evo 1650 Smart Core

Complete Control

The evo 1650 Smart Core Series Transmitter is a highly versatile, microprocessor-based RTU designed for both analog and digital applications. When connected to the evo 1610 Radar Level Gauge, it receives analog input signals and transmits data via the L&J 4-wire data highway or other digital communication protocols to the system computer. Additionally, the evo 1650 Smart Core can supply loop power for 24VDC loop-powered devices, enhancing system flexibility and efficiency.

Compatibility

The evo 1610 connects to the evo 1650, enabling real-time monitoring of local RS485 devices directly at your tank site. Additionally, it seamlessly integrates with various accessories, including:

- MCG 351 Average Temperature Probes (via the MCG 2350)
- 4-20 mA input devices
- Discrete input devices

The evo 1650 supports direct wiring of 4-20 mA signals from an ultrasonic level gauge, a pressure transducer, and a 3-wire RTD. These values can be displayed on the local LCD and transmitted to a central computer or receiver via the standard L&J Tankway 4-wire digital highway or other digital protocols. Furthermore, the evo 1650 Smart Core supports temperature inputs and discrete I/O, enhancing its flexibility for diverse monitoring applications.

Total System Integration

This provides the ability to add virtually any type of instrument or sensing device to the system without the need of running individual analog data wires back to the control room. The evo 1650 Smart Core provides for a convenient reliable interface between the gauging or SCADA system and various analog devices. New or updated programming can be downloaded to any evo 1650 Smart Core Transmitter into its on-board flash memory "on the fly" to incorporate protocol changes and additional functionality.

Graphical LCD Display w/ Infrared Calibration

The evo 1650 Smart Core utilizes a brand new local graphical LCD display which has the ability to display up to 10X more information than the previous 2x16 character LCD display used on previous generations of the evo 1650 Smart Core. As with all the L&J's state of the art level gauging solutions, the evo 1650 Smart Core can be configured via infrared technology by using the MCG 2150 Remote Calibrator in hazardous environments.
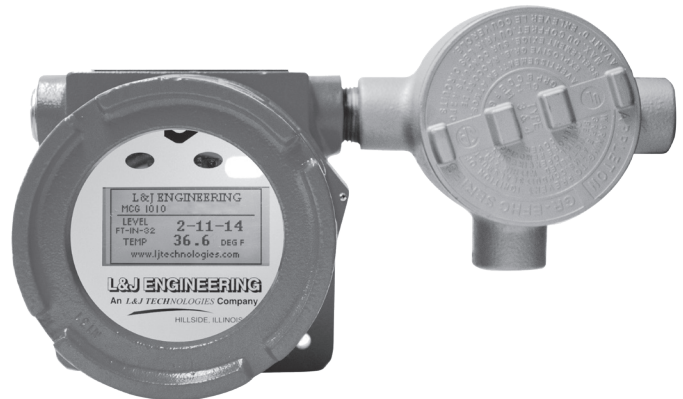
Features

- Analog to Digital Conversion
- Monitor Field / Internal Parameters
- Reliable Interface between Analog Devices and Digital Protocols
- Advanced Flash Memory Technology
- Wireless Infrared Programming
- Local Graphical LCD Display

Applications

- Interface various field control and monitoring equipment to the inventory management system
- Specifically designed for any sized application
- Converts analog signals to digital protocols
- Ground Level Display for evo 1610 Radar Level Gauge

5911 Butterfield Road Hillside, IL 60162 • tel: (708) 236-6000 • fax: (708) 236-6006
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Rev: evo 1650-3C

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Specifications

Display:
Local Graphical LCD Display

Communication:
L&J Tankway
Other digital protocols
Wireless

Temperature Inputs:
3-Wire RTD (Copper or Platinum)
Average Temperature*

Analog Inputs:
Up to 2 4-20mA Inputs

Discrete I/O:
Up to 2 Discrete I/O's

Analog Outputs:
Up to 2 4-20mA Outputs

Power Options:
12 - 70 VDC

Enclosure Rating:
Class I, Division 1, Groups A, B, C and D
Class II, Division 1, Groups E, F and G
Class III
Class I, Zone 1, AEx db IIC Gb
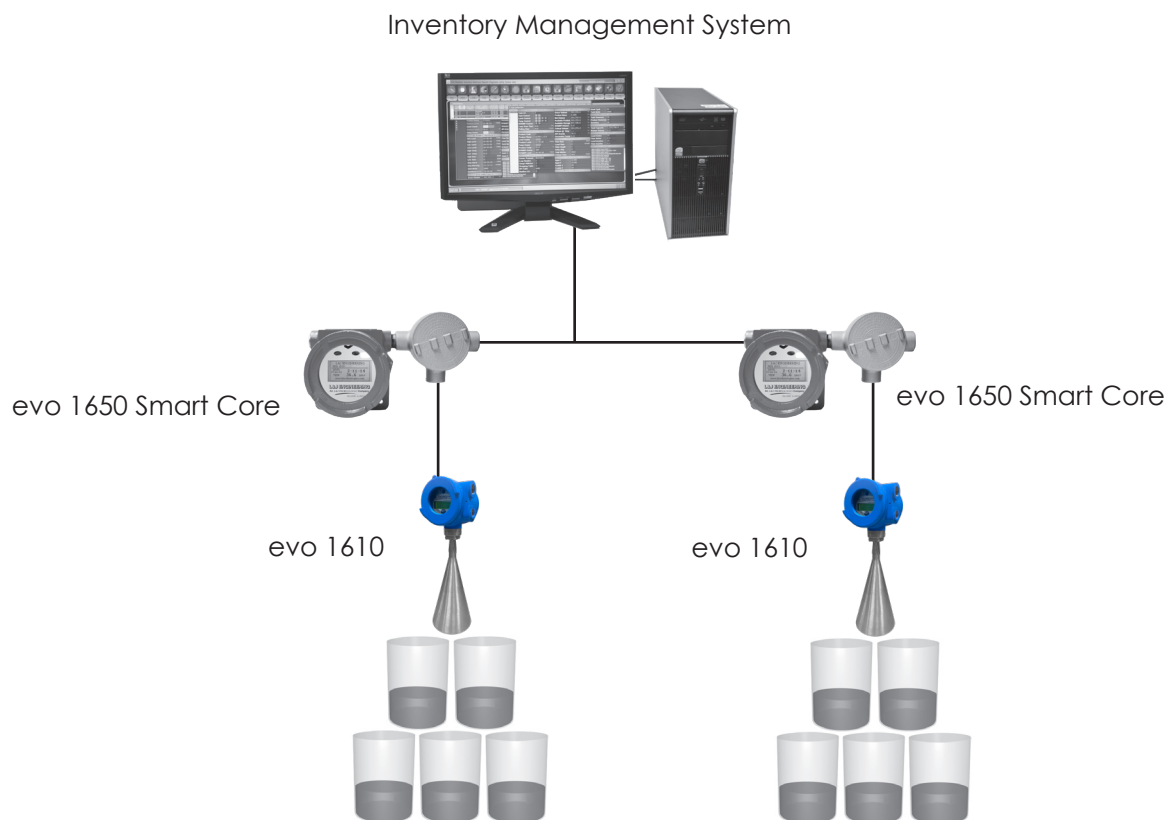Zone 21, AEx tb IIIC Db
Ex db IIC Gb Ex tb IIIC Db Type 4X, IP66/IP68
ATEX - II 2 G EEx d IIB; II 2 D

*Requires MCG 2350 (ordered separately)

All designs subject to change. Certified dimensions and specifications available upon request.

Typical System Layout

Inventory Management System

evo 1650 Smart Core

evo 1650 Smart Core

evo 1610

evo 1610

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evo 1650 Smart Core Ordering Guide

evo 1650 Smart Core Analog/Digital Transmitter
Includes: Explosion Proof Housing, Infrared Remote Capabilities, Smart Flash Technology, Local Graphical LCD Display

MCG 2150 Remote Calibrator
(One Required)

Model Number Selection:

The model number will consist of a base number **evo 1650** followed by 7 digit letters. These digits will represent 5 option tables:

evo 1650 - AB - CD - E - F - G

AB – Analog Inputs / Temperature	
00	None
02	Average Temperature*
05	4-20 mA Input (Single)
06	4-20 mA with Average Temperature* (No Barriers)
08	Dual 4-20 mA Input
11	Spot Temperature
14	Spot Temperature, with Barriers
17	4-20mA with Spot Temperature
32	Dual Spot / Dual 4-20 mA Input

*Order MCG 2350 Separately

CD – Singal Outputs	
00	None
02	L&J Tankway
04	4-20 mA Output
06	L&J Tankway / Dual 4-20 mA (Level & Temperature)
08	Dual 4-20 mA Out (Level & Temperature)
16	L&J Tankway / 4-20 mA Out (Level)
18	RS-232 Output
24	Modbus on RS-485 (2-Wire)
28	Modbus on L&J Tankway
30	Modbus on RS-485 (4-Wire)
34	HART
40	WirelessHART

E – Relays	
0	No Relays
1	2 Relays
2	4 Relays

F – Display	
1	Level
2	Temperature
3	Pressure
6	Level & Temperature
7	Level & Pressure

G - Power Supply	
0	48 VDC - Standard (12-70 VDC)

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