

LiquaVision® Features, Level Sensors & Complete Systems



Technical Information

Sensor Input: Isolated input accepts any type of 4-20 mA process signal. Loop power available up to 24VDC for 2 wire device

Input Power: 120VAC/500 mA; 24VDC unregulated/450 mA; 220VAC/300 mA

Security Levels: 3 levels of access protect data changes with DIP switch on back

Control Circuits: Four Form C relays, 10.0 amp 125VAC (noninductive). For more detail see Controller Operation inside or LiquaVision® Control Notes on back page.

Programmed Memory: EEPROM - Loss of power will not affect existing programmed data.

Mounting Format: Flush mounted anodized steel enclosure with eight (8) 10/32 studs and sealing gasket; NEMA 4 graphic front panel; steel back pan housing.

Overall Dimensions: Tall: 16.75" (425 mm), Wide: 10.25" (250mm), Deep 2.25" (57mm), Weight: 10 lbs.

Level Sensor Input

Input is an isolated 4-20 mA. It is also loop powered up to 24VDC for two wire sensors. It accepts any type of 4-20 mA process sensor allowing you to use a wide variety of sensors. Provides tremendous design flexibility on your application. Some of the more common types of input sensors are pressure transducers, ultrasonic, submersible transducers, capacitance probes and bubbler systems measuring back pressure. Existing bubblers systems can be upgraded to LiquaVision® by connecting the back pressure line from the bubbler stand pipe to a pressure transducer, available from DistaView®, converting pressure to a 4-20 mA signal.

ISOLATED Sensor Input Terminal	
4.	4-20 mA (-)
3.	4-20 mA (+)
2.	Ground
1.	+ 24VDC Output

Complete Control Systems

A variety of complete turnkey systems are available to control your application. The system includes: a LiquaVision® controller; a NEMA 4 or 12 enclosure, with or without a protective window door; and either a transducer or bubbler to send the level information to LiquaVision®.

Transducer System: Flush-mounted LiquaVision® in the door of a NEMA 4 or 12 enclosure, with or without a protective window door; din rail mounted terminal strip, and back plate inside the enclosure. Your choice of pressure transducer with NPT fittings or submersible on a cable. See specification key to order.

Enclosed Bubbler System: This system uses the bubbler principle to sense level without using plant air. The air supply is a low pressure, low flow diaphragm pump in the enclosure which creates backpressure on a 4-20mA sensor inside the enclosure. A bubbler is an excellent choice when slurry, caustic or high temperature materials are being controlled.

No Foolin' Around Bubbler: This system uses plant air but doesn't require any adjustments to the air supply or flow. An excellent upgrade to existing photohelic gauge bubblers.

DistaView®
DistaView Corp.
(800) 795-9970

Controller Operation

MU Make-Up

A differential Form C circuit maintains level within the upper and lower limits of the range. The make up circuit is activated when the level reaches the lowest point of the range and deactivated at the high point. Discrete Form C circuits control each alarm point.

SU Sump

A differential Form C circuit maintains level within the upper and lower limits of the range. The sump circuit is activated when the level reaches the highest point of the range and deactivated at the lowest point of the range. Discrete Form C circuits control each alarm point.

4P Four Point

Four discrete Form C circuits are activated when the level passes each set point. Custom text on the controller face.

4M Four Point Makeup

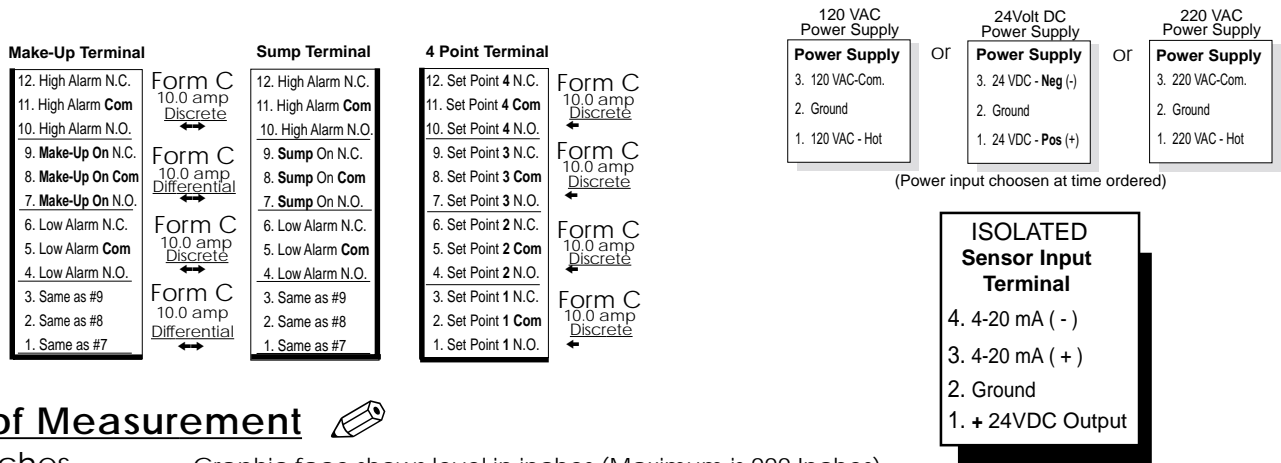
Four discrete Form C circuits are activated when the level passes each set point. Standard text on the controller face is High Alarm, Makeup Off, Makeup On, Low Alarm

4S Four Point Sump

Four discrete Form C circuits are activated when the level passes each set point. Standard text on the controller face is High Alarm, Sump On, Sump Off, Low Alarm.

SP Special Order

Custom operations can be programmed. Describe your specific control needs on back.



Units of Measurement

- 01** Inches Graphic face shows level in inches (Maximum is 999 Inches)
- 02** Centimeters Graphic face shows level in centimeters (Maximum is 999 Centimeters)
- 05** Feet Graphic face shows level in feet (Maximum is 999 Feet)
- 06** Special Order Graphic face shows level in measurements you require

Language

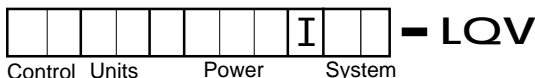
- E** English Manual, back label, side tags & graphic face printed in English
- S** Spanish Manual, back label & side tags in Spanish; graphic face in English

Power Supply Voltage


- 024** 24 Volt DC 750 mA unregulated or unregulated
- 120** 120 Volt AC 900 mA
- 220** 220 Volt AC 600 mA


Complete System Assembled

- AT** Transducer System: All of the selected components are assembled in the specified enclosure. The system comes with all the input and output terminals wired to a DIN mounted terminal strip. LiquaVision® is already mounted in the door or swing out panel. You bring power and sensor wiring through the knock out style of your choice.
- AB** Bubbler System: This system comes assembled with a 1/4" NPT female fitting for the bubbler stand pipe connection. Same assembly as the AT Transducer System above.
- NF** This system uses plant air but doesn't require any adjustments to the air supply or flow. An excellent upgrade to existing photohelic gauge bubblers.
- XX** No Assembly Required: All components and enclosure with cutting template.



Application Notes for Quotes & Orders - More details, less confusion.

 **Contact Name:** _____ **Company:** _____
 Phone: () _____ -- _____ ext. _____ • Fax: () _____ -- _____
 Department _____ Rep Name _____ Date ____/____/____

 **Material Being Measured:** What is it? _____
 (Sensor diaphragm is 316 stainless steel. Other diaphragm types are special order.)

- Normal Operating Temperature: _____ °F °C
- Max. Temperature: _____ °F °C For how long? _____
- Specific Gravity of Material: _____
- High Viscosity or Particulates that may clog 3/8" orifice? YES (see note if YES)


NOTE: The Endress & Hauser PMC 131 and PMC 41 have 3/8" diameter orifices to sense pressure. If you are in contact with high viscosity liquids, slurry and/or sludge, you may want to consider a non-clogging flush diaphragm with a straight thread connection. Call for details.

 **Site Installation Notes:**

- LiquaVision® enclosure is located - Outdoor / Indoor
- Pressure Sensor will be located - Outdoor / Indoor
- Distance pressure sensor is from LiquaVision® controller - approx. feet _____ .
- Depth of liquid above the sensor or length of submersible cable is _____ inches.
- Tank is pressurized? YES - up to _____ psi. NO
- Tank is under vacuum? YES - up to _____ inches Hg. NO
- Does the controller location have a great deal of dust or caustic vapors in the air?
 Dusty - What is it? _____ Vapor - What is it? _____
- Standard E&H transducer thread size is 1/2" NPT male. Is this acceptable? YES NO
 If not, what thread size is required? _____

 **LiquaVision Controller Notes:**

- Are the devices on each circuit under 10 amps each? NO YES Amps _____
 NOTE: On all inductive loads you should install surge suppressors.
- Describe the level control you require for this installation - ✓check one.
 - Make-Up [MU]** Differential Form C circuit maintains level within the upper and lower limits of the range. Circuit is activated when the level reaches the lowest point of the range and deactivated at the high point. Discrete Form C circuits control each alarm point.
 - Sump [SU]** Differential Form C circuit maintains level within the upper and lower limits of the range. Circuit is activated when the level reaches the highest point of the range and deactivated at the lowest point. Discrete Form C circuits control each alarm point.
 - Four Point [4P]** Four discrete Form C circuits are activated when the level passes each set point.
 - Two Point [2P]** Two discrete Form C circuits are activated when the level passes each set point. (Our 2Point® Controller may accommodate your needs for this application)
 - Dual Make-Up [DM]** Two differential Form C circuits are activated at the low point of each range. (We would recommending using DistaView's TwoView Level Controller)
 - Dual Sump [DS]** Two differential Form C circuits are activated at the high point of each range. (We would recommending using DistaView's TwoView Level Controller)
 - Special Order [SP]** Custom operations can be programmed. Describe your specific control needs:

 **Comments & Notes:** _____

