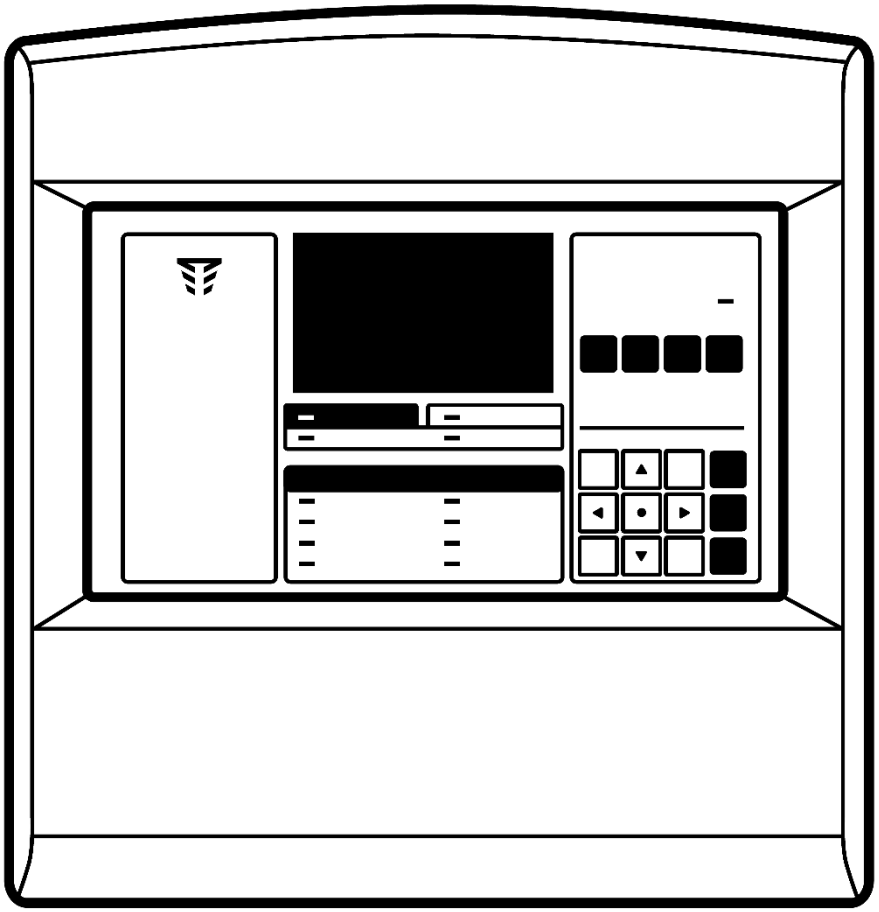
FIRE ALARM SYSTEMS

TIRAS



ADDRESSABLE FIRE CONTROL PANEL
Tiras PRIME A

Passport AAZCh.425521.009 PS

1O206

EN 54

DSTU ISO 9001:2015

Serial number:

Firmware version:

This passport refers to addressable fire control panel (futher – FCP) Tiras PRIME A, and manufacturer's warranty obligations on this FCP.

The detailed information on the installation, configuration, and operation of the FCP as part of the AFAS is given in the operation manual for the FCP.

1 List of abbreviations

The following abbreviations are used in this document:

AI – Addressable interface;

PS – Power supply unit;

M-GSM – fire and fault alarm communication device M-GSM;

PC – Personal computer;

FCP – Fire control panel *Tiras PRIME A*;

CMS – Central monitoring station;

ECD – Electrical automatic Control and delay Device "Tiras 1X" AAZCh.425532.012;

AFAS - addressable fire alarm system based on FCP.

2 General information and technical features

2.1 General information

FCP is intended to operate as a part of AFAS, namely, to receive and process the information from fire detectors, indicate fire alarms and faults, transfer fire alarm signals to sirens, CMS, the means of automatic fire extinguishing, and control addressable components according to settings, configured by a user.

FCP meets the requirements of DSTU EN 54-2: 2003, DSTU EN 54-4: 2003 standards. With the M-GSM module connected, the FCP also meets the requirements of DSTU EN 54-21: 2009.

Up to four FCPs can be networked via Ethernet interfaces.

The FCP provides ECD control interfaces via AM-Converter modules (type C outputs according to DSTU EN 54-2: 2003).

2.2 FCP technical features

2.2.1 General features:

1) 2 loop or 4 radial AIs;
2) each loop AI can contain up to 250 addressable components, and radial can contain up to 32 addressable components;
3) Maximum length of AI – 2000 m;
4) 6 outputs: AL ("Fire"), FT ("Fault"), OUT1 - OUT4 (alert, with programmable functions);
5) 2 controlled power outputs "24 V" for peripheral devices suppling;
6) 2 inputs of power control IN1, IN2 (to connect outputs of "open collector" or "dry contact" type of other devices);

7) separate input of AI power supply with the voltage of 20 to 30 V – power supply from external PSU is possible;
8) 2 Ethernet interfaces, 10 Mbps;
9) Service interface RS485;
10) USB interface for programming and configuration from a PC;
11) interface for connecting the GSM-communicator (M-GSM);
12) integrated PSU;
13) built-in charging device with battery capacity control and voltage control on each battery;
14) backup power supply – two sealed lead-acid batteries;
15) non-volatile clock;
16) event log with 10,000 messages capacity.

2.2.2 Main technical features

The main technical features of a FCP are given in Table 1.

Table 1 – Main technical features of a FCP

Feature	**Value**
Primary power source: AC mains, V	187-242
Primary power source: AC mains frequency, Hz	50±1
Maximum current consumption from the primary power source in all modes, A	0,27
Maximum power consumption from the primary power source, VA	60
Backup power source: nominal voltage of a single battery, V	12
Backup power source: capacity of a single battery, A*h	7
Maximum battery charging current, mA	500
The permissible internal total resistance of both batteries and their connection circuits, R_{imax}, Ohm, not more than	1,0
The output voltage of integrated PS, V	21,0 – 29,5
Maximum current consumption from the integrated PS in all modes, I_{min}[1], A	0,05
Maximum long-term current consumption from the integrated PS with the maximum loadings, I_{max_a}[2], A	1,1
Maximum long-term load current of "+ 24V" outputs (each), mA	400
Maximum current consumption by AI LPOW power input, mA	140
Dimensions (WxHxD), mm	350 × 365 × 100
Net weight (without battery), kg	4
Mean time to failures, h., not less than	40000
Average lifetime, years, not less than	10
Enclosure protection degree (IEC 60529)	IP30

Table 1 continuing

Inputs and outputs	
Maximum number of zones	1000
Maximum number of detectors in a zone, pcs	32
Voltage at AI terminals in all modes, V	24 – 25
Maximum current of AI, mA	80
Minimum leakage resistance in AI (between each wire and ground), kOhm	50
Sum of resistances of AI wires and the resistance of the short-circuit isolators, Ohm, not more than	125
Maximum output voltage at IN1, IN2 inputs, V	3
Maximum output current of IN1, IN2 inputs, mA	0,1
Maximum switching current of FT, AL outputs, mA	400
Maximum switching current of OUT1-OUT4 outputs, mA	800
Maximum switching voltage of FT, AL, OUT1-OUT4 outputs, V	30
Resistance of the terminal resistor for the AL output, kOhm	6,8 – 30
Maximum short-circuit resistance of the AL output at the GND terminal, kOhm	1,4
Resistance of the terminal resistor for OUT1-OUT4 outputs, at the supply voltage of 20 - 29,5 V on U12, U34 inputs, kOhm	1,3 – 8,2
Open circuit resistance of the OUT1-OUT4 output line, not less than, kOhm	> 8,2
Short circuit resistance of OUT1-OUT4 outputs on the GND terminal, kOhm	< 1,3
Voltage at the outputs + 24V, V	21,0 – 29,5
Maximum jutput current of each output + 24V, A	0,4
Fuses	
AC network, A	3.15
"+24V" outputs, A	2 × 0,5, self-restoring
OUT1-OUT4 outputs, A	4 × 1,0 self-restoring
Communicator power supply, A	0,2, self-restoring
Time features	
Maximum detection time of alarm (fault) in zones, s	10
Maximum fault detection time (except zones), s	100
Maximum time to determine the battery capacity (low capacity), min	15
Maximum time to determine the battery absence, min	2
Wire cross-section, permissible for clamping in terminals, mm^2, (for stranded wires)	0,22 - 2,5

Notes.

1. According to DSTU EN54-4, without AI consumption and with automatically switched off display.
2. According to DSTU EN54-4, with AI consumption, with the display, switched on, power supply of peripheral devices from outputs "+ 24V".

3 Security requirements



Connection devices only when the supply voltage of the FCP is switched off.

3.1 The service personnel must be guided by the "Rules of technical operation of electrical installations of consumers" and "Rules of safety in the operation of electrical installations of consumers" when installing and operating the FCP.

3.2 Mounting, demounting, and maintenance of the FCP are carried out only if the supply voltage is switched off.

3.3 Mounting, demounting, and maintenance of the FCP must be carried out by personnel who have an electrical safety qualification group not lower than III.

3.4 Fire safety rules must be kept when carrying out any works with a FCP.

4 Delivery set

After unpacking the FCP make an external inspection and make sure that there is no mechanical damage, check the completeness, which should comply with table 2.

Table 2 – Delivery set of a FCP

Name	Code	Number	Note
Tiras PRIME A FCP	AAZCh.425521.009	1	
Passport	AAZCh.425521.009 PS	1	
Terminal block for cable	2EDGK-5.0-10-14	1	
Resistor 4,7 kOhm, 1%, 0,5 W		4	
Resistor 30 kOhm, 1%, 0,5 W		2	
Screw (to fix the main module)	2,9×9,5	2	
Cover plug		1	
Battery	7 Ah, 12 V	2*	* individual order

5 Information on declarations of conformity to technical regulations and certificates

A FCP meets the requirements of mandatory technical regulations, namely:

- Technical regulations on electromagnetic compatibility of equipment;
- Technical regulations restricting the use of certain hazardous substances in electrical and electronic equipment.
- Technical regulations of low-voltage electrical equipment.

Tiras-12 LTD declares that the type of radio equipment of the Tiras PRIME A FCP, together with the installed M-GSM module, complies with the technical regulations of the radio equipment.

Certificate of compliance with the requirements of DSTU EN 54 series standards issued by the State Certification Center of the SES of Ukraine.

The Quality Management System of Tiras-12 LTD is certified in accordance with DSTU ISO 9001: 2015.

The full text of declarations of compliance with technical regulations and certificates are available on the website at tiras.technology.

6 Manufacturer declarations

The design of the FCP is made in accordance with the Quality Management System, which contains the set of design rules for all elements. All components of the FCP were selected for their intended purpose; their operating conditions correspond to the environmental conditions outside the buildings in accordance with class 3k5 IEC 60721-3-3.

7 Acceptance certificates

A FCP meets the requirements of regulatory and technical documents and is suitable for operation.

The serial number and date of manufacture are indicated in the upper right corner of the front part of the cover of this passport. The date of acceptance (stamp) is on the last page of the passport.

8 Operation, storage, and transporting conditions

A FCP is intended for continuous 24h operation in the premises under regulated climatic conditions. Operating temperature range: - 10˚C .. 55˚C.

Packaged FCPs are stored in warehouses under the following conditions: air temperature range: - 50˚C .. 55˚C, relative humidity must not exceed 98% at a temperature of 35˚C. There should be no aggressive impurities in the air causing corrosion in the premise where the FCPs are stored.

Packaged FCPs are transported by low-tonnage shipments at any distance by road and rail in closed vehicles in accordance with the rules of transportation applicable to each type of transport. When placing and securing boxes with packed FCPs during transportation, ensure a stable position of the boxes to prevent shifting and bumps between them. During loading and transportation, the requirements of handling signs on the packaging must be met.

9 Warranty obligations

The manufacturer guarantees the FCP compliance with the requirements of regulatory and technical documents during the warranty period of operation under the conditions of transportation, storage, and the operation specified in this passport.

The warranty period is 36 months and starts at the date of sales specified in the operating documents for the FCP or in other accompanying documents (sales contract, invoice, bill, etc.). If you cannot provide a document confirming the date of sale of the FCP, the warranty period starts from the date when the device was produced.

_____ _____

(date of sale) *(seller's signature)* *stamp*

10 Limitation of liability

The manufacturer has the right to refuse the FCP warranty service under disputed circumstances. The manufacturer also has the right to make a final decision on whether the FCP is subject to warranty service or not.

These are the actions and damages that lead to loss of warranty service:

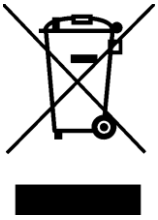
1) damage caused by natural phenomena (fire, flood, wind, earthquake, lightning, etc.);
2) damage caused by the violation of the installation rules or improper FCP operating conditions, including in particular:
   - poor grounding;
   - overvoltage;
   - high humidity and vibration;
3) damage caused by other objects, liquids, insects, etc. getting inside the FCP;
4) mechanical damage to the FCP components (chips, dents, cracks, broken contact connectors, etc.);
5) damage caused by unauthorized repair;
6) damage caused by the violation of transportation, storage, and operation rules;
7) change, delete, erase or damage the device serial number (or stickers with serial numbers on the FCP).

11 Information on repair

The FCP is repaired by the manufacturer. FCPs for which the warranty period has not expired and which have been operated in accordance with the operating documents for the device are repaired free of charge. If you want to repair a FCP, send it to the manufacturer with a document indicating the date of the sale, and a letter describing the nature of the fault, the place of FCP operation, and the contact phone number of the person for repair

12 Disposal

After the expiry of the service life of the FCP or batery its utilization is carried out in accordance with the current legislation, separate from household waste.



In accordance with the EU Directive 2012/19/EU on waste electrical and electronic equipment, the disposal of FCP should be done separately from household waste. To dispose of the equipment, it should be delivered to a point of sale or a local processing point.

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TIRAS

tiras.technology

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Technical support: support@tiras.ua
Warranty and post-warranty service: otk@tiras.ua

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