

Define **TM Series - Signal Conditioners**



Part No. **DEFINE-TM-2DLI**



Part No. **DEFINE-TM-4DPI**

The TM-2DLI and TM-4DPI are both compact, USB-programmable universal transmitters from Define Instruments, designed for industrial signal conversion. They support a wide array of input types (voltage, current, thermocouples, RTDs, potentiometers) and provide high isolation (3750 VAC) between input and output for noise immunity and safety. Both models offer excellent accuracy ($< \pm 0.03\%$ FSO typical), low ambient drift ($< \pm 0.003\%$ / °C FSO typical), and EMC compliance (EN 61326 for emissions/immunity, EN 61010-1 for safety). They are suited for harsh environments, mount on 35mm DIN rails, and are configured via free Define Toolbox software.



Features

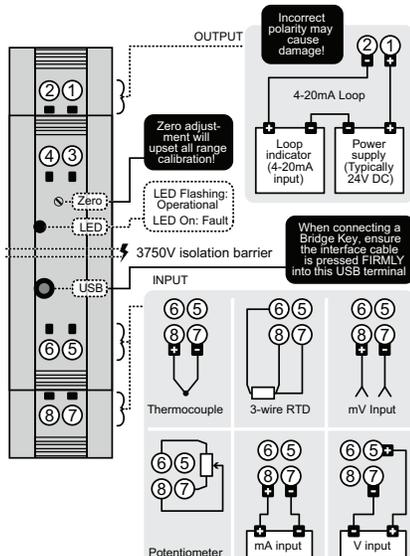
- **Universal Input Compatibility:** Supports a wide range of inputs including voltage, current, thermocouples (types B, E, J, K, N, R, S, T with cold junction compensation), RTD (Pt100/Pt1000 3-wire), and potentiometers (3-wire, 0–2 kΩ or 0–1 MΩ).
- **Programmable Features:** USB programmable for zero/span adjustments (up to $\pm 99\%$ span for most inputs), with free Toolbox software for easy configuration. (**DEFINE-BRIDGE-KEY** required)
- **Output:** TM-4DPI offers flexible 4-wire outputs (0–10V/ ± 10 V DC voltage or 4–20 mA / 0–20 mA); TM-2DLI provides 2-wire 4–20 mA loop-powered output.
- **Power Supply:** TM-4DPI supports universal 22–300 VDC or 85–265 VAC; TM-2DLI is loop-powered with 10.5–36 VDC
- **Performance and Accuracy:** High precision with $< \pm 0.03\%$ FSO accuracy, $< \pm 0.003\%$ / °C ambient drift, and $< \pm 0.02\%$ FSO linearity/repeatability for most inputs; fast 400ms response time (300 ms for 10–90% steps).
- **Protection and Immunity:** 3750 VAC isolation between input/output, 125 dB CMRR noise immunity, $< 1\%$ RF effect, and EMC compliance (EN 61326 emissions/immunity, EN 61010-1 safety).
- **Environmental Durability:** Operating range -4 to +185 °F (-20 to +85 °C) and 5–85% RH (non-condensing).
- **Installation:** DIN rail mounting; compact design (TM-4DPI at 30mm width and TM-2DLI at 20mm width); LED status indicators (flashing for operational, on for fault) and zero adjustment pot.
- 5-Year warranty

Define Instruments TM Series Signal Conditioners					
Part No.	Description	Manufacturer Manual	Weight (lb)	Drawing Link	Price
DEFINE-TM-2DLI	Define Instruments signal conditioner, isolated, Input: 1-channel, current/voltage/RTD/thermocouple/potentiometer, Output: 1-channel, loop powered current, 10.5–36 VDC operating voltage, 35mm DIN rail mount.	PDF	0.16	PDF	\$06x1z:
DEFINE-TM-4DPI	Define Instruments signal conditioner, isolated, Input: 1-channel, current/voltage/RTD/thermocouple/potentiometer, Output: 1-channel, current/voltage, 22–300 VDC / 85–265 VAC operating voltage, 35mm DIN rail mount.	PDF	0.28	PDF	\$.06x1j:

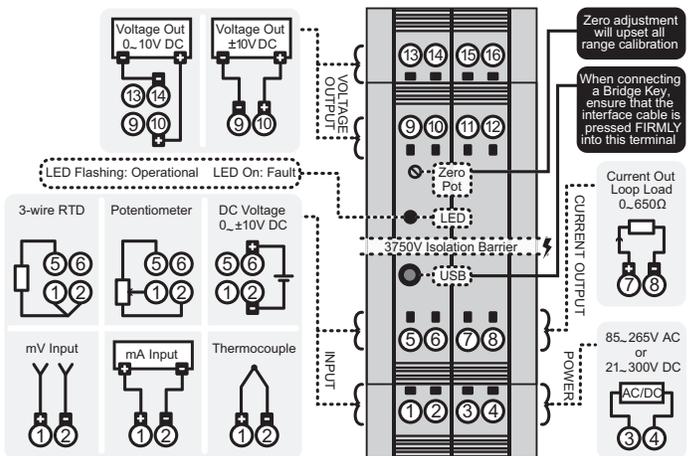
For complete technical information and installation see **Manufacturer Manual links**.

TM-2DLI Wiring

See Manufacturer Manual for additional wiring information and other applications.



TM-4DPI Wiring



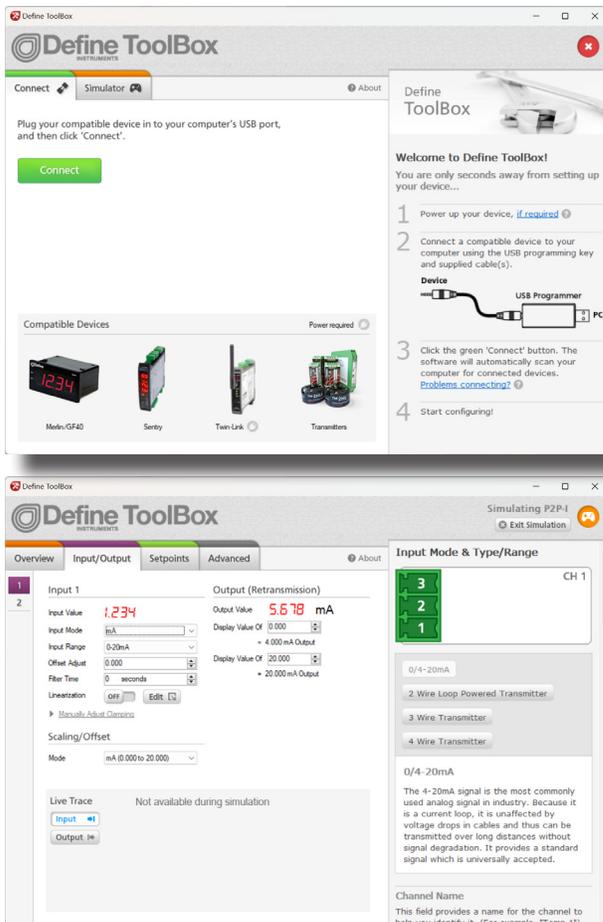
Define Windows Configuration Software

DEFINE-TOOLBOX-SW

Easily connect, configure, simulate, and monitor.

FREE Download

Easily configure and optimize your Define Instruments products with the intuitive ToolBox software. Designed for simplicity and power, ToolBox enables rapid setup of Define Instruments universal analog inputs, 4–20 mA outputs, digital I/O, and other product dependent configurations all in under 60 seconds via USB Bridge Key. Select from pre-calibrated input ranges, scale outputs with ease, and program sophisticated setpoint functions for alarms, remote control, temperature control, or pump operations. Simulation Mode enables configuration testing without hardware, making it ideal for troubleshooting or pre-deployment planning. The Import/Export feature simplifies backups and cloning, while Configuration Certificates provide professional PDF summaries for easy sharing and record keeping. Whether you're a novice or expert, ToolBox delivers flexible, click-and-select options to streamline your wireless signal transmission, ensuring reliable and consistent setup. Download ToolBox from AutomationDirect.com.



The BK-HM is a head-mount adapter cable from Define Instruments, for the DEFINE-BRIDGE-KEY USB programming cable. It enables connection to head-mounted transmitters TM-2HL and TM-2HLI for programming via the Define ToolBox software.



Part No. [DEFINE-BRIDGE-KEY](#)



Part No. [DEFINE-BK-HM](#)

Define Instruments Accessories				
Part No.	Description	Manufacturer Manual	Weight (lb)	Price
DEFINE-BK-HM	Define Instruments head-mount adapter, for use with Define Instruments DEFINE-TM-2HL and DEFINE-TM-2HLI programmable temperature transmitters. Requires DEFINE-BRIDGE-KEY fob USB adapter.	PDF	0.04 lb	\$6x1u.
DEFINE-BRIDGE-KEY	Define Instruments fob USB adapter, for use with Define Instruments DEFINE-TWIN-LINK and DEFINE-REPEATER. (1) 2.3ft interface cable and (1) 3.2ft/1m USB extension cable included. Requires DEFINE-TOOLBOX-SW configuration software.	PDF	0.208 lb	\$6noe.

For additional information see [Manufacturer Manual links](#).