

Model 4801

Remote Switch Control



**FLEXIBLE
INTELLIGENT
AUTOMATION**

For the Remote Control of Overhead Switches



New EnergyLine 4801 Remote Switch Control

The EnergyLine Model 4801 Remote Switch Control gives you a flexible, economical way to begin distribution system automation. Based on the sophisticated 5800 Series switch controls, the Model 4801 is a simpler control for local or remote switch operation. The control is shipped ready for pole-mounted installation.

This device retains the look and feel of the 5800 Series, but does not include analog inputs or an LCD. It can later be field upgraded to a fully featured 5801 Automatic Switch Control. The 4801 control works with distribution-class switchgear from a variety of manufacturers.

With the fault sensing option installed, the Model 4801 can also isolate faults without the need of line post current sensors. Sectionalizing is based on voltage loss (with or without prior fault), and fault detection via external fault indicators is an option.

By offering a field upgrade to the full functionality of the 5801 Automatic Switch Control, the Model 4801 gives utilities remote access today with a simple path to advanced automation in the future.

Flexible Communications

Utility personnel can operate the switch remotely via SCADA or locally from the faceplate.

The switch control has three communications ports: two SCADA ports for remote operation, and a DB9 faceplate connector for local monitoring and configuration. The switch control can service SCADA requests even while it is connected locally to a computer. You can also change setpoint values remotely with the WinMon[®] Graphic User Interface, EnergyLine's distribution device management system.

EnergyLine supports the Model 4801 with a variety of communications hardware options:

- ◆ Schlumberger's UtiliNet[®]
- ◆ Schlumberger's CellNet[®]
- ◆ Microwave Data System
- ◆ Modems (Bell 202, CDPD, or Hayes[™]-compatible)
- ◆ Cellular transceivers
- ◆ Fiber optic transceivers
- ◆ Motorola[®] Darcom[™]
- ◆ Other (contact EnergyLine)

Radios and modems may be factory-mounted inside the switch control case, saving on installation costs.

DNP 3.0 is the standard protocol for the Model 4801 control. Like all EnergyLine controls, you can easily upgrade the 4801 control's software in the field, using a laptop computer and the IntelliLINK[™] Setup Software, EnergyLine's Windows[®] based program for local interface with the control.

Power Supply and Battery System

EnergyLine uses a single power supply for the entire switch installation, thereby reducing failure rates inherent in systems with multiple power supplies and multiple batteries. This highly efficient switching power supply delivers both 12 and 24 VDC to the entire system, while continuously applying a float charge to the batteries for maximum battery life.

The switch control automatically checks the battery condition on a periodic basis. Detailed information on the battery and power supply condition is available through the communications ports.

Compatible with a Wide Range of Switches

The 4801 Remote Switch Control is compatible with the following switches:

- ◆ S&C Scada-Mate[®]
- ◆ S&C Automated Omni-Rupter[®]
- ◆ Cooper NOVA[™]
- ◆ Joslyn VBM
- ◆ Others (contact EnergyLine)

Field Proven Design

EnergyLine's field proven microprocessor based technology, and electronics manufactured in an ISO 9002 certified facility deliver reliable performance. Thousands of EnergyLine controls are being used by hundreds of utilities.

Specifications



4801 Control

Operating Electrical Characteristics

- ♦ Nominal operating voltage: 120 VAC or 240 VAC
- ♦ Operating voltage range: 100 to 140 VAC or 200 to 280 VAC
- ♦ Power dissipation: 10 to 120 Watts, depending on options installed

Electrical Isolation/Protection

- ♦ Insulation withstand: 2.5 kV RMS
- ♦ Surge withstand: ANSI C37.90.1
- ♦ Power line surge: ANSI C62.41
- ♦ ESD withstand: IEC 1000-4-2
- ♦ Electromagnetic emissions (conducted and radiated): FCC Part 15, Class B
- ♦ Electromagnetic compatibility: EN 61000-4-3

Fuses

- ♦ AC fuses: FNM-10, GMD-2A
- ♦ Battery fuse: ATC-10

Operating Environmental Characteristics

- ♦ Temperature: -40°C to +70°C
- ♦ Humidity: 0-95% (non-condensing)

Battery

- ♦ Sealed lead acid
- ♦ Expected battery carryover: 16 hours¹

Enclosure

- ♦ Pole-mount bracket
- ♦ Corrosion resistant aluminum
- ♦ 24" x 18" x 9.5"
- ♦ Typical weight: 58 lbs. (including battery)

Memory

- ♦ Non-volatile, battery-backed RAM
- ♦ 20 year expected life in powered state
- ♦ 10 year expected life in unpowered state
- ♦ Does not require firmware change to upgrade software

Calendar

- ♦ Perpetual calendar – crystal controlled, automatically adjusted for leap year
- ♦ User-enabled automatic daylight savings time changeover

Communications Ports

- ♦ Three RS232 connectors, 300 to 9600 baud

Communications Hardware and Protocols

- ♦ Schlumberger's UtiliNet[®] or CellNet[®]; Microwave Data Systems; modems; cellular transceivers; fiber optic transceivers; Motorola[®] DarcCom[™]; others (contact EnergyLine)
- ♦ DNP 3.0 (standard); others (contact EnergyLine)

Quality

- ♦ Electronics manufactured in an ISO 9002-certified facility

¹ Battery carryover varies with battery type, age, ambient temperature, communications option installed, and number of switch operations.

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What is IntelliLINK™?

IntelliLINK Setup Software is EnergyLine's Windows[®] based program for interfacing locally with our family of controls. You can view real-time data, manage setpoints, gather troubleshooting information, and download historical data for reports – all from screens that are easy to use and understand.