



Features

- Choice of 2-1/4", 4", 6" or 8" digit heights
- Four digits with selectable decimal point
- Choice of normal or outside viewing brightness
- Scalable for 4-20 mA, 0-20 mA or 0-10V signals
- Choice of panel mount, wall mount or suspension mount
- Choice of 95-264 Vac or 11-30 Vdc power
- Sealed to NEMA-4 (IP65)
- Only 3.0" (75 mm) deep
- Programmable from front panel
- Optional dual 5A relay outputs, analog output, serial I/O

Description

MAGNA Series Large Digit Temperature Displays can be ordered for a Pt100 RTD input or a thermocouple input. Seven thermocouple types (J, K, T, E, N, R, S) can be selected at the time of order or later by using a USB configurator kit. These large digit temperature displays use a 4-20 mA process signal conditioner board and a built-in temperature transmitter, which is available for Pt100 RTD or thermocouple inputs. Displayed values can be scaled for °C or °F and can be smoothed by digital filtering.

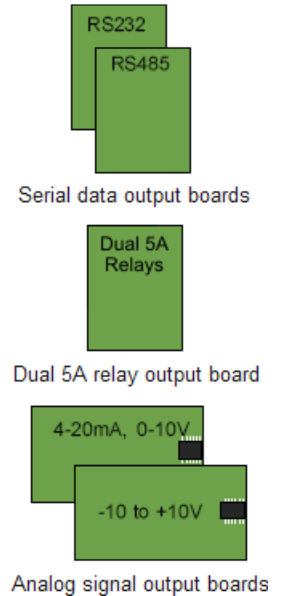
Viewing distances up to 320 feet (100 m) are achieved with oversize digits. A rule of thumb is that viewing distance in feet is 40 times digit height in inches, or in metric terms, that viewing distance in meters is digit height in millimeters divided by 2.

Four digit heights are available: 57 mm (2-1/4"), 102 mm (4.0"), 150 mm (5.9"), and 200 mm (7.9"). Solid segments are used for normal brightness 2.2" and 4.0" digits. Individual 5 mm LED pixels are used for larger digits and outdoor brightness versions. The number of digits is 4. The decimal point is selectable.

Indoor or Outdoor Viewing: MAGNA Series Displays with normal brightness LEDs can be read across an entire plant floor to keep workers informed without leaving their work area. Displays with outdoor brightness LEDs can be read across an industrial yard, parking lot or roadway, for example to display vehicle load. Available mounting options are panel mount, wall mount and suspension mount.

Environmental sealing to IP65 (NEMA-4X) is standard. Available Options are dual 5A relays, an analog output, an RS-232 or RS485 serial data output, and 95-264 Vac or 11-30 Vdc power.

Intuitive Setup is normally provided by means of built-in front panel switches, which can be locked. It is also possible to remotely wire four pushbuttons to the display.



Specifications

Approvals	
Types	Produced to IPC 610 Class 2 Standard UL ISO9001:2008 QA
Pt100 RTD Input	
A/D Converter	20-bit resolution
RTD Type	Pt100 RTD linearized per DIN 43760, DIN alpha of 0.003850
Temperature Range	-200°C to 850°C (18 to 390 ohms)
Accuracy	0.1°C ± 0.005% of reading
Isolation	250V
Thermal Drift	25 ppm/°C
Update Time	500 ms

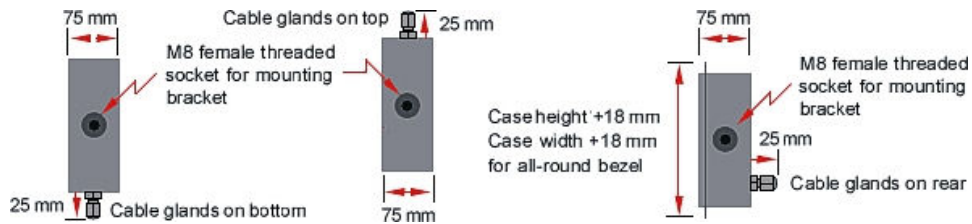
Thermocouple Input	
A/D Converter Thermocouple Types Temperature Range	20-bit resolution J (-100 to 1200°C), K (-200 to 1370°C), T (-200 to 400°C), E (-200 to 1000°C), N (-180 to 1300°C), R (-10 to 1760°C), S (-10 to 1760°C) -200°C to 850°C (18 to 390 ohms)
Accuracy Isolation Update Time	±0.1% of transmitter span ± 0.5°C cold junction error 250V 500 ms
Display	
Number of Digits Digit Height Digit Color Brightness	4 57 mm (2-1/4"), 102 mm (4.0"), 150 mm (5.9"), or 200 mm (7.9") Red Variable
Power	
AC Power (standard) DC Power (option) Max Consumption	100-240 Vac 11-30 Vdc 30 VA
Analog Output Option	
Output Levels Resolution Accuracy Stability Output Isolation Scaling Special Features	0-20 / 4-20 mA into 0 to 500 Ohms, 0.4 µA resolution. 0-10V into loads > 600Ω, 0.2 mV resolution. -10 to +10V into loads > 600Ω, 0.4 mV resolution. 16 bits 0.1% of range 50 ppm/°C Isolated from input and power Digitally scalable Forward or reverse action possible. Can be set to operate from net or gross value.
Alarm Output Option	
Relay Type Special Features	2 Alarms rated 5A, 250VAC, SPDT Adjustable hysteresis In-flight compensation facility. Energize or de-energize on trip. Adjustable timers to set energize and de-energize delays. Can also be set to pulse for applications needing less than 100% duty cycle. In-band and out-of-band alarm function. Manual and automatic in-flight compensation. Can be set to operate from net or gross value.
Serial Data Output Option	
Output Types Special Features	RS232 or RS485, addressable, on demand or continuous output. Can include time and date with RTC option fitted. Can be set to operate from net or gross value.
Environmental	
Storage Temperature Operating Temperature Sealing Mounting	-20°C to +70°C 0°C to 50°C, non-condensing -25°C to 50°C, non-condensing, with MHTR AC heater option NEMA-4 (IP65) standard, all-round Wall mount, suspension mount, panel mount



Number of Digits & Case Dimensions



Display Format	8.8.8.8.	
Case width x height	4-digit case	6-digit case
57 mm (2.2") digits	279 x 155 mm (11.0" x 6.1")	376 x 155 mm (14.8" x 6.1")
102 mm (4.0") digits	434 x 196 mm (16.7" x 7.7")	
150 mm (5.9") digits	514 x 247 mm (20.2" x 9.8")	
200 mm (7.9") digits	664 x 298 mm (26.1" x 11.7")	
Case depth	75 mm (3.0")	



Notes: Models with 57 mm (2.2") digits, 4 digits and 4 relays require the larger 6-digit case. For panel mount versions, add 18 mm (0.7") to case width and height for the bezel and 25 mm (1.0") for cable glands in back of the case.

Ordering Guide

Create a model a model number in this format: **M84-MTC-MMT2**

Base Model	M24 2" (57 mm) digit height, 4 digits. Display to 8.8.8.8. M24UM 2" (57 mm) digit height, 4 digits. Display to 8.8.8.8. (UM includes needed extra width to fit relay, analog or serial output options) M26 2" (57 mm) digit height, 6 digits. Display to 8.8.8.8.8.8. M44 4" (102 mm) digit height, 4 digits. Display to 8.8.8.8. M46 4" (102 mm) digit height, 4 digits. Display to 8.8.8.8.8.8. M64 6" (150 mm) digit height, 4 digits. Display to 8.8.8.8. M66 6" (150 mm) digit height, 6 digits. Display to 8.8.8.8.8.8. M84 8" (200 mm) digit height, 4 digits. Display to 8.8.8.8. M86 8" (200 mm) digit height, 6 digits, Display to 8.8.8.8.8.8.
Signal Input (one required, select one)	MRTD RTD input MTC Thermocouple input
Analog Output Board (one optional)	MAO1 4-20 mA MAO2 0-10V MAO3 -10V to +10V
Relay Output Board (one optional)	MRL1 Two 5A, 250 Vac relays MRL2 Four 5A, 250 Vac relays
Serial Data Output Board (one optional)	MO232 RS232 MO485 RS485 with Modbus ASCII
Case and Mounting (one required)	MT1 Panel mount, black NEMA-4 (IP65) case MT2 Wall mount, black NEMA-4 (IP65) case MT3 Suspension mount, black NEMA-4 (IP-65) case
Meter Modifying Options (not shippable separately from meter)	MRDLV Daylight viewing brightness instead of normal indoor brightness MHTR AC heater for operation down to -25°C (-13°F) MPS2 11-30 Vdc power instead of normal 85-265 Vac power
Add-on Option (shipped separately from meter)	MRP MAGNA remote programmer (wire connection to display unit)