E QUADEL

Addressable fire detection control panel ALPHA 2100



Generation of analogue addressable control panels ALPHA2100 with its flexible structure allows configuration of systems in a range that includes not only the size of objects but also their topological structure. But, besides the flexibilility, a high degree of functionality is detained throughout the area of application and virtually does not depend on the complexity of the project.

ALPHA2100 is certified according EN54-2 and EN54-4 standards.

Range of application

Combining the existing performance of fire detectors and other elements compatible with ESP HOCHI-KI communication protocol and developing its own interface of generic character that enable the integration of external multi purpose transducers, QUADEL expanded performance range of their systems from typical fire detection to general building parameters that are important for the monitoring facilities..

The scope of application of ALPHA 2100 is very broad - ranging from facilities of medium to very high complexity.

Flexible structure

Hardware organization of the control panel ALPHA 2100 allows configuring systems of both centralized and distributed structures, using capability to dislocate addressable loop modules ALPHA 2100-LCU and connect them to the unique system bus (QBUS). On the same two-wires bus (twisted pair) of large information capacity (50 kbps), it is possible to connect additional control units ALPHA 2100-MCU in order to increase the system's reliability and displaying performances.

Input elements

- Analogue addressable elements such as smoke and heat sensors, but also the other transducers (relative humidity, gas concetracion, etc.).

- Addressable call points and other input/output modules.

- Fire detectors with collective address, such as beam detectors, linear heat detectors (thermosensitive cables), flame detectors, etc. Their connection to the address loop is possible only via appropriate interface address modules.

Output elements

Various alarm annunciators, controlling elements, switches, etc., can be connected to the otputs on the panel directly or into the addressable output modules. Versatile cause-effect configuration that could be done on site and downloaded via service PC, enables

the system to response to almost any application requirements.

External devices

- Fire extinguishing control panel SQS-101A (connection to the address loop with occupation of merely one of the 127 addresses on the loop)

- Line matrix printer (serial connection to one of the communication channels via RS 232 interface)

- Annnunciator QPT-3A (remote signalization displays)

Alph@Net

Expansion of telecommunications infrastructure in the field of Internet and GSM networks enabled the QUADEL to develope appropriate network hardware and software and thus remove the barriers in system monitoring that have existed in the previous system generations.

For the monitoring purposes the next modules are available::

- QIN/ET - interface module for monitoring of control panels ALPHA 1100 and ALPHA 2100 over Ethernet/Internet.

- QIN/485 - interface module for monitoring of control panels ALPHA 1100 and ALPHA 2100 through the local multipoint lines (twisted pair, length up to 1km).

- QIN/GSM - interface module for monitoring of control panels over GSM network.



Structure of fire protection system ALPHA 2100

Main Control Unit ALPHA 2100-MCU				
Characteristic	Number	Description		
Loop capacity	8	Internal - max 127 elements per loop		
	32	Networking - max 127 elements per loop		
Loop modules (ALPHA 2100-LCU)	2	Internal - up to 2 loops per module		
control capacity	16	Networking - up to 2 loops per module		
Zones	99	Software zonal organization		
LCD display	1	Graphic, 16 x 40 characters,		
		CCFL backlight		
Keyboard		Industrial standard		
Communication interfaces		QBUS / USB / RS485 / RS232		
	4	Ethernet modem / GSM modem		
Operating levels	4	Password system		
Configuration parameters (on site programming via service PC)		 Textual description of the element's location (40 characters) Alarm level for each sensor, separately for DAY and NIGHT organization 		
		 Address elements type and the nature of their parameters Terms for daily self-calibration, DAY/NIGHT organization Cause effect table, etc. 		
Loa Event Memory		Last 2000 events		
Sistem bus - OBUS		- 2-wire signal line: 50 Kbps.		
Control units networking – QBUS		- 2-wire signal line: 50 Kbps,		
		twisted pair, up to 1 km.		
		- max 64 control units		
Remote signalization –		- 2-wire signal line: twisted pair, max 1 km.		
repeater panel QPT-3A		- max 32 remote units		
PC monitoring networking -		- Ethernet/Internet		
Alph@Net		- GSM		
		- KS 485 multipoint, twisted pair		

Line Control Unit ALPHA 2100-LCU			
Characteristic	Number	Description	
Loop capacity	2	Up to 127 address elements	
Internal sounder outputs	4	- 24VDC +/- 15%, 2A max	
		- individually programmed	
		- relay change over integrity control	
Internal transisitor outputs	4	- 24VDC +/- 15%, 2A max	
		- individually programmed	
Internal ON/OFF inputs	4	- voltage free contacts	
		- individually programmed	
Communication channel	1	QBUS	
Replacable fuse	1	F3 – 3.15A, Glass, Time D, 5x20mm	

Cabinet & supply unit CS 2100-8L Characteristic Number Description Loop gangaity 9 Up to 127 address elements

Loop capacity	8	Up to 127 address elements
Loop modules capacity	4	ALPHA 2100-LCU
Main control unit	1	ALPHA 2100-MCU
Working conditions		- 10°C to +50 °C
		- up to 90% relative hummidity
Main supply input		- Voltage range: 230 VAC +10% /-15%
		- Steady AC Current: 0.75 A max
Main supply output		- System voltage: 28.2 VDC +/-2%
		- Charger voltage: 27.6 VDC +/-2%
Back-up supply		- Fully charged voltage (EN54-4 cl. 3.1.2): 27.6 VDC
		- Final voltage (EN54-4 cl. 3.1.1): 20.6 VDC
		- Internal battery resistance: max 1.8 Ohm
		- Applicable batteries: 2 x 12Ah/18Ah/28Ah
Supply output currents		- Imax. a (EN54-4 cl. 3.1.3): 1.8 A
		- Imax. b (EN54-4 cl. 3.1.4): 3 A
Replacable fuse	1	F2 on ALPHA 2100-SPU
		4A, Glass, Time D, 5x20mm
FAULT signalization output		Voltage free contacts (normally closed)
	1	30V/0.5A max
ALARM signalization output	4	Voltage free contacts (normally closed)
	1	30V/0.5A max
Dimensions (w x h x d)		470 x 530 x 180 mm
Weight		11 kg (without baterries)
Case material		Plastic coated stainless steel –
		Light gray color (RAL7032)