



Precision Digital Presents

Tank Farm Display & Control Best Practices

Webinar Presenter



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Agenda, Objectives, & Takeaways



Understand the common challenges in tank level monitoring



Learn key considerations for picking the right tank side indicator or controller



Review various remote display solutions and features



Put it all together with real world applications



Common Challenges

Climbing up tanks

- The most serious issue in tank level monitoring is that climbing tanks is dangerous
- It is also time consuming and not much fun in the cold, heat, rain or snow



Built-in transmitter displays



- Even if the transmitter does have a display on it, it is still on top of the tank and impossible to read without climbing the tank.

The better solution – a remote display

- With a properly located remote display, efficiency and safety are never compromised
- Precision Digital's level indicators and controllers provide instant and convenient access to your important processes





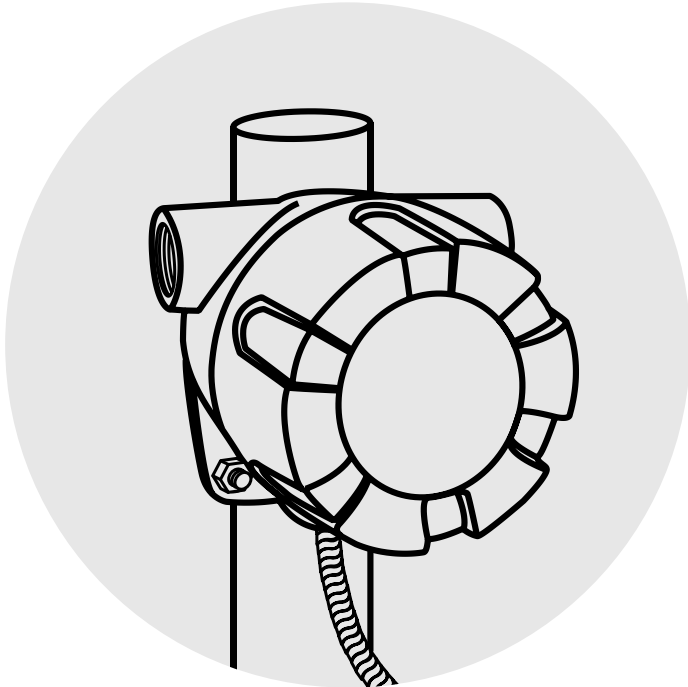
Picking the Right Indicator

1. It must display the right information

- Consider what is most useful to operators such as displaying 0-100%, feet & inches readings, metric readings, volume, height or large digits.
- Then choose a display accordingly
 - Dual-line display
 - Feet & inches display
 - Large display
 - Number of digits



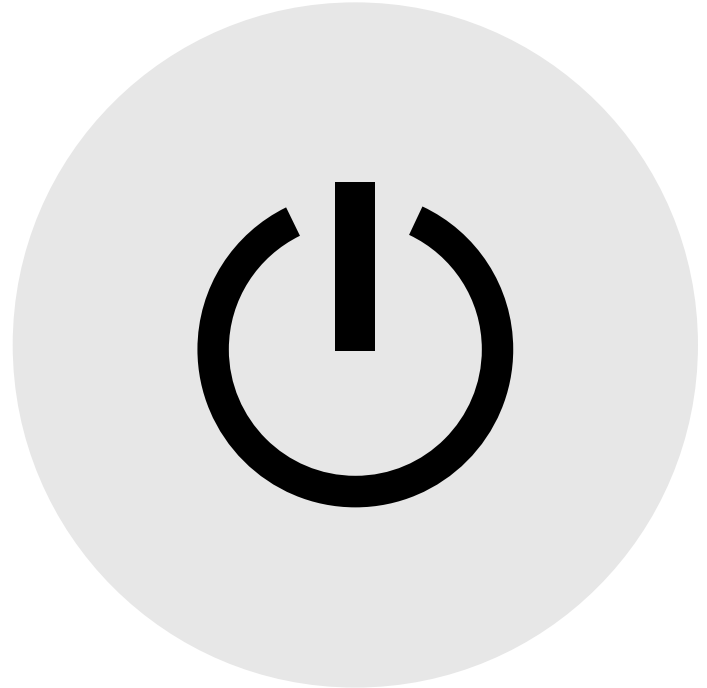
2. Plan your mounting method



- A useful level indicator must be located somewhere accessible to the operator
- It should also be easy to install
- Level Indicators are available for:
 - Panel mounting
 - Field mounting
 - Wall or pipe mounting
 - Hazardous locations

3. Look for convenient power

- Tanks or silos are often isolated
- Running power to these locations can be costly and time consuming
- Consider what power source your remote level display will use based on what power may already be available
- Level indicators are available with:
 - 4-20 mA loop power
 - 85-265 VAC or VDC power
 - 9-36 VDC or VAC power



4. Consider it more than just a display

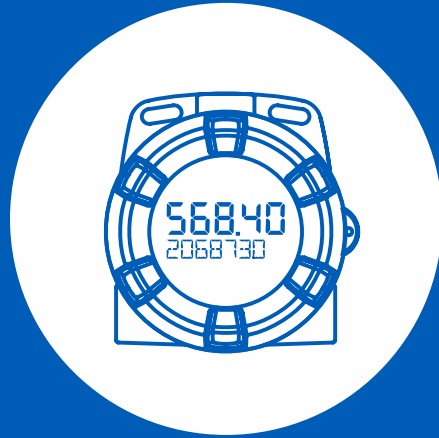


- Consider what other features your remote display has and how they can enhance your application
- Alarm monitoring can be done with relays or open collector outputs with hi/lo alarming
- Pump control can be done with meters featuring pump alternation control
- Multivariable Modbus level displays can indicate interface level and temperature

Questions?

- Please enter your questions in the 'Questions' chat window.





Display & Control Solutions

Tank level display & control solutions



Feet & inches level displays

- Unique displays, read & understood clearly in feet, inches, and 8th or 16th of an inch
- Most feature a tank height bargraph



Multi-pump controllers

- Great for sump pump applications
- Provide clear level indication, pump alternation control, and can power the transmitter



Loop-powered level meters

- Great for level applications where no other power is available



Multivariable transmitter displays

- Display level, temperature, and interface level
- Monitor multiple tanks



Feet & Inches level displays



PD6801 & PD6701

- Work with any 4-20 mA transmitter
- Tank height bargraph
- Loop-powered
- Open collector output for alarms



PD6830X & PD6730X

- Great for multivariable level transmitters
- Display level, temp, interface & more
- Monitor multiple tanks
- Tank height bargraph
- Two open collector outputs for alarms



PD8-6001 & PD6001

- Work with any 4-20 mA transmitter
- Bright LED displays, great for outdoors
- Provide power to the transmitter
- 2 or 4 form C internal relays



PD8-6081, PD6081 & PD6089

- Great for multivariable level transmitters
- Display level and volume
- Monitor multiple tanks
- Bright LED displays, great for outdoors
- Provide power to the transmitter
- 2 or 4 form C internal relays



Multi-pump controllers



PD8-765 & PD765

- Work with any 4-20 mA transmitter
- Up to 2 pump alternation control
- Bright LED displays, great for outdoors
- Huge display, can be seen from far away
- Provide power to the transmitter



PD8-6000 & PD6000

- Work with any 4-20 mA transmitter
- Up to 8 pump alternation control
- Bright LED displays, great for outdoors
- Dual-line display
- Provide power to the transmitter



PD8-6001 & PD6001

- Work with any 4-20 mA transmitter
- Feet & inches display
- Up to 8 pump alternation control
- Bright LED displays, great for outdoors
- Provide power to the transmitter



PD8-6081, PD6081 & PD6089

- Great for multivariable level transmitters
- Feet & inches display
- Up to 8 pump alternation control
- Monitor multiple tanks
- Bright LED displays, great for outdoors
- Provide power to the transmitter



Loop-powered level meters



PD6801 & PD6701

- Work with any 4-20 mA transmitter
- Feet & inches display
- Tank height bargraph
- Loop-powered
- Open collector output for alarms

PD6800 & PD6700

- Work with any 4-20 mA transmitter
- Tank height bargraph option
- Loop-powered
- Open collector output option for alarms



Multivariable Transmitter Displays



PD6830X & PD6730X

- Display level, temp, interface & more
- Monitor multiple tanks
- Tank height bargraph
- Feet & inches display
- Two open collector output for alarms



PD8-6081, PD6081 & PD6089

- Display level and volume
- Monitor multiple tanks
- Bright LED displays, great for outdoors
- Provide power to the transmitter
- 2 or 4 form C internal relays

Other important level features available



32-point linearization

- Available on most meters
- Great for linearizing level of elliptical tanks



Round horizontal tank feature

- Available on ProtEX-MAX & PROVU
- Enter height and diameter of tank with flat ends and automatically calculate volume



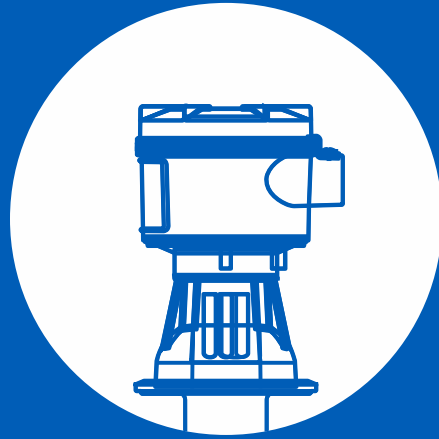
Pump alternation control

- Available on most meters
- Control up to 8 pumps



Dual-scale feature

- Available on select meters
- Display level in two scales (i.e. volume & percent)
- Both independently scaled and based on 4-20 mA signal



Real World Applications

PD6801 - Oil Refinery Level Indication in Feet & Inches

Application

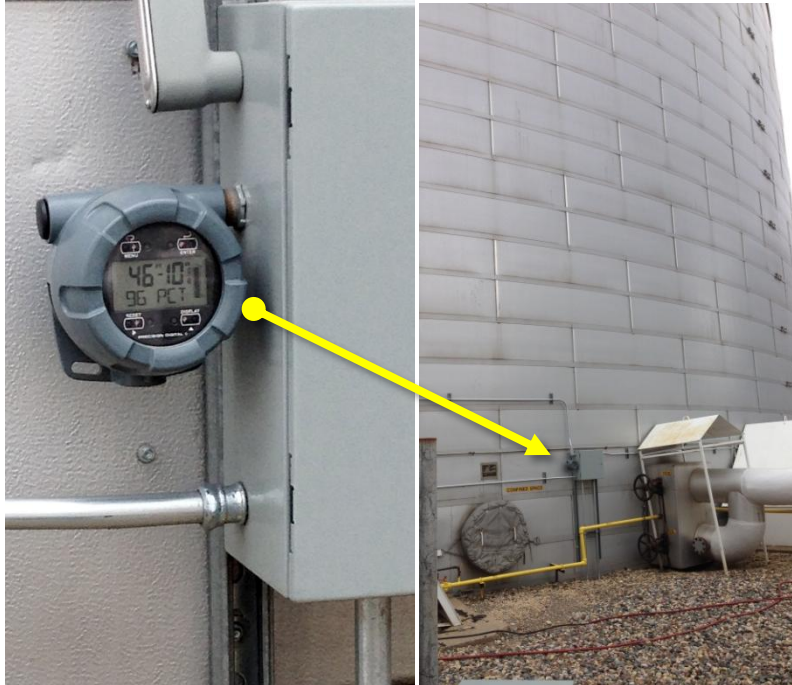
- Tank farm in need of remote level displays for oil tanks
- No power readily available
- The installation is outdoors and in a hazardous area

Solution

- Two PD6801s
 - Loop-powered
 - F&I display with tank height bargraph
 - Explosion-proof enclosure
 - Agency approvals



PD6801 - Oil Refinery Level Indication in Feet & Inches



Application

- Commercial asphalt storage tank
- No power readily available
- The installation is outdoors

Solution

- One PD6701
 - Loop-powered
 - F&I display with tank height bargraph
 - Field mountable
 - NEMA 4X enclosure

Summary



Identified the common challenges in tank level monitoring



Learned key considerations for picking the right remote display



Reviewed various remote display solutions and features



Put it all together with real world applications

Q & A

- Please enter your questions in the 'Questions' window
- Apologies if we do not get to your question today. We'll contact you offline with a response as soon as possible.



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