Specifications

Conditions of Sale

STANDARD: The seller's standard conditions of sale set forth in Price Sheet 150 apply, except as modified by the "Special Warranty Provisions" section on page 2 and the "Warranty Qualifications" section on page 3.

SPECIAL TO THIS PRODUCT:

INCLUSIONS: 6801 Automatic Switch Controls combine sophisticated automatic control schemes with a remote terminal unit (RTU) functionality, data logging, and advanced communication capabilities in a single package. Models are available for outdoor pole and pad mounting. The 6801 switch control manages distribution switches and can automatically sectionalize a feeder based on such factors as overcurrent, loss of voltage, and phase unbalance. One switch control can automate one switch, and multiple controls can be programmed to communicate with each other using the optional IntelliTeam® SG Automatic Restoration System.

The IntelliTeam SG Automatic Restoration System allows multiple switch controls to work together in teams using peer-to-peer communication and quickly transfer load to minimize the number of customers affected by a fault or outage. The system uses distributed intelligence; no central processing or SCADA is required (though fully supported). Different types of switches, reclosers, and controls can be included in the same team.

Utility personnel can communicate with the 6801 switch control to identify and isolate faults and restore service—with or without a SCADA master station. Distributed Network Protocol (DNP) 3.0 is the supported protocol, and two S&C-approved radios can be installed inside the enclosure—one for an automation network and one as a SCADA getaway radio. An approved radio or a fiber-optic modem are the recommended communication devices for use with the IntelliTeam SG Automatic Restoration System.

The 6801 switch control provides true RMS voltage and current readings. Over the operating temperature range of -40°F (-40°C) to +158°F (+70°C), current readings are accurate to ±0.5% full scale, with a resolu-tion of 1 ampere, RMS; voltage readings are accurate to ±0.5% full scale, with a resolution of 0.1 Vac. Phase-angle readings are accurate to ±1° at 5% of full-scale current, with a resolution of ⅛°. The switch controls have a current sensor input range of 0 to 800 amperes, RMS.

The 6801 switch control is configured specifically for fault detection. Over the overcurrent fault-detection range of 0 to 4000 amperes, RMS, overcurrent readings are accurate to ±0.5% full scale, with a resolution of 1 ampere, RMS.

The 6801 switch control has extensive data-logging capabilities. Voltage, current, and kvars are logged every 15 minutes for one month; daily maximum and minimum voltage, current, kvars, and power factor are logged for one year. Overcurrent, loss-of-voltage, and fault magnitude and duration data, as well as equipment diagnostics, are also recorded. A crystal-controlled, temperature-compensated clock (GPS is optional) provides accurate time-stamping of the data. The information collected at the switch location is invaluable for analyzing problems on the circuit, troubleshooting, optimizing performance of the installation, and planning for future requirements. With IntelliTeam SG system-equipped controls, data logging is especially useful for determining the sequence of events during a team reconfiguration and for comparing the information with substation data.

A PC using the Windows® 10 or later operating system can be connected via a DB9, or USB faceplate connector and IntelliLink® Setup Software used to view real-time data, manage setpoints, troubleshoot, and download historical data for reports. Setpoints and data can also be accessed remotely using the IntelliLink Setup Software.

The 6801 switch control uses a single power supply and battery, eliminating the problems inherent in controls with multiple power supplies and batteries. This highly efficient power supply delivers 12-Vdc to the entire system and supplies 24-Vdc temperature-compensated battery charging and float charging to maximize battery life. The battery condition is periodically checked under varying loads. Detailed information on battery and power-supply status is available at the faceplate liquid-

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crystal display and is accessible at remote locations in communication-device-equipped controls. battery and power-supply status is available at the faceplate liquid-crystal display and is accessible at remote locations in communication-device-equipped controls.

6801 switch controls for use with S&C switching devices can accept control power from a 100- to 135-Vac or 200- to 270-Vac source or from S&C sensor outputs. If both ac and sensor sources are available, the control automatically uses control power and switches to sensor power if control power is lost.

Automatic Sectionalizing

The 6801 switch control has automatic sectionalizing capabilities that can improve circuit reliability when coordinated with source-side reclosing devices. The switch control can help reduce loss of service and locate faulted line sections. A switch control equipped with IntelliTeam SG system automatic circuit reconfiguration can provide full restoration of unaffected customer loads, if circuit capacity will allow it.

Shots to Lockout

The selectable **Shots-to-Lockout** feature prevents the source-side protective device from reclosing into a fault multiple times.

Loss of Phase

The 6801 switch control protects three-phase loads from single-phasing by automatically opening the switch. The control can be programmed to automatically reclose the switch when three-phase voltage returns.

Hot Line Tag

A Hot Line Tag can be set with either a SCADA command or with a configurable button on the faceplate. It can only be cleared by the command type used to set it.

Switching Devices Supported

The 6801 switch control supports the following switching devices:

- Scada-Mate® SD Switching System
- Scada-Mate® Switching System
- Scada-Mate CX™ Switching System (discontinued)
- Other specific switching devices listed in Table 2 on page 4

For applicability to other switching devices, refer to your nearest S&C Sales Office.

EXCLUSIONS: The 6801 Automatic Switch Control does not include a communication device, antenna, or antenna connections.

For non-IntelliTeam SG system applications, S&C may be able to furnish and install in the 6801 Automatic Switch Control or make provision for a customer-specified communication device not listed in Table 6 on pages 6 through 8. S&C will need to evaluate the physical and electrical requirements of the communication device and its performance characteristics and conduct qualification testing to verify its suitability for the desired application. Refer to the nearest S&C Sales Office for scheduling information. S&C cannot furnish or install any communication device for which the supplier requires S&C to offer Tier I (i.e., "help desk") support.

OPTIONS: Refer to the Table 6 on pages 6 through 8 for options deviating from the "base" control.

SPECIAL WARRANTY PROVISIONS: The standard warranty contained in the seller's standard conditions of sale, as set forth in Price Sheet 150, applies to the 6801 Automatic Switch Control, except that the first paragraph of said warranty is replaced by the following:

(1) General: The seller warrants to the immediate purchaser or end user for a period of 5 years from the date of shipment that the equipment delivered will be of the kind and quality specified in the contract description and will be free of defects of workmanship and material. Should any failure to conform to this warranty appear under proper and normal use within 5 years after the date of shipment the seller agrees, upon prompt notification thereof and confirmation that the equipment has been stored, installed, operated, inspected, and maintained in accordance with recommendations of the seller and standard industry practice, to correct the nonconformity either by repairing any damaged or defective parts of the equipment or (at the seller's option) by shipment of necessary replacement parts.

The seller's warranty does not apply to any equipment that has been disassembled, repaired, or altered by anyone other than the seller. This limited warranty is granted only to the immediate purchaser or, if the equipment is purchased by a third party for installation in third-party equipment, the end user of the equipment. The seller's duty to perform

under any warranty may be delayed, at the seller's sole option, until the seller has been paid in full for all goods purchased by the immediate purchaser. No such delay shall extend the warranty period.

The seller further warrants to the immediate purchaser or end user that for a period of two years from the date of shipment the software will perform substantially in accordance with the then-current release of specifications if properly used in accordance with the procedures described in the seller's instructions. The seller's liability regarding any of the software is expressly limited to exercising its reasonable efforts in supplying or replacing any media found to be physically defective or in correcting defects in the software during the warranty period. The seller does not warrant the use of the software will be uninterrupted or error-free.

WARRANTY QUALIFICATIONS: Warranty of the 6801 Automatic Switch Control is contingent upon the installation, configuration, and use of the control or software in accordance with S&C's applicable instruction sheets. This warranty does not apply to major components not of S&C manufacture, such as batteries, communication devices, and remote terminal units. However, S&C will assign to the immediate purchaser or end user all manufacturers' warranties that apply to such major components.

END USER LICENSE AGREEMENT: The end user is granted a nontransferable, non-sublicensable, non-exclusive license to use the LinkStart Connection Management Software, IntelliLink Setup Software, IntelliTeam® Automatic Restoration System software, automatic sectionalizing software, and/or other software furnished with the 6801 Automatic Switch Control only upon acceptance of all the terms and conditions of the seller's end user license agreement set forth in Price Sheet 155.

How to Order

Complete the following steps to build a 6801 Automatic Switch Control catalog number. Included with the steps are fill-in boxes to help keep track of the various components of the final catalog number.

Note: Pay strict attention to the various footnotes, which identify constraints and considerations regarding the selection of the various options.

STEP 1. Obtain the switch control catalog number from Table 1 on page 4.

Catalog Number: | 6 | 8 | 0 | 1 |

STEP 2. Select a switching device from Table 2 on page 4.

Suffix: | | | |

STEP 3. Select the control software from Table 3 on page 4.

Suffix: | | | |

STEP 4. Select the mounting from Table 4 on page 5.

Suffix: | | | |

STEP 5. (Optional) Obtain the software catalog number from Table 5 on page 4.

Catalog Number: | | | | – | | | | | | – | | |

STEP 6. (Optional) Select options from Table 6 on page 6 and from Table 7 (options for gateway applications) on page 9.

Suffix(es): | | | | | | |

STEP 7. (Optional) Obtain the catalog numbers for any desired accessories from Table 8 on page 10.

Catalog Number: | | | | – | | | | | | – | | |

Example: The catalog number for a 6801 Automatic Switch Control to be used to operate and control one Scada-Mate Switch, with a pole-mounted padlockable corrosion-resistant aluminum enclosure, and a GPS module with a bottom mounted N-type 902-928-MHz 5-dB GPS antenna is:

| 6 | 8 | 0 | 1 | – | F | 0 | 1 | H | 9 | J | B | 1 | A | 4 | T |
| 2 | S | 2 |

6801 Automatic Switch Control

Table 1. 6801 Automatic Switch Control

Item①	Control Source	Number of Switching Devices Controlled	Catalog Number
6801 Automatic Switch Control	100 to 135 Vac, 50/60 Hz or 200 to 270 Vac, 50/60 Hz	One	6801

① Communication device, antenna, and antenna connections are not included. Switching device, control software, and mounting must be specified from Tables 2 and 3, and Table 4 on page 5.

Table 2. Switching Device—Must Be Specified

Switching Device	Suffix to Be Added to Switch Control Catalog Number
Scada-Mate SD Switching System Scada-Mate Switching System Scada-Mate CX Switching System (discontinued)	-F01
Mini-Rupter® Switch in Remote Supervisory PME Pad-Mounted Gear	-F02
Mini-Rupter Switch in Remote Supervisory PMH Pad-Mounted Gear	-F03
Alduti-Rupter® Switch with AS-1A or AS-10 Switch Operator	-F05
Cooper GWC Sectionalizer①	-F30
Cooper F Switch①	-F31

① Requires input sensing provided by three Lindsey current and voltage sensors, suffix "-K5," or one potential transformer and three 1000:1 current sensors, suffix "-K8." See Table 6 on page 6.

Table 3. Control Software—Must Be Specified

Control Software①	Applicable to Switching Device	Suffix to Be Added to Switch Control Catalog Number
6801	Scada-Mate SD Switching System, Scada-Mate Switching System, or Scada-Mate CX Switching System, with voltage sensing on one side of the switch	-H9
6801 Dual-Voltage	Scada-Mate SD Switching System, Scada-Mate Switching System, or Scada-Mate CX Switching System, with voltage sensing on one side of the switch	-H10
6801 Universal	Alduti-Rupter Switch with AS-1A or AS-10 Switch Operator Cooper GWC Sectionalizer Cooper F Switch	-H11
6801 Pad-Mount	Mini-Rupter Switch in Remote Supervisory PME Pad-Mounted Gear Mini-Rupter Switch in Remote Supervisory PMH Pad-Mounted Gear	-H14

① Includes Bronze access-level IntelliTeam SG system license. IntelliTeam® Designer configuration and license management software is required to configure the IntelliTeam SG Automatic Restoration System and is not included. A Gold access-level IntelliTeam SG system license is required to enable IntelliTeam® II Automatic Restoration System compatibility mode. Refer to S&C Specification Bulletin 1044-31.

Table 4. Mounting—Must Be Specified

Mounting	Suffix to Be Added to Switch Control Catalog Number
No enclosure	-JB0●
Pole mounting, in a padlockable corrosion-resistant aluminum enclosure; W 18- × H 24- × D 9½-inches (457 × 610 × 241 mm)	-JB1
Pole mounting, in a padlockable corrosion-resistant aluminum enclosure with cable protection box, box door hinged on bottom; W 18- × H 47- × D 9½-inches (457 × 1,194 × 241 mm)	-JB6

● Only available with suffixes "-H11" or "-H14."

Table 5. Optional Software

Software	Catalog Number
IntelliTeam® II Automatic Restoration System Software License. Use this license for IntelliNode™ Interface Modules operating in an IntelliTeam II system with IntelliRupter® PulseCloser® Fault Interrupters, IntelliNode Interface Modules, 5800 Series Automatic Switch Controls, 6800 Series Automatic Switch Controls, 6801M Automatic Switch Operators, and Universal Interface Modules. This license includes an IntelliTeam Designer slot at no charge that must be entered as a separate line item. The slot allows an easy upgrade to the IntelliTeam SG Automatic Restoration System at a later date. Requires an IntelliTeam II system-qualified communication device from Table 6 beginning on page 6	008-007106-02●
IntelliTeam® Designer slot. Included in above license	008-007006-03

● The 008-007106-02 license should not to be confused with IntelliTeam SG Automatic Restoration System operating in **IntelliTeam II** mode. An IntelliTeam SG system operating in **IntelliTeam II** mode requires an IntelliTeam SG system-qualified communication device.

Table 6. Options

Item	Suffix to Be Added to Switch Control Catalog Number
Wi-Fi module with antenna, for wireless setup (Not available outside the United States and Canada. Contact S&C for options in other countries.)	-A3
GPS module (includes top-mount GPS antenna)	-A4
Wi-Fi/GPS module with antennae (Wi-Fi and GPS), for wireless setup (Not available outside the United States and Canada. Contact S&C for options in other countries.)	-A5
Sensing inputs (sensors not included) — Three S&C Current/Voltage Sensors①	-K1
Sensing inputs (sensors not included) — Three Lindsey current/voltage sensors	-K5
Sensing inputs (sensors not included) — One potential transformer and three 1000:1 current transformers	-K8
Sensing inputs (sensors not included) — Three S&C Current Sensors and six S&C Voltage Sensors①	-K9
Indicator option — Reversed colors for OPEN/CLOSED indicating lamps (green = closed, red = open)	-L1
Foreign language labels, front panel and screens② — Spanish	-L51
Foreign language labels, front panel and screens② — Portuguese	-L52
Foreign language labels, front panel and screens② — French	-L53
Foreign language labels, front panel and screens② — Chinese	-L54
Foreign language labels, front panel and screens② — Arabic	-L55
Communication protocol — DNP 3.0	-P0
IntelliTeam SG, IntelliTeam II, and SCADA communication device and mounting (furnished by S&C, requires suffix "-R98") — Factory-installed and wired iS5 Comm. Inc. - iES6-Slim with 2-SFP 100 Mbps multi-mode LC transceiver 550 m, 850 nm, low voltage (9-36 Vdc)	-R287
IntelliTeam SG, IntelliTeam II, and SCADA communication device and mounting (furnished by S&C, requires suffix "-R98") — Factory-installed and wired iS5 Comm. Inc. - iES6-Slim with 2-SFP 100 Mbps multi-mode LC transceiver 2 KM, 1310 nm, low voltage (9-36 Vdc)	-R288
IntelliTeam SG, IntelliTeam II, and SCADA communication device and mounting (furnished by S&C, requires suffix "-R98") — Factory-installed and wired iS5 Comm. Inc. - iES6-Slim with 2-SFP 100 Mbps single-mode LC transceiver 10 KM, 1310 nm, low voltage (9-36 Vdc)	-R289
IntelliTeam SG, IntelliTeam II, and SCADA communication device and mounting (furnished by S&C, requires suffix "-R98") — Factory-installed and wired iS5 Comm. Inc. - iES6-Slim with 2-SFP 100 Mbps single-mode LC transceiver 30 KM, 1310 nm, low voltage (9-36 Vdc)	-R290
IntelliTeam SG, IntelliTeam II, and SCADA communication device and mounting (furnished by S&C, requires suffix "-R98") — Factory-installed and wired iS5 Comm. Inc. - iES6-Slim with 2-SFP 100 Mbps single-mode LC transceiver 60 KM, 1310 nm, low voltage (9-36 Vdc)	-R291
IntelliTeam SG, IntelliTeam II, and SCADA communication device and mounting (furnished by S&C, requires suffix "-R98") — Factory-installed and wired iS5 Comm. Inc. - iES6-Slim with 2-SFP 120 Mbps single-mode LC transceiver 100 KM, 1550 nm, low voltage (9-36 Vdc)	-R292
IntelliTeam SG, IntelliTeam II, and SCADA communication device and mounting (furnished by S&C, requires suffix "-R98") — Factory-installed and wired iS5 Comm. Inc. - iES6-Slim with 2-SFP 100 Mbps single-mode LC transceiver 120 KM, 1550 nm, low voltage (9-36 Vdc)	-R293

Footnotes to this table are on page 8.

Table 6. Options—Continued

Item		Suffix to Be Added to Switch Control Catalog Number
SCADA communication device and mounting (furnished by S&C, requires suffix "-R98")	MDS Transnet 900 Transceiver with diagnostics	-R19
	MDS NR104L IP Radio. Includes serial to Ethernet device server	-R71
	Telemetric DNP-RTMII-GSM Transceiver	-R161
	MDS SD9 Remote Radio	●
	SpeedNet™ Cell Edge Gateway 4G LTE Cellular Modem with removable SIM card for USA and Canada (shipped without SIM card)③	-R352
IntelliTeam SG, IntelliTeam II, and SCADA communication device ready for (communication device furnished by customer)④	Provision only for iS5 Comm. Inc. - iES6-Slim – Customer needs to provide iES6-Slim with 2-SFP LC transceivers	-R285
	Provision only for Itron Bridge 5 (Gen 5) radio - Customer must provide/install Itron Bridge 5 radio	-R401
SCADA communication device ready for (communication device furnished by customer)④	MDS 9810 Radio	-R02
	MDS 9710A Radio. For new systems	-R03
	MDS 9710B Radio. For existing systems	-R04
	MDS Transnet 900 Radio	-R07
	MDS 2710D Radio	-R27
	FreeWave FGR-115RC Radio	-R30
	MDS 2710 Radio	-R32
	Internal MDS iNET 900 Dual Gateway: Ethernet and serial remote	-R34
	FreeWave DTR-115RU Radio	-R35
	FreeWave FGR-09CSU Radio	-R36
	H&L Model 570 Single-Mode Fiber-Optic Transceiver. Includes ST connectors⑤	-R137
	H&L Model 570 Multi-Mode Fiber-Optic Transceiver. Includes ST connectors	-R138
	MDS SD9 Remote Radio	-R188
Factory installation of communication device	Furnished by S&C	-R98
	Furnished by customer	-R99
Antenna connections (multiple types may be specified)	N-Type connector, bottom mounted. For remote antenna installation	-S2
	PolyPhaser® Surge Suppressor, N-type connector, bottom mounted. For remote and local antenna installation	-S3
	Antenex NMO mounting	-S4
	PolyPhaser Surge Suppressor, N-type connector, 800-2300 MHz. For dual-band cellular antenna	-S6
	PolyPhaser Surge Suppressor for GPS antenna. Includes 4-foot (122-cm) cable	-S9
	Two N-Type connectors, bottom mounted. Includes suppressor	-S11
	PolyPhaser Surge Suppressor for LTE with N-type female connector (698 - 2700 MHz)	-S14

Footnotes for this table are on page 8

Table 6. Options—Continued

Item		Suffix to Be Added to Switch Control Catalog Number
Antenna	902-928-MHz 5-dB gain antenna, N-type male connector	-T2
	LoPro Transit Antenna⑥	-T5
	Dual-band LoPro Cellular Antenna (824-896 and 1850-1990 MHz), 3 dBi	-T7
	Factory-installed top-mounted GPS	-T9
	Antenna, high-efficiency MLPV LTE (698-2700 MHz), permanent mount, 3dB gain, no ground plane	-T25
Control power	From potential transformer, 100- to 135-Vac source⑦	-W1
	From sensors	-W2■
	From potential transformer, 200- to 270-Vac source⑦	-W3

① When applying S&C sensors at system voltages below 11.3 kV phase to phase, the "W1" option must be specified. Total maximum continuous power is 12 watts. This is the available power for all communication equipment installed in the switch control. A maximum peak transmit of 27 watts for up to 250 milliseconds is allowed, but the average power draw must not exceed 12 watts, including a transmission peak. Refer to the nearest S&C Sales Office if more than one communication device is to be installed in the control.

② Labels will add four weeks to lead time. Contact the nearest S&C Sales Office for front panel and screen availability.

③ See S&C Specification Bulletin 1076-31 for SpeedNet Cell Edge Gateway antenna options.

④ Total maximum continuous power is 12 watts. This is the available power for all communication equipment installed in the switch control. A maximum peak transmit of 27 watts for up to 250 milliseconds is allowed, but the average power draw must not exceed 12 watts, including a transmission peak. Refer to the nearest S&C Sales Office if more than one communication device is to be installed in the control.

⑤ H&L Model 570 Single-Mode Fiber-Optic Transceiver can be used for IntelliTeam II system applications that do not include IntelliRupter PulseCloser Fault Interrupters. Refer to the nearest S&C Sales Office for more information.

⑥ Suffix "-S3" must be specified when choosing this option.

⑦ Select this option when applying S&C voltage sensors below 11.3 kV phase to phase.

● Specify the appropriate catalog number suffix based on the frequency band range and application for the radio from the following table. For example, for a 928- to 960-MHz MDS SD9 Radio for Ethernet and Serial application, specify catalog number suffix "-R216CL."

Frequency Band Range, MHz	Application	Suffix to be Added to Catalog Number
820 to 870	Serial	-R216AK
928 to 960		-R216CK
928 to 960, 50-kHz channel		-R216DK
880 to 915		-R216EK
880 to 915, 50-kHz channel		-R216FK
850 to 860 / 926 to 936, transmit low		-R216GK
850 to 860 / 926 to 936, transmit high		-R216HK
820 to 870	Ethernet and serial	-R216AL
928 to 960		-R216CL
928 to 960, 50-kHz channel		-R216DL
880 to 915		-R216EL
880 to 915, 50-kHz channel		-R216FL
850 to 860 / 926 to 936, transmit low		-R216GL
850 to 860 / 926 to 936, transmit high		-R216HL
820 to 870	9710 emulation	-R216AM
928 to 960		-R216CM
928 to 960, 50-kHz channel		-R216DM
880 to 915		-R216EM
880 to 915, 50-kHz channel		-R216FM
850 to 860 / 926 to 936, transmit low		-R216GM
850 to 860 / 926 to 936, transmit high		-R216HM

■ Radio power is restricted when using control power from three voltage sensors at system voltages of 13.8 kV and lower. Refer to the nearest S&C Sales Office for specific radio limitations.

Table 7. Options for Gateway Applications

Item		Suffix to Be Added to Switch Control Catalog Number
Communication protocol	DNP 3.0	-XP0
Communication device (furnished by S&C, requires catalog number suffix "-XR98")	Telemetric DNP-RTMII-GSM Transceiver	-XR161
	MDS SD9 Remote Radio	●
Communication device ready for (communication device furnished by customer)	MDS 9810 Radio	-XR02
	MDS 9710A Radio. For new systems	-XR03
	MDS 9710B Radio. For existing systems	-XR04
	MDS 2710D Radio	-XR27
	FreeWave FGR-115RC Radio	-XR30
Factory installation of communication device	Furnished by S&C	-XR98
	Furnished by customer	-XR99
Antenna connections	N-type connector, bottom mounted. For remote antenna installation	-XS2
	PolyPhaser Surge Suppressor, N-type connector, bottom mounted. For remote antenna installation	-XS3
	Antenex NMO mounting	-XS4
	PolyPhaser Surge Suppressor, N-type connector, 800-2300 MHz. For dual-band cellular antenna	-XS6
	Two N-type connectors, bottom mounted. Includes suppressor	-XS11
Antenna	900-MHz 5-dB gain antenna. Includes N-type male connector	-XT2
	LoPro transit antenna	-XT5
	Dual-Band LoPro cellular antenna (824-896 and 1850-1990 MHz), 3 dBi	-XT7

● Specify the appropriate catalog number suffix based on the frequency band range and application for the radio from the following table. For example, for a 928- to 960-MHz MDS SD9 Radio for Ethernet and serial application, specify catalog number suffix "-XR216CL."

Frequency Band Range, MHz	Application	Suffix to be Added to Catalog Number
820 to 870	Serial	-XR216AK
928 to 960		-XR216CK
928 to 960, 50-kHz channel		-XR216DK
880 to 915		-XR216EK
880 to 915, 50-kHz channel		-XR216FK
850 to 860 / 926 to 936, transmit low		-XR216GK
850 to 860 / 926 to 936, transmit high		-XR216HK
820 to 870	Ethernet and serial	-XR216AL
928 to 960		-XR216CL
928 to 960, 50-kHz channel		-XR216DL
880 to 915		-XR216EL
880 to 915, 50-kHz channel		-XR216FL
850 to 860 / 926 to 936, transmit low		-XR216GL
850 to 860 / 926 to 936, transmit high		-XR216HL
820 to 870	9710 emulation	-XR216AM
928 to 960		-XR216CM
928 to 960, 50-kHz channel		-XR216DM
880 to 915		-XR216EM
880 to 915, 50-kHz channel		-XR216FM
850 to 860 / 926 to 936, transmit low		-XR216GM
850 to 860 / 926 to 936, transmit high		-XR216HM

Table 8. Accessories

Description	Catalog Number
6801 front panel field retrofit kit. For 5801 Automatic Switch Control	903-002350-01
6801 front panel field retrofit kit with GPS. For 5801 Automatic Switch Control. Does not include antenna or cable①	903-002350-02
Wi-Fi module retrofit kit. For 6801 Automatic Switch Control. Includes Wi-Fi antenna	903-002351-01
Wi-Fi antenna, bottom mounted	903-002345-01
Spare 24-Vdc, 8-ampere-hour Gates battery	591-000190-01
Battery charger. For up to eight 24-Vdc switch control batteries catalog number 591-000190-01	904-000057-01
Ethernet switch kit. Includes one Sixnet SLX-5ES-1 and three 7-foot (213-cm) CAT6 cables②	903-002390-01
SpeedNet remote antenna kit. Includes omni-directional antenna, pole-mounted antenna arm, and 30-foot (914-cm) coaxial cable with connectors on both ends	903-002132-02
SpeedNet remote antenna kit. Includes omni-directional antenna, pole-mounted antenna arm, and 50-foot (1524-cm) coaxial cable with connectors on both ends	903-002132-03
SpeedNet and cellular remote dual-antenna kit. Includes omni-directional antennas, pole-mounted antenna arm, and two 30-foot (914-cm) coaxial cables with connectors on both ends	903-002172-02
SpeedNet and cellular remote dual-antenna kit. Includes omni-directional antennas, pole-mounted antenna arm, and two 50-foot (1524-cm) coaxial cables with connectors on both ends	903-002172-03
GPS retrofit kit for field installation with 6801 Front panel retrofit kit with GPS. Does not include antenna or cable①	903-002346-01
GPS antenna, surface mount③	007-001615-02
Pole-mount antenna kit for GPS. Includes 25-foot (762-cm) cable, mounting bracket, and antenna. Requires suffix "-S9" or Surge Suppressor catalog number 005-001471-01	903-002344-01
Surge suppressor for remote GPS antenna	005-001471-01
FIC test fixture. Simulates overhead switch disconnect status and switch position	906-000001-01
Sensor output tester	906-002168-01
Portable test switch. Electronically operates Scada-Mate® SD, Scada-Mate®, or Scada-Mate CX™ Switching Systems, independently of switch control	904-000050-01
iS5 Comm. Inc. - iES6-Slim Industrial Ethernet switch (fully enclosed), comes with panel mount bracket, low-voltage (input 9-36 Vdc), LC connector	110-003800-01
SFP 100-Mbps multi-mode LC transceiver 550 m, 850 nm	110-003774-01
SFP 100-Mbps multi-mode LC transceiver 2 km, 1310 nm	110-003774-02
SFP 100-Mbps single-mode LC transceiver 10 km, 1310 nm	110-003774-04
SFP 100-Mbps single-mode LC transceiver 30 km, 1310 nm	110-003774-05
SFP 100-Mbps single-mode LC transceiver 60 km, 1310 nm	110-003774-06
SFP 100-Mbps single-mode LC transceiver 100 km, 1550 nm	110-003774-07
SFP 100-Mbps single-mode LC transceiver 120 km, 1550 nm	110-003774-08
iS5 Comm. Inc. – iES22GF industrial Ethernet switch, high voltage (Input 130-370 Vdc or 90-264 Vdc), 8 – 10/100/1000 base TX RJ45 Ports, 4 – GSFP	110-003777-01
iS5 Comm. Inc. – iES22GF industrial Ethernet switch, low voltage (Input 9-36 Vdc), 8 – 10/100/1000 Base TX RJ45 Ports, 4 – GSFP	110-003778-01
iS5 Comm. Inc. – iDS3 industrial single port RS232/422/485 to Ethernet serial device server, low voltage (input 9-36 Vdc), 1 – serial port and 2 – 10/100 base TX RJ45 ports	110-003779-01

① Use GPS antenna, surface mount catalog number 007-001615-01 or pole-mounted antenna kit for GPS catalog number 903-002344-01.

② Sixnet SLX-5ES-1 has five RJ45 10/100 Ethernet ports.

③ Top-mounted surface-mount antennas must be installed by S&C.

Table 9. Current Phase Change Harness

Description	Catalog Number
Current phase change harness—Phases ABC to Phases CBA	007-001351-01
Current phase change harness—Phases ABC to Phases BAC	007-001351-02
Current phase change harness—Phases ABC to Phases ACB	007-001351-03
Current phase change harness—Phases ABC to Phases BCA	007-001351-04
Current phase change harness—Phases ABC to Phases CAB	007-001351-05

Table 10. Voltage Phase Change Harness

Description	Catalog Number
Voltage phase change harness—Phases ABC to Phases CBA	007-001352-01
Voltage phase change harness—Phases ABC to Phases BAC	007-001352-02
Voltage phase change harness—Phases ABC to Phases ACB	007-001352-03
Voltage phase change harness—Phases ABC to Phases BCA	007-001352-04
Voltage phase change harness—Phases ABC to Phases CAB	007-001352-05

6801 Automatic Switch Control

Dimensions in inches (mm)

9 (229)   **1¼** (32)

¹³⁄₃₂ (10)   **2⅛** (54)

¾ (19)   **1** (25)

9¹³⁄₁₆ (249)

24
(610)

30
(762)

36
(914)

AC IN

NEUTRAL

¹³⁄₁₆ (21)

4 (102)   **¾** (19)

18 (457)

1¹⁹⁄₃₂ (40)

COMMUNICATIONS
2 X ⌀ ⅝ (16)

⌀ **1⅜** (35)
FOR CONDUIT ENTRY

3¹⁄₁₆
(78)

5⅞
(149)

FIC

5²⁵⁄₃₂
(147)

GND LUG
#14–#2AWG

2¼ (57)   **4¾**
(121)