



SpringField Controls

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SpringField Controls , ET549, 2-Wire Electronic Pressure & Temperature Switches

**E F.S. Ranges 5 to 4500 PSI, -50 to 450°F, 100% F.S.
Deadband & Set Point Adjustment**



DESCRIPTION

The ET549 Series 2-Wire electronic switch is both an evolutionary and a revolutionary solution to alarm and shutdown applications. It is the only electronic switch to operate on a single pair of wires, similar to a traditional mechanical switch. It combines the simplicity and low cost features of a switch and the reliability features of a transmitter, at less than half the price of the transmitter. In addition, many features have been added that provide more control and information than any other switch!

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OPERATION

The ET549 Series 2-Wire derives its operating power from the discrete input to which it is connected. Unlike a transmitter, it will do this on a digital channel, not a more expensive analog channel. In most applications this will be the input of a Programmable Logic Controller (PLC), a Distributed Control System (DCS) or an interposing relay. When operating in an "OPEN" condition, One Series 2-Wire draws less than 750 uA of current, which the host device interprets as an open condition. When operating in a "CLOSED" state the switch will pass enough current to be interpreted by the host as a closed condition. Whether its internal switch is open or closed, the One Series 2-Wire obtains a minute but sufficient amount of power to operate continuously - directly from the discrete input. No separate power wiring is required. The PLC/DCS input interprets the One Series 2-Wire connection as if it were mechanical contacts - **JUST LIKE A SWITCH!**

- **FEATURES**

The ET549 Series 2-Wire has a large, easy-to-read display, showing the process condition and the status of the switch. Set point, deadband and minimum/maximum process values can be easily accessed from the keypad while in operation. One Series 2-Wire also contains patented IAW[®] self-diagnostic software for assurance that it will switch when needed. With PLUGGED PORT detection enabled, it will watch for process conditions which are evidence of a plugged sensing port, and alert the user to potential problems, locally and remotely. Also, the switch output can be configured for manual reset, requiring the user to manually acknowledge the alarm. Field adjustments can be made to OFFSET and SPAN for calibrating to user instrument and system requirements. Transients and spurious impulses can be filtered.

ADVANCED FEATURES

- 2-Wire design (Patented)

The ET549 Series 2-Wire innovative design allows the unit to power itself and switch using the same two wires. The electronic switch's low power requirements allow the ET549 Series 2-Wire to operate using residual current from the PLC discrete input, totally undetected during an open switch condition.

- Easy wiring

The ET549 Series 2-Wire is a direct drop-in replacement for a switch that is attached to a PLC, using the same two wires. No other wiring is necessary. Power and switching signals are accommodated over the same (existing) wire pair. The terminal block wiring is effective for either new construction or field replacement.

- Intrinsically safe (with IS barrier, 24 VDC model only)

The ET549 Series 2-Wire is approved for use in intrinsically safe applications. Galvanically-isolated barrier, part no. 62169-29, is custom-designed for use with the One Series. The One Series is also compatible with standard 28 volt diode barriers supplied from most major manufacturers including MTL 7087+ and Pepperl+Fuchs Z787.

- IAW[®] (I Am Working) diagnostics

ET549 Series 2-Wire contains the patented IAW[®] self-diagnostics feature, giving the user peace-of-mind that the instrument is operating properly and will switch when required. Locally, a series of rotating arrows and display messages inform the operator of reliable operation. Remotely, the switch output can be configured to alert the operator to the IAW[®] status.

- Plugged Port detection (Patent pending Pressure Models only)

One Series 2-Wire display will alert the user locally and remotely, using its IAW[®] indications.

