tecnofireddetection.com