

Tiras-12 LTD declares that the type of radio equipment of the Tiras PRIME A mini FACP with the installed M-WiFi, M-LTE or M-2G module complies with the technical regulations of the radio equipment.

Certificate of compliance with the requirements of DSTU EN 54 series standards is 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.

7 WARRANTY OBLIGATIONS

The manufacturer guarantees the FACP 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 FACP or in other accompanying documents (sales contract, invoice, bill, etc.). If you cannot provide a document confirming the date of sale of the FACP, the warranty period starts from the date when the device was produced.

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

The FACP is repaired by the manufacturer. The FACP 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 the FACP, 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 the FACP operation, and the contact phone number of the person for repair.

Information about limitation of liability is available in the "Warranty" section on the website: tiras.technology.



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



In accordance with EU Directive 2006/66/EC, batteries (used in the products) should be disposed of separately from household waste. For proper recycling, return the batteries to your local supplier or dispose of them at designated collection points.

8 CONTACT INFORMATION

In case you have any questions, please contact:

Sales department: market@tiras.ua

Technical support: support@tiras.ua

Warranty and post-warranty

service: otk@tiras.ua

Appendix A

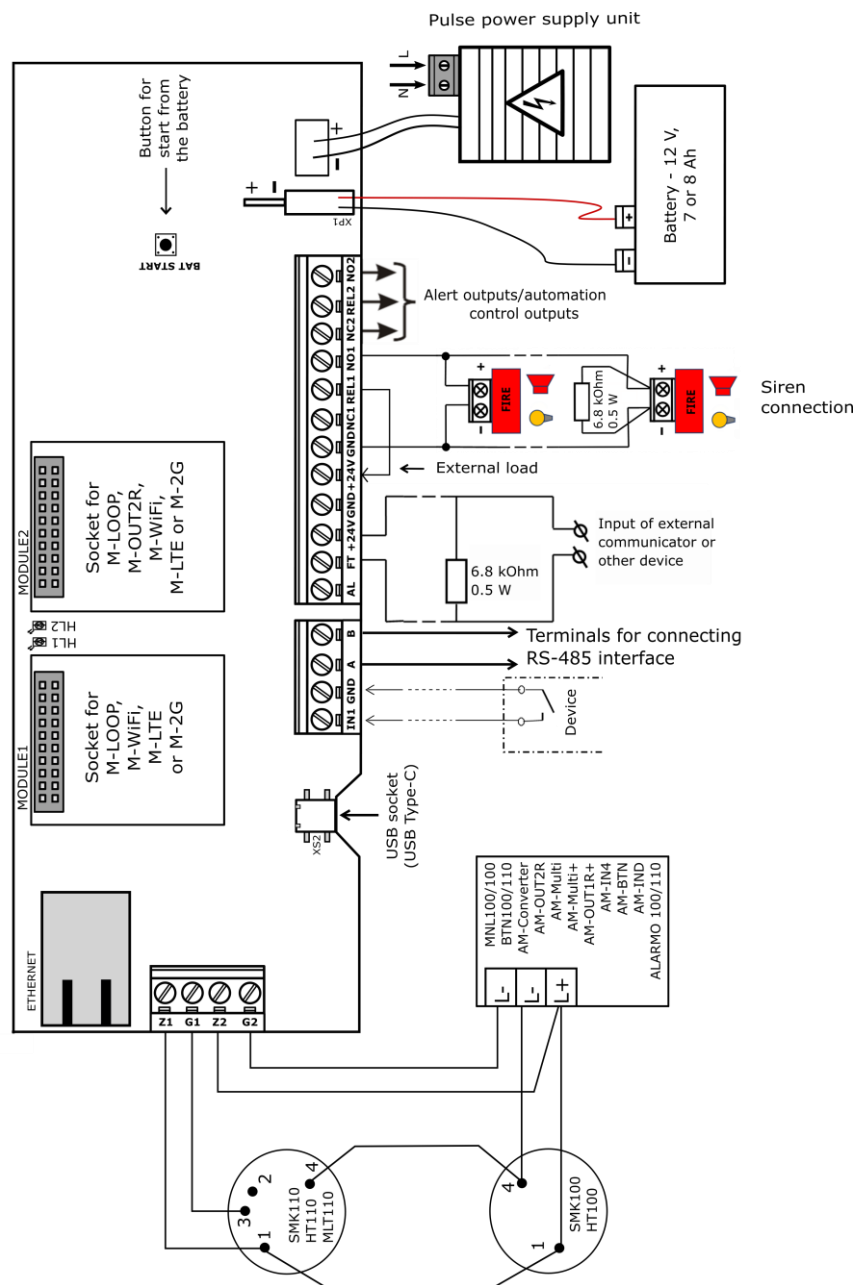
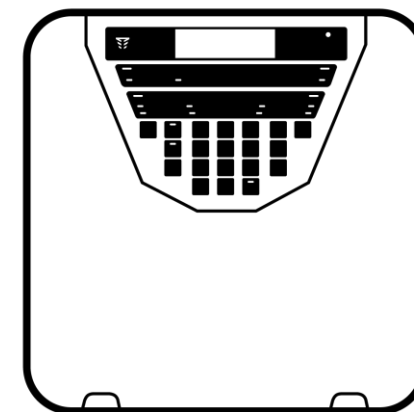


Figure A.1 - Wiring diagram



Tiras PRIME A mini
Addressable Fire Alarm Control Panel



Tiras-12 LTD
Ukraine, Vinnytsia,
Khmelnyskoho Shose lane 2, b. 8



More information on the site
tiras.technology

This passport refers to the addressable fire alarm control panel (further – FACP) Tiras PRIME A mini, and manufacturer's warranty obligations on this FACP.

Detailed information on the installation, configuration, and operation of the FACP as part of the AFAS is given in the FACP's installation and operation manual available on the website tiras.technology.

1 LIST OF ABBREVIATIONS

AI	- addressable interface;
PSU	- power supply unit;
PC	- personal computer;
FACP	- addressable fire alarm control panel Tiras PRIME A mini;
FARC	- fire alarm receiving centre;
ECD	- electrical automatic control and delay device Tiras 1X;
AFAS	- addressable fire alarm system.

2 GENERAL INFORMATION AND TECHNICAL FEATURES

2.1 General information

2.1.1 The FACP is intended to operate as a part of AFAS: to receive and process the information from fire detectors, to indicate fire alarms and faults, to transfer fire alarm signals to sirens, FARC, automatic fire extinguishing systems, and to control addressable components according to settings configured by a user.

2.1.2 The FACP meets the requirements of EN 54-2, EN 54-4 standards. With the connected M-WiFi, M-LTE, M-2G module or an activated built-in Ethernet module, the FACP also meets the requirements of EN 54-21.

2.1.3 The FACP does not provide for the possibility of networking with other FACPs.

The FACP provides control of additional devices via AI (using AM-Converter module) or RS-485 interface.

The total number of connected devices via RS-485 interface should not exceed 16:

- PUIz (type C outputs according to EN 54-4) – up to 8;
- M-OUT8R module – up to 8;
- M-OUT2R box module – up to 8.

2.2 FACP's technical features

2.2.1 General features:

- 128 zones/inputs/outputs to control automation;
- 1 loop or 2 radial AIs (2 loop or 4 radial AIs using M-LOOP module);
- maximum 250 addressable devices for one FACP;
- each loop AI can contain up to 250 addressable devices, and each radial AI – up to 32 addressable devices;
- maximum length of AI – 2000 m;
- 4 outputs: AL ("Alarm"), FT ("Fault"), REL1, REL2 (alert, with programmable functions);
- 2 controlled power outputs "+24 V" for peripheral devices supply;
- 1 universal IN1 input with programmable functions;
- RS-485 interface, 38400 Bps;
- Ethernet interface, 10 Mbps;

- USB Type-C interface for programming and configuring from a PC;
- 2 universal slots for connecting: M-WiFi, M-LTE or M-2G module, one or two M-OUT2R modules, one M-LOOP module;
- LCD;
- built-in charging device with battery capacity control and voltage control on each battery;
- backup power supply – one lead-acid or LiFePO₄ battery (capacity is given in Table 2.1);
- non-volatile clock;
- event log with 2000 messages capacity.

2.2.2 Main technical features

The main technical features of the FACP are given in Table 2.1.

Table 2.1 – Main technical features of the FACP

Parameter	Value
Primary power source: AC mains voltage, V	187-253
Primary power source: AC mains frequency, Hz	50±1
Maximum current consumption of the primary power source in all modes, A	0.14
Maximum power consumption of the primary power source, VA	31
Backup power source (battery): nominal voltage of each battery, V	12
Backup power source: battery capacity, Ah	7 or 8
Maximum battery charging current, mA:	
▪ standard charging mode	400
▪ fast charging mode	800
The permissible internal total resistance of both batteries and their connection circuits, R _{imax} ¹ , Ohm, not more than	1.0
The output voltage of integrated PSU ² , V	10.8 – 15.0
Maximum current consumption from the integrated PSU in all modes, I _{min} ³ , A	0.06
Maximum long-term current consumption from the integrated PSU with the maximum loading, I _{max,a} ³ , A	2.0
Maximum long-term load current of + 24V outputs (each), mA	400
Dimensions (WxHxD), mm	280×280×80
Net weight (without battery), kg, not more than	1.25
Average meantime to failures, hours, not less than	40000
Average service life, years, not less than	10
Enclosure protection degree (IEC 60529)	IP30
Inputs and outputs	
Maximum number of zones	128
Voltage at AI terminals in all modes, V	24 – 25
Maximum current of AI, mA	160
Minimum leakage resistance in AI (between each wire and ground), kOhm	50
Total resistance of AI wires and the resistance of the short circuit isolators, Ohm	125
Maximum output voltage at IN1 input, V	3
Maximum output current of IN1 input, mA	0.1

mA	
Maximum switching current of FT, AL outputs, A	0.4
Maximum switching current of REL1, REL2 outputs, A	3
Maximum switching voltage of FT, AL, REL1, REL2 outputs, V	30
Resistance of the EOL resistor for the AL ⁴ output, in standby mode at the PSU supply voltage of 10 V, kOhm	6.8 – 30
Resistance of the EOL resistor for the AL ⁴ output, in standby mode at the PSU supply voltage of 29.5 V, kOhm	6.8 – 210
Maximum short circuit resistance of the AL ⁴ output at the GND terminal, kOhm	1.4
Resistance of the EOL resistor for REL1, REL2 ⁴ outputs, at the supply voltage of 20 – 29.5 V, kOhm	1.2 – 12
Open circuit resistance of the REL1, REL2 ⁴ output line, kOhm, not less than	13
Maximum short circuit resistance of REL1, REL2 ⁴ outputs on the GND terminal, kOhm	1.0
Voltage at the + 24V outputs, V	24.0 – 25.0
Wire cross-section, permissible for clamping in terminals, mm ² (for stranded wires)	0.22 – 2.5
Fuses	
AC network, A	3.15, fusible
+24V outputs ⁵ , A	2 × 0.5
AL, FT outputs ⁵ , A	2 × 0.14
Battery ⁵ , A	1.85
Time parameters	
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
Notes:	
1. According to DSTU EN54-4, without AI consumption and with automatically switched off display.	
2. PSU means a built-in PSU and battery operating within the specified voltage range, but operating voltage of external device power outputs is 24V.	
3. According to DSTU EN54-4, with AI consumption, with the display switched on, power supply of peripheral devices from + 24V outputs.	
4. The outputs are set to line monitoring mode.	
5. Resettable.	

3 SAFETY REQUIREMENTS

	All connections must be carried out with disconnected power supplies of the FACP: main (230 V AC) and alternative (batteries).
--	---

	Caution! Printed circuit boards of the FACP and modules contain static-sensitive components. To avoid damage to sensitive components before handling any boards, you should discharge static electricity in your body by touching ground.
	Caution! Installing and removing modules should be carried out with disconnected power sources (AC and DC) to avoid damage to the main board and modules.

3.1 Installation, uninstallation, operation and maintenance of the FACP should be carried out by qualified personnel in accordance with the electrotechnical regulations and fire safety regulations.

3.2 Installation, uninstallation and maintenance of the FACP must be carried out with the power supply disconnected.

4 OPERATION CONDITIONS

The FACP is intended for continuous 24h operation in the premises with regulated climatic conditions. Operating temperature range – -5°C ... +40°C, maximum humidity – 93% (t= 25°C).

5 PACKAGE CONTENTS

After unpacking the FACP, make an external inspection and make sure that there is no mechanical damage, check the completeness, which should comply with Table 5.1.

Table 5.1 – Package contents of the FACP

Name	Quantity, pcs
FACP Tiras PRIME A mini	1
Passport	1
Resistor 6.8 kOhm, 1%, 0.5 W	5*
Resistor 180 kOhm, 1%, 0.5 W	1**
Screw 3.9×16	2
Cover plug	1
Battery 7(8) Ah, 12 V	1***
Tie RCV-100	1
Notes:	
* - for REL1, REL2, AL, FT, and IN1 outputs;	
** - for RS-485 interface;	
*** - individual order.	

6 INFORMATION ON DECLARATIONS OF CONFORMITY TO TECHNICAL REGULATIONS AND CERTIFICATES

The FACP 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.