

LEVELtrol II

Multi-Function Level Indicator, Controller and Batcher

Trend, Alarm and Log your LEVELtrol II Data with KEPCore HMI Software!
See Special Flow Instruments Section

Features

- Level and Tank Volume Indicator
- Batching by Level
- Level Control, Tank Volume, Corrected Volume and Mass Calculations
- Menu Selectable Hardware & Software Features
- Two Line LCD or VFD Display
- Isolated Outputs Standard
- RS-232 Port Standard, RS-485 Optional
- DIN Enclosure with Two Piece Connectors
- DDE Server & HMI Software Available
- NEW! - Attractive Wall Mount Enclosure



Description:

The LEVELtrol II Flow Computer satisfies the instrument requirements for a variety of level sensor types in liquid applications. Multiple tank geometries, fluid equations and instrument functions are available in a single unit with many advanced features.

The alphanumeric display shows measured and calculated parameters in easy to understand format. Single key direct access to measurements and display scrolling are supported

The versatility of the LEVELtrol II permits a wide measure of versatility within the instrument package. The various hardware inputs and outputs can be "soft" assigned to meet a variety of common application needs. The user "soft selects" the usage of each input/output while configuring the instrument. Consider the following illustrative examples.

The isolated analog output can be chosen to follow level, tank volume, corrected tank volume, tank mass, temperature, or density by means of a menu selection. Most hardware features are assignable by this method.

The user can assign the standard RS-232 Serial Port for data logging, transaction printing, or for connection to a modem for remote meter reading.

Specifications:

Environmental

- Operating Temperature: 0°C to +50°C
- Storage Temperature: -40°C to +85°C
- Humidity : 0-95% Non-condensing
- Materials: U.L. approved

Listing: UL/C-UL Listed (File No. E192404), CE Compliant

Display

- Type: 2 lines of 20 characters
- Types: Backlit LCD and VFD ordering options
- Character Size: 0.3" nominal
- User programmable label descriptors and units of measure

Keypad

Keypad Type: Membrane Keypad
Number of keys: 16

Enclosure

Style: See Ordering Code for Available Mounting Options
Size: See Dimensions
Depth behind panel: 6.5" including mating connector
Type: DIN
Materials: Plastic, UL94V-0, Flame retardant
Bezel: Textured per matt finish

Power Input

The factory equipped power option is internally fused. An internal line to line filter capacitor and MOV are provided for added transient suppression.
110 VAC Power Option: 85 to 127 Vrms, 50/60 Hz
220 VAC Power Option: 170 to 276 Vrms, 50/60 Hz
DC Power Option:
12 VDC (10 to 14 VDC)
24 VDC (14 to 28 VDC)

Power Consumption

AC Power: 11.0 V/A
DC Power: 300 mA max.

Level Inputs:

Analog Input:

Accuracy: 0.01% FS at 20° C
Ranges
Voltage: 0-10 VDC, 0-5 VDC, 1-5 VDC
Current: 4-20 mA, 0-20 mA
Basic Measurement Resolution: 16 bit
Update Rate: 4 updates/sec
Automatic Fault detection: Signal over/under-range, Current Loop Broken
Calibration: Software Calibration (no trimmers) and Auto-zero Continuously
Extended calibration:
Learns Zero and Full Scale of each range using special test mode.

Sensor Types Supported:

- Differential Pressure
- Ultrasonic
- Many Others

Tank Geometries:

Horizontal, vertical, spherical and 32 point strapping table

Auxiliary / Compensation Input

The auxiliary/compensation input is menu selectable for temperature, density or not used. This input is used for the compensated input when performing compensated tank volume and mass calculations. It can also be used as a general purpose input for display and alarming.

Available Input Ranges

Voltage: 0-10 VDC, 0-5 VDC, 1-5 VDC

Current: 4-20 mA, 0-20 mA

Resistance: 100 Ohms DIN RTD

Control Inputs

Switch Inputs are menu selectable for Start, Stop, Reset, Lock, Alarm Acknowledge, Print or Not Used.

Relay Outputs

The relay outputs are menu assignable to Level, Tank Volume, Temperature, Density, Batch Control or Malfunction

Number of relays: 2 (4 optional)

Contact Ratings: 5 amp, 240 VAC or 30 VDC

Isolated Analog Output

The analog output is menu assignable to correspond to the Level, Tank Volume/Mass, Temperature or Density.

Type: Isolated 4-20 mA Current Sourcing

Excitation Voltage

24 VDC @ 100 mA (fault protected)

Isolated Pulse output

The isolated pulse output is menu assignable to generate pulse outputs when tank fills, empties or both.

Pulse Output Form: Isolated Open Collector

Maximum On Current: 25 mA

Maximum Off Voltage: 30 VDC

Pulse Duration: 10 msec or 100 msec

Serial Communication

The serial port can be used for printing, datalogging, modem connection and communication with a computer.

RS-232:

Device ID: 01-99

Baud Rates: 300, 600, 1200, 2400, 4800, 9600, 19200

Parity: None, Odd, Even

Handshaking: None, Software, Hardware

Print Setup: Configurable print list and formatting

RS-485:

Device ID: 01-247

Baud Rates: 300, 600, 1200, 2400, 4800, 9600, 19200

Parity: None, Odd, Even

Protocol: Modbus RTU (Half Duplex)

Real Time Clock

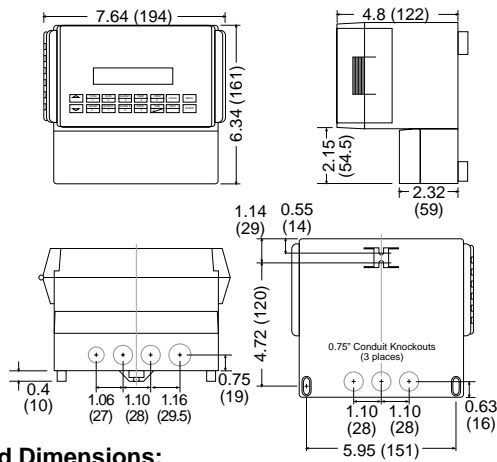
LEVELtrol II is equipped with a battery backed real time clock with display of time and date.

Format:

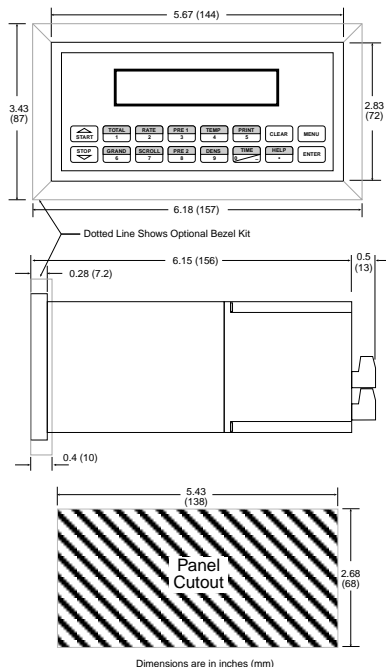
12 or 24 hour time display

Day, Month, Year date display

Wall Mount Dimensions:



Standard Dimensions:



Terminal Designations:

1	DC OUTPUT	LEVEL IN
2	Vin +	
3	lin +	
4	COMMON	
5	RTD EXCIT +	Vin +
6	RTD SENS +	COMP IN
7	RTD SENS -	lin +
8	CNTR IN 1	
9	CNTR IN 2	SEE USER MANUAL
10	CNTR IN 3	
11	COMMON	
12	PULSE OUTPUT +	
13	PULSE OUTPUT -	
14	ANALOG OUTPUT +	4-20 mA
15	ANALOG OUTPUT -	
16	NC	COM RLY3
17	COM RLY1	25
18	NO	26
19	NC	27
20	COM RLY2	28
21	NO	29
22	NC	30
23	AC LINE	DC +
24	AC LINE	DC -
		POWER IN

Ordering Information

Example LT2 L 1 B 0 P

Series: LT2 = LEVELtrol II

Display Type: L = LCD, V = VFD

Input Type: 1 = 110 VAC, 2 = 220 VAC, 3 = 12 VDC (10 to 14 VDC), 4 = 24 VDC (14 to 28 VDC)

Relays: A = 2 SPDT Relays, B = 4 SPDT Relays

Network Card: 0 = None (STD), 2 = RS485/Modbus (available soon)

Mounting: P = Panel Mount, N = NEMA 4 Wall Mount, W = NEMA 12/13 Wall Mount w/ Clear Cover, E = Explosion Proof (No Button Access), X = Explosion Proof (with Button Access)

Options: CSA = CSA Approved Unit (pending) (consult factory)

Accessories:
 KEPS-KEP1-32 = KEP RS232 for SUPERtrol 1, SUPERtrol 1LE, SUPERtrol 2 and LEVELtrol 2 • 32 Bit DDE Server
 P1000 Printer (see Accessories)
 IM-2400 = Internal Modem for SUPERtrol Family
 MPP2400 = Port Powered Modem
 MPP2400N = Port Powered Modem in NEMA4X Enclosure