



# Programmable Temperature Transmitters

## Features



Part No. [DEFINE-TM-2HL](#)



Part No. [DEFINE-TM-2HLI](#)

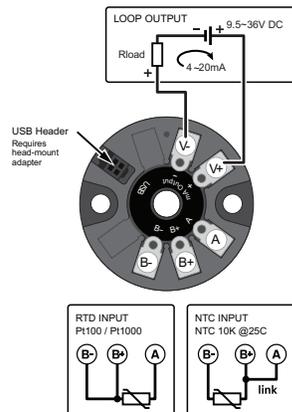
- Compact Head-Mount Design: DIN Form B connection head mount fits ProSense connection heads.
- Loop-Powered Operation: 2-wire 4–20 mA output with 9.5–36 VDC supply, low sensitivity to voltage changes, and up to 700 Ω load resistance for reliable signal transmission.
- Versatile Temperature Inputs: Supports RTD (Pt100/Pt1000), NTC thermistors including ProSense 10 K Type 3, and thermocouples (types B, E, J, K, N, R, S, T on TM-2HLI model) for broad compatibility.
- High Precision and Stability: Accuracy up to  $\leq 0.3$  °C for RTD/NTC and  $\pm 1-2$  °C for thermocouples, with low ambient drift ( $< \pm 0.003\%$  / °C) and excellent linearity for consistent performance.
- Isolation Option: TM-2HLI features 3750 VAC galvanic isolation between input and output for enhanced safety and noise rejection in harsh environments.
- Robust Environmental Ratings: Operating range from -20 °C to +85 °C (TM-2HLI) or 65 °C (TM-2HL), with 5–85% RH non-condensing, and high noise/RF immunity (125 dB CMRR,  $< 1\%$  effect).
- Sensor Break Protection: Configurable high upscale or low downscale output on sensor failure to prevent system errors.
- Response Time: 400 ms typical (300 ms for 10–90% steps), with 100 ms for NTC, ensuring quick signal updates.
- Easy USB Programming: Zero/span adjustments (up to  $\pm 99\%$  span), and setup via removable free ToolBox software. ([DEFINE-BRIDGE-KEY](#) & [DEFINE-BK-HM](#) adapter required)
- EMC Compliance and Safety: Meets EN 61326 for emissions/immunity and EN 61010-1 for safety, with limited output current ( $< 28$  mA) for reliable operation in demanding settings.
- 5-year warranty



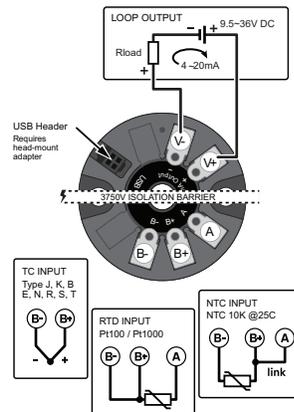
Define Instruments Programmable Temperature Transmitters					
Part No.	Description	Manufacturer Manual	Weight (lb)	Drawing Link	Price
<a href="#">DEFINE-TM-2HL</a>	Define Instruments programmable temperature transmitter, non-isolated, Input: 1-channel, RTD, °F or °C, Output: 1-channel, current, 9.5–36 VDC operating voltage, DIN Form B connection head mount, screw terminals.	<a href="#">PDF</a>	0.09	<a href="#">PDF</a>	\$;6x1[:
<a href="#">DEFINE-TM-2HLI</a>	Define Instruments programmable temperature transmitter, isolated, Input: 1-channel, RTD/thermocouple, °F or °C, Output: 1-channel, current, 9.5–36 VDC operating voltage, DIN Form B connection head mount, screw terminals.	<a href="#">PDF</a>	0.09	<a href="#">PDF</a>	\$6x1_:

For complete technical and installation information see [Manufacturer Manual links](#).

### TM-2HL Wiring



### TM-2HLI Wiring



See Manufacturer Manual for additional wiring information and other applications.

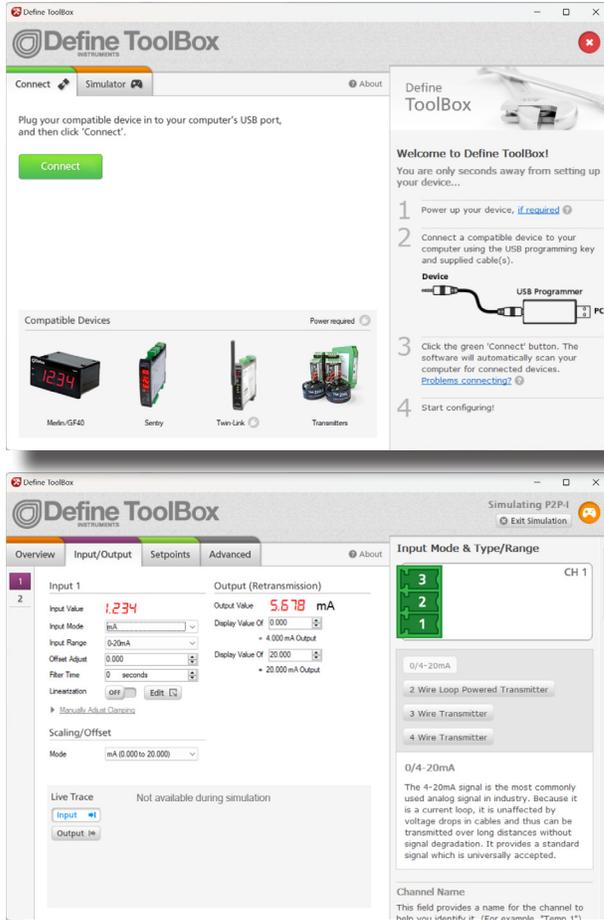
# Define Windows Configuration Software

## DEFINE-TOOLBOX-SW

### 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.

Easily connect, configure, simulate, and monitor.



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
<a href="#">DEFINE-BK-HM</a>	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.	<a href="#">PDF</a>	0.04 lb	\$6x1u.
<a href="#">DEFINE-BRIDGE-KEY</a>	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.	<a href="#">PDF</a>	0.208 lb	\$6noe.

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