

# SEL-487E-3,-4

Transformer Protection Relay and Station Phasor Measurement Unit

Standard with Synchrophasor Measurement, Serial Protocols<sup>(1)</sup>, 8 Outputs, 7 Inputs, ACSELERATOR QuickSet® SEL-5030 Software<sup>(2)</sup> and Configurable Labels

UL Approved

Part Number:

0 4 8 7 E    X X    X    X

**Firmware**

Standard with Voltage, Frequency, Directional Overcurrent, and Volts-Per-Hertz Elements

3

Station Phasor Measurement Unit

4

**Connector Type, Secondary Voltage Input, and Conformal Coat**

Screw Terminal Block, 300V Phase-Neutral Maximum (Wye), No Conformal Coat

X

Connectorized® Relay, 300V Phase-Neutral Maximum (Wye), No Conformal Coat\*

1

Screw Terminal Block, 300V Phase-Neutral Maximum (Wye), Conformal Coat\*

2

Connectorized® Relay, 300V Phase-Neutral Maximum (Wye), Conformal Coat\*

3

Screw Terminal CT, Euro Connector with IEEE C37.92 Low Energy Analog Voltage Inputs (LEA), Conformal Coated<sup>(3)\*</sup>

4

Connectorized® CT, Euro Connector with IEEE C37.92 Low Energy Analog Voltage Inputs (LEA), Conformal Coat<sup>(3)\*</sup>

5

**Power Supply**

24-48 Vdc

2

48-125 Vdc or 110-120 Vac

4

125-250 Vdc or 110-240 Vac

6

**AC Input Card 1 Configuration (Current Channels S, T, U)**

S (Three-Phase) = 5A

T (Three-Phase) = 5A

U (Three-Phase) = 5A

1

S (Three-Phase) = 5A

T (Three-Phase) = 5A

U (Three-Phase) = 1A

2

S (Three-Phase) = 5A

T (Three-Phase) = 1A

U (Three-Phase) = 1A

3

S (Three-Phase) = 1A

T (Three-Phase) = 1A

U (Three-Phase) = 1A

4

**AC Input Card 2 Configuration (Current Channels W, X, Y<sup>(4)</sup>, <sup>(5)</sup>)**

W (Three-Phase) = 5A

X (Three-Phase) = 5A

Y (Neutral x 3) = 5A,5A,5A

1

W (Three-Phase) = 5A

X (Three-Phase) = 5A

Y (Neutral x 3) = 5A,5A,1A

2

W (Three-Phase) = 5A

X (Three-Phase) = 5A

Y (Neutral x 3) = 5A,1A,1A

3

W (Three-Phase) = 5A X (Three-Phase) = 5A Y (Neutral x 3) = 1A,1A,1A	4
W (Three-Phase) = 1A X (Three-Phase) = 1A Y (Neutral x 3) = 5A,5A,5A	5
W (Three-Phase) = 1A X (Three-Phase) = 1A Y (Neutral x 3) = 5A,5A,1A	6
W (Three-Phase) = 1A X (Three-Phase) = 1A Y (Neutral x 3) = 5A,1A,1A	7
W (Three-Phase) = 1A X (Three-Phase) = 1A Y (Neutral x 3) = 1A,1A,1A	8

### Ethernet Communications Protocols

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

### Ethernet Connection Options

None	X	X
Ports 5A, 5B <sup>(6)</sup> with PTP: Ethernet Card with Two 10/100BASE-T Connectors*	1	
Ports 5A, 5B <sup>(6)</sup> with PTP: Ethernet Card with Two 100BASE-FX Connectors*	3	
Ports 5A, 5B <sup>(6)</sup> with PTP: Ethernet Card with One 10/100BASE-T, One 100BASE-FX Connector*	5	
Ports 5C, 5D <sup>(7)</sup> : Ethernet Card with Two 10/100BASE-T Connectors*	0	
Ports 5C, 5D <sup>(7)</sup> : Ethernet Card with Two 100BASE-FX Connectors*	2	
Ports 5C, 5D <sup>(7)</sup> : Ethernet Card with One 10/100BASE-T, One 100BASE-FX Connector*	4	

### Mainboard Input Voltage

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

### Mounting

Horizontal Rack Mount	H
Horizontal Panel Mount	3
Vertical Rack Mount	V 5 X X X X
Vertical Panel Mount	4 5 X X X X

### Chassis

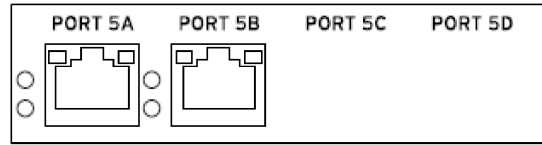
5U, No Additional I/O Board	5 X X X X
6U, Up to One Additional I/O Board	6 X X
7U, Up to Two Additional I/O Boards	7



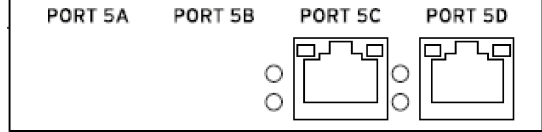
(4) Current Channel Y is comprised of three single-phase neutral current inputs.

(5) When using the Y current channels for synchrophasor data, all Y channel currents must have the same nominal current rating (1A,1A,1A or 5A,5A,5A) to provide proper synchrophasor scaling. **AC Input Card 2 Configuration** options 1, 4, 5, or 8 meet this criteria.

(6) 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.



(7) PTP is not available on Ports 5C and 5D.



(8) The 24 Optoisolated Inputs are comprised of 18 Common Inputs and 6 Independent Inputs. The 8 outputs are comprised of 6 High-Speed, High-Current Interrupting Outputs and 2 Standard Outputs.

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

(10) Specify Connectorized® Wiring Harness WA0487E using WI-10630. All wiring harnesses ship in a separate box.

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

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