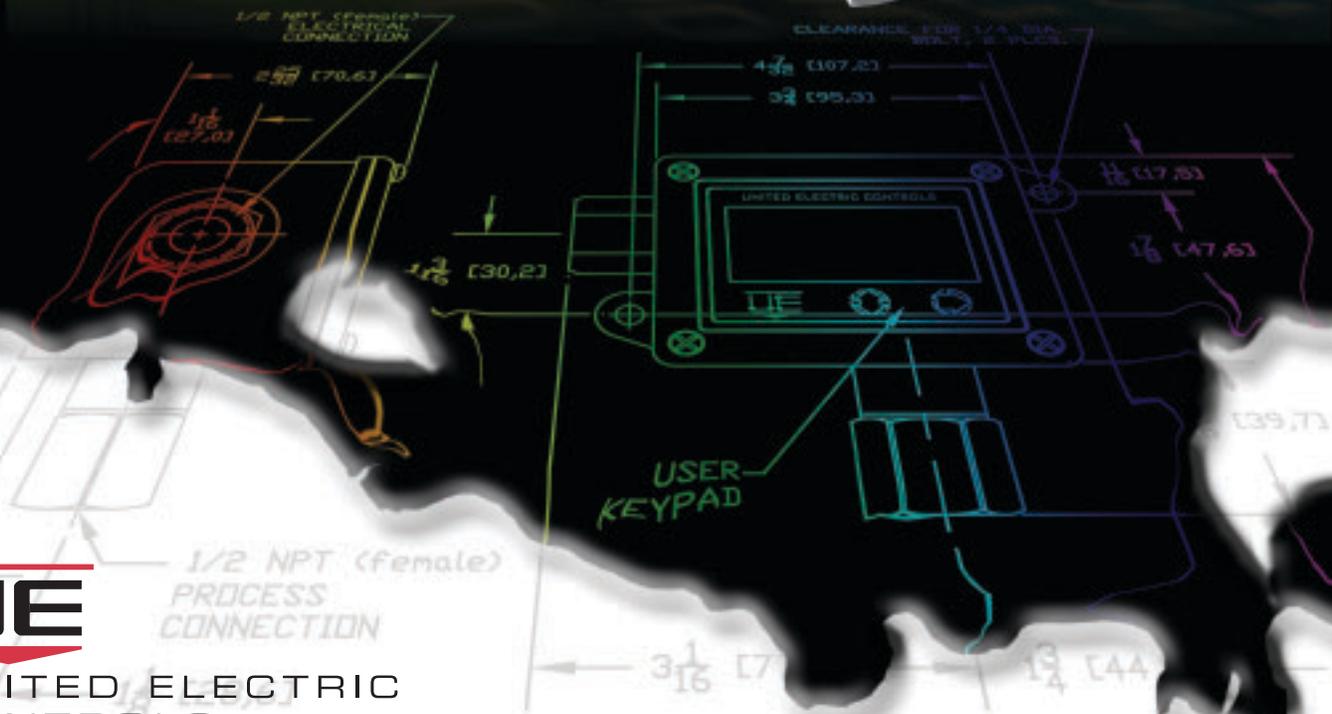


# ONE

SERIES  
2-WIRE



UNITED ELECTRIC CONTROLS

# *The Revolution Continues*

## *In the Past, there were two choices for Alarm or Shutdown:*

- An electro-mechanical switch (low cost; simple operation), or
- a transmitter (higher cost; but with “live zero” output and perceived higher reliability).



## *Then there was a Third Choice:*

The One Series, a family of rugged electronic switches with the combination of low cost, reliability and self-diagnostics, filled the gap – a cost-effective answer for many applications which required the combination of “switch” function and “health” information.



*Now, the One Series 2-Wire is the next **Evolutionary** stage in the One Series **Revolution**.*

**The One Series 2-Wire Electronic Pressure Switch is a programmable electronic switch that operates on just two wires.**

## *Still using process transmitters for alarm & shutdown applications?*

The One Series 2-Wire's versatility makes it the ideal solution for alarm and shutdown applications previously accomplished by transmitters. Typically, transmitters have been used in switching applications when there is a need to know that the device is working – a “live zero”. **However, transmitters have two weaknesses - they are typically slow-reacting to process changes, and they are the expensive choice.**

## *One Series 2-Wire is the cost-effective answer:*

- Peace-of-Mind: The IAW® diagnostics provide a “live zero” analogous to the transmitter's 4-20 mA signal.
- Fast Response: One Series 2-Wire typically reacts within 50 mS to process changes.
- Cost-Effective: Using the One Series 2-Wire instead of a transmitter could save \$1000 a channel.
  - One Series 2-Wire itself is only 1/3 the cost of a process transmitter.
  - Unlike the transmitter, the One Series 2-Wire can use less expensive discrete input channels.
  - The One Series 2-Wire can be directly pipe-mounted in many cases, eliminating mounting brackets or pipe stands.
  - Wiring and installation costs are equal for the two devices.
- Plus, there are many features a standard process transmitter doesn't provide: digital display, self-diagnostics, plugged port detection and minimum/maximum value “data logging”.

## *Need to upgrade your Mechanical Switches?*

Once again, the One Series can be your answer. The One Series product line can directly switch a wide variety of outputs: up to 200 VDC, up to 280 VAC, and from milliAmp loads to 13A. And now, by utilizing low power from the host, One Series 2-Wire can provide digital switching on a single pair of wires. This allows the user to retrofit existing mechanical switches with no wiring changes (as long as the circuit is low power DC - such as a PLC or DCS input). Just drop it in, and hook up the wires.

## ***Features***

## ***Benefits***

### ***Power***

2 wire connection to a PLC, DCS or DC load

No separate power supply needed utilizes power from the residual current of a PLC/DCS input circuit. Save on installation costs

All solid state, no moving parts

Accurate, reliable, repeatable, rugged and extended service life

Intrinsically Safe

Suitable for Class I, Division 1 and Zone 0 applications

### ***Programmable Settings***

Large, easy-to-read digital display

Read settings, make adjustments, determine status in the field at the point of measurement

100% adjustable set point, deadband and switch mode

Compensate for process variations without removing the instrument from the process, no rewiring required

Tamper-resistant 2-button keypad

Easy field programming and parameter viewing with a key sequence that safely discourages tampering

Plugged port detection

Indicates conditions consistent with a clogged sensor and reports this locally and remotely

Process extremes memory

Captures and stores the minimum and maximum values sensed, aids in troubleshooting

Offset and span adjustments

Ability to customize the factory calibration to match other instruments measuring the same process

Latching switched output

Requires manual reset after the set point is reached

Sensor delay

Provides a means of filtering out data spikes

Non-volatile memory

Resumes normal operation and restores all settings and values after power interruptions

### ***Output***

SPST solid-state switch

Handles 12 - 30 VDC at 40 mA. Intended for the discrete input to a PLC, DCS or low DC load. Indicates alarm and shutdown conditions

I Am Working (IAW<sup>®</sup>) self-diagnostics

Reports health status locally and remotely

### ***Enclosure and Materials***

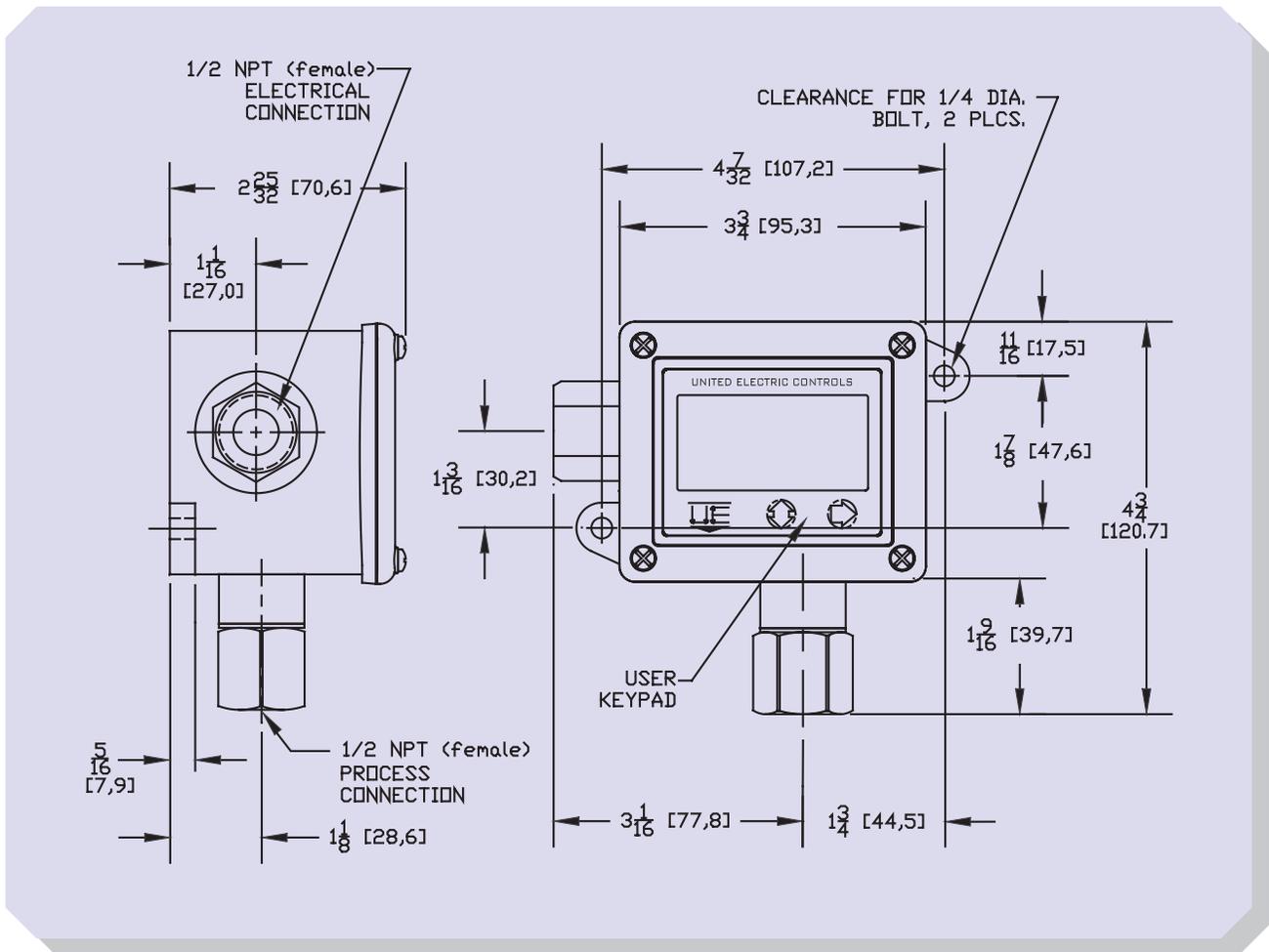
Enclosure Type 4X, epoxy-coated aluminum

Suitable for Class I, Division 1 and Zone 0 applications

All 316 stainless steel welded sensor

Wetted parts are all stainless for varied media compatibility

# Dimensional Drawings



MODEL	OPERATING RANGE		
	LOW	HIGH	
	psi/bar	psi	bar
10	0	5	0,3
11	0	15	1,0
12	0	30	2,1
13	0	50	3,4
14	0	100	6,9
15	0	300	20,7
16	0	500	34,5
17	0	1000	68,9
18	0	3000	206,8
19	0	5000	344,7



UNITED ELECTRIC  
CONTROLS

180 Dexter Avenue  
P.O. Box 9143  
Watertown, MA 02471-9143  
Phone: 617 926-1000  
Fax: 617 926-4354

<http://www.ueonline.com>