

2 loops control unit



OVERVIEW

TFA2-596

The addressable fire alarm control unit TFA2-596 is designed and built in compliance with the standards EN 54-2-A1:2006 (main unit) and EN 54-4-A2:2006 (supply section).

The design was implemented as part of a ISO9001 quality management system that involves the application of a set of rules for project planning and plans all subsequent test and control activities necessary for the production of all the items that make up the above control units.

All the components of the equipment were selected for the intended purposes. Their specifications are met when the environmental conditions outside the enclosure correspond to those specified for the class 3K5 of standard EN 60721-3-3:1995.

Indoor use: the control unit should be installed in a location protected from the inclemency of the weather. Temperature and humidity control is not required in the installation environments.

item no. IFIIFA2596-Ur

PHYSICAL STRUCTURE

Addressable fire alarm control unit, constituted by a modular structure composed of:

- Metal cabinet which can hold two 12V-12Ah batteries.
- CPU controller card that integrates the user interface consisting of display, and management and programming keyboard.
- Connection card on which the connection infrastructures of detection loops, system bus, outputs and Ethernet node are located.
- Fly-back switching power supply 24V 5A (ALSW285PFC

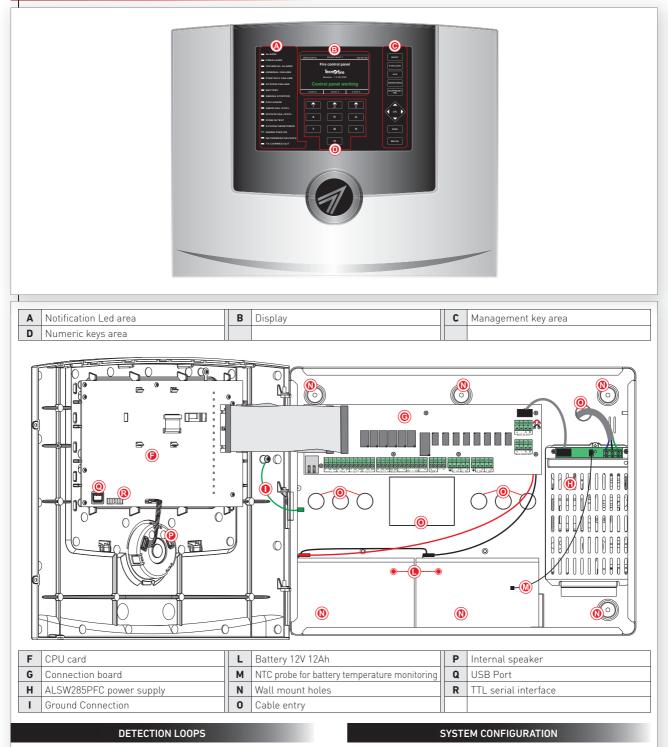
LOGICAL STRUCTURE

300 logic detection zones freely customizable as Fire or technological zones. Automatic management of the Default Zone. 100 virtual logical Zones, freely assembled, which can be subjected to Boolean Formulas for functional conditioning of the system.

TFA2-596

Tecn fire

Centrale 2 Loop



Each detection loop can manage 199 sensors and 99 modules. The programming of the devices connected on the LOOP is facilitated by the self-learning function. Device polling speed with full load Loop of less than 1 sec. For privileged devices, it is possible to set a higher frequency.

SIGNALLING OUTPUTS

The control unit is equipped with dedicated mandatory signalling outputs: Alarm, Siren, Fault and Reset and with freely programmable signalling outputs: 3 relay outputs and 3 open collectors outputs.

The control unit can be programmed in Local, Master or Slave mode.

Local mode allows to realize a simple system consisting of a single control unit.

The Master and Slave modes allow to create complex systems, consisting of multiple control units. These systems include a Master control unit which can control up to 15 Slave control units.

AUTOMATED CONTROLS

The system automatically performs functions based on the programming of: System timers, 4-year calendar, 32 time ranges, 200 Boolean formulas.

2 loops control unit

USER INTERFACE

Multi-purpose user interface consisting of: colour graphic display, 16 signalling LEDs, extended programming and management system keyboard, speech synthesis with customizable dictionary and speaker dedicated to sound alerts. The intensity of the sound alerts can be programmed,

The graphic display of the source of the signalled events. The graphic display of the control unit uses a clear iconography, the information is displayed in hierarchical order. The use of colours and the variable size of the fonts highlight the alerts according to their relevance. The exposure of the alarm information structured on multiple levels of detail, enables a rapid classification and a clear identification of the source of the alarm, in cases of obvious danger, data is integrated in the display of the alarm plan related to the event.

ACCESS LEVELS

Access to basic functions and system programming regulated by passwords which control the access levels to the system. The control unit recognizes 4 access levels. The first access level is not subject to access password, it enables to acknowledge the alarm and examine the associated detail information. The access levels 2-User, 3-Installer and

4-Manufacturer, are regulated by password and provide access, in accordance with the different skills, to functional information and programming of the system.

ETHERNET HUB

The Ethernet connections are managed by the integrated 10 Mbit to 100 Mbit standard 803.2 half/full duplex Ethernet interface.

The interface uses four communication channels dedicated to specific functions:

- Channel 1 LOCAL SERVER TECNOALARM Server channel for LAN connection
- Channel 2 REMOTE SERVER TECNOALARM Server channel for WAN or VPN connection
- Channel 3 TECNOSERVER TECNOALARM Client channel for the notification of events using 8 channels. Each channel notifies the programmed IP address of the events. The communication is built using the protocol associated to the channel.
- Channel 4 CALL BACK TECNOALARM Client channel for call back and test call communications

The communication channels support 128 bit AES encryption.

Access to the Server channels is governed by a White list. A programmable test call function is available.

MANAGEMENT SOFTWARE

The system can be fully managed, locally or remotely, by software modules that allow programming and management through LAN or WAN connection.

MONITORED SYSTEM MODE

The fire alarm system provides a "Monitored System" mode, which can be operated on condition that the system is under the direct control of authorized personnel. The activation and deactivation of this operating mode is subject to the recognition of a level 2 password. Functioning of the Monitored System mode can be limited by time periods, so that the operating mode can only be activated during the programmed period of time and is deactivated automatically on expiry of it. In the Monitored System mode, the system has a different mode of reporting alarm events.

RSC® FUNCTIONS

The RSC[®] functions allow to program, monitor and remotely control the system locally or remotely. With the RSC[®] functions you can perform the following tasks:

- Hardware consistency check: the check analyses and records the operating parameters and the hardware and software identification data for all devices. The collected data is correlated with the programming data of the system.
- Parametric analysis: the data recorded by the hardware consistency function is used as comparison data for subsequent parametric analyses, with this analysis, all possible deviations from the values previously recorded are detected and reported.
- Device monitor: the function allows to select a single device of the System to perform a dynamic real-time monitoring of all the operating parameters of the device.

SYSTEM REPORTS

The RSC® functions allow to automatically obtain a number of report files that can be printed or stored. The reports are very useful, with them it is possible to officially document the following data:

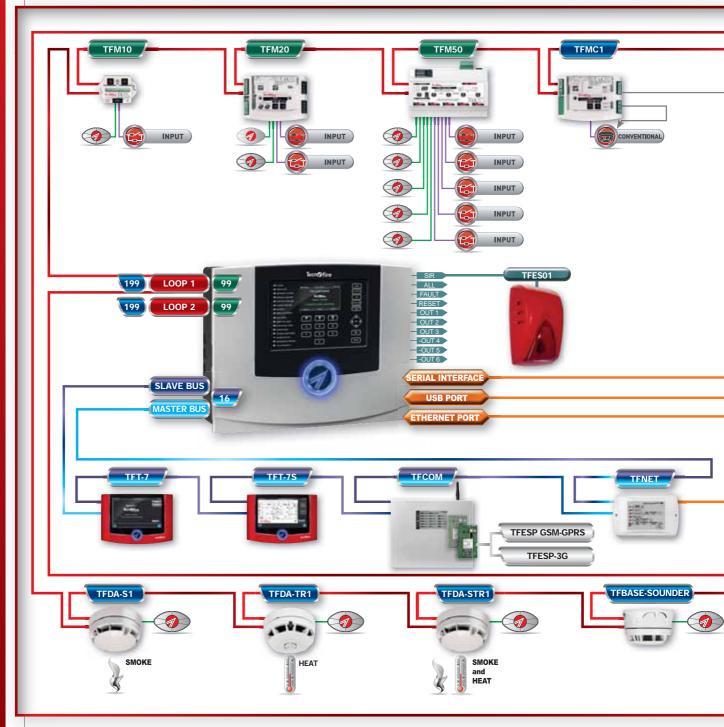
- Programming Report: the report includes all the programming data of all the devices that make up the system.
- Hardware consistency report: the report contains all the functional and identification data of all the devices that make up the system.
- Parametric analysis report: the report collects and compares each time the functional data of the devices that make up the system, highlighting the deviations and the drifts of the values recorded and certified in the previous parametric analyses.
- Event Log Report: the report shows the event data stored by the control unit.
- The events can be filtered by date and/or event type.

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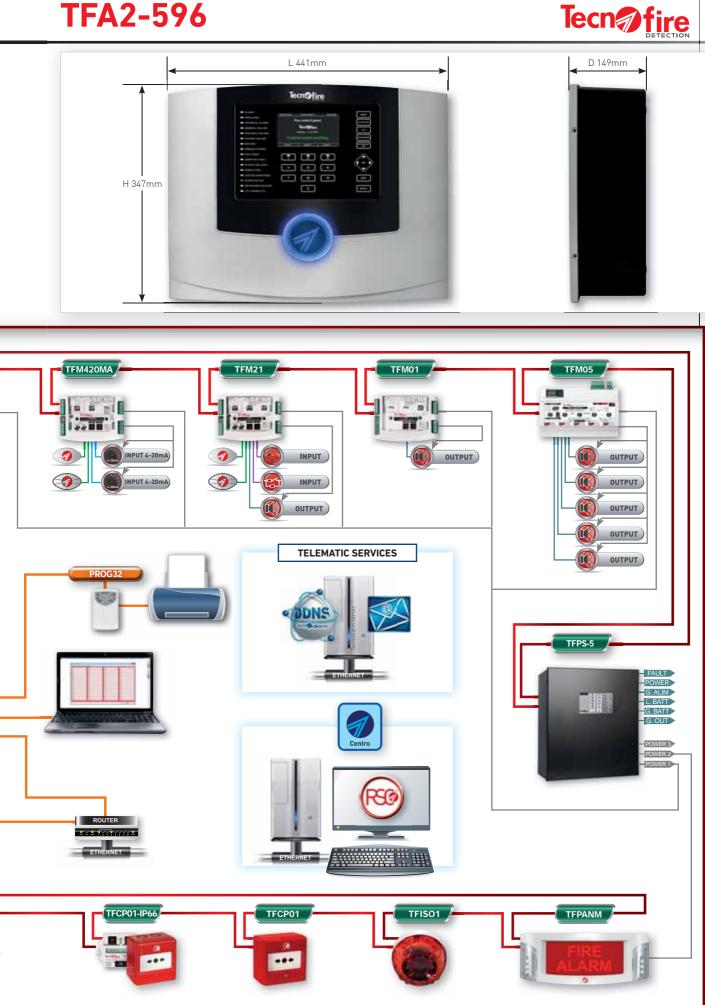


System Configuration

	Max. system configuration TFA2-596
EXPANSIONS	16
LOOPS	2
DETECTORS PER LOOP	199
TOTAL DETECTORS	398 (199 x 2)
MODULES PER LOOP	99
TOTAL MODULES	198 (99 x 2)







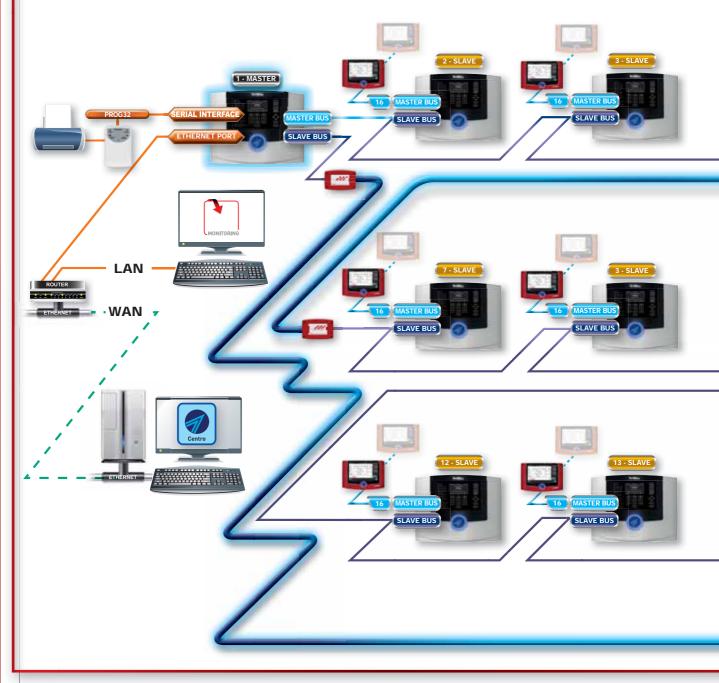
Centrali indirizzate - Addressable fire alarm panels - Systèmes d'alarme incendie adressables - Sistemas de incendio direccionables

TFA2-596

Network Configuration

	MAX. SYSTEM CONFIGURATION TFA2-596	MAX. SYSTEM CONFIGURATION TFA4-1192	MAX. NETWORK CONFIGURATION TFA4-1192			
EXPANSIONS	16	16	256 (16 x 16)			
LOOPS	2	4	64 [4 x 16]			
DETECTORS PER LOOP	199	199				
TOTAL DETECTORS	398 (199 x 2)	796 (199 x 4)*	12736 (796 x 16)*			
MODULES PER LOOP	99	99				
TOTAL MODULES	198 (99 x 2)	396 (99 x 4)	6336 (396 x 16)			
ZONES	300	300	4800 (300 x 16)			
VIRTUAL ZONES	100	100	1600 (100 x 16)			

* The EN 54-2 standard allows to connect 512 detectors and/or manual call points to one single fire alarm panel. Therefore, the maximum number of detectors managed by a Tecnofire network is 8,192 (512 devices multiplied by 16 fire alarm panels).









The system can consist of multiple control units, up to a maximum of 16 addressable units, networked through supervised BUS RS485 Fire-Bus. The infrastructure of the network of control units can be realized with copper wires or optical fiber. The network hierarchy provides for a Master (main)

control unit and up to 15 Slave control units.

The Master control unit has complete control over the Slave control units,

all the information and alerts generated by the Slave control units are conveyed to the Master control unit. The operation of the control units in network mode complies with the applicable standard EN 54-13.

Legislation restriction - The standard EN 54-13.

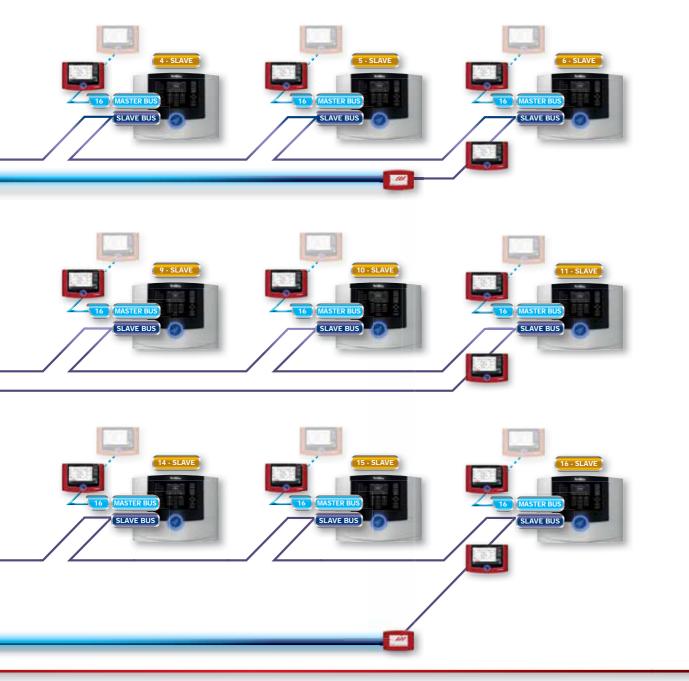
in case of failure, no more than 512 fire detection points and/or manual alert points

and their mandatory functions are affected.

Therefore, to maintain compliance with the standard EN 54-2 on each control unit, it is not possible to use more than 512 detection devices and/or manual alert points.

Therefore, the maximum number of detection points.

manageable by a network of Tecnofire control units is 8192 points (16 control units, each with 512 points).





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IP nodeCommunication channelsRemote Server Tecnoserver Call backOperating temperature (non condensing))IP nodeCommunicatorsRemote Server 		Carrier	IP		Environmental class	3K5 EN 60721-3-3:1995
IP nodeCommunication channels Tecnoserver Call backRelative humidity10%93% (non condensing))IP nodeCommunicatorsCall backCommunicators8Physical (2 for each communicator)Physical (2 for each communicator)Communicable events15 (categories)Communication protocols5EncryptionAES 128 bitEvent queue64 itemsFormulas200Alarm plans100Time ranges32Calendar years4 (programmable)Nutber of declaration003_TFA2-596Nutified backNutified back					Operating temperature	+5° C +40° C
IP nodeTecnoserver Call back CommunicatorsBattery housing2 x 12V/12Ah Protection degreeIP addresses(2 for each communicator) Communicable events15 (categories)Communication protocols5EncryptionAES 128 bit Event queue64 itemsFormulas200 Alarm plans100Automated controls32 Calendar years4 (programmable)Automated controls32 Calendar years4 (programmable)		Communication channels			Relative humidity	
IP nodeCommunicators8IP addresses(2 for each communicator)16Communicable events15 (categories)Communication protocols5EncryptionAES 128 bitEvent queue64 itemsFormulas200Alarm plans100Time ranges32Calendar years4 (programmable)	IP node			Physical	,	
IP addresses16 (2 for each communicator)CasingAluminum - SteelCommunicable events15 (categories)Dimensions (L x H x D)441 x 347 x 149mmCommunication protocols5Weight (without battery)6.2KgEncryptionAES 128 bitPower supplyEN 54-2: 1997+A1: 2006Event queue64 itemsPower supplyEN 54-4: 1997+A2: 2006Automated controls100ConformityYear of CE marking14Number of declaration of performance003_TFA2-596Number of declaration of performance003_TFA2-596		Communicators				
Automated controls (2 for each communicator) Image: State			16			
Communication protocolsSEncryptionAES 128 bit Event queueEvent queue64 itemsFormulas200 Alarm plansAutomated controlsTime rangesTime ranges32 Calendar yearsCalendar years4 (programmable)						441 x 347 x 149mm
EncryptionAES 128 bit Event queueControl UnitEN 54-2: 1997+A1: 2006Event queue64 itemsPower supplyEN 54-4: 1997+A2: 2006Auromated controlsFormulas200Certification number0051-CPR-0389Alarm plans100Year of CE marking14Time ranges32Number of declaration of performance003_TFA2-596Calendar years4 (programmable)Nutified bodyNutified body					Weight (without battery)	6.2Kg
Automated controls Formulas 200 Automated controls Time ranges 32 Calendar years 4 (programmable)		· · · · ·			Control Unit	EN 54-2: 1997+A1: 2006
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Automated controls Time ranges 32 Calendar years 4 (programmable)				Conformity		
Calendar years 4 (programmable)						
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			Programmable		Notified body	IMQ

N.B. The declarations of conformity and performance are available on the website: www.tecnofiredetection.com







DATA SHEET - REL. 1.4

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