

MICROCONTROLLER BASED LARGE DISPLAY PROCESS INDICATOR (Model DPI-4000-M & DPI-8000-M)



Model Wise Description:

Model	Product Description	Size W x H x D (mm.)
DPI-4000-M	Microcontroller based Large Display Process Indicator with 4" digit height	500 x 250 x 150
DPI-8000-M	Microcontroller based Large Display Process Indicator with 8" digit height	760 x 340 x 150

Description:

Libratherm offers large display digital indicator to monitor the temperature / process value from long distance or at a height. The indicator is housed in a sturdy and heavy duty MS powder coated enclosure and can be easily mounted on a wall, or on a shelf or on the ceiling. It accepts universal analog signal of 4-2mA, 0-20mA, 0-5VDC or 0-10VDC which can be scaled and calibrated by user in the range of (0 to 4000) counts or (-1999 to 1999) count with selection facility for decimal point. The decimal point and desired display range selection is facilitate through front panel heavy duty 4 push buttons. The input selection can be done by selecting the DIP switch on the built in signal isolator. All inputs are optically isolated from the source to protect the incoming signal against any ground line interference.

User must note that the analog signal may or may not exactly match point to point with respect to the source reading and such matching will depend upon the length and type of the signal cable and inherent error of the analog measurement at two different places.

In order to match the point to point display reading with respect to source, it is always recommended to opt for the digital communication over an RS-485 MODBUS. User can send data over this line in the specific MODBUS protocol with the chosen slave ID address.

Features:

- Microcontroller based design
- 12bit ADC
- User selectable input, scalable range and selectable decimal point
- Accepts input from Analog source or digital source
- Choice of 4" and 8" digit size for long distance visibility
- Analog and Digital Input are optically isolated from the source.

Technical Specifications:

Design	Based on 8 bit microcontroller and 12 bit ADC
Analog Signal Input	Universal process input 0-20mA, 4-20mA, (0-5)VDC, (0-10)VDC – user selectable through DIP switch. If any other please specify.
Maximum Signal Distance	The analog input signal should not travel more than 10 meter from the source. Otherwise mismatch in the display reading compared to source may occur within +/- 10 counts.
Isolation	All process inputs are optically isolated from the incoming source. (Isolation voltage greater than 1KV)
Display	4 digit – 4" seven segment red LED display (DPI-4000-M) 4 digit – 8" seven segment red LED display (DPI-8000-M)
Display Range	0 to 4000 counts (for only positive process value) – 12 bit ADC -1999 to 1999 counts (for negative going process value) – 12 bit ADC
Calibration Range	User can calibrate or scale the desired range as per requirement using front panel 4 push buttons.
Resolution	1 count, 0.1 count, 0.01 count or 0.001 count (user selectable – through front panel push buttons)
Accuracy	+/-0.1% of the specified range.
Distance between 2 digits	Sufficient to identify each digit from long distance.
Power Supply	230AC +/- 10%, 50/60 Hz. , (24VDC – Optional)
Settings	Range selection, Calibration and Decimal point selection facility is provided through push button / keys which is fixed on the display unit – as shown in the picture.
Digital Interface	RS485 2 wire isolated on MODBUS RTU protocol – with programmable SLAVE ID (Optional feature)
Enclosure	Dust free – Metallic powder coated (IP 64)
Size (mm.)	500(W) x 250(H) x 150(D)- 4" LED display 760(W) x 340(H) x 150(D)- 8" LED display
Operating conditions	Temperature: 60 °C, RH 90% max. (noncondensing)
Weight	6.0kg (approx.) for DPI-4000-M and 10.0 Kg (approx.) for DPI-8000-M
Mounting	Wall mounting key holes, Ceiling mounted hooks or can be placed on a shelf on integrated Nylon bush at the base.
Technical Documents	Each display unit will be supplied along with the detail user's manual, wiring diagram, calibration report and MODBUS protocol.

We also offer double sided display – to enable viewing from either side, when the display is hanged on the ceiling.

