SCHWEITZER ENGINEERING LABORATORIES, INC.

SEL-451-2

Protection, Automation, and Control System, Standard with Synchrophasor Measurement, 8 Outputs, 7 Inputs, ACSELERATOR® QuickSet SEL-5030 Software[1], and Configurable Labels

Part Number: **O 4 5 1 2** ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ **X**

Firmware

Standard (Replaces SEL-451-1)				2	

Power Supply

24/48 Vdc					2
48/125 Vdc or 120 Vac					4
125/250 Vdc or 120/240 Vac					6

Connector Type

Screw Terminal Block					1
Connectorized® Relay (specify wiring harness SEL-WA04210 using order form WI-2262)*					2

Secondary Inputs

300V Phase - Neutral Maximum (Wye), 1 Amp Phase						1
300V Phase - Neutral Maximum (Wye), 5 Amp Phase						5
300V Phase - Neutral Maximum (Wye), 1 Amp Phase with High Impedance Fault Detection*						D
300V Phase - Neutral Maximum (Wye), 5 Amp Phase with High Impedance Fault Detection*						E

Serial Communications Protocols

SEL ASCII, Compressed ASCII, and Settings File Transfer, SEL Fast Meter with Configuration, Fast Operate, Fast SER, Phasor Measurement, and Enhanced MIRRORED BITS® Communications							1
DNP3 Level 2 Slave Plus Dial-Out and Virtual Terminal (Includes all protocols listed above)*							2

Ethernet Communications Protocols

None							X	X
FTP, Telnet, Synchrophasors, and IEC 61850*							A	
FTP, Telnet, Synchrophasors, and DNP3 LAN/WAN*							B	
FTP, Telnet, Synchrophasors, DNP3 LAN/WAN, and IEC 61850*							C	

Ethernet Connection Options

None							X	X
Ethernet Card with Two 10/100BASE-T Connectors*								0
Ethernet Card with Two 100BASE-FX Connectors*								2
Ethernet Card with One 10/100BASE-T, One 100BASE-FX Connector*								4

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Mainboard I/O Configuration

Description	Code
Standard with 3 High-Current Interrupting Outputs, 2 Standard Form A Outputs, 3 Standard Form C Outputs, and 7 Optoisolated Level-Sensitive Inputs	B

Mainboard Input Voltage

Description	Code	
24 Vdc	B	1
48 Vdc	B	2
110 Vdc	B	3
125 Vdc	B	4
220 Vdc	B	5
250 Vdc	B	6

Mounting

Description	Code
Horizontal Rack Mount	H
Horizontal Panel Mount	3
Vertical Rack Mount	V
Vertical Panel Mount	4

Chassis

Description	Code				
3U, Standard I/O	1	X	X	X	X
4U, Up to One Additional I/O Board	2			X	X
4U, Front Panel with 24 Target LEDs, 12 Operator Control Pushbuttons, and Tri-Color LEDs*	3			X	X
5U, Up to Two Additional I/O Boards	6				
5U, Front Panel with 24 Target LEDs, 12 Operator Control Pushbuttons, and Tri-Color LEDs*	7				

I/O Board Position B For 4U or 5U Chassis

Description	Code	
Empty I/O Board Position	0	X
8 Independent Inputs, 13 Standard Form A, 2 Standard Form C Outputs*	1	X
8 Optoisolated Independent Level-Sensitive Inputs, 13 Standard Form A, 2 Standard Form C Outputs*	2	
24 Optoisolated Level-Sensitive Inputs, 8 Outputs[2]*	4	
8 Independent Inputs, 8 High-Speed High-Current Interrupting Form A Outputs*	5	X
8 Independent Inputs[2], 13 High-Current Interrupting Form A, 2 Standard Form C Outputs*	6	X
8 Optoisolated Independent Level-Sensitive Inputs, 13 High-Current Interrupting Form A, 2 Standard Form C Outputs*	7	
8 Optoisolated Independent Level-Sensitive Inputs, 8 High-Speed High-Current Interrupting Form A Outputs*	8	
Auxiliary Trip/Close Pushbuttons, 24 Optoisolated Independent Level-		

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Description		
Sensitive Inputs, 4 High-Current Interrupting Form A Outputs*	3	A
Auxiliary Trip/Close Pushbuttons, 24 Optoisolated Independent Level-Sensitive Inputs, 4 High-Current Interrupting Form A Outputs*	7	A

Description		
Auxiliary Trip/Close Pushbuttons with Guards, 24 Optoisolated Independent Level-Sensitive Inputs, 4 High-Current Interrupting Form A Outputs[3]*	3	B
Auxiliary Trip/Close Pushbuttons with Guards, 24 Optoisolated Independent Level-Sensitive Inputs, 4 High-Current Interrupting Form A Outputs[3]*	7	B

I/O Board Position B Input Voltage

Description	
User-Settable Pickup Voltage Level (Available only on I/O Board Options 1, 5, and 6)	X
24 Vdc	1
48 Vdc	2
110 Vdc	3
125 Vdc	4
220 Vdc	5
250 Vdc	6

I/O Board Position C For 5U Chassis Only

Description		
Empty I/O Board Position	0	X
8 Independent Inputs, 13 Standard Form A, 2 Standard Form C Outputs*	1	X
8 Optoisolated Independent Level-Sensitive Inputs, 13 Standard Form A, 2 Standard Form C Outputs*	2	
24 Optoisolated Level-Sensitive Inputs, 8 Outputs[2]*	4	
8 Independent Inputs, 8 High-Speed High-Current Interrupting Form A Outputs*	5	X
8 Independent Inputs, 13 High-Current Interrupting Form A, 2 Standard Form C Outputs*	6	X
8 Optoisolated Independent Level-Sensitive Inputs, 13 High-Current Interrupting Form A, 2 Standard Form C Outputs*	7	
8 Optoisolated Independent Level-Sensitive Inputs, 8 High-Speed High-Current Interrupting Form A Outputs*	8	

I/O Board Position C Input Voltage

Description	
User-Settable Pickup Voltage Level (Available only on I/O Board Options 1, 5, and 6)	X
24 Vdc	1
48 Vdc	2
110 Vdc	3

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		4	
125 Vdc		4	
220 Vdc		5	
250 Vdc		6	

Conformal Coat

None		X	
Conformal Coated Circuit Boards*		2	

Accessories

Wiring Harness for SEL-421 and SEL-451 Relays	W A 0 4 2 1

* Additional Cost

[1] Download ACSELERATOR QuickSet SEL-5030 software for free at www.selinc.com/software.htm. ACSELERATOR QuickSet on CD (503001WX4) is available upon request.

[2] 18 Common Inputs, 6 Independent Inputs, 6 High-Speed High-Current Interrupting Form A Outputs, 2 Standard Form A Outputs.

[3] The guards help prevent inadvertent operation of the auxiliary Trip/Close pushbuttons. These guards may be ordered separately in a kit (part number 9252001).

Note: The SEL-451 comes standard with a CD manual. A printed instruction manual is available upon request.

Making Electric Power Safer, More Reliable, and More Economical ®

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