



70304G

# Microprocessor-Controlled Temperature Controller Type 70304

with self-optimization

## Special Features

- **Multifunctional application**
- **Small dimensions**
- **Available in various mounting versions:**
  - **As basic controller in DIN-format panel-mounting housing with a 48 x 48 mm [≈ 1.9" x 1.9"] front**
  - **With optional frame for mounting on top-hat rails (control cabinet mounting)**
  - **In a wall-mount housing 175 x 250 x 145 mm [≈ 6.9" x 9.4" x 5.7"] with 15 Amp. solid state relay**

## Application

The electronic temperature controller 70304 PID is especially designed for controlling the electrically heated M&C components with temperature sensor.

## Description

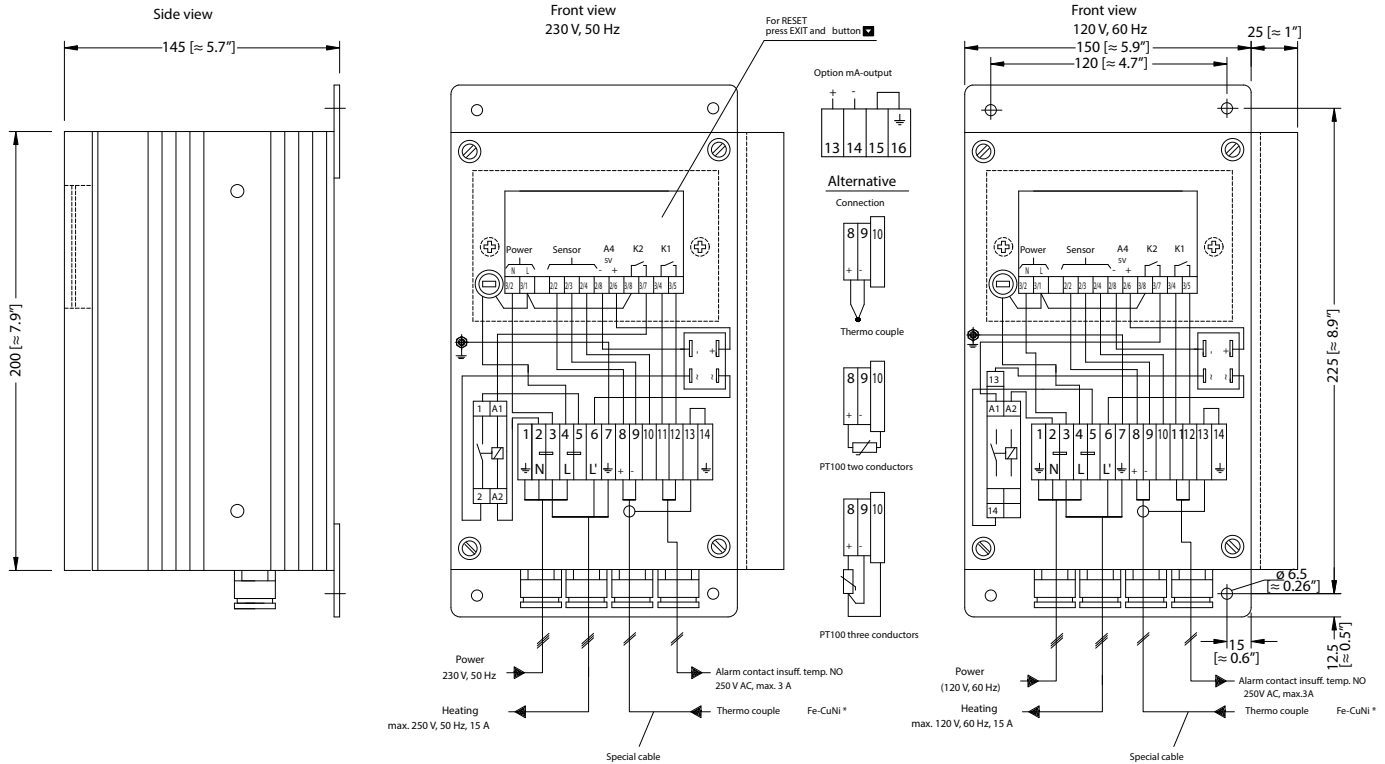
The microprocessor-controlled temperature controller type 70304 is available in a front-, wall- or rail-mount housing and has the following features:

- Programmable sensor input for thermocouples, PT100 or standard signals
- Logic output for solid-state relay control
- Integrated power supply unit for 110 V up to 240 V, 50/60 Hz
- Selectable functions via foil keypad
- Power failure-proof data storage
- Manually adjustable control mode On-Off; P, PD, PI or PID mode
- PID control mode with auto-tuning function
- Programmable alarm output with various functions
- Programming of heating or cooling functions
- Programming of switch cycle time
- Switching hysteresis with ON-OFF control mode adjustable
- Display pre-selectable in °C or °F
- Freely programmable temperature control range
- Programming of ramp function

- 4-digit display with a programmable decimal point
- Protection against unauthorized operation
- Plug-in unit exchangeable on the front side
- Overtemperature limiter with lock
- Line break monitoring also for thermocouple
- mA output optionally

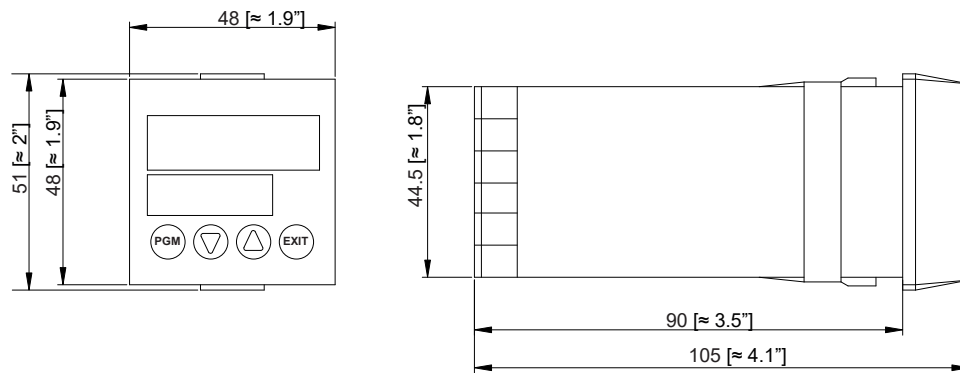
Temperature controller	Basic controller type 70304	Wall-mount housing type 70304G	
Part No.	01B8401	01B8451	01B8451a
Temperature sensors	Resistance thermometer, thermocouples		
Controlling output	0/12 V DC, max. 30 mA to an external solid state relay		
Switching capacity of solid state relays	External	Max. 15 A (overtemperature limiter with continuous cutoff)	
Control mode	PID with auto-tuning		
Status alarm	Overtemperature limiter with continuous shutdown, low temperature alarm: 1 contact NO each, potential free, contact rating 250 V AC, 3 A	Low temperature alarm: 1 contact NO, potential-free, contact rating 250 V AC, 3 A	
Display	ACTUAL value: 7-segment LED display 4-digit, red, 10 mm high; SET value: green, but 7.0 mm, control output, ramp function On, 2 alarms		
Temperatures	Ambient: 0 to 55 °C ; Storage: -30 to +70 °C [-22 to 158 °F]	Ambient: 0 to 50 °C [32 to 122 °F]; storage: -30 to +70 °C [-22 to 158 °F]	
Climatic conditions	< 90 % r.H., no dew	< 90 % r.H., dew allowed	
Electrical connection	Terminals 1.5 mm <sup>2</sup>	4 mm <sup>2</sup>	
Power supply	110-240 V +10/-15 % 48-63 Hz, 8 VA	230 V 50/60 Hz 3450 VA	115 V 50/60 Hz 1725 VA
Housing material	Synthetic material	Steel, white laquered	
Housing version	Front mounting	Wall-mount housing	
Weight/protection	200 g [≈ 0.4 lbs]/terminals IP20, housing IP20, front plate IP65 EN 60529	3.7 kg [≈ 8.2 lbs]/IP65 EN 60529	
Options			
Top-hat rail (DIN rail) mounting frame for controllers in the format of 48 x 48 mm	01B8380	No	No
Controller with mA output for actual value	01B8411	01B8453	01B8453a

Dimensions type 70304G, wall-mount housing

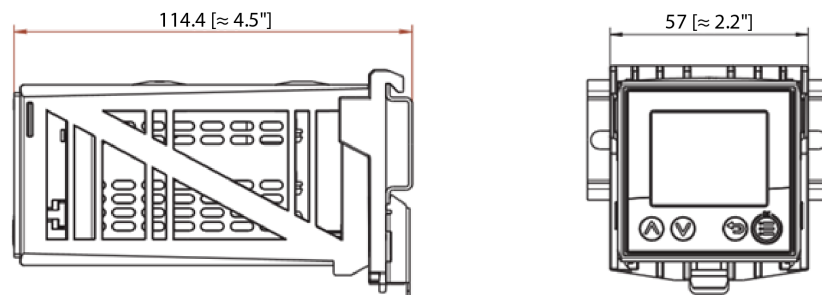


Dimensions in mm [Inch]

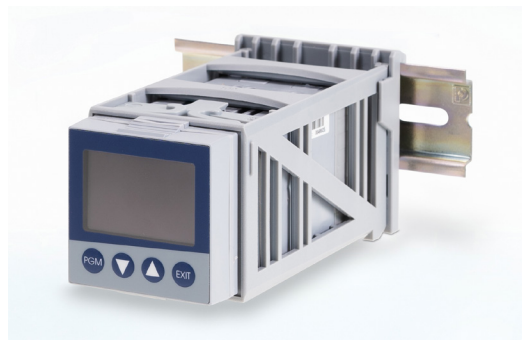
## Dimensions type 70304



## Dimensions type 70304 with frame for top-hat rail mounting



Dimensions in mm [Inch]



Type 70304 with frame for top-hat rail mounting mounted on a top-hat rail