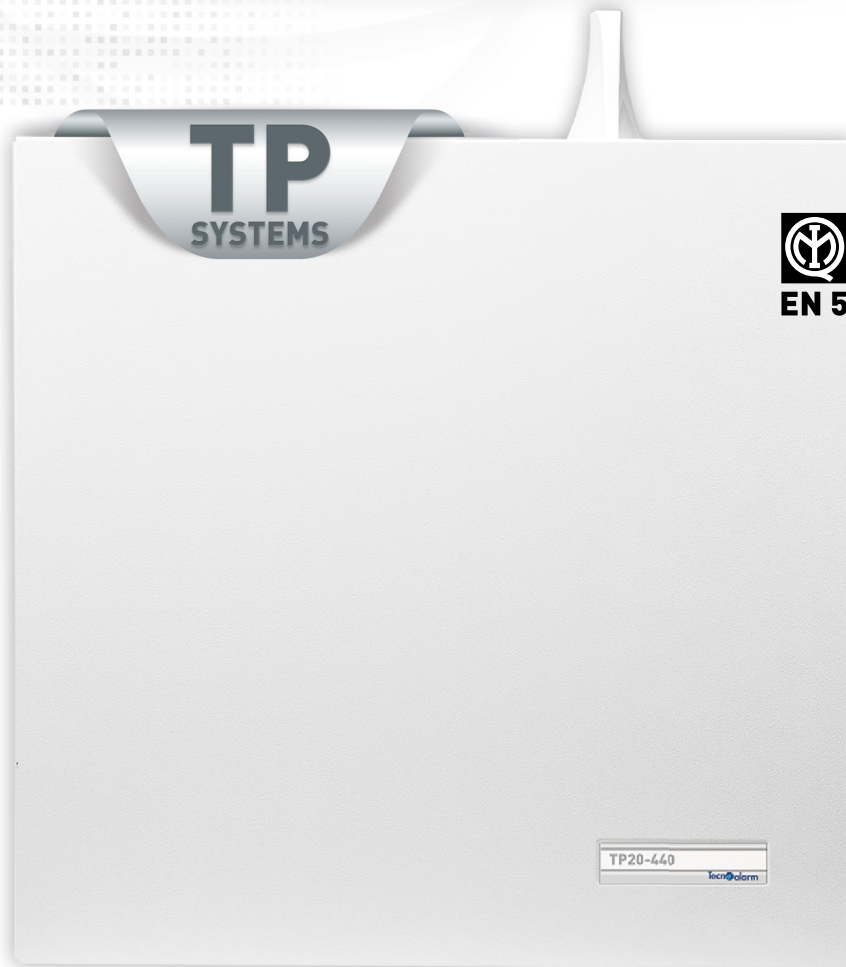


TP20-440 TP20-440 EN

Expandable serial alarm system



The highest security standards
for a reliable protection of medium-sized and large
as well as multi-user-systems

Tecnalarm[®]
Hi-Tech Security Systems





Tecnoalarm RSC® Technology

RSC® (Remote Sensitivity Control) is an exclusive technology developed by Tecnoalarm, thanks to which the central monitoring station (CMS) and the installer can program and control the system completely from a distance.

Sophisticated diagnostic tools allow to verify and maintain the smooth functioning of each system component as well as adjust and improve the system's performance.



Programming



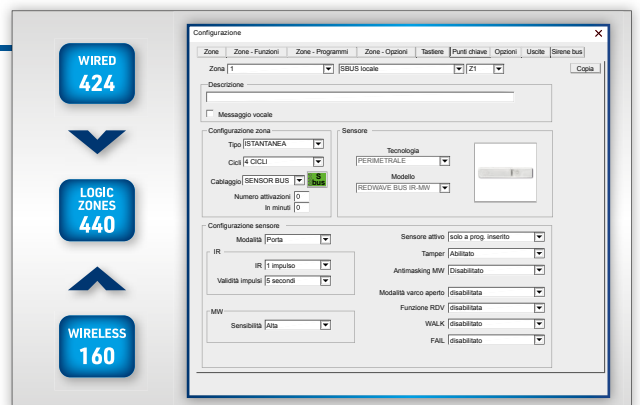
Programming of the system's functioning parameters can be made either locally or remotely using the Tecnoalarm programming software. The sophisticated software permits easy setting of the numerous functioning parameters of the system as well as saving of the system configurations for future modifications. It facilitates even the compliance with a maintenance plan, as recommended by the application guide CLC/TS 50131-7. The technician of the installer company can check the settings and functioning of each device from his office and adjust programming. So, at least one of the two annual inspections prescribed by the standards can be carried out remotely. The diagnostic tools permit easy analysis of the system's functioning and the automatic saving of the corresponding reports.



Zones



The 12 conventional and the 8 bus inputs of the CPU constitute the basic version of the system. The modular structure as well as the great variety of input expansions permit the expansion to a total of 440 zones which can be freely associated to the hard-wired (conventional or bus) or wireless inputs of the hardware. The zone programming facilities allow to obtain excellent performances even from traditional detectors but only with the Tecnoalarm RDV® and RSC® detectors the system's full potential is utilized. These detectors permit the verification and analysis of the alarms at the very moment they are released, through specific diagnostic tools. The limitations of traditional remote management have been overcome and a new concept of interaction has been proposed. RDV® and RSC® are registered trademarks, RDV® is an international patent.



Programs and control units



The system manages 32 programs for a perfect management of multiuser systems. A wide range of control units is able to satisfy any application requirements. The exclusive touch screen consoles of the series UTS (Universal Touch Screen) are available as a standard console or, for the integration of video surveillance, as a video console. A plug-in for the loading and management of 32 floor plans or images of your home is available. The Tecnoalarm control units manage access to the system's functions through codes, transponders/RFID cards, wireless keys and finger prints. The programs can also be managed by the myTecnoalarm and myTecnoalarm TCS apps.



TP20-440

Tecnoalarm

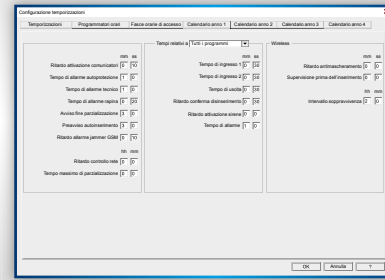


Time configuration

In order to offer the maximum versatility, it is possible to program all the time parameters independently for each of the programs. Access to the functions can be limited through 16 access periods and their activation can be triggered by 64 timers and 10 cyclic timers. The calendar for the management of the automatic functions of the system can be either quadrennial or perpetual.

PROGRAM-SPECIFIC TIME SETTINGS

AUTOMATIC FUNCTIONS



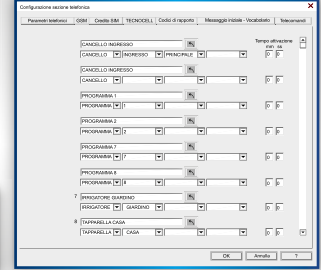
- ACCESS PERIODS 16
- TIMERS 64
- CYCLIC TIMERS 10
- CALENDAR 4Y/∞



Interaction

The system provides 32 remote controls which allow the user to interact with the system by phone, SMS or app. The remote controls are customizable and permit the management of the system's functions as well as the interaction with external devices such as the heating, air-conditioning, lighting installation etc.

32 REMOTE CONTROLS



- LIGHTS
- IRRIGATION
- ROLLER SHUTTERS



ASYNC@WL wireless expansion

The wireless expansion modules using the protocol ASYNC@WL manage a total of 250 wireless keys and 160 detectors. The modules are connected to the serial bus which permits the installation in positions guaranteeing a good signal transmission. The wide product range comprises indoor and outdoor detectors as well as barriers capable of offering the ideal solution for all kinds of protection requirements.

RF MONITOR
BAD
HIGH
LOW
dBm LEVEL



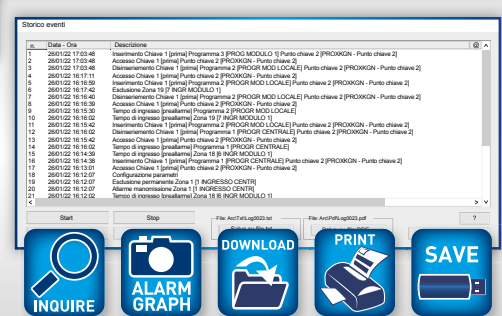
WL KEYS 250
DETECTORS 160



Event log

The event log contains all the events concerning the system's functioning, i.e. the alarms, the diagnostics and the changes of status. A total of 32,000 events can be recorded, in reverse chronological order, with indication of date and time. For each event, detailed information is given on the zones, programs and remote controls involved, identified by a number or a description, as well as the telephone calls made. The installer can download the event log at any time using the Tecnoalarm software and extract the necessary information to verify the system's smooth functioning.

EVENT BUFFER CAPACITY
32,000



- INQUIRE
- ALARM GRAPH
- DOWNLOAD
- PRINT
- SAVE



Video surveillance

The system is compatible with video surveillance products of the Videoalarm IP series. Management of the surveillance cameras is implemented by means of the UTS E touch screen video console. The console uses IP connections for managing the surveillance cameras. The implementation of the Videoalarm IP products requires the installation of the ESP LAN Ethernet interface on the control panel. Viewing of the live streams coming from the surveillance cameras can be associated to alarm events, the arming/disarming of programs or the activation/deactivation of remote controls.



24 VIEWED
8 RECORDED

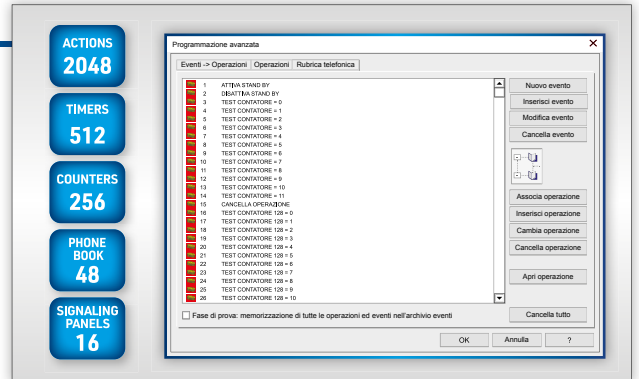
TP20-440

Tecnoalarm



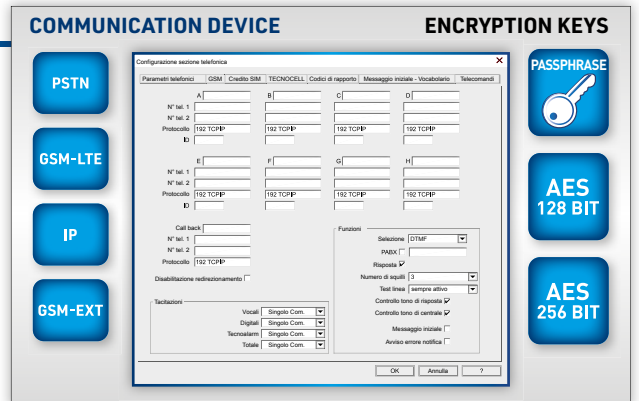
Advanced programming

The advanced programming is a plug-in of the firmware of the system which permits the customization of the system's resources beyond the standard as well as the integration of home automation functions. The conventional functionality of the inputs, outputs, channels, remote controls etc. is redefined through a series of actions, associated to the events. Expansion modules with relay outputs can be connected via serial bus to the system. The possibility of cloning their address allows to control different devices installed throughout the installation by excitation of only one relay.



Alarm transmission equipment (ATE)

The integrated telephone interface provides 8 telephone channels to notify the 1,097 transmittable events to the users and the CMS. The on board PSTN telephone interface can be integrated by an internal GSM-GPRS interface and/or an internal Ethernet interface. Depending on their characteristics, the communication devices, use several protocols, also encrypted, to communicate in an appropriate and safe way with the user.



SOFTWARE PLUG-INS		ADVANCED PROGRAMMING
TECNO OUT	Tecno Out management software plug-in N.B. Function subject to Non-Disclosure Agreement. Indicate serial number of control panel in order.	Item no. F127T440/TECNO

COMMUNICATION DEVICES		TCS	DDNS	MAIL	App	RDV®	Software	CMS	Supervisor
Format	Device								
PSTN	On board					✓		✓	
GSM*	ESP GSM 4G	✓			✓	✓	TCP/IP	✓	
	ESP GSM LINK (TECNOCELL 4)	✓			✓	✓	TCP/IP	✓	
GSM-EXT*	TECNOCELL 4							✓	
IP*	ESP LAN	✓	✓	✓	✓		TCP/IP	✓	✓

* Optional format

TP20-440 EN		AUTONOMY				
EN 50131		Battery	Autonomy required	CPU self consumption	Recharge current	Load current
Security grade 2	Non-remotely managed system	1 x 12V-17Ah	12 hours	190mA max.	850mA*	2810mA
Security grade 3	Remotely managed system	1 x 12V-17Ah	30 hours	190mA max.	850mA*	1010mA

* Charging time: approx. 20 hours - Required charging time: security grade 3 - 80% in 24 hours, security grade 2 - 80% in 72 hours

Tecnoalarm telematic services



The Tecnoalarm systems implement the management of the telematic services **Tecnoalarm Connect Service**, **DDNS Tecnoalarm**, **Mail Server Tecnoalarm** and **SNTP**. These services are managed automatically by dedicated servers and are provided free-of-charge to the customers of Tecnoalarm in order to simplify and protect the network connection of their systems.



TECNOALARM CONNECT SERVICE

Tecnoalarm Connect Service (TCS) connects the Tecnoalarm systems via the internet with the software applications made for both, technical staff and final customers. TCS arranges the transfer of push notifications towards the Tecnoalarm apps. For technical management, TCS uses the direct addressing to route the Tecnoalarm software towards the alarm system.



MAIL SERVER TECNOALARM

The systems are equipped with a Mailer Client for the transmission of emails. The Mail Server Tecnoalarm provides a hard-programmed account for the system, through which it transmits the emails received from the system to a total of 8 recipients. The emails contain the time of occurrence of the events as well as the system status.



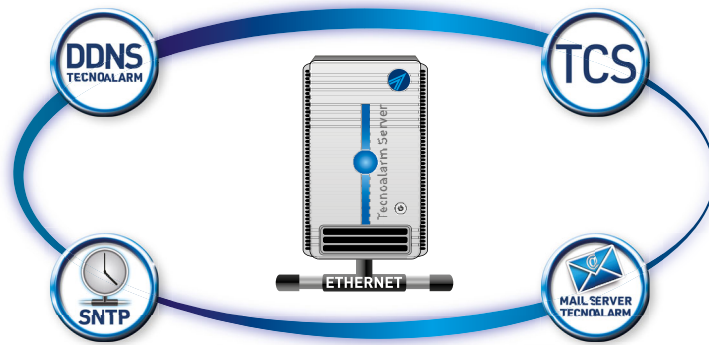
DDNS TECNOALARM

The system's name and IP address are automatically recorded on the DNS servers of Tecnoalarm. Whenever the system registers that its IP address has changed, it automatically communicates the new address to the Tecnoalarm DNS servers which update the registered IP address and transmit the information to the DNS servers on the internet.



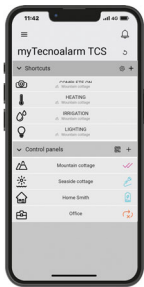
SNTP

The system's internal clock is automatically synchronized with an NTP server which uses the universal coordinated time (UTC).



Tecnoalarm apps

With the Tecnoalarm apps, the management and control of the alarm system is something handy, accessible from anywhere and anytime, with the functionality and simplicity of a remote control. The apps connect the user with the system in real time, with speed and efficiency. Standard commands, menu shortcuts and the Alexa voice control contribute to manage the alarm system and the home automation of either the principal dwelling, the holiday cottage or the office in a natural and intuitive way. Detailed and filterable push notifications inform the user about the operating state of the system and possible failures. Security and privacy is ensured by an encrypted communication protocol and a double security code: passphrase and access code, optionally replaceable by the practical biometric authentication.



myTecnoalarm TCS

The app for the latest TP range systems.

- Connection via **TCS** (Tecnoalarm Connect Service)
- Voice control with **Amazon Alexa**



myTecnoalarm

The app for the network-compatible TP range systems.

- Connection with **static IP** address, **DDNS** or **TCS** (Tecnoalarm Connect Service).
- Videosurveillance with **Videoalarm IP**

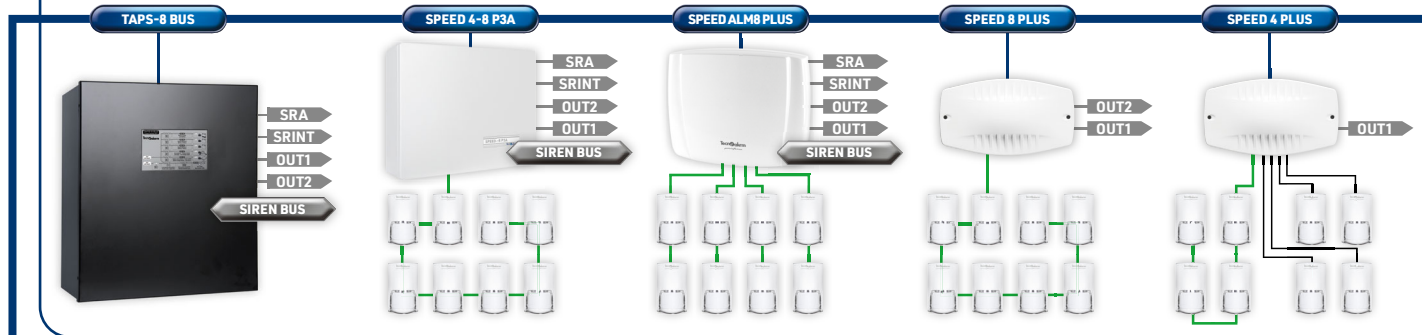


VideAlarm					
	UTS E	IP cameras	Recording	Viewing	App
	3	24	8		

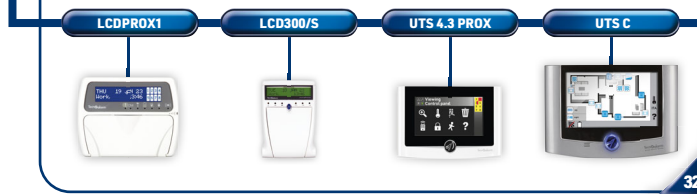
TP20-440

Tecnoalarm

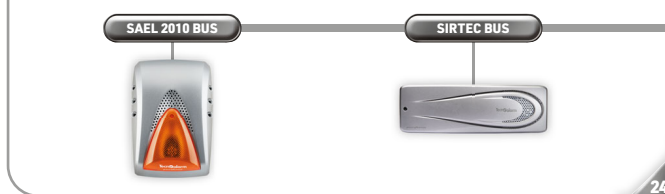
POWER SUPPLIES - INPUT EXPANSIONS



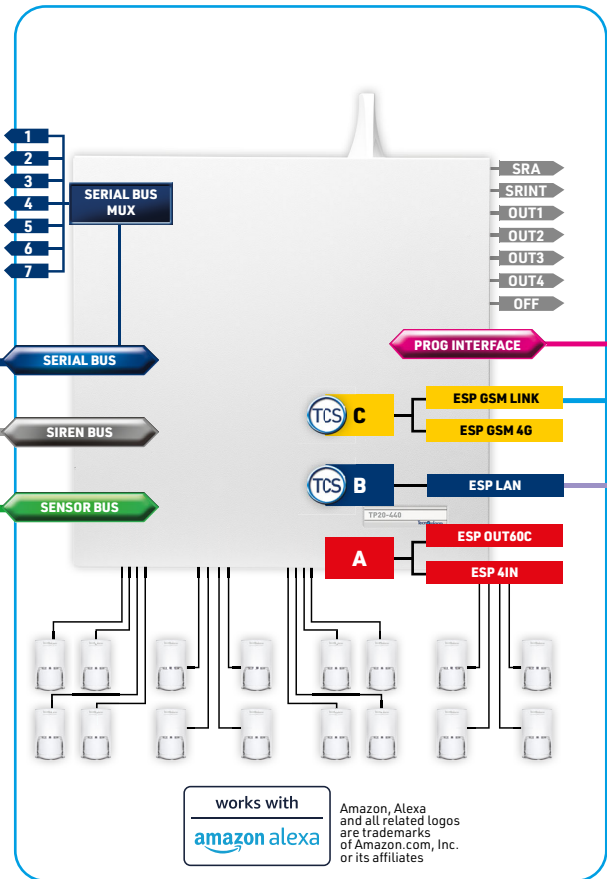
CONSOLES



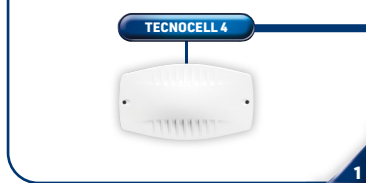
BUS SIRENS



BUS DETECTORS



COMMUNICATORS



OUTPUT EXPANSIONS



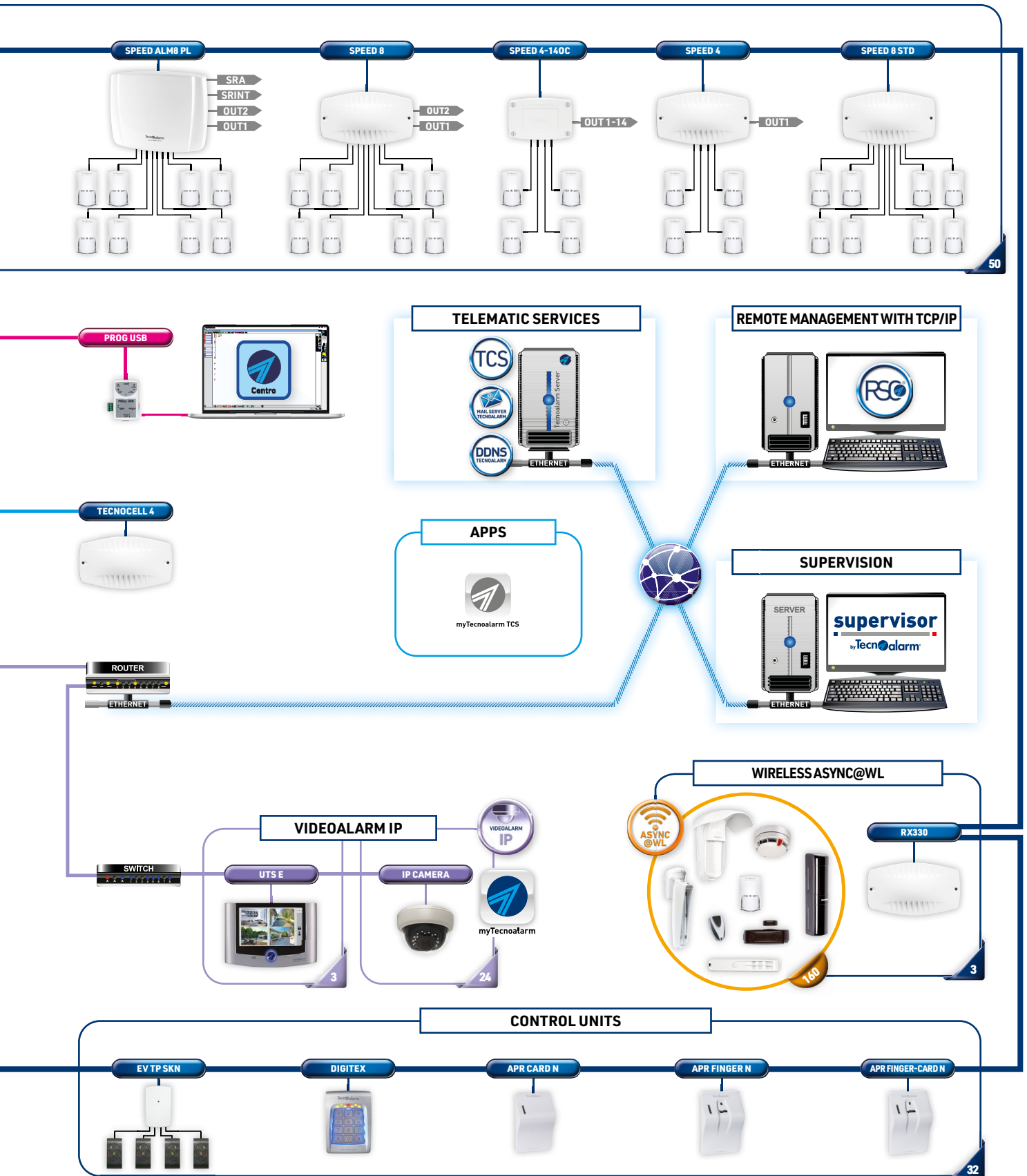
Number of connectable devices per type

Number of managed ASYNC@WL devices

INPUTS	CPU	ESP 4IN	SPEED 8 STD	SPEED 4	SPEED 4-140C	SPEED 8	SPEED ALM8 PL	SPEED 4 PLUS	SPEED 8 PLUS	SPEED ALM8 PLUS	SPEED 4-8 P3A
CONVENTIONAL*	12	4	8	4	4	8	8	4	-	-	4**
ZONE BUS	-		-								
SENSOR BUS	8	-	-	-	-	-	-	4	8	8	8

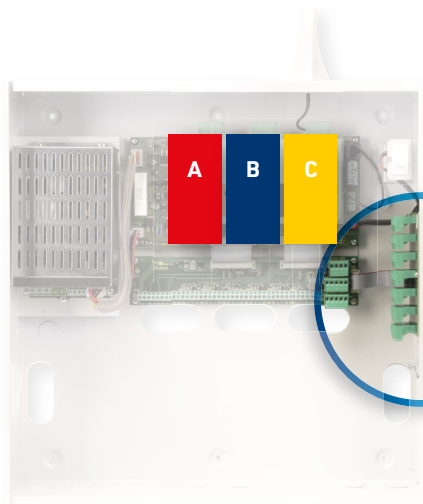
*The following contact types can be programmed: NC (normally closed), NO (normally open), BIL (end-of-line resistor), B24 (double end-of-line resistor). The following filters can be programmed: time, pulse count or vibration.

**The 4 conventional inputs are only available as an alternative to 4 Sensor Bus inputs (max. 8 inputs managed).



<h2>ESP 4IN</h2>	Approved for certified systems EN 50131				
	Mounting position A B C				
Expansion module with 4 inputs for connecting conventional, RDV® and Zone Bus detectors from Tecnoalarm - EN 50131-3 certification					
Item no. F127ESP4IN					
<h2>ESP OUT60C</h2>	Approved for certified systems EN 50131				
	Mounting position A B C				
Expansion module with 6 programmable open-collector outputs which can be freely associated to the logic outputs of the system - EN 50131-3 certification					
Item no. 127ESPOUT60C					
<h2>ESP LAN</h2>	Approved for certified systems EN 50131				
	Mounting position A B C				
Ethernet-Interface for the transmission of alarm notifications and the management of the telematic services TCS, DDNS Tecnoalarm, SNTP and Mail Server Tecnoalarm through the remote management software with TCP/IP - EN 50131-3 certification					
Item no. F127ESPLAN					
<h2>ESP GSM 4G</h2>	Approved for certified systems EN 50131				
	Mounting position A B C				
Interface for connecting the control panel to the mobile network - Transmission of alarm notifications and management of the telematic service TCS through the remote management software with TCP/IP - Compatible with all GSM formats from 2G GPRS to 4G LTE - Manages the VoLTE service - EN 50131-3 certification					
Item no. F127ESPGSM4G					
<h2>ESP GSM LINK</h2>					
	Mounting position A B C				
Interface for connecting the TECNOCELL 4 communicator via RS422 serial bus - In this configuration, the communicator emulates the operation of the ESP GSM 4G interface					
Item no. F127ESPGSMLINK					

Mounting positions



SERIAL BUS MUX

The module is standard equipment for the TP20-440 system and permits the distribution of the devices connected via RS485 serial bus over several terminals. It is possible to wire one branch line of the serial bus to each terminal. The length of each branch line must not exceed 25 meters.



Performance level

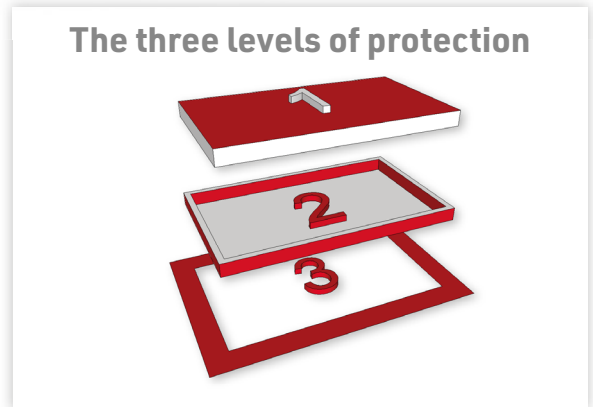
During the drafting of the project of a burglar alarm system, it is necessary to thoroughly analyze the risks such as the location of the installation, the environmental risk, the possible interferences, the values to be protected and the security requirements of the customer.

According to the assessed risks, the European standards define up to 4 performance levels, and for each of them the compulsory protection facilities.

Protection level

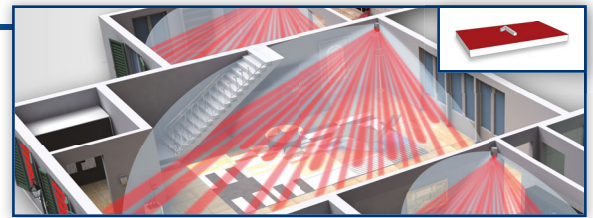
The standards also define **three protection levels**:

- First level** Protection of the sensible areas in the indoors (bedroom, living room etc.)
- Second level** Protection of the outside of the building (doors and windows)
- Third level** Perimeter protection of the estate (boundary wall or fence)



TWINTEC BUS

Indoor protection through dual technology (passive infrared + microwave)
A sophisticated digital processing of the detected signals and the programmable detection logic (AD/OR/WALK), which can be combined with the RDV® function, allows a positive verification of the alarm. The TWINTEC MASK BUS model also provides an antimasking control.



First level



REDWAVE BUS

Protection of windows and doors
Detector for the protection of openings, windows and doors consisting of 2 independent detection units. The first unit is a volumetric dual technology (PIR + MW) element with programmable detection logic (AND/WALK). The second one is composed of an internal contact and an input to which an external magnetic contact, rope contact or vibration detector can be connected.



Second level



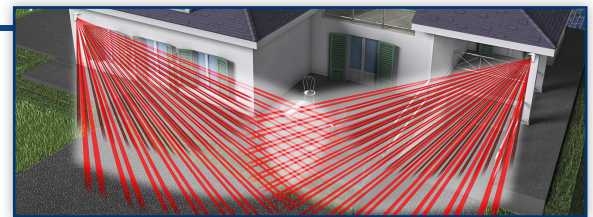
WINBEAM/S - DOORBEAM/S

Protection of the in-and-out-openings through active infrared barriers
The barriers have been developed for the installation in protected outdoor areas and are resistant to mechanical stress and weather. A sophisticated digital synchronism protects them against undesired reflections and other interferences.



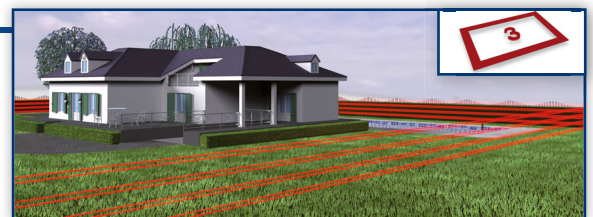
GLOBAL SPACE BUS

Volumetric protection for outdoor use
The dual technology (triple infrared and microwave) detector features a multi-point technology, providing a very tight protection made of 43 infrared beams distributed on 5 levels, combined with the microwave beam. The programmable AND detection logic permits the adaptation of the detector's functioning to the characteristics of the area to be protected.



BEAMTOWER

Perimeter protection through active infrared barriers
The surprising versatility of the barrier, mounted in self-supporting self-protected aluminum columns, allows to build, in addition to the classic single-path barrier protection, complex protections of large areas, such as solar parks, with open and closed perimeter configurations.



Third level



EXPLORER BUS





Perimeter protection through microwave barriers
The barrier projects a beam of electromagnetic waves along the side to protect, which constitutes a sensitive barrier to intrusion attempts. It is perfect for the protection of high security facilities such as industrial plants, solar parks, warehouses, airports. The barrier is highly immune against light sources and RFI/EMI interferences.






TP20-440






TecnAlarm®






Serial expansions


CONSOLES				
	UTS 4.3 PROX	UTS C	LCDPROX1	LCD300/S
CODES	✓	✓	✓	✓
TRANSPONDERS	✓		✓	
PROGRAMS	15	32	8	15
VOICE SYNTHESIS	✓	✓		✓
DISPLAY	TFT 4,3" capacitive touch screen	TFT 7" capacitive touch screen	LCD graphic display	LCD 2x16 characters
FLOOR PLANS		Optional*		
USB PORT		✓		
ITEM NO.	F127UTS43P	F127UTSC	F127LCDPROX1	F127LCD300S


* Optional software plug-in for the management of 32 floor plans

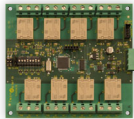
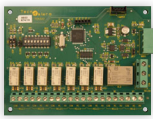
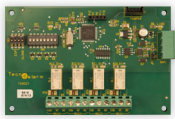


BUS SIRENS			
	SIRTEC BUS	SAEL 2010 BUS	SAEL 2010PRO BUS
PROGRAMS	32	32	32
ALARM MODES	Programmable	Programmable	Programmable
ANTI-FOAM		✓	✓
ANTI-DRILLING			✓
CASING	ABS	ASA	ASA + AL
ITEM NO.	F105SIRTECBUS	F105S2010BUSBI	F105S2010PBUSAL






INPUT EXPANSIONS					
	TAPS-8 BUS	SPEED 4-8 P3A	SPEED ALM8 PLUS	SPEED 8 PLUS	SPEED 4 PLUS
POWER SUPPLY	8A	3A	1.8A		
INPUTS		4 conventional/ Zone Bus + 8 Sensor Bus	8 Sensor Bus	8 Sensor Bus	4 conventional/ Zone Bus + 4 Sensor Bus
OUTPUTS	4	4	4	2	1
SENSOR BUS		1 port	4 ports	1 port	1 port
SIREN BUS	1 port	1 port	1 port		
CASING	Metal	Metal	ABS	Optional	Optional
ITEM NO.	F107TAPS-8BUS	F101SPEED48P3A	F101SPEALM8PLUS	F101SPEED8PLUS	F101SPEED4PLUS

AUXILIARY CONTROL UNITS					
	APR FINGER-CARD N	APR FINGER N	APR CARD N	DIGITEX	TP SKN
FINGER PRINTS	✓	✓			
RFID	✓		✓		
TRANSPONDERS					✓
CODE				✓	
PROGRAMS	3	3	3	4	3
MEMORY	On board (96 finger prints)	On board (96 finger prints)			
CASING	ABS	ABS	ABS	Al	ABS
ITEM NO.	F103APRFINCARN	F103APRFINNN	F103APRCARDNN	F103DIGITEX	F127TP-SKN

WIRELESS RECEIVER	
	RX330
PROTOCOL	ASYN@WL
FREQUENCY	433MHz/868MHz - 1 channel
CASING	ABS
ITEM NO.	F102RX330

COMMUNICATOR	
	TECNOCELL 4
INTERNAL GSM MODE	RS422
EXTERNAL GSM MODE	RS485
CASING	ABS
ITEM NO.	F104TECNOCELL4

OUTPUT EXPANSIONS					
	ESP 8RP	ESP 8RSP	ESP 4RS	ESP32-OCN	SINOTTICO 32N
OUTPUTS	8x 4A relays	7x 0.3A relays + 1x 4A relay	4x 0.3A relays	32 open collectors	32 programmable LED
CASING	Optional	Optional	Optional	Optional	ABS
ITEM NO.	F127ESP8RP	F127ESP8RSP	F127ESP4RS	F127ESP32OCN	F127SINOTTICON









				
SPEED ALM8 PL	SPEED 8	SPEED 4-140C	SPEED 4	SPEED 8 STD
1.8A				
8 conventional/ Zone Bus	8 conventional/ Zone Bus	4 conventional/ Zone Bus	4 conventional/ Zone Bus	8 conventional
4	2	14	1	
ABS	Optional	Optional	Optional	Optional
F101SPEEDALM8PL	F101SPEED8	F101SPEED4140C	F101SPEED4	F101SPEED8STD

TP20-440 - TP20-440 EN - Technical and functional specifications

21ISTR09471

Zones	Total logic zones	440	Videolarm	Videolarm IP	✓
	CPU hard-wired zones	12 conventional 8 Sensor Bus		Internal expansions	Input expansions
	Total hard-wired zones	424	Serial expansions		Hard-wired input expansions
	Total wireless zones	160		Wireless expansions	3
Outputs	CPU outputs	6		Consoles	32
	Sirens	32		Auxiliary control units	32
System features	RS485 serial bus	3		Output expansions	42
	Voice synthesis	✓		GSM communicator	1
	Event buffer capacity	32,000 events	Bus sirens	24	
Programs and access management	Programs	32	Advanced programming	Actions	2,048
	Codes	1,000		Timers	512
	Finger prints	96		Counters	256
	Transponders/RFID	1,000		Telephone index	48 numbers
	Wireless keys	250		Reserved output expansions	16
Automation	Timers	64	Accessory management	App (iPhone + Android)	myTecnoalarm myTecnoalarm TCS
	Access periods	16		Supervisor	Optional
	Calendar	Quadrennial or perpetual		Tecno Out	Optional
	Remote controls	32	Electrical specifications	Operating voltage	230V AC +/- 10% 50Hz
	Cyclic timers	10		CPU board consumption	190mA @ 13.8V DC
	Test call with TCP/IP	✓		Power supply	8A @ 14.4VDC
Alarm transmission equipment (ATE)	Channels	8	Batteries	2x 12V/17Ah	
	PSTN format	On-board	Physical specifications	Environmental class	II
	GSM format (optional)	ESP GSM 4G		Casing	Metal
	GSM-EXT format (optional)	TECNOCELL 4		Dimensions (L x H x D) (w/o antenna)	455 x 445 x 115mm
	IP format (optional)	ESP LAN		Antenna height	90mm
	Transmittable events	1,097		Weight (w/o battery)	7.8kg
	Telephone numbers/ IP addresses	2 per channel (max. 24 digits)	Conformity	Standards	EN 50131-1 EN 50131-3 EN 50136-2
	Call event queue	96		Security grade	3 (TP20-440 EN)
Protocols	203	Notified body		IMQ	
Telematic services	DDNS Tecnoalarm	✓			
	SNTP	✓			
	Mail Server Tecnoalarm	✓			
	TCS	✓			

Tecnoalarm reserves the right to change the product specifications and features without prior notice.

MODELS									
Model	Item no.								
TP20-440	F101T440-UK		✓	Optional	Optional	Optional	Optional	8A	✓
TP20-440 EN	F101T440EN-UK	Security grade 3	✓	Optional	Optional	Optional	Optional	8A	✓



Tecnoalarm

Via Ciriè, 38 - 10099 - San Mauro T.se Torino (Italy) - Tel. +39 011 22 35 410 - info@tecnoalarm.com



www.tecnoalarm.com