

The automatic fire alarm systems from Tecnofire guarantee the highest standards of fire protection and safety. Three systems are available to satisfy any installation requirement, from small to medium- and large-sized systems, thanks also to the possibility of networking several fire alarm panels.

Systems

TFA1-298

TFA2-596

TFA4-1192



TFA1-298



1 loop addressable fire alarm system



User interface

- True color TFT display 482 x 272 pixel
- Function keys, 16 signaling LED
- Voice synthesis (vocabulary customizable through the programming software)
- Integrated speaker with volume setting
- Specific notification mode for each event category
- Iconographic event viewing
Information is displayed in a hierarchical order, according to its importance.
- Intuitive signaling thanks to different colors and font sizes
- Multi-level event viewing
- Quick classification and clear identification of the origin of the event
- Zone alarm notification accompanied by viewing of the alarm plan

Connection ports

- USB port for the direct connection of a PC
- Serial port for the connection of a PC and a serial printer through the PROG32 or PROG USB interface

Control by PC

- Programming of the system
- Upgrade of the firmware of the devices
- Download of the reports
- Customization of the vocabulary, icons and fonts

Software

- Optional software for programming and monitoring of the system

RSC® tools and reports

- RSC® tool – Hardware Coherence Control
- RSC® tool – Parametric Analysis
- RSC® tool – Device Monitor
- Report – Programming data file
- Report – Hardware Coherence Control data file
- Report – Parametric Analysis data file
- Report – Event log file

Basic features of the system

- Addressable fire alarm panel
- Expandability:
max. 5 expansions connected via serial bus
- 1 loop
- 199 addressable detectors per loop
- 99 addressable modules per loop
- Serial bus protocol: "Fire-Bus" proprietary protocol
- 1 RS485 serial bus port (master)
- Loop protocol: "Fire-Speed" proprietary protocol
- Hard-programmed outputs: alarm, siren, failure
- Programmable outputs: 2 open-collector outputs
- Hard-wired zones: 150 zones programmable as fire detection or technical zone
- Virtual zones: 100 zones to be used as operation category for the Boolean functions
- 100 Boolean functions, 43 operation categories
- 50 alarm plans to be associated to the zones
- 8 time periods to be used as operation category
- Customizable 4-years calendar
- Event buffer capacity: 4,096 events
- Serial printer management
- Modular switching power supply
- Max. output current: 2.7A
- Bay for 2x 12V/7Ah batteries

Access levels and protection

- Access levels: level 1 = operator, level 2 = user, level 3 = installer, level 4 = manufacturer
- Protection of access to the system: the access to level 2, 3 and 4 is protected by password
- Passwords: 8 user passwords, 1 installer password, 1 manufacturer password
- Protection of access to the monitored system mode: the monitored system mode is protected by a level 2 password

MODEL	ITEM NO.	EN 54-2 EN 54-4	RSC	LOOP	VOICE SYNTHESIS	PRINTER PORT	USB PORT	POWER SUPPLY	METAL BOX
TFA1-298	TF1TFA1298-UK	0051-CPR-0444	✓	1	✓	✓	✓	2.7A	✓

CORREZIONE DEL 03-02-17
AGGIUNTO TRATTINO E TOLTI

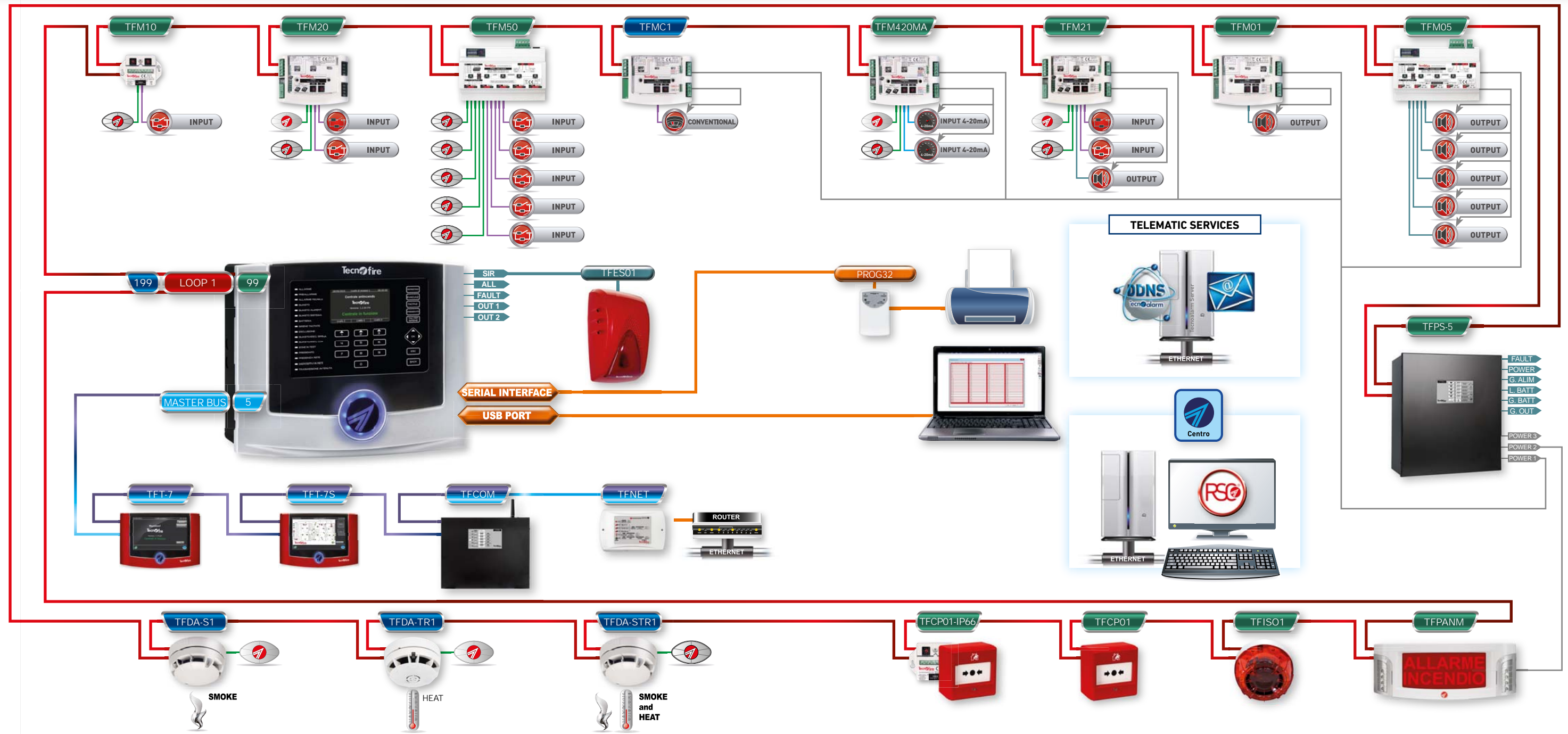
TFA1-298 - Technical and functional specifications

Detectors Modules Zones	Total connectable detectors	199	Modular power supply	Type	A - switching
	Total connectable modules	99		Operating voltage	230V AC +10% -15% 50Hz
	Total zones	150		Power supply consumption	600mA AC
	Virtual zones	100		Rated output current	2.7A @ 27.6V DC
CPU outputs	Hard-programmed relays	2		Max. current available	2.7A
	Programmable open-collectors	2		Peak-to-peak ripple voltage	≤230mV p-p
	Controlled siren output	1		Battery protection fuse	T 1A
System features	True color TFT display	480 x 272 pixel	Battery	Capacity	2x 12V/7.2Ah
	Voice synthesis	3		Flame class	V-2 or superior
	Detection loops	1		Internal resistance	1.5 ohm
	RS485 serial buses	Master Bus (1 port)		Release voltage	<17.6V DC
	Event buffer capacity	4096		Recharge time	100% in 48h
Access management	Access levels	4	Physical specifications	Environmental class	3K5 (EN 60721-3-3:1995)
	Access codes	10		Operating temperature	+5°C...+40°C
	Monitored system mode	3		Relative humidity (without condensation)	10%...93%
Protocols	Loop	Fire-Speed		Protection class	IP30
	RS485 serial bus	Fire-Bus		Casing	Aluminum – Metal
Automation	Formulas	100		Dimensions (L x H x D)	361 x 301 x 107mm
	Alarm plans	50	Weight (without batteries)	2.7kg	
	Time periods	8	Conformity	Fire alarm panel	EN 54-2:1997 + A1:2006
	Calendar	Quadrennial (programmable)		Power supply	EN 54-4:1997 + A2:2006
Expandability	Serial expansions (max. 5)	TFT-7		Certification number	0051-CPR-0444
		TFT-7S		Year of CE marking	15
		Telephone communicator		Number of declaration of performance	015_TFA1-298
		Ethernet interface	Notified body	IMQ	
Serial printer	3	Electrical specifications CPU	CPU board consumption	200mA @ 24V DC	
Electrical specifications CPU	Electrical outputs		I max. 50mA	Electrical outputs	I max. 50mA
	Power supply voltage (loop, serial bus, sirens)		20V...27.6V DC	Power supply voltage (loop, serial bus, sirens)	20V...27.6V DC

TFA1-298

System configuration

MAX. SYSTEM CONFIGURATION TFA1-298	
REPEATERS	5
LOOPS	1
DETECTORS PER LOOP	199
MODULES PER LOOP	99



TFA2-596 - TFA4-1192



2 and 4 loop addressable fire alarm systems



Basic features of the system

- Addressable fire alarm panel
- Programmable local or master/slave functioning mode
- Expandability in the local functioning mode: max. 16 expansions connected via serial bus
- Expandability in the master/slave mode: max. 16 panels and max. 256 expansions networked via serial bus
- 2 loops (TFA2-596) or 4 loops (TFA4-1192)
- 199 addressable detectors per loop
- 99 addressable modules per loop
- Serial bus protocol: "Fire-Bus" proprietary protocol
- 2 RS485 serial buses (master and slave)
- Loop protocol: "Fire-Speed" proprietary protocol
- Hard-programmed outputs: alarm, siren, failure
- Programmable outputs: 3 free-contact relay outputs, 3 open-collector outputs
- Control output: reset
- Hard-wired zones: 300 zones programmable as fire detection or technical zone
- Virtual zones: 100 zones to be used as operation category for the Boolean functions
- 400 Boolean functions, 43 operation categories
- 200 alarm plans to be associated to the zones
- 32 time periods to be used as operation category
- Customizable 4-years calendar
- Event buffer capacity: 4096 events
- Serial printer management
- Modular switching power supply Fly-back type
- Max. output current: 5A
- Bay for 2x 12V/12Ah batteries

Access levels and protection

- Access levels: level 1 = operator, level 2 = user, level 3 = installer, level 4 = manufacturer
- Protection of access to the system: the access to level 2, 3 and 4 is protected by password
- Passwords: 8 user passwords, 1 installer password, 1 manufacturer password
- Protection of access to the monitored system mode: the monitored system mode is protected by a level 2 password

User interface

- True color TFT display 482 x 272 pixel
- Function keys, 16 signaling LED
- Voice synthesis (vocabulary customizable through the programming software)
- Integrated speaker with volume setting
- Specific notification mode for each event category
- Iconographic event viewing
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Ethernet hub

- Standard Ethernet interface 803.2 half/full duplex 10 Mbit to 100 Mbit 4 channels
- Local Server channel: LAN connection
- Remote Server channel: WAN or VPN connection
- Tecnoserver channel: 8 channels for event notification
- Call back channel: connection with CMS
- Protocols: 5 internet protocols (e.g. Contact-ID, SIA)
- Event notification: report codes for 13 categories
- 2 IP addresses per channel for a total of 16 addresses
- Security: data encryption
- AES 128 bit data encryption supported
- Passphrase: specific passphrase for each channel, including call back and server channels
- Access to the server channels protected by a whitelist of IP addresses
- Programmable test call function with TCP/IP

Connection ports

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Control by PC

- Programming of the system
- Upgrade of the firmware of the devices
- Download of the reports
- Customization of the vocabulary, icons and fonts

Software

- Optional software for programming and monitoring of the system and remote management via LAN or WAN

RSC® tools and reports

- RSC® tool - Hardware Coherence Control
- RSC® tool - Parametric Analysis
- RSC® tool - Device Monitor
- Report - Programming data file
- Report - Hardware Coherence Control data file
- Report - Parametric Analysis data file
- Report - Event log file

MODEL	ITEM NO.	EN 54-2 EN 54-4	RSC	LOOP	VOICE SYNTHESIS	IP	PRINTER PORT	USB PORT	POWER SUPPLY	METAL BOX
TFA2-596	TF1TFA2596-UK	0051-CPR-0389	✓	2	✓	✓	✓	✓	5A	✓
TFA4-1192	TF1TFA41192-UK	0051-CPR-0388	✓	4	✓	✓	✓	✓	5A	✓

TFA2-596 - TFA4-1192 - Technical and functional specifications

Detectors Modules Zones	Total connectable detectors	796 (TFA4-1192) 398 (TFA2-596)
	Total detectors per loop	199
	Total connectable modules	396 (TFA4-1192) 198 (TFA2-596)
	Total modules per loop	99
	Total zones	300
	Virtual zones	100
	CPU outputs	Hard-programmed relays
Programmable relays		3
Programmable open-collectors		3
Controlled siren output		1
Reset output		1
System features	True color TFT display	480 x 272 pixel
	Voice synthesis	3
	Detection loops	4 (TFA4-1192) 2 (TFA2-596)
	RS485 serial buses	Master Bus (1 port) Slave Bus (1 port)
	Event buffer capacity	4096
Access management	Access levels	4
	Access codes	10
	Monitored system mode	3
Protocols	Loop	Fire-Speed
	RS485 serial bus	Fire-Bus
Ethernet hub	Type	Standard 803.2
	Connection channels	Local Server
		Remote Server
		Tecnoserver
		Call back
	Notification channels	8
	IP addresses	16 (2 per channel)
	Transmittable events	15 categories
	Protocols	5 IP protocols
	Encryption	AES 128 bit
Transmission time	SIA IP DC-09 10s	
Call event queue	64 events	
Automation	Formulas	400 (TFA4-1192) 200 (TFA2-596)
		200 (TFA4-1192) 100 (TFA2-596)
	Alarm plans	32
	Time periods	Quadrennial (programmable)
	Calendar	3
	Test call with TCP/IP	3

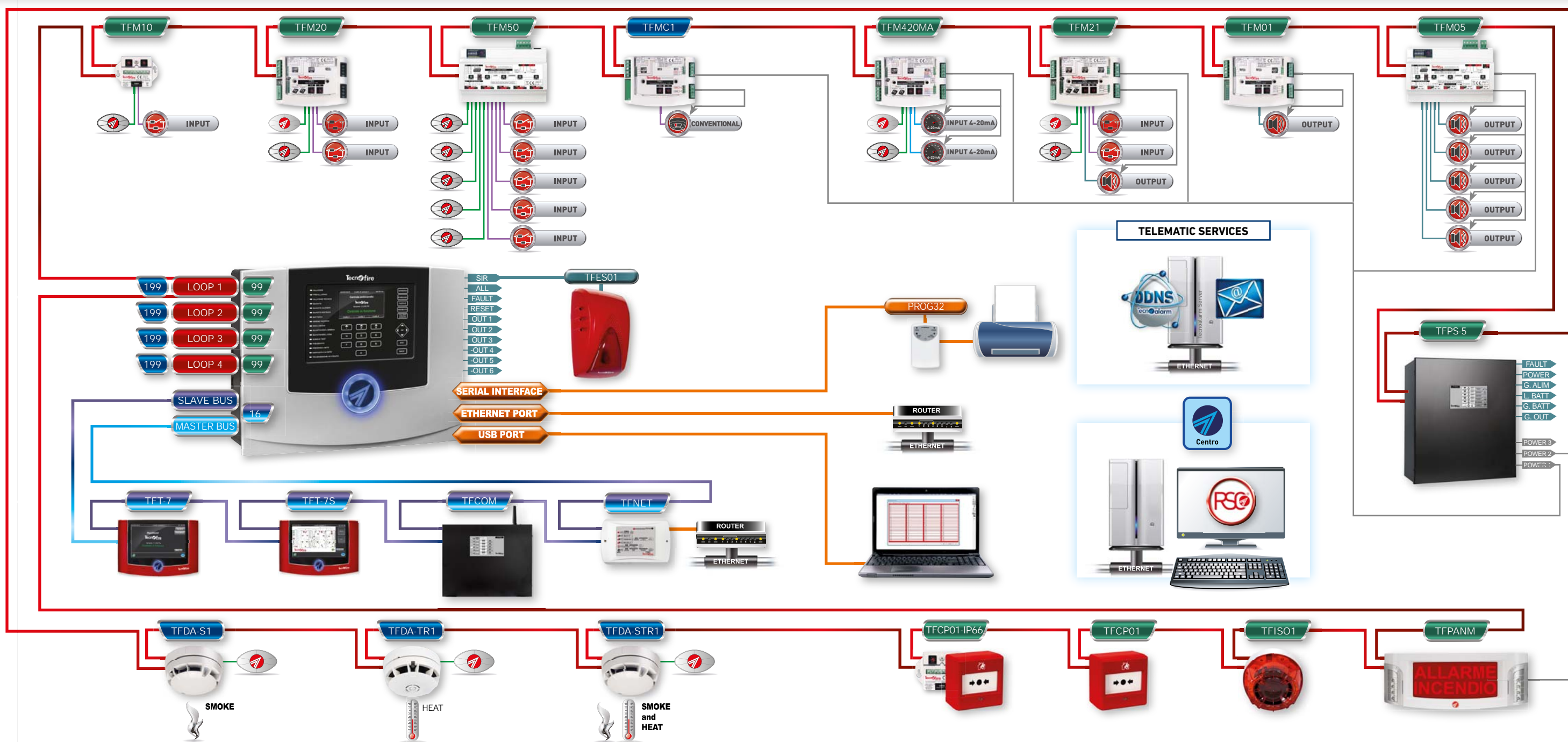
Expandability	Serial expansions (max. 16)	TFT-7
		TFT-7S
		Telephone communicator
		Ethernet interface
Electrical specifications CPU	CPU board consumption	200mA @ 24V DC
	Electrical outputs	1 max. 50mA
Modular power supply	Power supply voltage (loop, serial bus, sirens)	20V...27.6V DC
	Type	A - switching Fly-back
	Operating voltage	230V AC +10% -15% 50Hz
	Power supply consumption	700mA AC
	Rated output current	5A @ 27.6V DC
	Max. current available	5A
Battery	Peak-to-peak ripple voltage	≤150mV p-p
	Battery protection fuse	T 1.6A
	Capacity	2x 12Ah/12V
	Flame class	V-2 or superior
Physical specifications	Release voltage	<17.6V DC
	Recharge time	100% in 48h
	Environmental class	3K5 (EN 60721-3-3:1995)
	Operating temperature	+5°C...+40°C
	Relative humidity (without condensation)	10%...93%
	Protection class	IP30
	Casing	Aluminum - Metal
	Dimensions (L x H x D)	441 x 347 x 149mm
	Weight (without batteries)	6.2kg
	Conformity	Fire alarm panel
Power supply		EN 54-4:1997 + A2:2006
Certification number		0051-CPR-0388 (TFA4-1192)
		0051-CPR-0389 (TFA2-596)
Year of CE marking		14
Number of declaration of performance		002_TFA4-1192 (TFA4-1192)
		003_TFA2-596 (TFA2-596)
Notified body	IMQ	

TFA2-596 - TFA4-1192

System configuration

	Max. system configuration TFA2-596	Max. system configuration TFA4-1192	Max. network configuration TFA4-1192
REPEATERS	16	16	Max. 256 [16 x 16]
LOOPS	2	4	Max. 64 [4 x 16]
DETECTORS PER LOOP	199	199	
TOTAL DETECTORS	398 [199 x 2]	796 [199 x 4]*	Max. 12736 [796 x 16]*
MODULES PER LOOP	99	99	
TOTAL MODULES	198 [99 x 2]	396 [99 x 4]	Max. 6336 [396 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].



TFA2-596 - TFA4-1192



Network configuration

	Max. system configuration TFA2-596	Max. system configuration TFA4-1192	Max. network configuration TFA4-1192
REPEATERS	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 network can be composed of up to 16 addressable fire alarm panels. The connection is made through a supervised RS485 serial bus using either copper cables or glass fiber. The network is arranged in a hierarchy, one master fire alarm panel has the complete control over up to 15 slave fire alarm panels. All information and signaling will be collected by the master. Network functioning is in compliance with the EN 54-13 standard. Restrictive clause: The standard EN 54-2 chapter 13.6 provides that a failure may not affect more than 512 detectors and/or manual call points nor compromise their designated functions. As a consequence, to preserve the compliance with the EN 54-2 standard a maximum of 512 detectors and/or manual call points can be connected to each 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].

