

Electronic Temperature Controller & Limiter

Kelvin

Features

- ▶ Multi-function controller/limiter
- ▶ Hazardous Europe ATEX Zone 1 International
IECEX Zone 1 and N.A. Class I, Div 2
- ▶ Rotary switch setpoint or optional Bluetooth® App.
- ▶ Remote access via optional Modbus
- ▶ Alarm relay option

Applications

- ▶ Control/monitor heat trace systems
- ▶ Process temperature control
- ▶ Freeze protection
- ▶ Over-temperature control
- ▶ Viscosity control
- ▶ Configurable for other applications, consult factory



Technical Data

Operating Mode	
Temperature Controller	- Two Point Controller - 0...500°C - 85-277V, up to 30A ¹ - Zone 1 and 2
Temperature Limiter	- Limiter in compliance with IEC/IEEE 60079-30-1 - 0...500°C - 85-277V, up to 30A ¹ - Zone 1 and 2
Temperature Limiter/Controller	- Limiter in compliance with IEC/IEEE 60079-30-1 - Two point Controller - 0...500°C - 85-277V, up to 22A ¹ - Zone 2
Measurement	
Device	3 wire PT100 with cable compensation
Range	-60...500°C
Accuracy	0.5% FS
Mounting	- Panel mount - DIN-Rail-Clip
Temperature Range	-40...55°C ¹
Interfaces/Options	Rotary Switches (Temperature Setup / Modbus Address) Colored LED indicator (Device Status) Alarm Relay (277 VAC or 36 VDC / 2A) Modbus RTU (Parametrization, Device Status) Bluetooth LE (Parametrization, Device Status) USB (Parametrization, Device Status, Firmware Update)
Approvals	
Europe	ATEX/IECEX approved for Zone 1 and 2, Temperature class up too T6 ¹
North America	Designed for Class 1 Division 2

¹ See Table below:

Control Relay Rating

Current Limits for Trace Heating		
Maximum Ambient Temperature [°C]	T6 [A]	T5 [A]
15	30.0 (22.0)*	30.0 (22.0)*
20	29.1 (22.0)*	30.0 (22.0)*
25	27.8 (22.0)*	30.0 (22.0)*
30	26.4 (22.0)*	30.0 (22.0)*
35	24.9 (22.0)*	29.1 (22.0)*
40	23.4 (22.0)*	27.8 (22.0)*
45	16.3	26.4 (22.0)*
50		24.9 (22.0)*
55		23.4 (22.0)*
60		21.7
65		19.9
70		12.5

Maximum ambient temperature in above table is temperature around the device, inside the required enclosure. Ambient temperature outside the enclosure has to be lower to keep above limits. Temperature limitation outside the enclosure depends on enclosure type and size

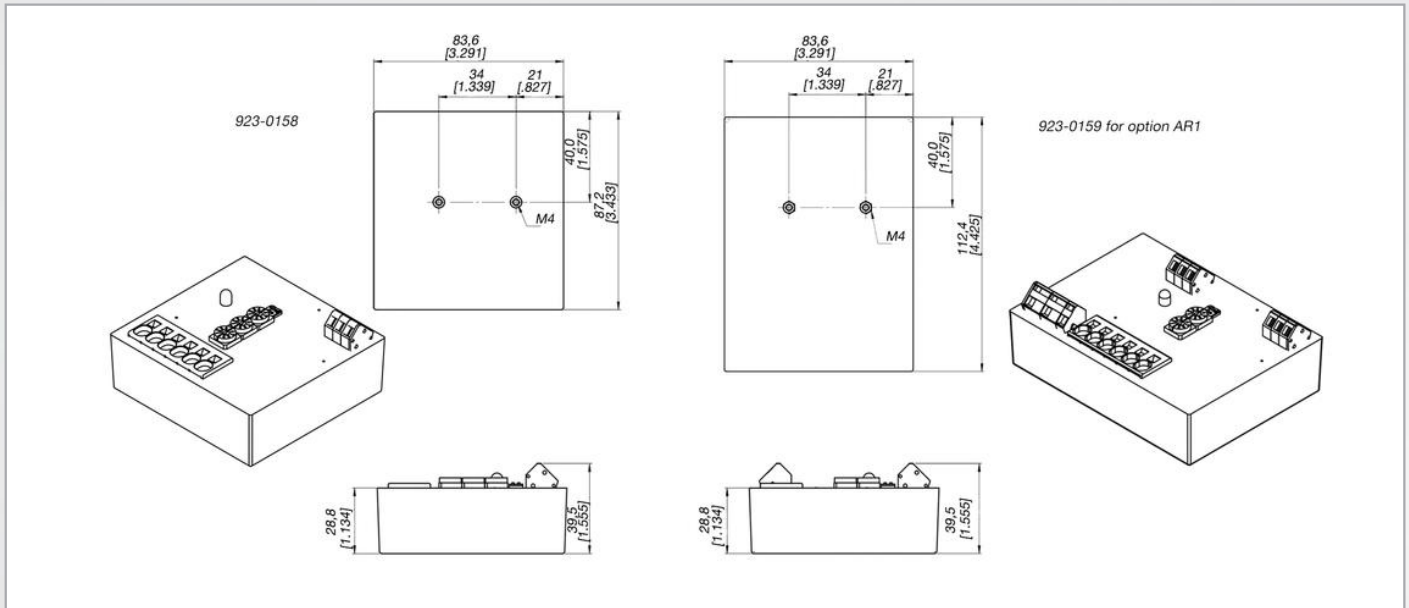
*Maximum current in above table is reduced to 22A in case of Temperature Controller with Limiter function (Configuration BHTLC) in compliance with IEC/IEEE 60079-30-1 for trace heating installed in Zone 2.

Temperature

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Dimensions (mm / inch)



Order Code

only on request:

Series BHTx

Base Model

BHTC

Controller

BHTL

Limiter

BHTLC

Limiter and Controller Zone 2

No. of circuits

SC

Single Circuit

Power Relay

PR1

30 A

Alarm Relay

NA

No Alarm Relay

AR1²

2 A

Communication setup

N

No LED No Switch

L¹

LED Interface only

D

DIAL Setpoint

LD¹

LED with Dial Setpoint

S

Modbus

LS¹

LED/Modbus

B

Bluetooth

LB¹

LED/Bluetooth

SB

Modbus/Bluetooth

LSB¹

LED/Modbus/Bluetooth

Example:

BHTC **-SC** **-PR1** **-AR1** **-LSB**

¹ LED option reduces temperature rating to T5.

² Optional Alarm Relay will change dimensions.

Order Numbers

Part Number	Description
0621-001	BHTC-SC-PR1-NA-LD
0621-008	BHTL-SC-PR1-NA-LD