

SEL-787

Transformer Protection Relay

SEL-787 Base Unit

- Vertical Chassis
 - Front Panel
 - Large LCD Display
 - 4 Programmable Pushbuttons w/8 LEDs
 - 8 Target LEDs (6 Programmable)
 - Operator Control Interface
 - EIA-232 Port
 - Processor and Communications Card
 - EIA-232 Port
 - Multimode (ST®) Fiber-Optic Serial Port (SEL-2812 Compatible)
 - IRIG-B Time Code Input
 - 6 AC Current Inputs Card
 - Power Supply Card with 2 DI, 3 DO
 - ACSELFRATOR QuickSet® SEL-5030 Software
 - User Configurable Labels
 - Instruction Manual CD (printed manual available)
 - Synchrophasors with C37.118 Protocol
 - Protocols
 - Modbus® RTU
 - SEL ASCII and Compressed ASCII
 - SEL Fast Meter, Fast Operate, Fast SER
 - SEL Fast Message
 - Ymodem File Transfer
 - SEL MIRRORED BITS®
 - Event Messenger®
 - SEL-787-0 Provides 3 Expansion Slots for Optional Cards.
 - SEL-787-1 and SEL-787-E Provide 2 Expansion Slots for Optional Cards.

Part Number:

0 7 8 7 x **0**

Firmware

SELECT Power Supply with I/O Option Slot A

SELECT Processor Board Option Slot B

Processor Board (SELECT CPU/COM)	All Slot B options include EIA-232 Front, IRIG-B, Fiber Optic Serial Multimode ST, SEL ASCII, Compressed ASCII, Fast Meter, Fast Operate, Fast Message, MIRRORED BITS, and Modbus RTU	
-------------------------------------	---	--

SELECT Ethernet/Rear Serial Options Slot B

Ethernet/Rear Serial Options	No Ethernet, EIA-232 Rear	
	No Ethernet, EIA-485 Rear	
	Single 10/100Base-T Ethernet, EIA-232 Rear*	
	Single 10/100Base-T Ethernet, EIA-485 Rear*	
	Single 100Base-FX MM LC Ethernet, EIA-232 Rear*	
	Dual 10/100Base-T Ethernet, EIA-232 Rear*	
	Dual 100Base-FX MM LC Ethernet, EIA-232 Rear*	

SELECT Protocols Slot B

Protocols	Standard	
	Standard plus IEC 61850 (requires Ethernet)*	
	Standard plus DNP3*	
	Standard plus DNP3 plus IEC 61850 (requires Ethernet)*	

SELECT I/O Card Option Slot C

No Card	Empty	
3 Digital Input / 4 Digital Output / 1 4 -20 mA Analog Output (SELECT 3 DI / 4 DO / 1 AO) ⁽¹⁾	125 Vdc/Vac DI, Electromechanical DO*	
	24 Vdc/Vac DI, Electromechanical DO*	
	48 Vdc/Vac DI, Electromechanical DO*	
	110 Vdc/Vac DI, Electromechanical DO*	
	220 Vdc/Vac DI, Electromechanical DO*	
	250 Vdc/Vac DI, Electromechanical DO*	
4 Digital Input / 4 Digital Output (SELECT 4 DI / 4 DO)	125 Vdc/Vac DI, Electromechanical DO*	
	24 Vdc/Vac DI, Electromechanical DO*	

	48 Vdc/Vac DI, Electromechanical DO*	
	110 Vdc/Vac DI, Electromechanical DO*	
	220 Vdc/Vac DI, Electromechanical DO*	
	250 Vdc/Vac DI, Electromechanical DO*	
	125 Vdc/Vac DI, Fast High-Current Interrupting DO*	
	24 Vdc/Vac DI, Fast High-Current Interrupting DO*	
	48 Vdc/Vac DI, Fast High-Current Interrupting DO*	
	110 Vdc/Vac DI, Fast High-Current Interrupting DO*	
	220 Vdc/Vac DI, Fast High-Current Interrupting DO*	
	250 Vdc/Vac DI, Fast High-Current Interrupting DO*	
4 Analog Input / 4 Analog Output (SELECT 4 AI / 4 AO) (2)	±20 mA or ±10 V Jumper Selectable*	
Serial Communication Card (SELECT EIA-232/485)*		
8 Digital Input (SELECT 8 DI)	125 Vdc/Vac*	
	24 Vdc/Vac*	
	48 Vdc/Vac*	
	110 Vdc/Vac*	
	220 Vdc/Vac*	
	250 Vdc/Vac*	
4 Digital Input / 3 Digital Output (2 Form C, 1 Form B) (SELECT 4 DI / 3 DO)	125 Vdc/Vac DI, Electromechanical DO*	
	24 Vdc/Vac DI, Electromechanical DO*	
	48 Vdc/Vac DI, Electromechanical DO*	
	110 Vdc/Vac DI, Electromechanical DO*	
	220 Vdc/Vac DI, Electromechanical DO*	
	250 Vdc/Vac DI, Electromechanical DO*	

SELECT I/O Card Option Slot D

No Card	Empty	
3 Digital Input / 4 Digital Output / 1 4 -20 mA Analog Output (SELECT 3 DI / 4 DO / 1 AO) ⁽¹⁾	125 Vdc/Vac DI, Electromechanical DO*	

	24 Vdc/Vac DI, Electromechanical DO*	
	48 Vdc/Vac DI, Electromechanical DO*	
	110 Vdc/Vac DI, Electromechanical DO*	
	220 Vdc/Vac DI, Electromechanical DO*	
	250 Vdc/Vac DI, Electromechanical DO*	
4 Digital Input / 4 Digital Output (SELECT 4 DI / 4 DO)	125 Vdc/Vac DI, Electromechanical DO*	
	24 Vdc/Vac DI, Electromechanical DO*	
	48 Vdc/Vac DI, Electromechanical DO*	
	110 Vdc/Vac DI, Electromechanical DO*	
	220 Vdc/Vac DI, Electromechanical DO*	
	250 Vdc/Vac DI, Electromechanical DO*	
	125 Vdc/Vac DI, Fast High-Current Interrupting DO*	
	24 Vdc/Vac DI, Fast High-Current Interrupting DO*	
	48 Vdc/Vac DI, Fast High-Current Interrupting DO*	
	110 Vdc/Vac DI, Fast High-Current Interrupting DO*	
	220 Vdc/Vac DI, Fast High-Current Interrupting DO*	
	250 Vdc/Vac DI, Fast High-Current Interrupting DO*	
4 Analog Input / 4 Analog Output (SELECT 4 AI / 4 AO) (2)	±20 mA or ±10 V Jumper Selectable*	
10 RTD Input (SELECT 10 RTD)*		
8 Digital Input (SELECT 8 DI)	125 Vdc/Vac*	
	24 Vdc/Vac*	
	48 Vdc/Vac*	
	110 Vdc/Vac*	
	220 Vdc/Vac*	
	250 Vdc/Vac*	
4 Digital Input / 3 Digital Output (2 Form C, 1 Form B) (SELECT 4 DI / 3 DO)	125 Vdc/Vac DI, Electromechanical DO*	

	24 Vdc/Vac DI, Electromechanical DO*		D	B	
	48 Vdc/Vac DI, Electromechanical DO*		D	C	
	110 Vdc/Vac DI, Electromechanical DO*		D	D	
	220 Vdc/Vac DI, Electromechanical DO*		D	G	
	250 Vdc/Vac DI, Electromechanical DO*		D	H	

SELECT I/O Card Option Slot E

No Card	Empty		0		0	X	
3 Digital Input / 4 Digital Output / 1 4 -20 mA Analog Output (SELECT 3 DI / 4 DO / 1 AO) ⁽¹⁾	125 Vdc/Vac DI, Electromechanical DO*		0		B	A	
	24 Vdc/Vac DI, Electromechanical DO*		0		B	B	
	48 Vdc/Vac DI, Electromechanical DO*		0		B	C	
	110 Vdc/Vac DI, Electromechanical DO*		0		B	D	
	220 Vdc/Vac DI, Electromechanical DO*		0		B	G	
	250 Vdc/Vac DI, Electromechanical DO*		0		B	H	
4 Digital Input / 4 Digital Output (SELECT 4 DI / 4 DO)	125 Vdc/Vac DI, Electromechanical DO*		0		1	A	
	24 Vdc/Vac DI, Electromechanical DO*		0		1	B	
	48 Vdc/Vac DI, Electromechanical DO*		0		1	C	
	110 Vdc/Vac DI, Electromechanical DO*		0		1	D	
	220 Vdc/Vac DI, Electromechanical DO*		0		1	G	
	250 Vdc/Vac DI, Electromechanical DO*		0		1	H	
	125 Vdc/Vac DI, Fast High-Current Interrupting DO*		0		C	A	
	24 Vdc/Vac DI, Fast High-Current Interrupting DO*		0		C	B	
	48 Vdc/Vac DI, Fast High-Current Interrupting DO*		0		C	C	
	110 Vdc/Vac DI, Fast High-Current Interrupting DO*		0		C	D	
	220 Vdc/Vac DI, Fast High-Current Interrupting DO*		0		C	G	

	250 Vdc/Vac DI, Fast High-Current Interrupting DO*	0	C H
4 Analog Input / 4 Analog Output (SELECT 4 AI / 4 AO) (⁽²⁾)	±20 mA or ±10 V Jumper Selectable*	0	6 X
8 Digital Input (SELECT 8 DI)	125 Vdc/Vac*	0	3 A
	24 Vdc/Vac*	0	3 B
	48 Vdc/Vac*	0	3 C
	110 Vdc/Vac*	0	3 D
	220 Vdc/Vac*	0	3 G
	250 Vdc/Vac*	0	3 H
Neutral AC Current Input (SELECT 1 ACI)	1 Amp Neutral*	1	A 1
	5 Amp Neutral*	1	A 5
Neutral AC Current Input / 3-Phase AC Voltage (300 Vac) Input (SELECT 1 ACI / 3 AVI)	1 Amp Neutral*	E	7 1
	5 Amp Neutral*	E	7 5
4 Digital Input / 3 Digital Output (2 Form C, 1 Form B) (SELECT 4 DI / 3 DO)	125 Vdc/Vac DI, Electromechanical DO*		D A
	24 Vdc/Vac DI, Electromechanical DO*		D B
	48 Vdc/Vac DI, Electromechanical DO*		D C
	110 Vdc/Vac DI, Electromechanical DO*		D D
	220 Vdc/Vac DI, Electromechanical DO*		D G
	250 Vdc/Vac DI, Electromechanical DO*		D H

SELECT I/O Card Option Slot Z

6 AC Current Input (SELECT 6 ACI)	1 Amp Winding 1, 1 Amp Winding 2	8 1
	1 Amp Winding 1, 5 Amp Winding 2	8 2
	5 Amp Winding 1, 5 Amp Winding 2	8 5

Conformal Coat

None	0
Conformally Coated Circuit Boards*	1

Accessories

Literature	Printed Instruction Manual ⁽³⁾	P M 7 8 7 - 0 1
------------	--	-----------------

* Additional Cost

⁽¹⁾ Only one (1) 3 DI /4 DO / 1 AO card per chassis.

⁽²⁾ Only one (1) 4 AI / 4 AO card per chassis.

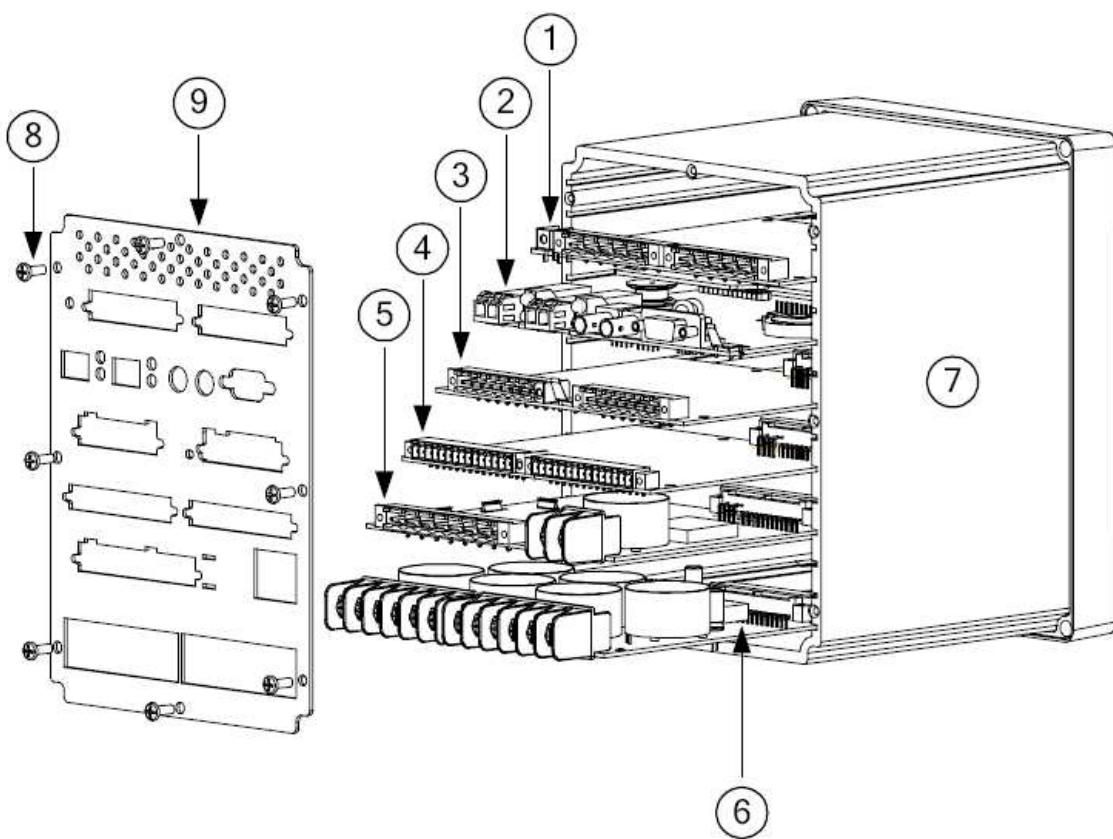
⁽³⁾ One complimentary printed instruction manual is available upon request with each product purchased.

NOTES:

- Base unit includes slots A, B (EIA-232), Z, HMI, and Front EIA-232 Port.
- Download ACSELERATOR QuickSet SEL-5030 software for free at <https://www.selinc.com/softwaresolutions/>. ACSELERATOR QuickSet on CD (503001WX4) is available upon request.
- A configuration kit is provided for the front panel configurable labels (packaged in the shipping box). For additional kits, order SEL part number 9260134 (2 sheet kit) or 9260135 (25 sheet kit).

- Order external AC powered RTD module SEL-2600A or external DC powered RTD module SEL-2600D using WI-5997 to interface remote external resistive temperature devices (RTD) or use internal RTD inputs option in Slot D.
- The SEL-787 can be ordered with a CD manual.
- The SEL-787 option cards are orderable separately for field installation. Use WI-5932 and contact your SEL representative to order option cards.
- For SEL-787 Mounting Accessories including adapter plates, dust protectors, etc go to the [SEL Mounting Selector](#)
- Remote I/O with SEL-2505 Remote I/O Module (SEL-2812 compatible ST option only).

Chassis Card Slot Configuration Example



- ① SELECT Power Supply Card with I/O (Slot A)
- ② SELECT Processor and Communications Card (Slot B)
- ③ SELECT I/O Expansion Card (Slot C)
- ④ SELECT I/O Expansion Card (Slot D)
- ⑤ SELECT I/O Expansion Card (Slot E)

- ⑥ SELECT ACI Card (Slot Z)
- ⑦ Device Case
- ⑧ Rear Panel Mounting Screws
- ⑨ Rear Panel

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