



# Sentry Series - Signal Conditioners



Part No. [DEFINE-SENTRY-R2](#)



Part No. [DEFINE-SENTRY-R2A](#)



The Sentry is a DIN-rail mounted universal signal conditioner from Define Instruments for control, alarm, and signal applications in harsh EMC environments. It supports software-selectable inputs (TC, RTD, NTC, mA, V, mV, pot, pulse, AC current), wide AC/DC power (24–250 VAC / 19.5–250 VDC), 22V excitation, 2 relays, a 0.4" LED display, optional analog output (0(4)–20 mA / 0–10V), and USB setup via ToolBox ([DEFINE-BRIDGE-KEY](#) required). Features 2,300 Vrms isolation, accuracy up to 0.05% FSO, -10 to +50 °C operation, and EMC/safety compliance (EN 61326-1, EN 61010).

## Features

- **Versatile Universal Input:** Supports a wide array of sensors including thermocouples, RTD, NTC thermistors including ProSense 10 K Type 3, current (mA), voltage (mV to 300V), potentiometers and digital pulses, for flexible application in process, temperature, flow, and more.
- **Broad Power Supply Compatibility:** Universal wide-range AC/DC input (24–250 VAC / 19.5–250 VDC) ensures easy integration.
- **Built-in Sensor Excitation:** Provides 22V excitation to power two-wire transmitters directly, simplifying wiring and reducing external components.
- **Dual Relay Outputs:** Includes one Form A and one Form C relay for reliable control, alarm, and switching functions in industrial setups.
- **Clear LED Display:** 0.4" red LED screen for quick commissioning, real-time monitoring, and fault diagnostics.
- **Optional Analog Retransmission:** Isolated 0(4)–20 mA or 0–10V output (software selectable) for seamless integration with PLCs and SCADA systems.
- **Easy USB Configuration:** Simple, fast setup via free Define ToolBox software. ([DEFINE-BRIDGE-KEY](#) required)
- **Advanced Control Features:** Offers configurable setpoints for alarms and controls with activation points, latching, manual reset via user input, and advanced modes like pump and temperature control.
- **Advanced Customization:** Features a flexible 32-point linearization table for precise scaling and custom sensor responses.
- **Compact and Efficient:** DIN rail mountable with low power consumption, ideal for space-constrained installations in control and signal applications.
- 5-year warranty

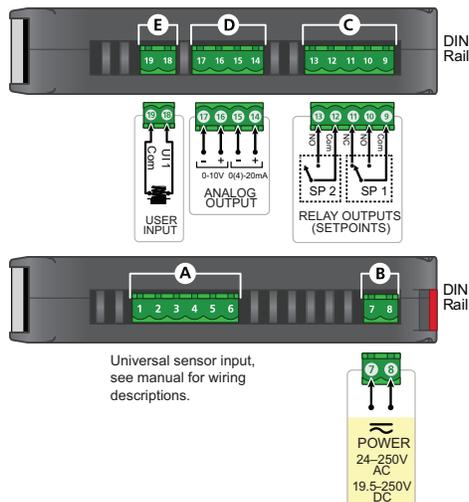
Define Instruments Sentry Series Signal Conditioners						
Part No.	Description	Manufacturer Specifications	Manufacturer Manual	Weight (lb)	Drawing Link	Price
<a href="#">DEFINE-SENTRY-R2</a>	Define Instruments signal conditioner, isolated, Input: 1-channel, current/voltage/RTD/thermocouple/thermistor/pulse/frequency/potentiometer, Output: 2-channel, relay, 24–250 VAC / 19.5–250 VDC operating voltage, IP20, 35mm DIN rail mount.	<a href="#">PDF</a>	<a href="#">PDF</a>	0.56	<a href="#">PDF</a>	\$06x1x:
<a href="#">DEFINE-SENTRY-R2A</a>	Define Instruments signal conditioner, isolated, Input: 1-channel, current/voltage/RTD/thermocouple/thermistor/pulse/frequency/potentiometer, Output: 3-channel, current/voltage/relay, 24–250 VAC / 19.5–250 VDC operating voltage, IP20, 35mm DIN rail mount.			0.58	<a href="#">PDF</a>	\$06x1y:

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

## Wiring

See [Manufacturer Manual](#) for additional wiring information and other applications.

Analog output only on the -R2A model.



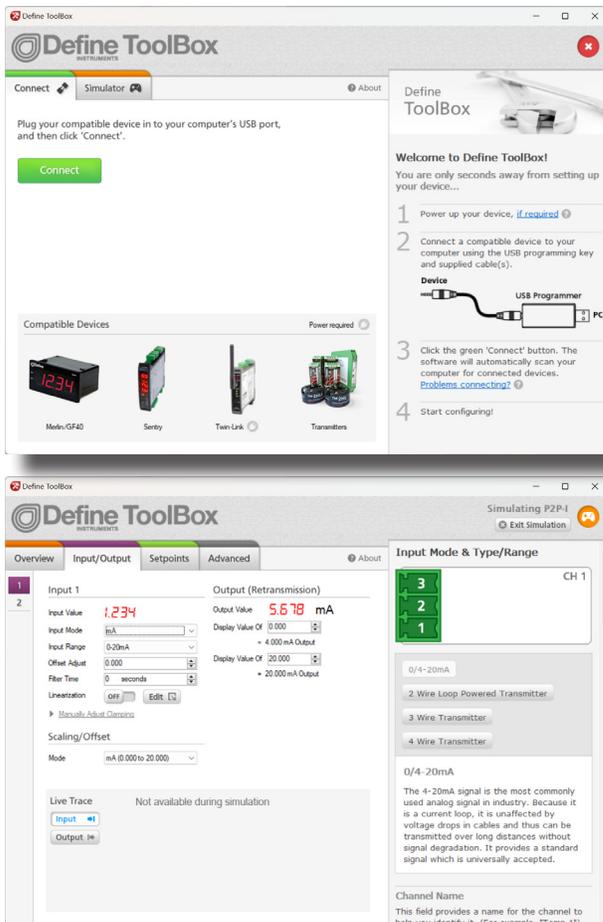
# Define Windows Configuration Software

## 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
<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](#).