

USB programmable! Free software at  
[www.defineinstruments.com/toolbox](http://www.defineinstruments.com/toolbox)



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## TM-2HLI Common Specifications

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**Configuration** 2-wire 4–20mA (loop powered)

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**Power supply** 9.5–36V DC

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**Supply voltage sensitivity**  $< \pm 0.005\%/V$  FSO

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**Output load resistance** 700 $\Omega$  at 24V DC (50 $\Omega$ /V above 9.5V DC)

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**Maximum output current** Limited to  $< 28\text{mA}$  (Emission & immunity)

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**EMC compliance** Emissions (EN 61326). Immunity (EN 61326). Safety (EN 61010-1).

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**Accurate to**  $< \pm 0.03\%$  FSO typical

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**Ambient drift**  $< \pm 0.003\%/^{\circ}\text{C}$  FSO typical

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**Noise immunity** 125dB CMRR average (2.0kV DC limit)

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**R.F. immunity**  $< 1\%$  effect FSO typical

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**Isolation test voltages** Between input/output: 3750V AC for 1min

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**Response time** 400msec typical (10–90% 300msec typical)

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**Casing (H x W x D)** Head mount 23 x 44 x 44mm (0.91 x 1.73 x 1.73")

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**Operating temperature** -20 to 85 $^{\circ}\text{C}$  (-4 to 185 $^{\circ}\text{F}$ )

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**Storage temperature** -20 to 100 $^{\circ}\text{C}$  (-4 to 212 $^{\circ}\text{F}$ )

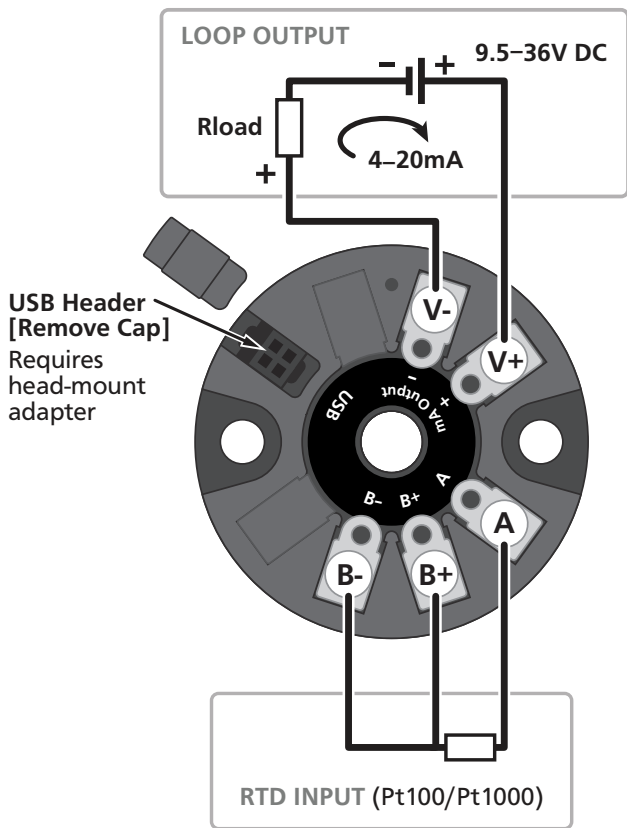
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**Operating humidity** 5–85%RH max (non-condensing)

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## Wiring



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## Thermocouple Input Specifications

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**Thermocouple types** B, E, J, K, N, R, S, T

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**USB programmable zero** 0–±99% of the span

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**Input impedance** 1M $\Omega$  min

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**Thermocouple lead resistance** 100 $\Omega$  max

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**Cold junction comp.** -20 to 90°C (-4 to 194°F)

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**Accuracy** E, J, K, N, T: < ±1°C. B, R, S: < ±2°C.

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**Temperature drift** E, J, K, N, T: < ±0.05°C. B, R, S: < ±0.2°C.

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**Sensor break output drive** Function high upscale/low downscale

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**CJC error** < ±1°C

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## RTD Input Specifications

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**RTD input** Pt100 or Pt1000 DIN 3-wire type (2-wire can be used with offset calibration)

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**Sensor current** 0.15mA nominal

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**Lead wire resistance** Pt100: 10 $\Omega$ /wire max. Pt1000: 5 $\Omega$ /wire max.  
0.02% FSO offset error per  $\Omega$  of lead resistance.

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**Accuracy** ≤ 0.3°C

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**USB programmable zero** 0–±99% of the span

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**USB programmable span** -200 to 850°C (-328 to 1562°F)

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**Sensor break output drive** Function high upscale/low downscale

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**Linearity (Pt100)** 0.02% FSO for span inputs ≤200°C (392°F)  
0.1% FSO for span inputs ≤850°C (1562°F)


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**Linearity (Pt1000)** 0.02% FSO for span inputs ≤200°C (392°F)  
0.2% FSO for span inputs ≤520°C (968°F)

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