

LARGE DIGITAL TEMPERATURE LED PROCESS DISPLAYS

THERMOCOUPLE & PT100 (RTD) INPUTS

Alarms and Retransmission Output
0-10Vdc, 4-20mA, RS-232, RS-485, Modbus, ASCII



INDOOR OR OUTDOOR USE

3, 4, 5, Digits with Decimal Point (option)

Series for INDUSTRIAL and COMMERCIAL APPLICATIONS

LARGE DIGITAL LED TEMPERATURE DISPLAYS

GENERAL OVERVIEW

These Large Digital LED Temperature Displays are ideal for all Industrial and Commercial applications for displaying Temperature across the range of – 199 ~ 1600 °C / – 326 ~ 2912 °F

The series of Large Digit Temperature Displays will accept Thermocouple or PT100/RTD input, to display numerically Temperature from a remote process in Large Digit format to give a clear indication of Temperature from a distance.

INDUSTRIAL AND COMMERCIAL LARGE DIGITAL LED TEMPERATURE DISPLAYS

INDUSTRIAL

These LED displays are more versatile in range and offer a wide choice of DIGIT HEIGHT and accept a wider range of INPUT SENSORS, **for most industrial application / processes.**

They are available from ranges – 200 to + 1600 °C / – 326 to + 2912 °F, with appropriate Input Sensor. LED Digit Height from 2.3" (58mm) to 18" (457mm), with retransmission output option and Alarm output option.

COMMERCIAL

This range is aimed at the commercial market for

- Large Walk in Refrigerators
- Large Walk in Freezers
- Cool Cabinets (for Drinks, Convenience Foods)
- Chill Rooms
- Office / Work area Air Temperature Comfort

They are limited to Temperature range – 50.0 to + 99.9 °C / – 58.9 to + 210 °F

They are supplied with their own built in sensor which can be up to 160 feet / 50 meters away from the display and sensor options suitable for AIR or WATER Temperature sensing.

LARGE DIGIT DISPLAY LED COLOR OPTIONS

Industrial Displays **Red** or **Green**

Commercial Displays **Red**, **Amber**, **Blue**, **Green**, White, **Yellow**

INDUSTRIAL LARGE DIGIT LED TEMPERATURE DISPLAYS

These displays are extremely robust for most harsh industrial applications when used with the appropriate IP or NEMA rating cases. They can be used Indoors or Outdoors.

They accept major Thermocouple Inputs, J, K, T, R and 2 or 3 wire PT100/RTD. They can be Wall Mounted, Suspension Mounted or Panel Mounted (2.3", 4.0" only).

RETRANSMISSION OUTPUT OPTIONS

- 0-10V, 4-20mA
- RS-232, RS-485
- Modbus and ASCII

ALARM OUTPUT OPTIONS

- HI or LO 3A SPCO
- HI & LO 3A SPCO (**All alarms are fully adjustable digitally**)

COMMERCIAL LARGE DIGIT LED TEMPERATURE DISPLAYS

These displays are aimed at the less harsh environment applications and more suited to the Chilled Food Industry and Air Temperature comfort for Offices and Factory areas

They are however suitable for INDOOR and OUTDOOR applications and have as standard IP66 / NEMA 4X rated enclosures. They are purely for Wall Mounting, with rear brackets supplied.

They are also supplied with their own inbuilt Temperature Sensor and will very accurately display Temperature across the range -50.0 to $+99.9$ °C / -58.9 to $+211.8$ °F.

A UNIQUE ALARM OUTPUT FEATURE is also available on these Large LED displays, programmable within the software for **DAILY REAL TIME OUTPUT** at different times of each day or a planned general weekly function by days.

INDUSTRIAL



COMMERCIAL



LARGE DIGIT SCALE RANGES / INPUT

INDUSTRIAL

- Thermocouple 'J' 0 – 750 °C / 32 – 1382 °F
- Thermocouple 'K' 0 – 1200 °C / 32 – 2192 °F
- Thermocouple 'T' 0 – 400 °C / 32 – 752 °F
- Thermocouple 'R' 400 – 1600 °C / 752 – 2912 °F
- PT100/RTD -200 ~ 200 °C / -328 ~ 392 °F or -19.9 ~ 99.9 °C / -3.82 ~ 211.8 °F

COMMERCIAL

- DTS -50.0 ~ 99.9 °C / -58.9 ~ 211.8 °F

LARGE LED DIGIT HEIGHT OPTIONS

Industrial 2.3" (58mm) 4" (102mm) 6" (152mm) 8" (203mm) 12" (305mm) 14" (355mm) 16" (405mm) 18" (457mm)

Commercial 4" (102mm) 8" (203mm)

LED DISPLAY VIEWING DISTANCES

The viewing distances shown below are true to the LED manufacturers specifications and will give **CLEAR UNAMBIGUOUS READING – They are NOT to be taken as Maximum distances.**

We have given a fair distance chart below for consideration.

• 2.3" (58mm)	Clear viewing up to 15 meters / 50 feet
• 4.0" (102mm)	Clear viewing up to 35 meters / 115 feet
• 6.0" (160mm)	Clear viewing up to 55 meters / 180 feet
• 8.0" (203mm)	Clear viewing up to 75 meters / 246 feet
• 12.0" (305mm)	Clear viewing up to 115 meters / 377 feet
• 14.0" (355mm)	Clear viewing up to 135 meters / 442 feet
• 16.0" (405mm)	Clear viewing up to 155 meters / 508 feet
• 18.0" (457mm)	Clear viewing up to 170 meters / 557 feet

IP / NEMA (USA) ENVIRONMENT PROTECTION RATINGS

Industrial IP54 / NEMA 13 and IP65 / NEMA 4

Commercial IP66 / NEMA 4X

LARGE DISPLAY – HIGH BRIGHTNESS DAYLIGHT VIEWING LEDS

High brightness LEDS are used for OUTDOOR applications but can also be used for INDOOR environments where it might be murky to ensure visibility at all times.

Commercial LED Displays have AUTOMATIC dimming to suit all ambient light conditions

POWER SUPPLY OPTIONS

95~265Vac
24Vdc
12Vdc

DUAL LINE (MULTILINE) LARGE DIGIT LED TEMPERATURE DISPLAYS

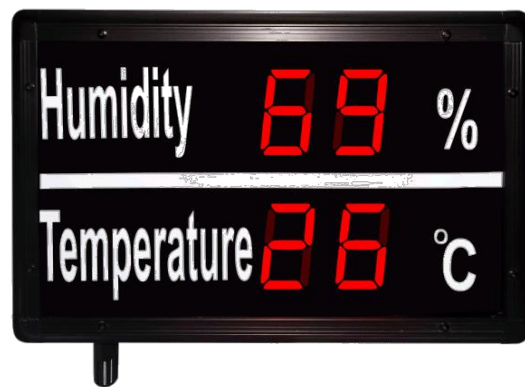
Both the INDUSTRIAL and COMMERCIAL range of Large Digit LED Temperature Displays can be supplied as Dual Line or Multiline digit displays.

One such popular example of a Dual Line display is the display both

HUMIDITY RH %
TEMPERATURE °C / °F

This can be done with a dual 4~20mA input sensor (**see sensor section**) with the sensor probe protruding from the bottom of the case, or an independent PT100/RTD and a 4~20mA input.

Multiline Temperature displays have independent input sensors for each line, Thermocouple or PT100/RTD depending on the Temperature ranges to be displayed.



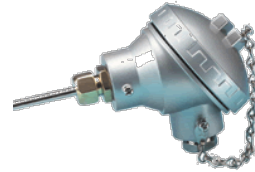
LED DISPLAY FASCIA LEGENDS / SYMBOLS

All fascia symbols are supplied and fitted free of charge

°C °F

INPUT SENSORS FOR LARGE DIGITAL DISPLAYS

There are many sensors available, we show some below, but we can offer a wide variety of different shapes and lengths and methods of sensing



MOUNTING OPTIONS OF LARGE DIGITAL DISPLAYS

There are three mounting options –

Wall (With Brackets) and Wall (Flush)
Flush Panel
Suspension

LED DISPLAY WALL MOUNTING

INDUSTRIAL (BRACKET MOUNTING)

Wall mounting cases up to 6" high digits are supplied with side brackets that can rotate in their mounting to enable the display to be ' TILTED '. 8" high digit displays and above are normally supplied with four welded corner brackets for direct fixing to a wall. The reason for the difference is purely weight. If an 8" high digits displays only has 2 or 3 digits and single line, it too can have side adjusting brackets. 12" and above are always with fixed.

CASE H (HEIGHT) AND L (LENGTH)

2 DIGIT LED DISPLAY DIMENSIONS

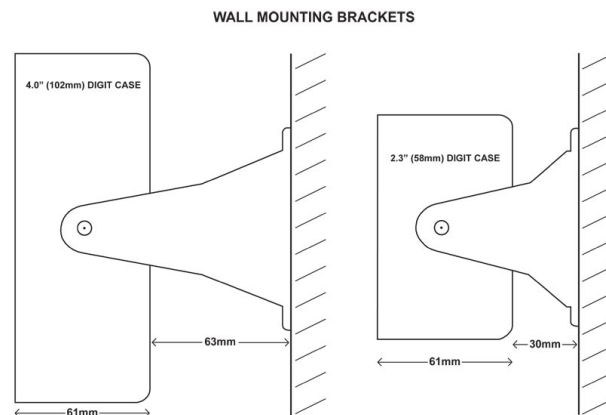
2.3" – H100 x L188mm
4.0" – H155 x L216mm

3 DIGIT LED DISPLAY DIMENSIONS

2.3" – H100 x L188mm
4.0" – H155 x L308mm

4 DIGIT LED DISPLAY DIMENSIONS

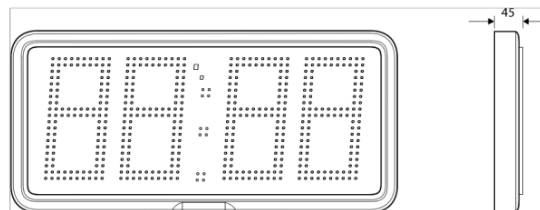
2.3" – H100 x L241mm
4.0" – H155 x L400mm
2.3" + 53mm for legend
4.0" + 92mm for legend



COMMERCIAL (FLUSH MOUNTING)

These displays are only available for Wall mounting

4.0" (100mm) – H186 x W349 x D45mm
8.0" (200mm) – H288 x W616 x D45mm



LED DISPLAY FLUSH PANEL MOUNTING

Industrial displays **ONLY** and 2.3", 4.0" **only**. This method requires a panel cut-out and the case is finished with a neat flange surround to enhance the look of the control panel .

CASE H (HEIGHT) AND L (LENGTH)

3 DIGIT LED DISPLAY PANEL CUT OUT

2.3" – H103 x L191mm

4.0" – H158 x L311mm

2.3" + 53mm for legend

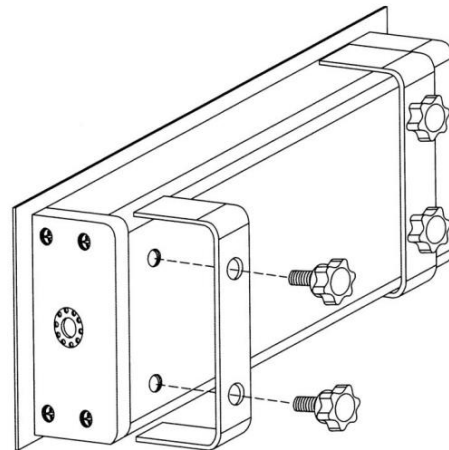
4.0" + 92mm for legend

4 DIGIT LED DISPLAY PANEL CUT OUT

2.3" – H103 x L244mm

4.0" – H158 x L403mm

1. Add 10 mm to H x L for all facia
2. Digit displays use the 3 digit Panel Mount case



PANEL MOUNTING CASE

LED DISPLAY SUSPENSION MOUNTING

This method of mounting is popular for Double Sided or Multiline displays which have to be seen by a section of workers. Several suspension mounting displays can be installed in a work area. Dimensions are not given here as they vary according to Digit Height, Number of Digits and Number of Lines as well as whether the Large Display is Single or Double sided.



Suspension Picture Example Only

GENERAL SPECIFICATIONS OF LARGE DIGITAL LED TEMPERATURE DISPLAYS

LED DISPLAY – GENERAL SPECIFICATION

- Digit heights available 2.3", 4", 6", 8", 12", 18"
- Decimal point option
- Brightness control Auto and Manual
- High Brightness Daylight viewing LED or Normal ambient light viewing LED
- Wall, Suspension and Panel Mounting options
- Inputs Thermocouples J, K, R, T and PT100 (RTD) options
- Temperature OFFSET adjustment standard
- Indoor or Outdoor use
- IP54, IP55, IP65, IP66 / NEMA 13, NEMA 4, NEMA 4X
- Alarm output option 3A SPCO Relay
- Retransmission output option, Analog (Current and Voltage)
- Power inputs 95~265Vac, 110Vac, 220Vac, 24Vdc, 12Vdc

INPUT STANDARDS

- Thermocouples IEC605584.3:2007
- PT100 (RTD) IEC60751 Class B
- DTS (Maxim) IC

MEASURING ACCURACY

- Thermocouple .25% FS +/- 1 digit
- PT100 (RTD) 0.1% FS +/- 1 digit
- DTS 0.5% FS

NUMBER OF DIGITS

- 3, or 4 for Thermocouples
- 2, 3 or 4 for PT100 (RTD)

CURRENT DRAW

- Dependent on digit height and number of digits and lines

RETRANSMISSION OUTPUT

- Analog 0-10Vdc, 4-20mA
- RS-232, RS-485, Modbus, ASCII

OPERATING ENVIRONMENT

- -10~50 °C / 14~122 °F (Standard)
- For Temperature under -10 consult Sales Office