



PRODUCTS AT A GLANCE



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S&C IS HERE TO HELP

We are applying our century-long heritage of innovation to address the challenges facing today's and tomorrow's power grid. Our solutions are pushing the boundaries of reliability and reducing the duration of outages from hours to seconds—or to no outage at all. In fact, S&C's technology helps save an average of 2.9 billion customer-outage minutes each year.

Our solutions are designed to withstand the impacts of time and nature to keep the lights on around the world. From distribution automation to our award-winning microgrids, we are helping make the grid smart and integrate distributed energy resources. Our non-wires alternatives are at the forefront of how the grid will change and are providing breakthroughs in the toughest energy challenges.

To move from the grid you have to the grid you need, S&C's experts are here to help. These are the men and women with the skills and know-how to help you plan and execute solutions—from concept through completion.

We have designed this guide for you to quickly reference our wide range of electric power switching, protection, and control solutions. For more information, please visit sandc.com, or contact your local S&C sales representative.

SERVICES

S&C's Power Systems Solutions team of automation-system planning and engineering experts have vast expertise in the real-world application of technology for improved grid reliability. They're well suited to perform the study, engineering and design, installation, project management, and field services needed to deliver and maintain a complete smart grid solution. These services can be furnished individually or as a complete solution.



TOOLS

S&C offers a wide range of handling tools, including the industrywide-accepted Loadbuster®—The S&C Loadbreak Tool. By using a Loadbuster tool on properly designed equipment (cutouts, power fuse mountings, and single-phase switches), customers can obtain an open point on their system with ease. The tool is available in two styles to cover system voltages from 15 kV to 35 kV, and it can interrupt up to 900 amperes continuous current.



SPEEDNET™ RADIOS AND SPEEDNET™ CELL EDGE GATEWAY

Reliable communication networks are a critical component of SCADA and grid-automation systems. When choosing a communication solution, a few key parameters to consider are resiliency, latency, and security.

	SpeedNet™ Radios		SpeedNet™ SDR Software Defined Radios				SpeedNet™ Cell Edge Gateway
	SpeedNet™ Radio	SpeedNet™ ME Mesh End-Point Radio	SpeedNet SDR 4	SpeedNet SDR 4x4	SpeedNet SDR 9	SpeedNet SDR 9x9	
Frequency	902-928 MHz		406-430 & 450-470 MHz		928-960 MHz		3G: 850 MHz, 1900 MHz 4G: 700 MHz, 850 MHz, 1700 / 2100 MHz, 1900 MHz, 2300 MHz
Data Rate	600 kbps	300 kbps	56.7 kbps @ 12.5 kHz	113.4 kbps @ 25 kHz	114 kbps @ 25 kHz	228 kbps @ 50 kHz	10 Mbps downlink, 5 Mbps uplink ^①
Idle Channel Latency	10 milliseconds		28 milliseconds	14 milliseconds	14 milliseconds	7 milliseconds	100-200 milliseconds ^①
Encryption	128-bit AES		256-bit AES		256-bit AES		256-bit AES, ECC
Certifications	FCC, IC, Brazil, Australia, New Zealand		FCC, IC, ETSI/CE, South Africa		FCC, IC		FCC, IC
IntelliTeam® CNMS Communication Network Management System	✓	✓	✓	✓	✓	✓	—

^① Many factors affect the speed and performance of cellular devices, including proximity to a cell site, the capacity of the cell site, the surrounding terrain, placement of the cellular device inside equipment, radio-frequency interference, the number of other devices attempting to use the same spectrum resources, the data plan from wireless carrier, and weather.

AUTOMATION & DISTRIBUTION



		IntelliRupter® PulseCloser® Fault Interrupter			Padmount IntelliRupter® PulseCloser® Fault Interrupter		TripSaver® II Cutout-Mounted Recloser		VacuFuse™ Self-Resetting Interrupter	Scada-Mate® Switching System			Scada-Mate® SD Switching System		Remote Supervisory & Source-Transfer Vista® Underground Distribution Switchgear			Remote Supervisory & Source-Transfer PMH Pad-Mounted Gear		Remote Supervisory & Source-Transfer PME Pad-Mounted Gear		Vista® Underground Distribution Switchgear			Vista® SD Underground Distribution Switchgear *		Wind Turbine Style Vista Switchgear	System VI™ Switchgear			Custom Metal-Enclosed Switchgear				PMH Pad-Mounted Gear		PME Pad-Mounted Gear				
Mounting Style		Overhead Non-Disconnect Style, Disconnect Style			Non-Disconnect Style, Disconnect Style		Overhead		Overhead	Overhead			Overhead																												
kV	Nominal 60 Hz (50 Hz)	12.47 (11)	15.93 (20)	34.5 (33)	12.47 (11.0)	18.7 (18)	15	25	25	14.4 (10)	25 (20)	34.5	14.4 (10)	25 (20)	15.5 (12)	27 (24)	38 (36)	14.4	25	14.4	25	15.5 (12)	27 (24)	38 (36)	15	27	38 (36)	15.5 (12)	27 (24)	38 (36)	4.16	13.8	25	34.5	14.4	25	14.4	25			
	Max 60 Hz (50 Hz)	15.5 (12.1)	27.0 (24.2)	38 (38)	15.5 (12.1)	27.0 (24.2)	15.5	29	29	17.0 (15)	29 (24)	38	17.0 (15)	29 (24)	15.5 (15.5)	29 (29)	38 (38)	17	27	17	27	15.5 (15.5)	29 (29)	38 (38)	17.5	29	38 (38)	15.5 (15.5)	29 (29)	38 (38)	4.8	17	29	38	17	27	25	27			
	BIL 60 Hz (50 Hz)	110 (110)	125 (125)	170 (170)	110 (110)	125 (125)	110	125 /150	125	110 (110)	150 (150)	200	110 (110)	125 (125)	95 (95)	125 (125)	150 (150)	95	125	95	125	95 (95)	125 (125)	150 (150)	95	125	150 (150)	95 (95)	125 (125)	150 (150)	60	95	125 or 150	150 or 200	95	125	95	125			
Leakage Distance to Ground, Minimum Inches (mm)		38 (965)	38 (965)	46 ¾ (1178)	38 (965)	38 (965)	—	—	17 (432) w/ porcelain insulator 19 (483) w/ polymer insulator	110 (110)	150 (150)	200	110 (110)	125 (125)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amperes, RMS	Continuous 60Hz (50Hz) Amperes		800	800	630	630	630	40 / 100 / 200	40 / 100 / 200	20	600 (630)	600 (630)	600 (630)	900	900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Interrupting, 60 Hz		16 000	12 500	12 500	16 000	12 500	4 000 / 6 300	4 000 / 6 300	6 300	600	600	600	900	900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Interrupting, 50 Hz		16 000	12 500	12 500	16 000	12 500	4 000 / 6 300	4 000 / 6 300	6 300	630	630	630	900	900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Main Bus Continuous Current, 60 Hz (50 Hz)		—	—	—	—	—	—	—	—	—	—	—	—	—	600 (630) / 1 200 (1 200)	600 (630) / 1 200 (1 200)	600 (630) / 1 200 (1 200)	600	600	600	600	600 (630) / 1 200 (1 200)	600 (630) / 1 200 (1 200)	600 (630) / 1 200 (1 200)	600 (630)	600 (630)	600 (630)	600 (630) — 2 000 (2 000)	600 (630) — 2 000 (2 000)	600 (630) — 2 000 (2 000)	600 / 1 200	600 / 1 200	600 / 1 200	600 / 1 200	600	600	600	600		
	Short-Circuit Symmetrical, 60 Hz (50 Hz)		16 000	12 500	12 500	16 000	12 500	4 000 / 6 300	4 000 / 6 300	—	—	—	—	—	—	12 500 / 25 000	12 500 / 25 000	12 500 / 25 000	14 000	12 500	14 000	12 500	12 500 (12 500) / 25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	16 000	12 500	25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	17 200 / 25 000 / 37 000 / 40 000	12 500 / 14 000 / 25 000 / 34 000 / 40 000	9 400 / 12 500 / 17 500 / 20 000 / 40 000	6 250 / 8 450 / 17 500	14 000	12 500	25 000	12 500		
	Peak Withstand, Amperes, Peak		—	—	—	—	—	10 000 / 15 100	10 000 / 15 100	—	—	—	—	41 600	41 600	32 500 / 65 000	32 500 / 65 000	32 500 / 65 000	36 400	32 500	36 400	32 500	32 500 / 65 000	32 500 / 65 000	32 500 / 65 000	—	—	65 000	32 500 / 65 000	32 500 / 65 000	32 500 / 65 000	44 720 / 65 000 / 96 200 / 104 000	32 500 / 36 400 / 65 000 / 88 400 / 104 000	22 440 / 32 500 / 45 500 / 52 000 / 10 4000	16 250 / 21 970 / 45 500	36 400	32 500	36 400	32 500		
	Momentary Asymmetrical		24 800	20 000	20 000	24 800	20 000	—	—	—	25 000	25 000	25 000	25 000	25 000	20 000 / 40 000	20 000 / 40 000	20 000 / 40 000	22 400	20 000	22 400	20 000	20 000 / 40 000	20 000 / 40 000	20 000 / 40 000	—	—	40 000	20 000 / 40 000	20 000 / 40 000	20 000 / 40 000	27 520 / 40 000 / 59 200 / 64 000	20 000 / 22 400 / 40 000 / 54 400 / 64 000	15 040 / 20 000 / 28 000 / 32 000 / 64 000	10 000 / 13 520 / 28 000	22 400	20 000	22 400	20 000		
	Fault Interrupter	Continuous & Load Dropping	—	—	—	—	—	—	—	—	—	—	—	—	—	200 (200) / 600 (630) / 900 (900)	200 (200) / 600 (630) / 900 (900)	200 (200) / 600 (630) / 900 (900)	—	—	—	—	200 (200) / 600 (630) / 900 (900)	200 (200) / 600 (630) / 900 (900)	200 (200) / 600 (630) / 900 (900)	200 (200) / 600 (630)	200 (200) / 600 (630)	600 (630)	200 (200) / 600 (630) / 900 (900)	200 (200) / 600 (630) / 900 (900)	200 (200) / 600 (630) / 900 (900)	—	—	—	—	—	—	—	—		
		Ten-Time Duty-Cycle Fault Interr., Sym.	—	—	—	—	—	—	—	—	—	—	—	—	—	12 500 / 25 000	12 500 / 25 000	12 500 / 25 000	—	—	—	—	12 500 (12 500) / 25 000 (25 000)	12 000 (12 000) / 25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	—	—	25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	—	—	—	—	—	—	—	—		
	Load-Interrupter Switch	Continuous & Load Dropping	—	—	—	—	—	—	—	—	—	—	—	—	—	600 (630) / 900 (900)	600 (630) / 900 (900)	600 (630) / 900 (900)	—	—	—	—	600 (630) / 900 (900)	600 (630) / 900 (900)	600 (630) / 900 (900)	600 (630)	600 (630)	—	600 (630) / 900 (900)	600 (630) / 900 (900)	600 (630) / 900 (900)	—	—	—	—	—	—	—	—		
Momentary & One-Second, Sym.		—	—	—	—	—	—	—	—	—	—	—	—	—	12 500 / 25 000	12 500 / 25 000	12 500 / 25 000	—	—	—	—	12 500 (12 500) / 25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	16 000 (16 000)	16 000 (16 000)	—	12 500 (12 500) / 25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	12 500 (12 500) / 25 000 (25 000)	—	—	—	—	—	—	—	—			
Mini-Rupter® Switch or Alduti-Rupter® Switch	Continuous	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	600	600	600	600	—	—	—	—	—	—	—	—	600 / 1 200	600 / 1 200	600 / 1 200	600 / 1 200	600	600	600	600				
	Load Dropping	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	600	600	600	600	—	—	—	—	—	—	—	—	600 / 1 200	600 / 1 200	400 / 1 200	600 / 1 200	600	600	600	600				
Fuse Unit / Refill Unit / Fuse Link / Cartridge / Module/Mounting Used		—	—	—	—	—	—	—	Type XS Fuse Cutout Mounting	—	—	—	—	—	—	—	—	—	—	SML-20, SML-4Z, Fault Fiter® Electronic Power Fuse; RMS Sym. alters depending on the fuse type	—	—	—	—	—	—	—	—	—	—	—	—	—	SM-4Z, SM-40, SM-5S, Fault-Fiter® Electronic Power Fuse	SM-4Z, SM-20, SM-40, SM-5S, Fault-Fiter® Electronic Power Fuse	SM-4Z, SM-20, SM-40, SM-5S, Fault-Fiter® Electronic Power Fuse	SM-4Z, SM-20, SM-5S, Fault-Fiter® Electronic Power Fuse	SML-20, SML-4Z, FaultFiter® Electronic Power Fuse; Amperes RMS Sym. varies depending on the fuse type	SML-20, SML-4Z, Fault-Fiter® Electronic Power Fuse; Amperes RMS Sym. varies depending on the fuse type		
S&C Controls		IntelliRupter Control Group			IntelliRupter Control Group		—		—	6800 Series Automatic Switch Control			6800 Series Automatic Switch Control		Micro-AT® Source-Transfer Control (standard for Source-Transfer Vista switchgear)/6800 Series Automatic Switch Control (optional)/IntelliNode™ Interface Module (optional)			Micro-AT® Source-Transfer Control (standard for Source-Transfer PMH switchgear)/6800 Series Automatic Switch Control (optional for Remote-Supervisory PMH switchgear)		Micro-AT® Source-Transfer Control (standard for Source-Transfer PME switchgear)/6800 Series Automatic Switch Control (optional for Remote-Supervisory PME switchgear)		—			—		—			Micro-AT® Source-Transfer Control available for automation				—		—					
Software	IntelliLink® Setup Software	✓	✓	✓	✓	✓	—	—	—	✓	✓	✓	✓	✓	IntelliLink® Setup Software, IntelliTeam® SG Automatic Restoration System, and IntelliTeam® FMS Feeder Management System are available if 6800 Series Controls or IntelliNode™ Interface Modules are provided			IntelliLink® Setup Software, IntelliTeam® SG Automatic Restoration System, and IntelliTeam® FMS Feeder Management System are available if 6800 Series Controls are provided		IntelliLink® Setup Software, IntelliTeam® SG Automatic Restoration System, and IntelliTeam® FMS Feeder Management System are available if 6800 Series Controls are provided		—			—		—			—				—		—					
	IntelliTeam® SG Automatic Restoration System	✓	✓	✓	✓	✓	—	—	—	✓	✓	✓	✓	✓	IntelliLink® Setup Software, IntelliTeam® SG Automatic Restoration System, and IntelliTeam® FMS Feeder Management System are available if 6800 Series Controls or IntelliNode™ Interface Modules are provided			IntelliLink® Setup Software, IntelliTeam® SG Automatic Restoration System, and IntelliTeam® FMS Feeder Management System are available if 6800 Series Controls are provided		IntelliLink® Setup Software, IntelliTeam® SG Automatic Restoration System, and IntelliTeam® FMS Feeder Management System are available if 6800 Series Controls are provided		—			—		—			—				—		—					
	IntelliTeam® FMS Feeder Management System	✓	✓	✓	✓	✓	—	—	—	✓	✓	✓	✓	✓	IntelliLink® Setup Software, IntelliTeam® SG Automatic Restoration System, and IntelliTeam® FMS Feeder Management System are available if 6800 Series Controls or IntelliNode™ Interface Modules are provided			IntelliLink® Setup Software, IntelliTeam® SG Automatic Restoration System, and IntelliTeam® FMS Feeder Management System are available if 6800 Series Controls are provided		IntelliLink® Setup Software, IntelliTeam® SG Automatic Restoration System, and IntelliTeam® FMS Feeder Management System are available if 6800 Series Controls are provided		—			—		—			—				—		—					
	TripSaver® II Service Center Configuration Software	—	—	—	—	—	✓	✓	—	—	—	—	—	—	—			—		—		—			—		—			—				—		—					

★ Contact your S&C sales person for more information for enclosure types and available mounting options.

