

# Panel Mount Digital Thermometer



## Product Description

National Controls' panel mount thermometer allows the constant monitoring of temperature in critical environments and equipment, enabling a higher degree of operating efficiency.

The high temperature alarm alerts personnel to a high temperature condition, protecting temperature sensitive equipment and operations. When the temperature rises to the setpoint temperature, the display flashes and an audible alarm sounds. When the temperature falls below the setpoint temperature, the alarm condition ceases. If during the alarm condition, it is desired to turn off the alarm, depressing the front panel push-button will interrupt the audible alarm for approximately 2-1/2 hours, but the display will continue to flash.

The heavy-duty stainless steel front plate protects the unit from mechanical shock and abuse, and is designed to blend visually with other stainless steel equipment.

The thermometer can be mounted directly on the equipment it is monitoring, or on a remote panel up to 250 feet away.

The thermometer is powered from low voltage AC or DC, thus eliminating the high costs of installation to NEC or other high voltage electrical standard wiring.

### Setting the High Temperature Alarm:

On the front of the TM165 and TM166 there are up and down arrow buttons for changing the set point temperature. The set point can be adjusted to any temperature within the specified range of that particular model.

### Setting °F or °C Operation:

Using the front panel buttons the display can be adjusted to display temperature in °F or °C.

## Model TNC-TM165/TM166 Features

- /// Heavy-duty stainless steel front plate and all metal case for rugged environments
- /// Easy-to-read digital display
- /// Temperature sensing range of -25°F to 100°F (-32°C to 38°C)
- /// Front panel selectable °F to °C operation
- /// Alarm temperature setting; programmable via front panel buttons
- /// Alarm relay option
- /// Low voltage AC or DC operation
- /// TM166 fits in a standard electrical box

## Ordering Information:

The TM165 and TM166 panel mount digital thermometers are available in two distinct sizes. When ordering the thermometers, be sure to select the following depending on your specific application (refer to actual dimensions on back):

### Panel Mount Digital Thermometer

MOUNTING CONFIGURATION	PART NUMBER
Customer Panel Cutout	TNC-TM165-010
Standard Utility Box	TNC-TM166-010
Surface Mount Enclosure, Single	TNC-TM165-KTA <sup>1</sup>
Surface Mount Enclosure, Dual	TNC-TM165-KT2A <sup>1</sup>

<sup>1</sup>Single and dual enclosures for TM165 version only



### Optional Accessories

DESCRIPTION	PART NUMBER
Six (6) foot refrigerator/freezer probe	ASP-TM165-011
Transformer (UL Class II Secondary)	B10-N0120-011
Stainless steel enclosures for TNC-TM165-010 only	
Single enclosure	BOX-TM100-010
Dual enclosure	BOX-TM100-020

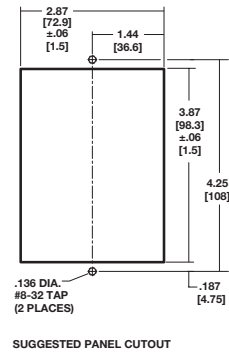
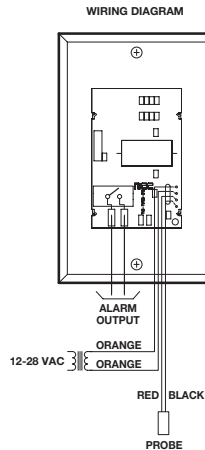
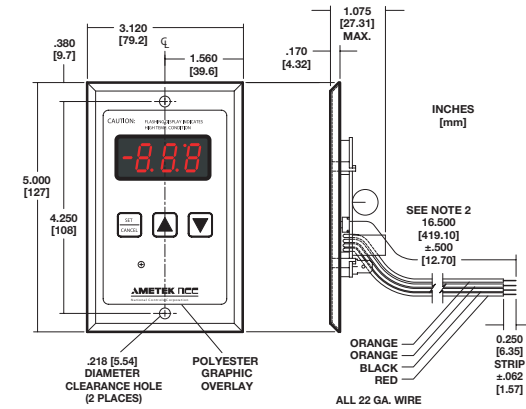
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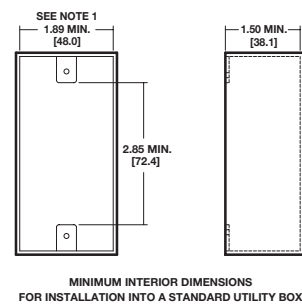
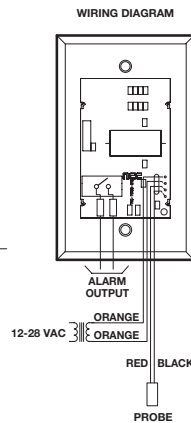
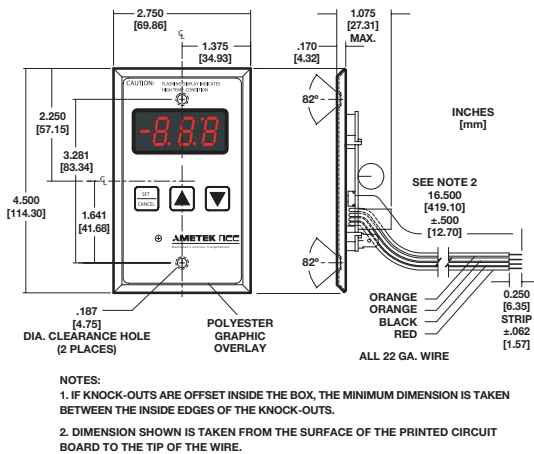
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## Food Refrigeration Equipment

TM165



TM166



- NOTES:  
 1. IF KNOCK-OUTS ARE OFFSET INSIDE THE BOX, THE MINIMUM DIMENSION IS TAKEN BETWEEN THE INSIDE EDGES OF THE KNOCK-OUTS.  
 2. DIMENSION SHOWN IS TAKEN FROM THE SURFACE OF THE PRINTED CIRCUIT BOARD TO THE TIP OF THE WIRE.

## Operating Specifications

**Temperature Sensing Range:** -25°F to 100°F (-32°C to 38°C)

**Temperature Reading Accuracy:** ±2°F (1.5°C)

**Resolution:** ±1°F or °C

**Setpoint Range:** -15°F to 50°F (-26°C to 10°C)

**Input Voltage:** 12 to 28 VAC, 50/60 Hz

**Power Consumption:** 10VA max @ 28 VAC

**Operating Temperature Range:** 0°C to 65°C

**Output Relay:** Form A relay contact, 1 amp max @ 30 VAC or DC

**Temperature Probe:** NTC thermistor, 3000 ohms @ 25°C, J-Curve

### WARRANTY

National Controls Corporation warrants its products for a period of one (1) year from date of receipt by user, but in no event more than eighteen (18) months from date of manufacture, against defective material or workmanship, but not against damage caused by accident, abuse, faulty installation, or improper application or operation. During this period, National Controls will, at its option, repair or replace defective products returned, transportation charges prepaid, to its factory. National Controls shall not be liable for any indirect or consequential damages. To the extent permitted by law, this warranty is given in lieu of all other warranties expressed or implied, and National Controls neither assumes nor authorizes any person to assume for it any liability beyond that stated herein.