Series 40M2

Digital Temperature Controller

Benefits/Features

- Field selectable °F or °C
- Universal temperature sensor or transmitter input
- Configuration key to quickly load parameters from one unit to another
- RS-485 communication
- Heating and cooling operation modes
- PID control

Applications

- Food service equipment
- Industrial process control

Description

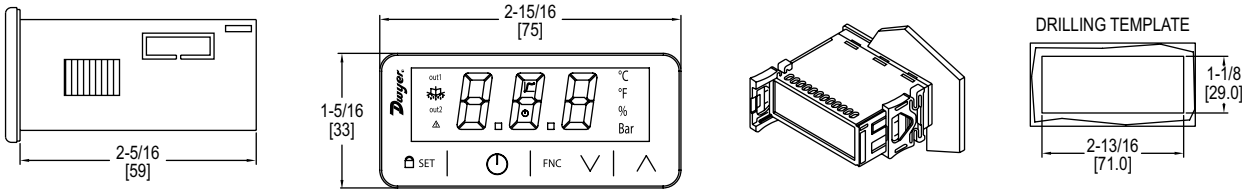
The **Series 40M2 Digital Temperature Controller** accepts a variety of inputs for temperature measurements and set points up to 999°F/537°C. Observing the current status of the controller is made easy with the 3-digit, multi-color LED display that has alarm and output symbols. For added versatility, the temperature units can be field selected for °F or °C. A flashing alarm informs users when the current temperature exceeds preset limits. The On-Off/PID and PID with auto-tuning provide accurate and reliable control in complex applications. The Modbus® protocol TTL slave port can be used to communicate over a TTL/RS-485 interface. When programming multiple units, the 40X2-K programming key is available to reduce setup time.

Specifications

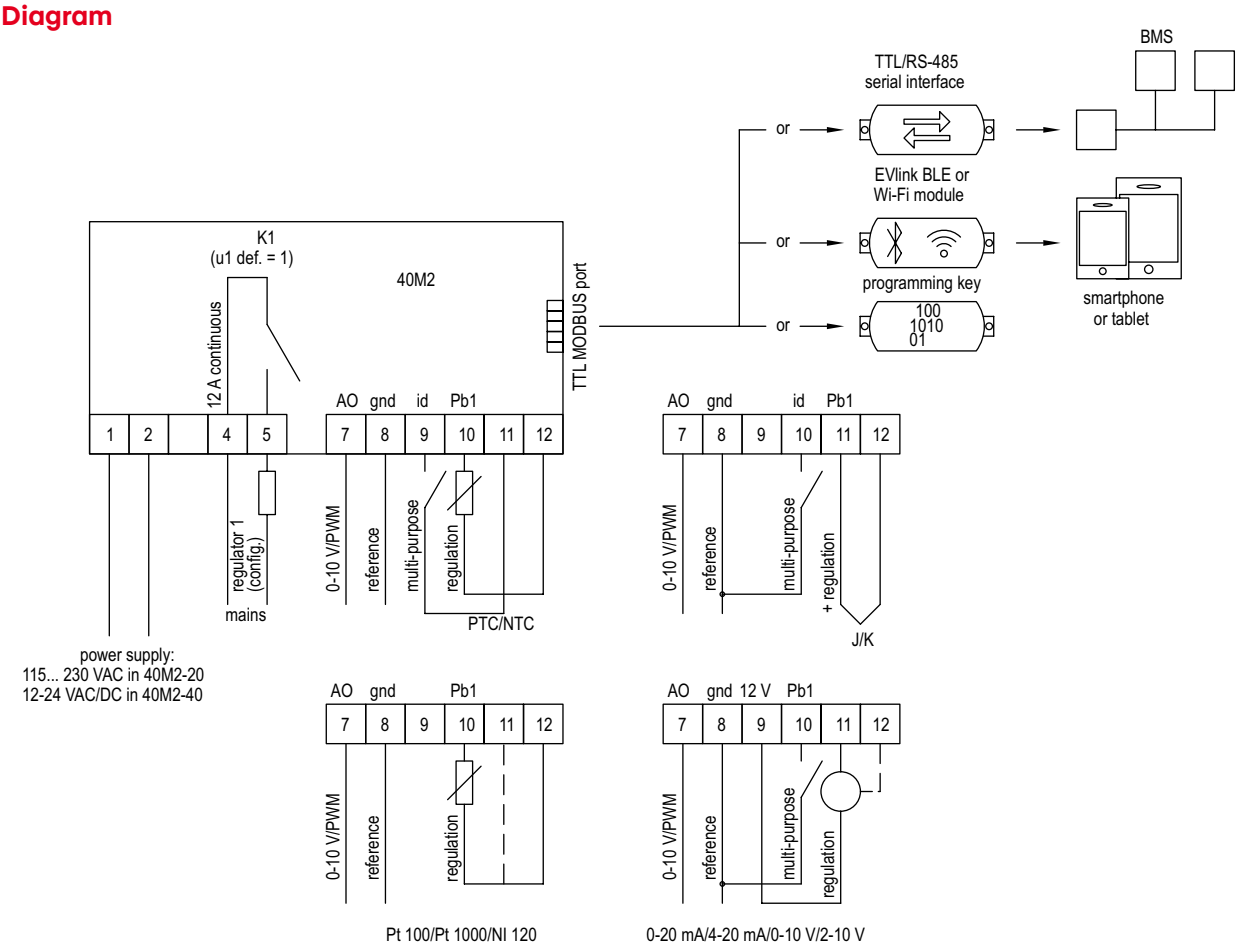
Sensor Input	RTD, thermocouple, thermistor, current, or voltage. 1 digital multipurpose dry contact.
Multipurpose Input	Dry contact 3.3 V, 1 mA (not available if sensor input is configured for Pt 100, Pt 1000, or Ni 120 3-wire input).
Sensor Input Types	Current: 0-20 mA/4-20 mA, configurable; Voltage: 0-10 V/2-10 V, configurable; PTC probe: -58 to 302°F (-50 to 150°C); NTC probe: -40 to 230°F (-40 to 110°C); PT100 probe*: -148 to 999°F (-100 to 650°C); PT1000 probe*: -148 to 999°F (-100 to 650°C); Ni120 probe: -112 to 572°F (-80 to 300°C); J T/C*: -130 to 999°F (-90 to 700°C); K T/C*: -130 to 999°F (-90 to 999°C).
Output	0-10 VDC or PWM (12-24 VAC/DC model needs to be powered @ 24 VAC/DC for 0-10 VDC or PWM).
Control Type	On-Off/PID, PID with auto-tuning.
Power Requirements	115-230 VAC or 12-24 VAC/DC depending on model.
Communication	TTL/RS-485 interface, Modbus® protocol port for programming or BMSF.
Display	3 digit LED display.
Resolution	1°F (0.1°C) for thermocouples; 1°F (0.1°C) for all other models.
Relay (K1) Output	16 A in-rush res. @ 250 VAC, SPST, type 1.
Dry Contact	One multi-purpose, 3.3 V, 1 mA rating.
Alarm	Built in buzzer.
Temperature Limits	Operating: 23 to 131°F (-5 to 55°C).
Humidity Limits	10-90% RH, non-condensing.
Storage Temperature	-13 to 158°F (-25 to 70°C).
Weight	2.3 oz (65 g).
Front Panel Rating	IP65.
Compliance	CE, UKCA, cURus.

*Upper range limited by 3-digit display.

Dimensions



Wiring Diagram



How to Order

Use the **bold** characters from the chart below to construct a product code.

40M2 **-20**

Series
40M2: Temperature switch

Power Supply
-20: 115-230 VAC
-40: 12-24 VAC/DC

Accessories

Model	Description
40X2-K	40M2/T2 programing key
TCS-J	J type thermocouple, 4" probe, 48" extension
TCS-K	K type thermocouple, 4" probe, 48" extension
TS-1	PTC sensor, brass sheath, PVC cable, 5 ft. (1.5 m) length
TS-2	PTC sensor, SS sheath, PVC cable, 5 ft (1.5 m) length
TS-7	NTC sensor, no sheath, PVC cable, 5 ft (1.5 m) length

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Printed in U.S.A. 12/23

DS-40M2 Rev. 2