

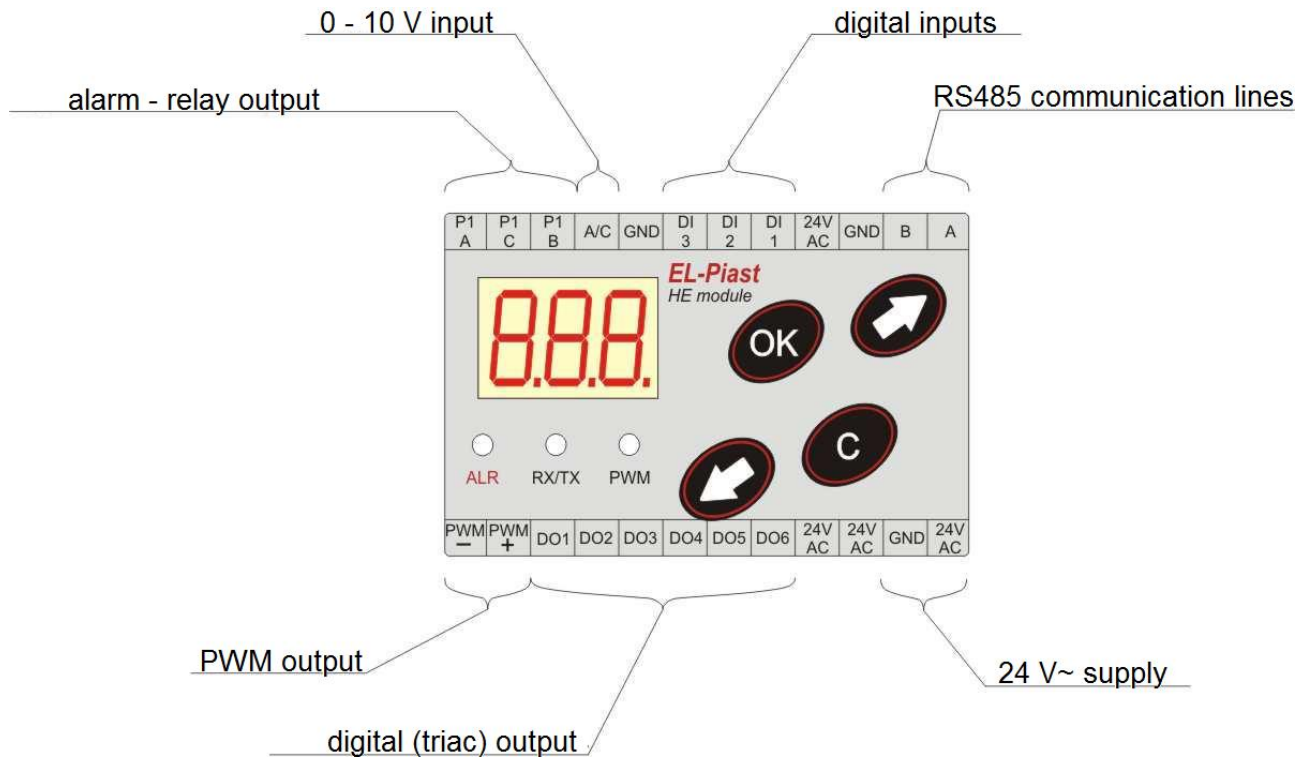
EL-HE heater control module

1. Technical data



- Supply voltage: 24 V~ (+/- 10%)
- Dimensions[mm] : 70 x 90 x 58
- Ability to control binary
- Adjustable parameters work: 12
- LED display
- Communication port RS-485 MODBUS RTU
- Relay – alarm output: normally closed contact 10 A, 250V~
- A/C voltage input: 0 – 10 V
- Input digital alarm from thermostat safety
 - DI 1 – DI 3: 0 – 24 V~
- PWM output: 0 – 7 V
- Output 24 VAC DO1-DO6 to contactor control heaters

2. The main technical parameters

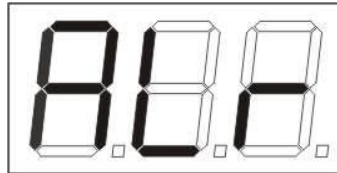


3. List of available parameters

Parameter	Function	Range	Factory setpoint	Type
10h	Upper signal limit in the analogue input	0.0 – 10.0 V	10.0	Write and read
11h	Lower signal limit in the analogue input	0.0 – 10.0 V	0.2	Write and read
12h	Signal value in the analogue (control) input	0.0 – 10.0 V	-	Read
13h	Number of switch-on heating stages	1-6	2	Write and read
14h	PWM output period	1.0 – 10.0 s	10.0	Write and read
15h	PWM output limit	0 – 100 %	-	Write and read
16h	Digital inputs		-	Read
17h	Digital outputs		-	Read
18h	Present PWM output level percentage	0.0 – 100 %	-	Read
19h	Heater operating mode selection / heater power reduction rate of rise	0 – 100	0	Write and read
20h	Control method delection: normal / binary	nor / bin	nor	Write and read
21h	Controller address	0 - 255	10	Write and read

4. Alarm output

Upon the emergence of alarm state, all heating stages are switched off, the PWM signal amounts to zero and the contact of a three-pole alarm relay is switched over. The alarm state is signaled on the display unit with the following symbol.



Heater operating mode (19h=0)

It is generated by a decay of at least one of digital inputs, the present state of which is displayed under the parameter 16h. The alarm state decays automatically once all three signals are present in digital inputs.

Preheater operating mode (19h=1...100)

It is generated by signal decay in the DI2 input exclusively. The alarm state is automatically cancelled once the signal is present in the DI2 input again.

ATTENTION If the state of the DI2 input changes 3 times in one hour, then the system becomes locked and requires manual cancelling by switching off and back on the module or by changing the value of the parameter 19h to 0 and setting it to a value from the range 1...100 again.

5. Connection diagram

