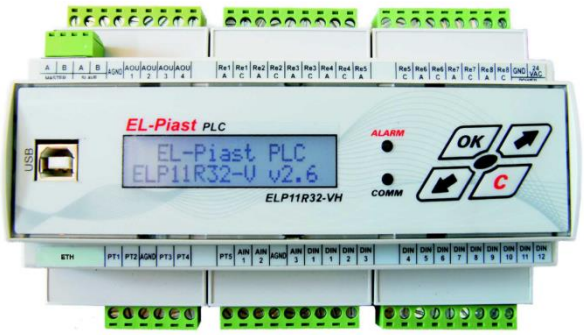
PLC Controller
ELP11R32

1. Technical detailes



- Dimensions: 158 x 106 x 58 mm
- Nominal power supply: 24 VAC, 50 Hz
- Permitted power supply: 24 V AC/DC ±10%
- Communication port: 3 x RS-485
- WEB Server
- Alarm and communication signalling
- Built-in RTC clock and calendar
- Power consumption: max. 15 VA
- Operating temperature: -20 … 50 °C
- Storage temperature: -20 … 70 °C
- Protection level: IP20
- Installation: DIN 35 bus-bar
- Memory: 48 KB RAM, 8 KB EEPROM, 384 KB FLASH
- CPU: STM32 – ARM Cortex-M3 (32-bit) 72 MHz

2. Resources

Group	Type	Quantity	Electric parameters	Marking
INPUT	Digital – voltage input	12	- Input voltage 24 VAC or 24 VDC - Voltage range 15 … 27 VAC or 16 … 38 VDC	DIN1 – DIN12
	Temperature input PT1000 with built-in protection PTC	5	- Probe current: 1mA - Minimal load resistance: 0 Ω - Measurement frequency: 2,5 ms - Measurement range: -50 … 170 °C - Measurement accuracy: ±0.2 °C - Resolution: 8 bit	PT1 – PT5
	Analogue voltage / current input with built-in protection PTC	3	*Voltage inputs:* - Permitted input voltage: 0 – 10 VDC - Input resistance: 450 kΩ ± 5% - Measurement frequency: 2,5 ms - Measurement accuracy: ±0.005 V - Resolution: 12 bit *Current inputs:* - Permitted input current: 0 – 20 mA - Input resistance: 120 Ω ± 5% - Measurement frequency: 2,5 ms - Measurement accuracy: ±0.01 mA - Resolution: 8 bit / V	AIN1 – AIN3
OUTPUT	Analogue voltage outputs with built-in protection PTC	4	- Nominal output voltage: 0 – 10 VDC - Maximal output load: 20mA - Minimal load impedance: 500 Ω - Resolution: 8 bit / V	AOU1 – AOU2
	Relay outputs	8	- Maximal contact voltage: 380 VAC, 125 VDC - Minimal contact voltage: 5VDC - Nominal resistance current: 5A / 250VAC; 5A / 30VDC - Nominal inductive current (cosφ = 0,4 L/R = 7ms): 2A / 250 VAC; 2A / 30 VDC - Minimal contact current: 10 mA - Long-term current carrying capacity: 5 A - Maximal connection power for resistance load: 1250 VA, 150 W - Maximal connection power for inductive load: 500 VA, 60 W - Maximal connection frequency under nominal load: 1800 cycles / h	Re1 – Re8
COMMUNICATION	RS485 SLAVE	1	- Serial port for communication with slave devices - Any transmission protocol - Transmission speed: 2,4 kbit – 115,2 kbit	AB (SLAVE)
	RS485 MASTER	1	- Serial port for communication with master devices - Protocol ModBus RTU, ModBus32, ELPBus, **BACnet MS/TP** (depending on the version of the driver) - Transmission speed: 2,4 kbit – 115,2 kbit	AB (MASTER)
	USB	1	- Serial port for communication with PC - Protocol ModBus RTU, ModBus 32, ELPBus - Transmission speed: 115,2 kbit	USB
	Ethernet	1	- Ethernet port compliant with 10 Base-T standard - Protocol ModBus TCP/IP, ELPBus TCP/IP, HTTP port:80, **Bacnet IP**	ETH
	HMI CON	1	- Serial port for communication with HMI - ELPBus protocol - Transmission speed: 9,6 kbit	Terminal Connector 4-pin: A, B, 24V, F

3. Available versions of the controllers

PLC controller ELP11R32 can appear in several versions of the optional configuration:

Name	Connectors		The display on the controller	Modbus		BACnet	
	USB	HMI		RTU	TCP	MS/TP	IP
ELP11R32-MOD-RTU	✓	✓	✓	✓	–	–	–
ELP11R32-MOD-IP	✓	✓	✓	✓	✓ (2)	–	–
ELP11R32-MOD-RTU BASIC	– (1)	– (1)	–	✓	–	–	–
ELP11R32-MOD-IP BASIC	– (1)	– (1)	–	✓	✓ (2)	–	–
ELP11R32-BAC-MSTP	✓	✓	✓	✓	–	✓	–
ELP11R32-BAC-IP	✓	✓	✓	✓	✓ (2)	✓	✓ (2)
ELP11R32-BAC-MSTP BASIC	– (1)	– (1)	–	✓	–	✓	–
ELP11R32-BAC-IP BASIC	– (1)	– (1)	–	✓	✓ (2)	✓	✓ (2)

(1) – The possibility of completing the missing connectors using additional optional expansion card HMI BRD. It is the expansion module dedicated for ELP11R32 BASIC controller, which allows you to communicate with the controller via the USB port and connect the HMI using a dedicated connector.

(2) – Communication functions implemented using Ethernet card.