



APPLICATION – AFS42 system with ZBP41 power supply is a crucial element thanks to which a modern fire alarm system can be built in buildings of small or medium size. It allows identification of the place where the fire appears and allows independently programmed external executive devices to start automatically.

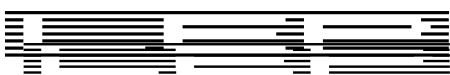
AFS42 system has been designed to create a fire alarm system adjusted to a specific building. In order to get as many address lines and outputs for executive devices as needed, up to five system's AFS42 can be joined into one system. Then it is also possible to build a distributed system where systems are connected only by means of RS485 network and all the remaining connections are of local character within each of the systems. The entire system is administered from one superior system. In order to improve the reliability, the RS485 network is led along two independent tracks. Additionally, in case of simultaneous communication failure on both tracks, the systems start working independently.

CONSTRUCTION – AFS42 system is made of a single, flat electronic module placed with ZBP41 power supply in a metal cage. All the inputs are in form of screw terminals, which additionally allow quick disconnection (for service purposes). The colours of the cage can be adjusted to the interior decoration on request of the investor.

THE PRINCIPLE OF OPERATION – the system's work is based on programs working in three microprocessors cooperating with each other – on the basis of the configuration saved in memory by the fitter. Two independent information canals are constantly controlled: fire watch line state and the state of power supply with accumulators which supply the system. All the divergences between the system configuration and the actual state are immediately converted into alarm states and signals. system configuration allows to group fire watch line addresses in zones; to set different alarm levels for all the addresses and zones; to start working automatically; to configure executive devices' work; to enter texts describing addresses, zones and executive devices. All the events happening during the system's work are saved in non-volatile memory and later they can be revised on the system's display. In system's microprocessors' work multilevel systems protecting from data loss or the program hang-up are included. AFS42 system operates one fire watch line in which 100 addresses may be controlled. The system consists of five systems and has got five fire watch lines, 500 addresses and 20 outputs for executive devices. It is possible to continue fire watch process of the whole building even in case the line gets tangled, no matter if there is short circuit or the line is damaged. The system controls the presence of the detectors in the line (their proper work) and a given detector's alarm state. The system cooperates with cooperates with GNA42 base used to connect OSD23 smoke detector and also with ROP42 – manual fire warner, which is used to start alarm directly by the person who noticed the fire. ROP42 has got MAR42 address module with a double-sided short circuit insulator. By means of MAR42 address modules it is possible to equip the system with any two-state fire signalling detectors in which alarm state causes the increase of feeding current or short circuit.

SPECIFICATIONS:

Type	addressable
Level of cage security	IP30
Working temperature range	from -20 to +50 degrees C
Dimensions (length x width x height)	115 x 231 x 403 mm
Types of devices working with the central set	ZBP41 power supply, ROP42, GNA42,
Type of fire watch line	loop
Number of fire watch lines	1
Maximum number of the elements in a line	100
Fire watch line voltage	20V
Stand-by maximum current	400mA
Acceptable line resistance	100Ohm
Acceptable line effective capacitance	100nF
Acceptable line inductance	0,1mH
Short-circuit insulator in the central set output circuit	yes
Short-circuit insulator in all line elements	yes
Number of relay outputs	4
Relay connectors maximum current	1A
Configurable properties of relay outputs:	
- NC/NO	yes
- potential / nonpotential	yes
- supervised / not supervised	yes
- mute option	yes
Multistage alarm organization	yes
Setting signal delays	yes
- waiting for first-stage alarm confirmation	from 0 s to 40 min every 10 s
- recognizing event after confirmation	from 0 s to 40 min every 10 s



- turning on alarm outputs delay	from 0 s to 40 min every 10 s
Correlative alarm	yes
Alarm counter capacity	500 events
Real time clock	yes +/- 2 s per 24 h
Recommended wire in the fire-watch line	YnTKSYekw 1x2x0,8
Connecting wire screen of the fire-watch line	one way to E do zacisku E (obudowa centrali)
Recommended signal wire	HLGs 2x1,0
Central set cage ground	PE filament of the supplying wire
Network option	yes - 5 central sets max
Central set program version	CG2-CS3-MA2

Technical specifications of ZBP41 power supply

Level of the cage protection	IP30
Working temperature range	from -20 to +50 degrees C
Dimensions (length x width x height)	94 x 231 x 403 mm
Cage material	powder painted steel
Power supply voltage	230 V AC
Maximum current consumption	1 A
Inner working voltage	24 V DC
Power consumption	160 VA (max)
Accumulators type	ferrous, automatic
Max. accumulators capacity	18 Ah
Buffer voltage	27,6 V DC
Temperature compensation	yes

Typical AFS42 system components:

