SEL-451-5

Protection, Automation, and Control System, Standard With Serial Communication $Protocols^{(1)}$, Synchrophasor Measurement, 8 Outputs, 7 Inputs, ACSELERATOR QuickSet[®] SEL-5030 Software⁽²⁾, and Configurable Labels

UL Approved

Part Number:	0	4	5	1	5							X								
Firmware																			 	
Standard (Replaces SEL-451-2 and SEL-451-4)					5															
Power Supply																				
24-48 Vdc						2														
48-125 Vdc or 110-120 Vac						4											Т			
125-250 Vdc or 110-240 Vac						6										<u> </u>	Ī			
Connector Type																				
Screw Terminal Block							1													
Connectorized [®] Relay ⁽¹⁰⁾ *							2													
Secondary Input Current																				
1 A Phase								1					1	1	1		T.			
5 A Phase			-					5					1	1	1	Ť.	Ť.	1	1	
1 A Phase With High Impedance Fault Detection*								D									Ī			
5 A Phase With High Impedance Fault Detection*								Ε												
Secondary Input Voltage																				
300 V Phase - Neutral Maximum (Wye)									Х											
Euro Connector with IEEE C37.92 Low Energy Analog Inputs (LEA) ⁽³⁾									1										2	
Ethernet Communications Pro	otod	cols																		
None										Х	Х						Τ			
FTP, Telnet, Synchrophasors, and DNP3 LAN/WAN										В							Ī			
FTP, Telnet, Synchrophasors, DNP3 LAN/WAN, and IEC 61850*										С										
Ethernet Connection Options																				
None										Х	Х									
Ports 5A, 5B ⁽⁴⁾ With PTP: Ethernet Card With Two 10/100BASE-T Connectors*											1									
Ports 5A, 5B ⁽⁴⁾ With PTP: Ethernet Card With Two 100BASE-FX Connectors*											3									
Ports 5A, 5B ⁽⁴⁾ With PTP: Ethernet Card With One 10/100BASE-T, One 100BASE-FX Connector*											5									
Ports 5C, 5D ⁽⁵⁾ : Ethernet Card With Two 10/100BASE-T Connectors*											0									
Ports 5C, 5D ⁽⁵⁾ : Ethernet Card With Two 100BASE-FX Connectors*											2									

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Ports 5C, 5D ⁽⁵⁾ : Et One 10/100BASE- FX Connector*	hernet Card With T, One 100BASE-									4										
Mainboard Inp	out Voltage																			
Standard With 3 High-Current Interrupting Outputs, 2 Standard Form A Outputs, 3 Standard Form C Outputs, and 7 Optoisolated Level-Sensitive Inputs	24 Vdc											1								
	48 Vdc											2								
	110 Vdc				Γ							3			[
	125 Vdc											4								
	220 Vdc											5								
	250 Vdc				İ.							6								
Mounting																				
Mounting Horizontal Rack Mo	ount		_										Н							
Horizontal Panel M		F	_		-	1	+						3		I			 	1	
Vertical Rack Mour			_		-								V							
					-										I					
Vertical Panel Mou	nt												4							
Chassis								 	 		1		1	1				11		
3U, Standard I/O														1	Х	Х	Х	Х		
4U, Up to One Add	litional I/O Board													2			Х	Х		
4U, Front Panel W 12 Operator Contr and Tri-Color LEDs	,													3			Х	Х		
5U, Up to Two Add	litional I/O Boards													6						
5U, Front Panel W 12 Operator Contr and Tri-Color LEDs														7						
I/O Board Pos	ition B For 4U o	or 5l	J C	ha	ssi	s														
Empty I/O Board F	Position														0	Х				
8 Independent Inp 13 Standard Form Form C Outputs*															1	Х				
8 Optoisolated Ind Sensitive Inputs, 1 A, 2 Standard Forr	3 Standard Form														2					
24 Optoisolated Le															4					
Inputs, 8 Outputs ⁽ 8 Independent Inp														_	F	V				
8 High-Speed High Interrupting Form	-Current A Outputs*														5	Х				
2 Standard Form (nterrupting Form A, C Outputs*														6	Х				
8 Optoisolated Ind Sensitive Inputs, 13 High-Current Ir	ependent Level- nterrupting Form A,														7					

2 Standard Form C Outputs*

8 Optoisolated Independent Level- Sensitive Inputs, 8 High-Speed High- Current Interrupting Form A Outputs*									8			
Auxiliary Trip/Close Pushbuttons, 24 Optoisolated Level-Sensitive Inputs, 4 High-Current Interrupting Form A Outputs ⁽⁸⁾ *								3	Α			
Auxiliary Trip/Close Pushbuttons, 24 Optoisolated Level-Sensitive Inputs, 4 High-Current Interrupting Form A Outputs ⁽⁸⁾ *								7	A			
Auxiliary Trip/Close Pushbuttons With Guards, 24 Optoisolated Level- Sensitive Inputs, 4 High-Current Interrupting Form A Outputs ⁽⁷⁾⁽⁸⁾ *								3	В			
Auxiliary Trip/Close Pushbuttons With Guards, 24 Optoisolated Level- Sensitive Inputs, 4 High-Current Interrupting Form A Outputs ⁽⁷⁾⁽⁸⁾ *								7	В			

I/O Board Position B Input Voltage

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

Empty I/O Board Position											0	Х	
8 Independent Inputs, 13 Standard Form A, 2 Standard Form C Outputs*											1	Х	
8 Optoisolated Independent Level- Sensitive Inputs, 13 Standard Form A, 2 Standard Form C Outputs*											2		
24 Optoisolated Level-Sensitive Inputs, 8 Outputs ⁽⁶⁾ *											4		
8 Independent Inputs, 8 High-Speed High-Current Interrupting Form A Outputs*											5	Х	
8 Independent Inputs, 13 High-Current Interrupting Form A, 2 Standard Form C Outputs*											6	Х	
8 Optoisolated Independent Level- Sensitive Inputs, 13 High-Current Interrupting Form A,											7		
2 Standard Form C Outputs* 8 Optoisolated Independent Level- Sensitive Inputs, 8 High-Speed High-											8		
Current Interrupting Form A Outputs*													
I/O Board Position C Input V	olta	age)										

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		Γ						T		5		
250 Vdc										6		
Conformal Coat												
None											Х	
Conformally Coated Circuit Boards*											2	
Front Overlay												
Standard Front Overlay												Х
Bay Control Front Overlay												1
A												

Accessories

Literature		
	Instruction Manual Set for SEL-451-5 and SEL-400 Series ⁽⁹⁾	
Wiring Harness		
	Connectorized [®] Wiring Harness for SEL-451 Relays ⁽¹⁰⁾ *	Please see Online MOT or contact SEL REP or CSR for ordering information.
IRIG Termination K	(it (50 Ohms)*	915900499

* Additional Cost

⁽¹⁾ Serial Protocols: SEL ASCII, CompressedASCII, Settings FileTransfer, SEL Fast Meter with Configuration, Fast Operate, Fast SER, Phasor Measurement, Enhanced MIRRORED BITS[®] Communications, DNP3 Level 2 Server Plus Dial-Out and Virtual Terminal. ⁽²⁾ Download AcSELERATOR QuickSet SEL-5030 software for free at https://www.selinc.com/softwaresolutions/. QuickSet on CD

(503001WX4) is available upon request.

⁽³⁾ The LEA Voltage Input option requires Conformal Coating.

⁽⁴⁾ Only two Ethernet ports will be populated based on the Ethernet Connection Options Selection. IEEE Precision Time Protocol (PTP) is only available on Port 5A and 5B.

PORT 5A	PORT 5B	PORT 5C	PORT 5D

 $^{(5)}$ PTP is not available on Ports 5C and 5D.

PORT 5A	PORT 5B	PORT 5C	PORT 5D
	C		

⁽⁶⁾ 18 Common Inputs, 6 Independent Inputs, 6 High-Speed High-Current Interrupting Form A Outputs, 2 Standard Form A Outputs. ⁽⁷⁾ The guards help prevent inadvertent operation of the auxiliary Trip/Close pushbuttons. These guards may be ordered separately in

a kit (part number 9252001).

⁽⁸⁾ Inputs: 6 Independent Level Sensitive Optoisolated and 18 Common Level Sensitive Optoisolated. Outputs: 4 High-Current Interrupting Form A Outputs

⁽⁹⁾ This product comes standard with a CD manual. One complimentary instruction manual kit is available upon request with each product purchased. $^{(10)}$ Order a Connectorized $^{\circledast}$ Wiring Harness for SEL-451 (harness shipped separately).

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



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