

## SEL-451-5 with TiDL Technology

Protection, Automation, and Control System, Standard with Serial Communication Protocols<sup>(1)</sup>, Synchrophasor Measurement, 8 Outputs, 7 Inputs, 4U Chassis, Front Panel with 24 Target LEDs, 12 Operator Control Pushbuttons, and Tri-Color LEDs, ACSELERATOR<sup>®</sup> QuickSet SEL-5030 Software<sup>(2)</sup> and Configurable Labels

UL Approved

Part Number: **0 4 5 1 5 3 R X 3 X X**

### Firmware

Standard

### Power Supply

24-48 Vdc

48-125 Vdc or 110-120 Vac

125-250 Vdc or 110-240 Vac

### Secondary Input Current

Time-Domain Link (TiDL)\*

Time-Domain Link (TiDL) with High Impedance Fault Detection\*

### Ethernet Communications Protocols

None

FTP, Telnet, Synchrophasors, and DNP3 LAN/WAN

FTP, Telnet, Synchrophasors, DNP3 LAN/WAN, and IEC 61850\*

### Ethernet Connection Options

None

Ports 5A, 5B<sup>(3)</sup> with PTP: Ethernet Card with Two 10/100BASE-T Connectors\*

Ports 5A, 5B<sup>(3)</sup> with PTP: Ethernet Card with Two 100BASE-FX Connectors\*

Ports 5A, 5B<sup>(3)</sup> with PTP: Ethernet Card with One 10/100BASE-T, One 100BASE-FX Connector\*

Ports 5C, 5D<sup>(4)</sup>: Ethernet Card with Two 10/100BASE-T Connectors\*

Ports 5C, 5D<sup>(4)</sup>: Ethernet Card with Two 100BASE-FX Connectors\*

Ports 5C, 5D<sup>(4)</sup>: Ethernet Card with One 10/100BASE-T, One 100BASE-FX Connector\*

**Mainboard Input 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 |  |  |  |  |  |  |  |  |  |  |   |   | 3 |   |   |   |
|  | 125 Vdc |  |  |  |  |  |  |  |  |  |  |   |   |   | 4 |   |   |
|  | 220 Vdc |  |  |  |  |  |  |  |  |  |  |   |   |   |   | 5 |   |
|  | 250 Vdc |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   | 6 |

**Mounting**

|                        |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |
|------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|--|--|
| Horizontal Rack Mount  |  |  |  |  |  |  |  |  |  |  |  |  |  | H |   |  |  |
| Horizontal Panel Mount |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 |   |  |  |
| Vertical Rack Mount    |  |  |  |  |  |  |  |  |  |  |  |  |  | V |   |  |  |
| Vertical Panel Mount   |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 4 |  |  |

**I/O Board Position B**

|   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|
| 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 <sup>(5)*</sup>   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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 |   |
| Auxiliary Trip/Close Pushbuttons, 24 Optoisolated Level-Sensitive Inputs, 4 High-Current Interrupting Form A Outputs <sup>(7)*</sup>                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | A |   |
| Auxiliary Trip/Close Pushbuttons with Guards, 24 Optoisolated Level-Sensitive Inputs, 4 High-Current Interrupting Form A Outputs <sup>(6)(7)*</sup> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | B |   |

**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 |

