



USFilter

A Siemens Business

LC150

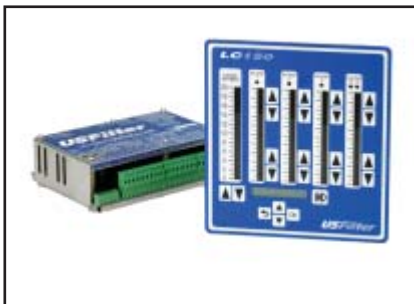
VIEW-AT-A-GLANCE

PUMP CONTROL-TELEMETRY UNIT

Simply

Features In Brief

- Telemetry Ready
- Security
- 2 or 3 Pump Control
- UL® Listed
- Alarm/Event Log
- Volumetric Flow Calculator
- VFD Control
- Optional Dialer
- Optional Ethernet Port



USFilter Control Systems is proud to introduce the LC150 Pump Controller, the newest addition to the family of "View-At-A-Glance" controllers. For nearly two decades, the D150 Series of "View-At-A-Glance" Pump Controllers has set the standard in the industry for ease of use and reliability. Now the LC150 provides the simplicity customers have come to expect with the advanced features they need – all in one system!

The LC150 is designed specifically for pump station applications and offers a simple, reliable and cost effective solution. The new "View-At-A-Glance" interface provides the operator with all the information needed to operate and maintain the pumping system and is UL® listed and NEMA® 4 rated.

FEATURES

Telemetry Ready - with the addition of a radio, phone line connection or connection to a high speed Ethernet interface (with the Ethernet option), the LC150 allows you to monitor station status, change pump start and stop setpoints, change high and low level alarm setpoints, acknowledge alarms, and view pump run, fail, and performance information remotely. If alarm notification is the only requirement, the optional integrated alarm dialer provides real voice

notification of alarm conditions over a dial up telephone line.

Versatile - the LC150 can be used to control and monitor up to three constant and/or variable speed pumps in either pump up or pump down mode. This versatility makes the LC150 useable even in difficult pump applications like pressure/flow controlled booster stations.

Time and Date Stamped Alarm/Event Log - the LC150 logs the time and date that alarms and events occur. This historical log provides the operator with the ability to analyze pump performance and system failures.

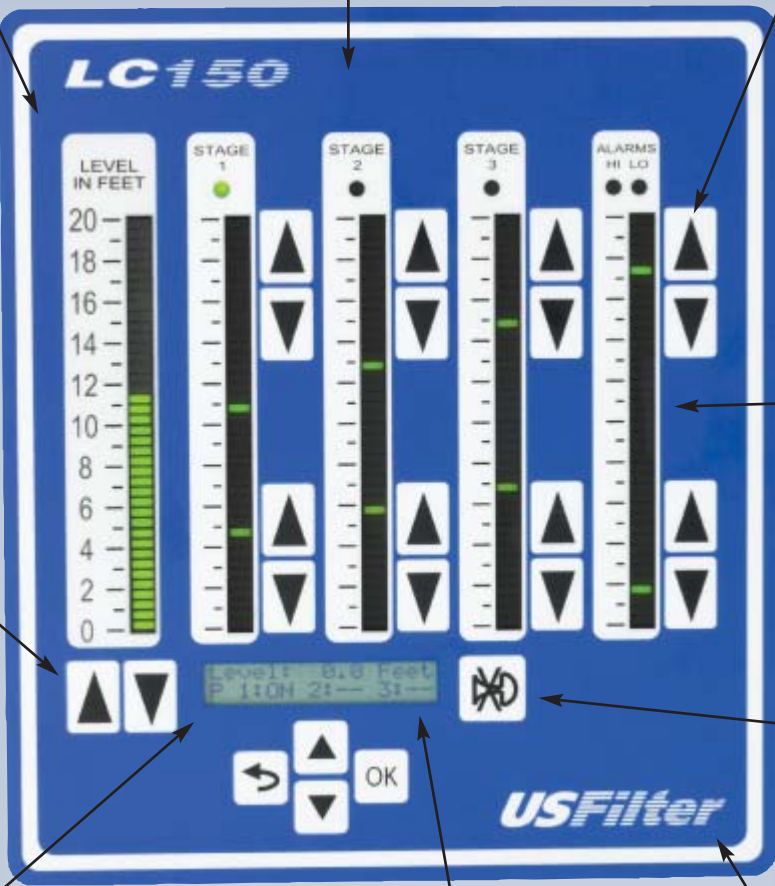
Volumetric Flow Calculator - the LC150 calculates flow rates based on level excursions and logs daily flow, flow rates per pump and average flow rate per pumping cycle. This information can be viewed locally at the operator interface and remotely via the telemetry connection.

Password Protection - three levels of password security allows only authorized users to modify the controller parameters.

Site Security - with the addition of a simple door switch or motion detector, the LC150 can function as a site security system used to detect unauthorized entry onto the premises.

the Easiest

Most User Friendly Pump Control-Telemetry Unit on the Market Today



The image shows the USFilter LC150 Pump Control-Telemetry Unit, a blue rectangular device with a white faceplate. It features a large vertical scale on the left labeled 'LEVEL IN FEET' with markings from 0 to 20. To the right of the scale are three vertical columns labeled 'STAGE 1', 'STAGE 2', and 'STAGE 3', each with a green indicator light and a vertical scale. Further right is an 'ALARMS' section with 'HI' and 'LO' indicators and a vertical scale. At the bottom, there is a small LCD screen displaying 'Level: 0.0 Feet' and 'P 1:04 2:-- 3:--'. Below the screen is a keypad with four directional keys (up, down, left, right) and an 'OK' button. The USFilter logo is at the bottom right of the unit.

Custom Scale Ranges
Allows you to scale the controller display precisely to the process.

View-At-A-Glance Operator Interface
View all critical information including: on/off setpoints, level alarm setpoints, level alarms and the process variable without pressing any keys.

Pump Up or Pump Down Mode
Controls 2 or 3 pumps in either mode.

Drop in Replacement
Operator Interface has the same footprint as D15x series products. No drilling or modifying the door.

Verify Proper Pump Operation
Two simple up/down keys allows an operator to simulate the process.

Alarm Control
Easily silence audible alarms and reset latching alarm conditions.

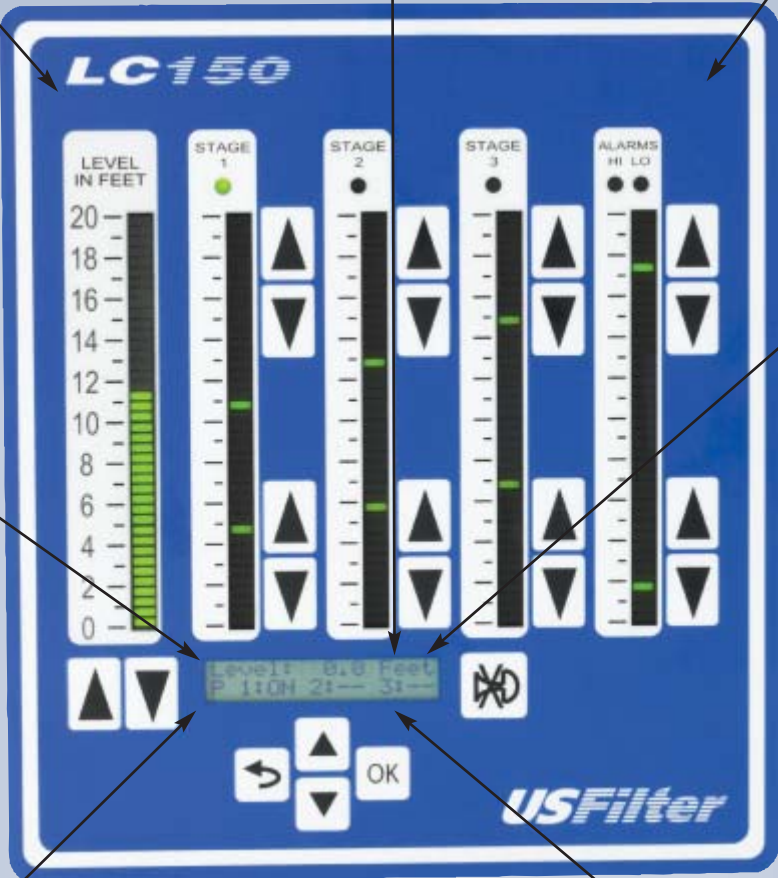
LCD with Backlighting
2 line x 16 character display and simple (4-key) key pad allows easy access to more advanced information.

Alternation
The LC150 supports multiple modes of operation configurable through the LCD and keypad.

NEMA 4 Rated Operator Interface

the Most Advanced

Pump Control-Telemetry Unit on the Market Today



The image shows a blue rectangular control unit labeled "LC150" and "USFilter". It features several vertical displays: a "LEVEL IN FEET" scale from 0 to 20, and three "STAGE" displays (1, 2, 3) each with a green bar and up/down arrows. To the right is an "ALARMS HI LO" display with two green bars. At the bottom, there is a small LCD screen showing "Level: 8.8 Feet" and "P 11:01 21-31-". Below the screen are several buttons: a left arrow, a right arrow, an "OK" button, and a "NO" button with a crossed-out circle. Arrows point from various text blocks to specific features on the unit.

Pump Protection
The LC150 controller will detect failed pumps, and take the failed pump out of service until corrected and reset.

Time and Date Stamped Alarm/Event Log
Stores the last 100 Alarm/Events.

Two Piece Design
Door mounted operator interface and DIN rail mounted I/O base.

Volumetric Flow Calculation
The controller can calculate station flows without the need for a flow meter.

Pump Run Data

- Total run time
- Total number of starts
- Daily run time
- Average number of starts/day
- Total pump flow
- Average flow rate of the pump

Security Protection

- 3 level password security
- Detect unauthorized station access (intruders) with a door switch input and an operator interface security password.
- Activates local alarm and telemeters unauthorized entry to a central monitoring point.

Calculated Flow Statistics

- Total station flow
- Average daily flow
- Maximum daily flow

A utility can monitor the pumps performance over time and perform maintenance on a pro-active basis rather than a reactive one.

A utility can monitor station performance and spot potential problems.

**Built-in RS-232 Serial Port
Supports Modbus® and USFilter
Open Protocols**

**The LC150 Supports a Wide Variety of
Communication Media**

- Radio (UHF, VHF, Spread Spectrum)
- Ethernet (optional)

Diagnostics
On board
communication and
diagnostics LED
support
troubleshooting

**120 Volts AC or
10-30 VDC
Operation**

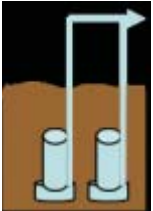


Isolated Inputs

**Pull Apart Terminal
Blocks Ease of
Installation &
Maintenance**

**Built-in Battery
Charger**

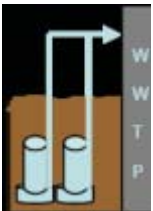
APPLICATIONS



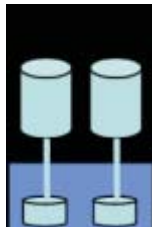
Sewage Lift Pump Station –
Controls pumps based on locally
monitored wetwell level. Supports both
level transmitter and float switch control
inputs for primary and back up control
strategies.



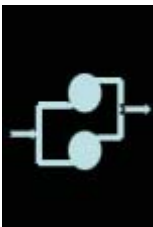
Well Pump Station –
Controls pumps based on locally
monitored pressure/level sensor or
remotely telemetered tank level.



**WWTP Influent or Effluent Pump
Station –** Controls pumps based on
locally monitored wetwell level.
Supports both level transmitter and float
switch control inputs for primary and
back up control strategies.



Raw Water Pump Station –
Controls pumps based on locally
monitored or telemetered flow
rate/pressure/level sensor signal.



Booster Pump Station –
Controls pumps based on locally
monitored discharge pressure sensor or
remotely telemetered tank level.



Transfer Pump Station –
Controls pumps based on locally
monitored wetwell level. Supports
both level transmitter and float switch
control inputs for primary and back up
control strategies.



Irrigation Pump Station –
Controls pumps based on locally
monitored discharge pressure or flow
rate.

SPECIFICATIONS

Base Unit	
Power Supply	120 VAC or 10-30 VDC w/Battery backup
Packaging	DIN rail mount, 5.4" x 7.5" x 2.25"
Communications Port	OI port, RS232 Telemetry Port, 10/100 Ethernet port (optional), 802-11 b/g wireless Ethernet (optional), Ethernet and serial ports support Modbus and USFilter Open, 32 channel auto-dialer (optional)
Discrete Inputs	16 channels, max 30 VDC, isolated
Pump/Alarm Outputs	5 channels, 10A @ 120 VAC relays
High/Low Level Alarm Outputs	2 channels, Open collector, 100 mA @ 5-30 VDC
Analog Input	1 channel, 4-20 mA or 0-10 VDC
Resolution	16 bits
Calibration	Software
Isolation	1 KV
Excitation Voltage	24 VDC or 6.2 VDC, isolated
Analog Output	1 channel, 0-5 VDC
Certifications	UL, FCC, CE

Operator Interface	
Packaging	Door mounted, 8.5" x 7.5" x 1.5"
Power	Supplied through communications cable from Base Unit
Level, Stage, Alarm Setpoint Display	LED columns, 40 segment, ultra bright
LCD	2 x 16 character, backlight, 4 key keypad
Communications Port	RS232 w/power
Environmental Rating	NEMA 4

Part Number	Description	Availability
ILK-LC150001-01	LC150 Pump Controller, Base Unit, 16 DI, 5 relay outputs, 2 open collector outputs, 1AI, 1 AO, RS232 telemetry port	Q3 2005
ILK-LC150002-01	LC150 Pump Controller, Base Unit, 16 DI, 5 relay outputs, 2 open collector outputs, 1AI, 1 AO, 10/100 Ethernet port	Q1 2006
ILK-LC150003-01	LC150 Pump Controller, Base Unit, 16 DI, 5 relay outputs, 2 open collector outputs, 1AI, 1 AO, 802.11b/g wireless Ethernet port	Q1 2006
ILK-LC150004-01	LC150 Pump Controller, Base Unit, 16 DI, 5 relay outputs, 2 open collector outputs, 1AI, 1 AO, 32 channel Auto-dialer, voice annunciated alarms, touch tone acknowledge	Q1 2006
ILK-LC150020-01	LC150 Operator Interface	Q3 2005



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NEMA is a registered trademark of National Electrical Manufacturers Association.

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