

## SEL-421-4, -5 with TiDL Technology

Protection, Automation, and Control System, Standard with Serial Communication Protocols<sup>(1)</sup>, Synchrophasor Measurement, 8 Outputs, 7 Inputs<sup>(2)</sup>, 4U Chassis, Front Panel with 24 Target LEDs, 12 Operator Control Push buttons, and Tri-Color LEDs, ACSELERATOR<sup>®</sup> QuickSet SEL-5030 Software<sup>(3)</sup>, and Configurable Labels

Part Number:                                      **0 4 2 1**    **3 R X**    **X**    **3**    **X X**    **X**

### Firmware

|   |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Standard (Replaces SEL-421-1, -2)   |  |  |  | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Standard Plus Sub-cycle Elements, Series Compensation Logic, and Full Automation (Replaces SEL-421-0,-3)* |  |  |  | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

### Power Supply

|                            |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 24-48 Vdc                  |  |  |  | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 48-125 Vdc or 110-120 Vac  |  |  |  | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 125-250 Vdc or 110-240 Vac |  |  |  | 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

### Ethernet Communications Protocols

|  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| None   |  |  |  |  |  |  |  |  |  | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FTP, Telnet, Synchrophasors and DNP3             |  |  |  |  |  |  |  |  |  | B |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FTP, Telnet, Synchrophasors, DNP3 and IEC 61850* |  |  |  |  |  |  |  |  |  | C |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

### Ethernet Connection Options

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

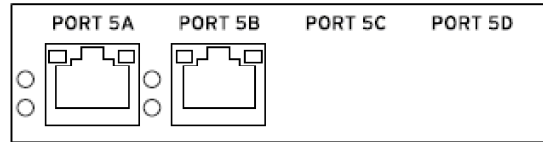
### Mainboard Input Voltage<sup>(2)</sup>

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

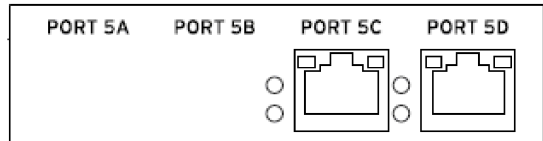


- (1) Serial Protocols: SEL ASCII, CompressedASCII, Settings FileTransfer, SEL Fast Meter with Configuration, Fast Operate, Fast SER, Phasor Measurement, Enhanced MIRRORRED BITS® Communications, DNP3 Level 2 Server Plus Dial-Out and Virtual Terminal.
- (2) Mainboard Configuration has 3 High-Current Interrupting Outputs, 2 Standard Form A Outputs, 3 Standard Form C Outputs and 7 Optoisolated Level-Sensitive Inputs.
- (3) Download acSELERATOR QuickSet SEL-5030 software for free at <https://www.selinc.com/software/solutions/>. acSELERATOR QuickSet on CD (503001WX4) is available upon request.

(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.



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



- (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.

***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