

USB programmable! Driver & manual at
www.defineinstruments.com/tmsetup



TM-2DLI Common Specifications

Configuration 2-wire 4~20mA (loop pwr)

Power supply 9.5–36V DC

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

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

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

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

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

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

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

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

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

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

Operating temperature -20 – $+85^{\circ}\text{C}$

Storage temperature -20 – $+100^{\circ}\text{C}$

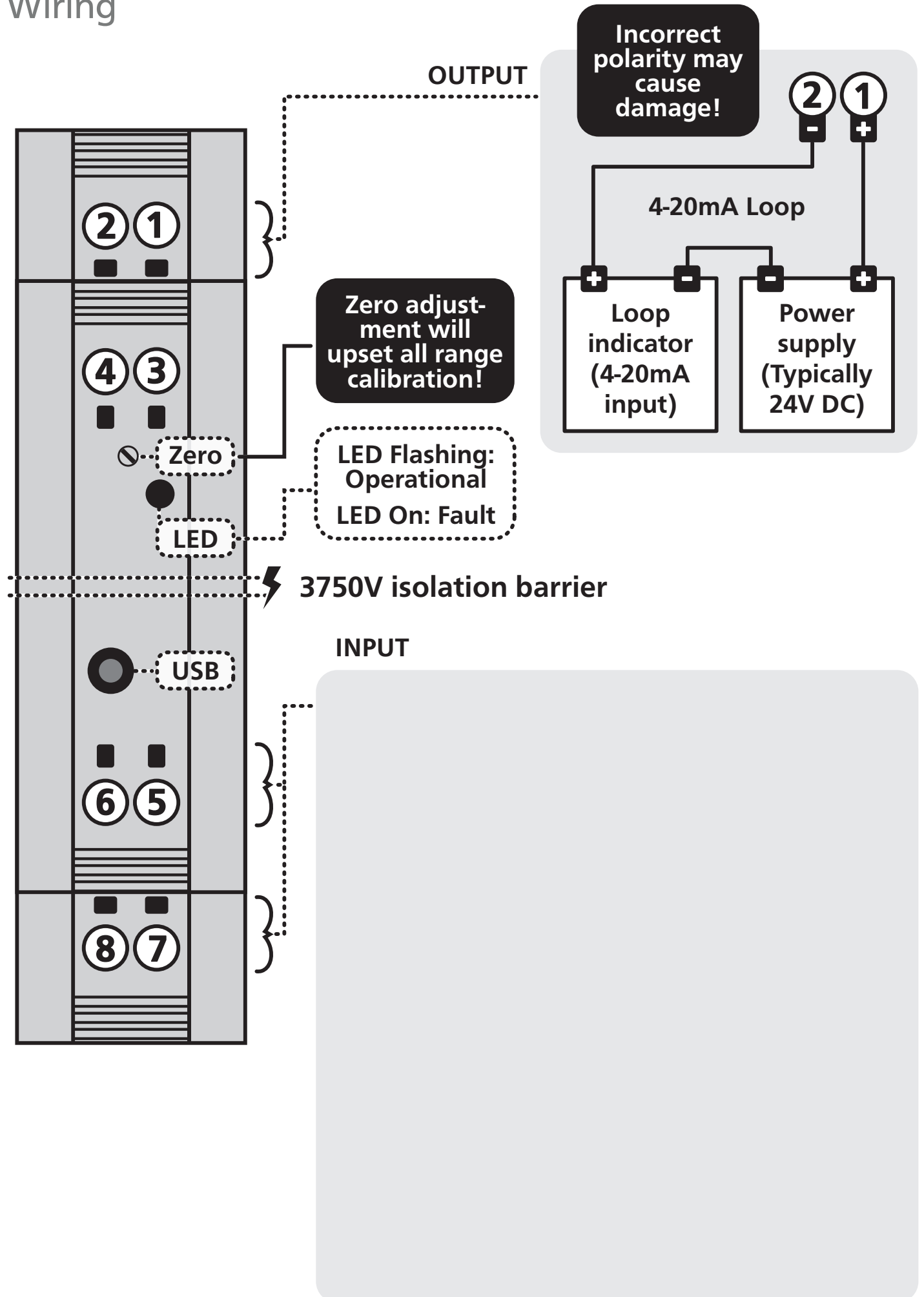
Operating humidity 5–85%RH max (non-condensing)

Mounting 35mm symmetrical DIN rail

Dimensions 79 x 20 x 68mm (H x W x D)



Wiring



Voltage Input Specifications

USB programmable zero 0–±99% of the span

USB programmable span 100mV to +/-10V DC (bipolar)

Input resistance 300kΩ min

Maximum over-range 60V DC continuous

Linearity and repeatability <±0.02% FSO typical

Current Input Specifications

USB programmable zero 0–±99% of the span

Field programmable span 1μA–24mA DC

Input resistance 10Ω

Maximum over-range 50mA DC continuous

Linearity and repeatability <±0.02% FSO typical

Thermocouple Input Specifications

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

USB programmable zero 0–±99% of the span

Field programmable span Refer to ordering information for min/max ranges for each type

Input impedance 1MΩ min

Thermocouple lead resistance 100Ω max

Cold junction comp. -20–+90°C

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

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

Sensor break output drive Function high upscale/low downscale

CJC error < ±1°C

RTD Input Specifications

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

Sensor current 0.15mA nominal

Lead wire resistance Pt100: 10Ω/wire max. Pt1000: 5Ω/wire max. 0.02% FSO offset error per Ω of lead resistance.

USB programmable zero 0–±99% of the span

USB programmable span -200–+850°C

Sensor break output drive Function high upscale/low downscale

Linearity (Pt100) 0.02% FSO for span inputs ≤200°C. 0.1% FSO for span inputs ≤850°C

Linearity (Pt1000) 0.02% FSO for span inputs ≤200°C. 0.2% FSO for span inputs ≤520°C

Other available RTD types JIS, Pt100/1000, Pt392, Cu10

Potentiometer Input Specifications

Potentiometer input 3-wire potentiometer

Excitation voltage 1.2V DC

Potentiometer resistance 0–2KΩ low pot, 0–1MΩ high pot

Field programmable zero 0–90% of the span

Field programmable span 0.1–100%

Linearity and repeatability <±0.02% FSO typical



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