

### Transmitters

# Transmit without the headaches.



## 2-minute PC programming, no power supply required.



**Program any transmitter** in just 2 minutes with our reusable TM-USB communications kit (sold separately). No power supply, input signal or calibration required during programming!

**Use our FREE configuration software** to easily select your input/output type and range, and view live data. Download it from **defineinstruments.com/tmsetup** 

**Save your configuration settings** and recall them for lightning fast programming of additional transmitters.

#### TM-2DLI 2-Wire Universal Transmitter

- > 2-wire universal input
- > Current output
- > Loop powered
- Isolated
- > 2-minute USB programming

#### Universal input

Thermocouple	B, E, K, J, N, R, S, T or custom type
RTD	Pt100/Pt1000
mA	0/4–20mA
V	+1–-1V, +10–-10V
mV	⁺100–⁻100mV
Potentiometer	1–10kΩ

Current output 4–20mA or 20–4mA

Supply voltage 36V max, powered by loop input signal

Isolation voltage 2.3kV AC (test), 250V AC (operation)

**Operating temperature** -20-\*80°C

**Temperature coefficient** ≤±0.01% of span/°C

**Maximum load** 1200 $\Omega$  (at 20mA with 36V input). Load stability  $\leq 0.01\%$  of span/100 $\Omega$ . Output load resistance 50 $\Omega$ /V above 10V.

**Response time** 0–90%, 100–10% <1sec

Resolution 0.5µA

Accuracy ≤±0.1% of span

**LED indication** for sensor errors (3.8mA, 21.5mA). LED flashing = normal operation, LED on = fault.

Potentiometer for fine offset adjustment of current output

32-point flexible linearization may be applied to current/voltage inputs

**USB programmable**, simple setup in under 2 minutes. No input signal required during programming.

**DIN rail mountable unit**, dimensions 79 x 20 x 75mm (HxWxD). Fits 35mm DIN rail (not included).



## TM-4DPI

4-Wire Universal Transmitter

- > 4-wire universal input
- > Current/voltage output
- > Universal power supply
- Isolated
- > 2-minute USB programming

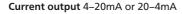
Universal input	
Thermocouple	B, E, K, J, N, R, S, T or custom type
RTD	Pt100/Pt1000
mA	0/4–20mA
V	10–0V, <sup>+</sup> 10– <sup>-</sup> 10V
mV	100–0mV
Potentiometer	2kΩ–1MΩ
Current or voltage	output
mA	0–20mA, 20–0mA, 4–20mA, 20–4mA
V	0–10V, 10–0V, <sup>+</sup> 10– <sup>-</sup> 10V, <sup>-</sup> 10– <sup>+</sup> 10V
Supply voltage 85-2	265V AC, 20-72V DC
Operating tempera	ture ⁻10–⁺60°C
Isolation voltage 2	3kV AC (test), 250V AC (operation)
Temperature coeffi	cient ≤±0.01% of span/°C
Maximum load 650	Ω. Load stability ≤0.01% of span/100Ω.
Response time 0–9	0%, 100–10% <1sec
Resolution 0.5µA	
Accuracy ≤±0.1% of	span
LED indication for s	ensor errors (3.8mA, 21.5mA). LED flashing =
normal operation, L	.ED on = fault.
Potentiometer for f	fine offset adjustment of current output
32-pointflexible line	earization may be applied to current/voltage input
USB programmable	e, simple setup in under 2 minutes. No input
signal required duri	ng programming.
DIN rail mountable	<b>unit</b> , dimensions 79 x 30 x 75mm (HxWxD). Fit

**DIN rail mountable unit**, dimensions 79 x 30 x 75mm (HxWxD). Fits 35mm DIN rail (not included).

### TM-2HL & TM-2HLI\*

2-Wire Temperature Transmitters

- > 2-wire temperature input
- > Current output
- > Loop powered
- Isolated or non-isolated
- > 2-minute USB programmir



Supply voltage 36V max, (loop input signal)

Operating temperature -20-+65°C

**RTD input** Pt100/Pt1000, 3-wire (or 2-wire with offset calibration)

 
 Sensor current
 0.15mA nominal

 Lead resistance
 Pt100: 10Ω/wire max, Pt1000: 5Ω/wire max (0.02% FSO offset error per Ω)

 Accuracy
 ≤0.3°C

 Linearity
 Pt100 0.02% FSO for ≤200°C, 0.1% FSO for ≤850°C

Pt1000 0.02% Fso for ≤200°C, 0.2% Fso for ≤520°C

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

Input impedance 1MQ minLead resistance100Q maxCold junction $^2$ O-\*90°CAccuracyE, J, K, N, T: <±2°C (or <±1°C \*)</td>B, R, S: <±3°C (or <±2°C \*)</td>B, R, S: <±3°C (or <±2°C \*)</td>Temp. driftE, J, K, N, T: <±0.05°C</td>B, R, S: <±0.2°C</td>CJC errorCJC error<±1°C</td>

**USB programmable**, simple setup in 2 minutes. No input signal required during programming. USB prog zero (0-±99% of span).

Head mounting unit, dimensions 44 x 44 x 23mm (HxWxD)

Features unique to isolated model (TM-2HLI)

**\* Isolation voltage** 250V AC (operation)

**\* LED indication** for sensor errors. Flashing = normal, On = fault.

\* Potentiometer for fine offset adjustment of current output



## New to defineinstruments.com

PSU-24

24V Instrument Power Supply

This 24V power supply effortlessly powers up to ten 4-20mA loops.



It delivers high accuracy and superior noise filtering using the latest EMI rejecting technology.

#### OVP-100

Over Voltage Protection Unit

This over voltage protection unit offers a simple and affordable way to insure your expensive instrumentation against power surges.



Enjoy all the benefits of a high level of protection concentrated in a compact space!



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