

Electrolab D99 Nodes are wireless industrial I/O devices that together with a gateway form a robust, easily configured wireless communications network to connect your oil field instrumentation.

Features

- High-quality, low-cost, uniquely designed 3.6V Lithium (Li-SOCL2) D-cell battery power integrated into the housing. Readily available and easily replaced within a D99 node, this LiSOCL2 battery is one of the most reliable batteries for industrial devices, offering electrical reliability in operating conditions of -55° to 85°C, long shelf life, maximum service life, and safety. The battery passes UL and Military standards.
- Ease of field-level user configuration.
- Frequency Hopping Spread Spectrum (FHSS) splits data packets and transmits them in a random pattern known only to the gateway and node. Multiple networks in close proximity can operate without interference due to the random patterns of transmission.
- Time Division Multiple Access (TDMA) provides a specific communication time slot for each device in the network, eliminating data collisions. The gateway requests data from each node during its time slot. This architecture lends itself to efficient power management, as each device knows the time period to receive or send data. The radio doesn't have to listen all the time, promoting longer battery life.
- Bidirectional communication between the Gateway and Node with fully acknowledged data transmission.
- Lost RF link detection via the transceiver, with ability to set relevant outputs for user-defined conditions.
- Certified Class I, Division 1, Groups A, B, C and D when installed to National Electrical Code standards.
- 900 MHz operating frequency.



Models

Model Description	SKU	Boost Voltage	I/O
Electrolab D99 Thermocouple Node	ELD99T4D0	NA	Two selectable discrete, three thermocouple, and one thermistor
Electrolab D99 RTD Temperature Sensing Node	ELD99N0D0	NA	Four 3-wire RTDs
Electrolab D99 Discrete/Analog Nodes <i>Available in 10 V and 18 V versions for maximum compatibility with 3rd party instrumentation and optimal power management for extended battery life.</i>	ELD99M2D1	10 V	Discrete Mode: • Inputs: Two selectable discrete • Switch Power: Two configurable
	ELD99M2D2	18 V	Analog Mode: • Inputs: Two selectable discrete, two 0 to 20 mA analog • Switch Power: Two configurable
	ELD99V2D1	10 V	Discrete Mode: • Inputs: Two selectable discrete • Switch Power: Two configurable
	ELD99V2D2	18V	Analog Mode: • Inputs: Two selectable discrete, two 0 to 10 V analog • Switch Power: Two configurable
Electrolab D99 Model 2100 Node	ELD99V2D4	13 V	Modbus Mode: One RS-485.
	ELD99V2D4H	13V	Modbus Mode: One discrete input accommodates Electrolab's High-Level Shut-In with no configuration required. (May also be used with other switch type devices)
Electrolab D99 Extended Warm-up Node	ELD99M3D5	19 V	One analog input with 29 second warm-up time, one sinking discrete. Additional Configurations: One 3-wire 100 ohm Platinum RTD, one sinking discrete and two analog 0 to 20 mA

WIRELESS / IOT DEVICES GATEWAYS

D80 PERFORMANCE GATEWAY

Electrolab's D80 Performance Gateway together with Electrolab D99 Nodes form a robust, easily configured wireless communications network to connect your oil field instrumentation.

Features

- Transmit power levels of 1 Watt for 900 MHz models.
- Power input of 10 to 30 V DC.
- Modbus serial interface.
- Ease of field-level user configuration.
- Site Survey analyzes network signal strength and reliability directly from the gateway, at installation, to ensure reliable communication.
- Supports up to 47 nodes, wirelessly.
- 900 MHz operating frequency.



Model Description	SKU	Environmental Rating	I/O
Electrolab D80 Performance Gateway	ELD99-D80-P2C	IP 67, NEMA 6	Inputs: Four selectable discrete, two 0 to 20 mA or 0 to 10V analog Outputs: Four sourcing discrete, two 0 to 20 mA analog

D100 IOT GATEWAY CONTROLLER

The D100 IoT Gateway Controller offers all the features of the D80 Performance Gateway with the following additions to form a platform for the Industrial Internet of Things (IIoT).

Features

- Modbus TCP/IP, Modbus RTU and Ethernet/IP automation protocols.
- Login controller with ScriptBasic programming.
- Cellular modem Internet connectivity or wired Ethernet.
- Industry standard RS-485, Ethernet and USB Communication Ports.
- Secure email and text messaging for alarms, alerts and data log files.
- Data logging with removable SD card.
- Interactive programmable user interface.
- Universal, on-board I/O ports to connect local sensors and control equipment.
- Supports up to 47 nodes, wirelessly.
- 900 MHz operating frequency.



Model Description	SKU	I/O
Electrolab D100 IoT Gateway Controller	ELD99-D100-B1R1	Inputs: Sinking/sourcing discrete, 4-20 mA analog, 0-10 V analog, counter, and temperature 10 kOhm thermistor Outputs: Analog 0 to 20 mA or 0 to 10 V, Sinking/sourcing discrete output, Two selectable 5 V or 16 V outputs
Verizon LTE Cellular Module	ELD99-DXM-V-LTE	Includes SIM card.