

SEL-411L

Current Differential Relay with full Distance Backup Protection.

NOTE: When applying the SEL-411L relay in line current differential applications, relays at all terminals of a protected line must use firmware that is compatible as shown in Table A.1.

Part Number:

0 4 1 1 L **X**

Firmware

Standard Current Differential and Distance Element	0
Standard Plus Sub-cycle Distance Elements, Series Compensation Logic and Traveling Wave Fault Location*	1

Conformal Coat

None	X
Conformal Coated Circuit Boards*	2

Power Supply

48-125 Vdc or 110-120 Vac	4
125-250 Vdc or 110-240 Vac	6

Connector Type

Screw Terminal Block	X
Connectorized [®] Relay*	2

Secondary Inputs

300V Phase - Neutral Maximum (Wye), 1 Amp Phase	1
300V Phase - Neutral Maximum (Wye), 5 Amp Phase	5

Ethernet Communications Protocols and 87L Line Current Differential

None	X X
FTP, Telnet, Synchrophasors and DNP3 LAN/WAN ⁽¹⁾	B
FTP, Telnet, Synchrophasors, DNP3 LAN/WAN and IEC 61850 ^{(1)*}	C

Ethernet Connection Options

None	X X
Four 10/100BASE-T Connectors ^{(1)*}	6
Four 100BASE-FX Connectors ^{(1)*}	7
Two 10/100BASE-T and Two 100BASE-FX Connectors ^{(1)(4)*}	8

Serial Line Current Differential Communications Channel 1

None ⁽²⁾	0 0
Isolated EIA-422*	A
Isolated G.703 Co-Directional*	B
850nm IEEE C37.94 Fiber*	C
1300nm Fiber*	D
1550nm Fiber*	E
1300nm IEEE C37.94 Fiber*	H

8 Optoisolated Independent Level-Sensitive Inputs, 8 High-Speed High-Current Interrupting Form A Outputs*	E
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I/O Board Position C Input Voltage

48 Vdc	2
110 Vdc	3
125 Vdc	4
220 Vdc	5
250 Vdc	6

I/O Board Position D for 6U Chassis Only

Empty I/O Board Position	0 X
8 Optoisolated Independent Level-Sensitive Inputs, 13 Standard Form A, 2 Standard Form C Outputs*	2
8 Optoisolated Independent Level-Sensitive Inputs, 13 High-Current Interrupting Form A, 2 Standard Form C Outputs*	7
24 Optoisolated Level-Sensitive Inputs, 2 Standard and 6 High-Speed High-Current Interrupting Form A Outputs*	C
24 Optoisolated Level-Sensitive Inputs, 8 Standard Form A Outputs*	D
8 Optoisolated Independent Level-Sensitive Inputs, 8 High-Speed High-Current Interrupting Form A Outputs*	E

I/O Board Position D Input Voltage

48 Vdc	2
110 Vdc	3
125 Vdc	4
220 Vdc	5
250 Vdc	6

Accessories

Literature	
Printed Instruction Manual ⁽³⁾	P M 4 1 1 L - K T - 0 1
Wiring Harness	
Connectorized [®] Wiring Harness for SEL-411L Relays ^{(5)*}	W A 0 4 2 1

* Additional Cost

(1) Ports 5A and 5B can be configured for line current differential communication or for IEEE Precision Time Protocol (PTP). If PTP is enabled, 87L over Ethernet will be performed on Ports C, D instead of A, B. PTP is only available on Ports A, B.

(2) Line current differential protection requires serial line differential communication options.

(3) This product comes standard with a CD manual. One complimentary printed instruction manual is available upon request with each product purchased.

(4) Ports 5A and 5C are dedicated as 100BASE-FX and Ports 5B and 5D are dedicated as 10/100BASE-T.

(5) Specify Connectorized[®] Wiring Harness WA0421 using WI-2262. The standard option (WA04210BC2A) ships in the same box as the relay. All other options ship in a separate box.

Table A.1

Firmware Version	Firmware is compatible with:
R100 through R107	R100 through R107
R108 and higher	R108 and higher

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