

## SEL-651R-2

Recloser Control With Automatic Network Reconfiguration, Harmonic Analysis, Single-Phase Trip Capability, 6 Voltage Inputs, Power Quality Monitoring, 8 Settings Groups, Template Storage, SEL Fast SER, and DNP3 Level 2 Outstation

Standard with ACSELERATOR QuickSet® SEL-5030 Software<sup>(1)</sup>

Part Number: **0 6 5 1 R 2** **A**

### Firmware

Standard **2**

### Control Cable Interface

Traditional Retrofit (14-Pin)	<b>1</b>
G&W Viper®-ST, G&W Viper-LT, ABB Gridshield, or ABB Elastimold MVR (32-Pin)*	<b>2</b>
ABB OVR-3/VR3S (15 and 27 kV only) (24-Pin)*	<b>3</b>
G&W Control Power Viper-S or Control-Powered Eaton NOVA (19-Pin)*	<b>4</b>
ABB Joslyn TriMod™ 600R (27-Pin)*	<b>5</b>
Eaton NOVA-TS Triple-Single or NOVA-STS Single-Tank Triple-Single (26-Pin)*	<b>6</b>
Siemens SDR Triple-Single (40-Pin)*	<b>8</b>
Siemens SDR 3-Phase (40-Pin)*	<b>9</b>
SEL Multi-Recloser Interface (42-Pin)*	<b>A</b>

### Enclosure<sup>(2)</sup>

Dual Door (Side Mount), Painted Steel With 3-Point Latches	<b>A</b>
Dual Door (Side Mount), Painted Type 304 Stainless Steel With 3-Point Latches*	<b>B</b>
Single Door (Rear Mount), Painted Steel With 3-Point Latches	<b>C</b>
Single Door (Rear Mount), Painted Type 304 Stainless Steel With 3-Point Latches*	<b>D</b>

### Conformal Coat

None	<b>X</b>
Conformally Coated Circuit Boards*	<b>1</b>

### Secondary Input Voltage

(6) 300 Vac Max Inputs	<b>A</b>
(3) 8 Vac Max LEA Inputs <sup>(3)</sup> and (3) 300 Vac Max Inputs	<b>B</b>
(3) 8 Vac Max LEA Inputs and (3) 120 Vac, 1M Lindsey SVM1 LEA	<b>C</b>

Inputs <sup>(3)</sup>	
(3) Eaton Nova LEA Inputs <sup>(3)</sup> and (3) 300 Vac Max Inputs <sup>(4)</sup>	D

(3) Eaton Nova LEA Inputs and (3) 120 Vac, 1M Lindsey SVM I LEA Inputs <sup>(3)(4)</sup>	E
(3) 300 Vac Max Inputs and (3) 120 Vac, 1M Lindsey SVM I LEA <sup>(3)</sup> Inputs	F
(6) 8 Vac Max LEA Inputs <sup>(3)</sup>	G
(3) 300 Vac Max inputs and (3) Siemens SDR LEA Inputs <sup>(3)(5)</sup>	H
(3) 120 Vac, 1M Lindsey SVM I LEA Inputs and (3) Siemens SDR LEA Inputs <sup>(3)(5)</sup>	J
(6) Siemens SDR LEA Inputs <sup>(3)</sup> (5)	K

### Secondary Input Current

1 A Phase, 0.2 A Neutral	A
1 A Phase, 0.2 A Neutral With High-Impedance Fault Detection*	G

### Extra Inputs/Outputs

None <sup>(6)</sup>	X
(7) 12 Vdc Inputs/(8) Standard Outputs*	8
(2) 125 Vdc and (5) 12 Vdc Inputs/(8) Standard Outputs*	A
(2) 48 Vdc and (5) 12 Vdc Inputs/(8) Standard Outputs*	B
(2) 220 Vdc and (5) 12 Vdc Inputs/(8) Standard Outputs*	C

### Communications Port

3 EIA-232, USB	A
----------------	---

### Communications Interface

(1) 100BASE-FX, EIA-485*	D
(2) 10/100BASE-T, EIA-485	E
(2) 100BASE-FX, EIA-485*	F
(1) 10/100BASE-T, (1) 100BASE- FX*	L

### Communications Protocol

Standard	1
Standard Plus IEC 61850*	2

### Power Supply

120 Vac (Includes GFCI Outlet)	1
230 Vac	2
48 Vdc	4 X
125 Vdc	3 X

### Battery Option

None	X
12 V, 16 Ahr	1



Voltage Input Fuse Block (Secondary Voltages), Universal Fuse Block (Input Power), AC Transfer Switch, 2-Position Socket Contact Receptacle for Low-Voltage Close (MS5015, Size 22), and 8-Position Pin Contact Receptacle for Voltage Inputs (MS5015, Size 22)*	1	1	A	1
Accessory Shelf, Universal Fuse Block, and 2-Position Socket Contact Receptacle for Low-Voltage Close (MS5015, Size 22) (9)*	1		A	3
100 W Heater and 2-Position Socket Contact Receptacle for Low-Voltage Close (MS5015, Size 22)(9)*	1		A	4
SEL-2401 Satellite-Synchronized Clock (24010XXX0) on Accessory Shelf and 2-Position Socket Contact Receptacle for Low-Voltage Close (MS5015, Size 22) (18)*	1		A	5
Accessory Shelf, Universal Fuse Block (Incoming Power), 100 W Heater, and 3-Position Pin Contact Receptacle for Input Power (MS5015, Size 22)(9)*	1		A	8
Voltage Input Fuse Block (Secondary Voltages), Universal Fuse Block (Incoming Power), 100 W Heater, SEL-2401 Satellite-Synchronized Clock (24010XXX0) on Accessory Shelf, 2-Position Socket Contact Receptacle for Low-Voltage Close (MS5015, Size 22), and 8-Position Pin Contact Receptacle for Voltage Inputs (MS5015, Size 22)(9)(18)*	1		A	9
Voltage Input Fuse Block (Secondary Voltages), Universal Fuse Block (Input Power), AC Transfer Switch, 2-Position Socket Contact Receptacle for Low-Voltage Close (MS5015, Size 22), 8-Position Pin Contact Receptacle for Voltage Inputs (MS5015, Size 22), and Door Switch Wired to IN101*	1	8	1	A A
Accessory Shelf and Door Switch Wired to IN103(9)(12)*			A	N
AC Transfer Switch and Two 3-Position Pin Contact Receptacles for Input Power (MS26482, Size 12)*			1	B 0
AC Transfer Switch, Two 3-Position Pin Contact Receptacles for Input Power (MS26482, Size 12), and 8-Position Pin Contact Receptacle for Voltage Inputs (MS5015, Size 22)*			1	B 1



Voltage Input Fuse Block (Secondary Voltages) and SEL-2401 Satellite-Synchronized Clock (24010XXX0) on Accessory Shelf <sup>(9)(18)*</sup>																		D	6					
AC Transfer Switch and 100 W Heater*															1				D	8				
SEL-2401 Satellite-Synchronized Clock (24010XXX0) and SEL-3031 Serial Radio Transceiver (30310W01XXX) on Accessory Shelf <sup>(9)(18)*</sup>																			D	9				
SEL-2401 Satellite-Synchronized Clock (24010XXX0) on Accessory Shelf and 3-Position Pin Contact Receptacle for Input Power (MS26482, Size 12) <sup>(9)(18)*</sup>																			D	A				
Accessory Shelf and AC Transfer Switch*															1				D	C				
Accessory Shelf, Voltage Input Fuse Block (Secondary Voltages), Universal Fuse Block (Incoming Power), and 100 W Heater <sup>(9)*</sup>																			D	E				
100 W Heater, 3-Position Pin Contact Receptacle for Input Power (MS26482, Size 12) and FT-14 Test Switch <sup>(15)*</sup>															1				E	0				
3-Position Pin Contact Receptacle for Input Power (MS26482, Size 12) and FT-14 Test Switch (FT4A14T08CN4286) <sup>(16)*</sup>																			F	T				
Voltage Input Fuse Block (Secondary Voltages), Universal Fuse Block (Incoming Power), 100 W Heater, and SEL-2401 Satellite-Synchronized Clock (24010XXX0) on Accessory Shelf <sup>(9)(18)*</sup>																			G	5				
Accessory Shelf, 100 W Heater, and Door Switch Wired to IN104 <sup>(9)(12)*</sup>																			L	1				
SEL-FR12 Fault Receiver (FR12-0001) on Accessory Shelf <sup>(9)(17)*</sup>																			L	3				
Accessory Shelf, 100 W Heater, AC Transfer Switch and 8-Position Pin Contact Receptacle for Input Power (MS5015 Size 22)*								2								1			M	7				

**Bundled Accessories (Shipped in box with SEL-651R but not installed in enclosure)**

None																					X	X		
Security Sleeve (2" Diameter)*																					0	1		
Two Security Sleeves (2" Diameter)*																					0	2		
Three Security Sleeves (2" Diameter)*																					0	3		
Four Security Sleeves (2" Diameter)*																					0	4		
Five Security Sleeves (2" Diameter)*																					0	5		



3-Position Pin Contact Receptacle for Input Power (MS26482, Size 12) for Dual-Door Cabinet*	9 2 5 0 5 5 6
3-Position Pin Contact Receptacle for Input Power (MS26482, Size 12) for Single-Door Cabinet*	9 2 5 0 5 8 0
4-Position Pin Contact Receptacle for LEA Inputs (MS5015, Size 22) for Single-Door Cabinet*	9 2 5 0 6 9 1
4-Position Pin Contact Receptacle for LEA Inputs (MS5015, Size 22) for Dual-Door Cabinet*	9 2 5 0 6 9 2
8-Position Pin Contact Receptacle for Voltage Inputs (MS26482, Size 12) for Dual-Door Cabinet*	9 2 5 0 5 5 7
8-Position Pin Contact Receptacle for Voltage Inputs (MS26482, Size 12) for Single-Door Cabinet*	9 2 5 0 5 8 1
16 Ahr Replacement Battery Kit*	9 1 5 9 0 0 2 0 0
40 Ahr Replacement Battery Kit*	9 1 5 9 0 0 1 9 9
SEL-C510 Control Cable (14-Socket MS5015 to 14-Pin MS5015) for Recloser*	C 5 1 0
SEL-C520 Control Cable (14-Socket MS5015 to 14-Pin MS5015) with Overmolding for Recloser*	C 5 2 0
SEL-C524 Control Cable (32-Socket MS26482 to 32-Pin MS26482) for Recloser*	C 5 2 4
SEL-C553 Control Cable (32-Socket MS26482 to 32-Socket MS26482) for Recloser*	C 5 5 3
SEL-C550 Control Cable (42-Socket Rectangular to 32-Socket MS26482) for Recloser*	C 5 5 0
SEL-C551 Control Cable (42-Socket Rectangular to 32-Pin MS26482) for Recloser*	C 5 5 1
SEL-C552 Control Cable (42-Socket Rectangular to 32-Pin MS26482) for Control Cable Extension*	C 5 5 2
SEL-C515 Low-Voltage Close Cable (2-Pin MS5015 to 2-Socket MS5015) for Recloser*	C 5 1 5
SEL-C517 Voltage Input Cable (8-Socket MS5015 to 8-Pin MS5015) for Recloser*	C 5 1 7
SEL-C5469 Quick Disconnect Battery Cable for Recloser Control*	C 5 4 6 9

\* Additional Cost

(1) Download acSELERATOR QuickSet SEL-5030 software for free at <https://www.selinc.com/software/solutions/>. QuickSet on CD (503001WX4) is available upon request.

(2) The Dual Door (side mount) enclosure dimensions are 24.5" W x 30" H x 16.6" D (11,200 in<sup>3</sup>). The Single Door (rear mount) enclosure dimensions are 17" W x 32.5" H x 14" D (7,700 in<sup>3</sup>). The SEL-651R enclosure includes doorstop(s), document holder, and padlockable handle(s).

(3) Refer to Low Energy Analog (LEA) voltage inputs in the installation section of the SEL-651R Instruction Manual for details.

(4) Only Available with Control Cable Interface Options 1, 4, or 6.

(5) Only Available with Control Cable Interface Options 8 or 9.

(6) Not Available with Control Cable Interface Options 3 or A.

(7) For model numbers specifying "Configurable Labels," a configuration kit (9260011 or 9260021) is provided (packaged in the



shipping box).

(8) Installed Accessories are mounted and wired inside the SEL-651R enclosure. The compatibility of selected accessory combinations must be verified using the SEL online product configurator (website).

(9) Available on AC Input Powered units only.

(10) Requires at least one 10/100BASE-T Ethernet Port.

(11) The SEL-651R cabinet solution including the pre-installed SEL-3061 is rated for -40° to +50°C. The SEL-3061 accessory includes two floor mounted N-type antenna surge arresters. It is pre-wired to both a Serial and an Ethernet port on the SEL-651R. External antennas and cables must be ordered separately. Refer to the SEL-3061 web page for cable and antenna options.

(12) Not available with Extra I/O Option X.

(13) Door switch is wired to SEL-3622 and SEL-651R IN104.

(14) Only Available with Control Cable Interface Options 1 or 4.

(15) Only Available with CCI Options 2 and A. Only Available with Enclosure Options C and D. Only Available with SIV Options A, B and G.

(16) Only Available with CCI Options 2 and A. Only Available with Enclosure options C and D. Only Available with SIV options B and G.

(17) The SEL-FR12 accessory includes a floor-mounted N-type antenna surge arrester. SEL-FT50 Fault Transmitters, an external antenna, and cable must be ordered separately. Refer to the SEL-FR12 web page for cable and antenna options.

(18) The SEL-2401 comes with the 915900045 Antenna Kit.

Note: The SEL-651R manual is available for download at selinc.com. One complimentary printed instruction manual is available upon request with each product purchased.

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

---

**SEL** SCHWEITZER ENGINEERING LABORATORIES, INC.

2350 NE Hopkins Court - Pullman, WA 99163 USA

Phone: +1.509.332.1890 - Fax: +1.509.332.7990