

TECHNICAL DATA SHEET

4-CHANNEL CURRENT LOOP SENSOR



ORDER CODE: CLS-4-420-TH
PRODUCT CATEGORY: SENSORS

Turn Any 4–20mA Probe into Instant Insight.

PRODUCT OVERVIEW

General Description

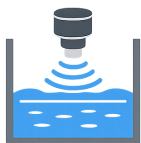
E4A's Current Loop Sensor (CLS) is a versatile four-channel 4–20mA sensor designed for seamless integration across a wide range of environments. Compact and easy to install, it mounts conveniently on a DIN rail and supports any off-the-shelf 4–20mA probe, offering maximum flexibility in sensor selection. With the ability to monitor four channels simultaneously, the CLS enables comprehensive, real-time data collection from multiple parameters—streamlining operations and improving efficiency.

Once connected, the CLS communicates effortlessly with any E4A gateway, becoming a reliable part of your infrastructure and supporting efficient, dependable system management.



TYPICAL APPLICATIONS

Level Monitoring



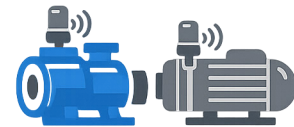
Insight: Continuously monitor tank water levels with non-contact radar sensing technology. Accurate level measurement helps prevent overflows, dry-run conditions, and process interruptions.

Pressure Monitoring



Insight: Maintain safe and efficient process operation with continuous pipe pressure monitoring. Real-time pressure feedback helps identify blockages, leaks, or pump issues early.

Vibration Monitoring



Insight: Protect critical rotating equipment by monitoring vibration at pumps and motors. Detecting abnormal vibration patterns early helps reduce unplanned downtime, and prevent equipment failure.

TECHNICAL SPECIFICATIONS

Power Supply

Main Power	7-15VDC @ 1.5A (external adapter)
Other Power (Optional)	USB Type B (5VDC @ 500mA)
	Internal Battery (3.6VDC, 3500mAh Li-ion)
Maximum Charging Current	1.5A (AC-DC adapter) 500mA (USB Type B)
Li-ion Charge Time	2.2H/3.2H (AC-DC adapter) 6.6H/7.6H (USB Type B)
External Sensors	24VDC 30mA output per channel isolated

Operating Specifications

Operating Temperature	-20°C to +60°C (lead-acid powered)
Internal Battery	Battery charging disabled >45°C Battery charging disabled <10°C Battery discharging disabled >60°C
Storage Temperature	-40°C to +85°C (with battery) -40°C to +85°C (without battery)
Operating Humidity	20-85% (operating and storage)
Ingress Protection Rating	IP30
Pollution Degree	2

Measurement Characteristics

Analog Front End	4 channels for current measurement 0-25mA input per channel
Resolution	24-bit resolution
Temperature Measurement	-20°C to +60°C (±0.5°C accuracy)
Humidity Measurement	20-85% relative humidity (±3.5% accuracy)

Physical Characteristics

Housing Material	Flame Retardant Polycarbonate/ABS
Physical Dimensions	Height: 120mm / 4.7 inches Width: 50mm / 1.9 inches Depth: 90mm / 3.5 inches
Weight	250g
Mounting	Universal 35mm DIN rail

Communications

Wireless Module	2.4GHz Bluetooth® 5 transceiver
Communication Range	125m line of sight
Reporting Interval	User programmable in 30s increments

Security

Encryption	AES 128-bit crypto accelerator ECC and RSA public key accelerator (PKA) SHA2 accelerator (full suite to SHA-512) True Random Number Generator (TRNG)
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User Interface

Indicators	Front fascia membrane (red, green, amber LED)
User Interface	2 push buttons (user-programmable) 1 power button 2 rotary encoders
Current Measurement	2 x 6 terminal block
Communication Port	USB 2.0 debugging interface



PRODUCT CERTIFICATIONS

FCC ID	2AXVCLS01
Industry Canada	26661-CLS01
Safety Standards	UL Std. No. 61010-1 3rd Edition + AM1: 2018 CAN/CSA-C22.2 No.61010-1-12 Third Edition + AM1:2018 CAN/CSA-C22.2 No. 61010-2-030:18 UL 61010-2-030:2018

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