SEL SCHWEITZER ENGINEERING LABORATORIES, INC.   www.selinc.com

SEL-710
Motor Protection Relay

SEL-710 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
  - IRIG-B Time Code Input or PTC Input
- Power Supply Card with 2 DI, 3 DO

- IA, IB, IC, IN Current Inputs Card
- ACSELERATOR QuickSet® SEL-5030 Software
- User Configurable Labels
- Instruction Manual CD (printed manual available)
- Protocols
  - Modbus® RTU
  - SEL ASCII and Compressed ASCII
  - SEL Fast Meter, Fast Operate, Fast SER
  - SEL Fast Message
  - Ymodem File Transfer
  - SEL MIRRORED BITS® Communications
- 3 Expansion Slots for Optional Cards

Part Number:

0	7	1	0	0													

SELECT Power Supply with I/O Option Slot A

Power Supply	Digital Input																
Power Supply 110–250 Vdc, 110–240 Vac, 50/60 Hz (SELECT PSIO / 2 DI / 3 DO)	125 Vdc/Vac Digital Input				1	A											
	24 Vdc/Vac Digital Input				1	B											
	48 Vdc/Vac Digital Input				1	C											
	110 Vdc/Vac Digital Input				1	D											
	220 Vdc/Vac Digital Input				1	G											
	250 Vdc/Vac Digital Input				1	H											
Power Supply 24–48 Vdc (SELECT PSIO / 2 DI / 3 DO)	125 Vdc/Vac Digital Input				2	A											
	24 Vdc/Vac Digital Input				2	B											
	48 Vdc/Vac Digital Input				2	C											
	110 Vdc/Vac Digital Input				2	D											
	220 Vdc/Vac Digital Input				2	G											
	250 Vdc/Vac Digital Input				2	H											

SELECT Processor Board Option Slot B

Processor Board (SELECT CPU / COM)																		
All Slot B options include EIA-232 Front, Fiber-Optic Serial Port Multimode ST, SEL ASCII, Compressed ASCII, Fast Meter, Fast Operate, Fast Message, MIRRORED BITS, and Modbus RTU	EIA-232 Rear, IRIG-B															0	0	0
	EIA-485 Rear, IRIG-B															0	1	0
	EIA-232 Rear, IRIG-B, 10/100BASE-T Ethernet, Modbus TCP*															0	2	0
	EIA-232 Rear, IRIG-B, 10/100BASE-T Ethernet, Modbus TCP, IEC 61850*															0	2	1

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Description	Code
EIA-485 Rear, IRIG-B, 10/100BASE-T Ethernet, Modbus TCP*	0 3 0
EIA-485 Rear, IRIG-B, 10/100BASE-T Ethernet, Modbus TCP, IEC 61850*	0 3 1
EIA-232 Rear, PTC Thermistor Input	1 0 0
EIA-485 Rear, PTC Thermistor Input	1 1 0
EIA-232 Rear, PTC Thermistor Input, 10/100BASE-T Ethernet, Modbus TCP*	1 2 0
EIA-232 Rear, PTC Thermistor Input, 10/100BASE-T Ethernet, Modbus TCP, IEC 61850*	1 2 1
EIA-485 Rear, PTC Thermistor Input, 10/100BASE-T Ethernet, Modbus TCP*	1 3 0
EIA-485 Rear, PTC Thermistor Input, 10/100BASE-T Ethernet, Modbus TCP, IEC 61850*	1 3 1
EIA-232 Rear, IRIG-B, Single 100BASE-FX MM LC Ethernet, Modbus TCP*	0 4 0
EIA-232 Rear, IRIG-B, Single 100BASE-FX MM LC Ethernet, Modbus TCP, IEC 61850*	0 4 1
EIA-232 Rear, IRIG-B, Dual 10/100BASE-T Ethernet, Modbus TCP*	0 6 0
EIA-232 Rear, IRIG-B, Dual 10/100BASE-T Ethernet, Modbus TCP, IEC 61850*	0 6 3
EIA-232 Rear, IRIG-B, Dual 100BASE-FX MM LC Ethernet, Modbus TCP*	0 8 0
EIA-232 Rear, IRIG-B, Dual 100BASE-FX MM LC Ethernet, Modbus TCP, IEC 61850*	0 8 3

SELECT I/O Card Option Slot C

Category	Description	Code
No Card	Empty	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*	B A
	24 Vdc/Vac DI, Electromechanical DO*	B B
	48 Vdc/Vac DI, Electromechanical DO*	B C
	110 Vdc/Vac DI, Electromechanical DO*	B D
	220 Vdc/Vac DI, Electromechanical DO*	B G
	250 Vdc/Vac DI, Electromechanical DO*	B H
4 Digital Input / 4 Digital Output (SELECT 4 DI / 4 DO)	125 Vdc/Vac DI, Electromechanical DO*	1 A

	24 Vdc/Vac DI, Electromechanical DO*	1	B
	48 Vdc/Vac DI, Electromechanical DO*	1	C
	110 Vdc/Vac DI, Electromechanical DO*	1	D
	220 Vdc/Vac DI, Electromechanical DO*	1	G
	250 Vdc/Vac DI, Electromechanical DO*	1	H
	125 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	A
	24 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	B
	48 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	C
	110 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	D
	220 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	G
	250 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	H
8 Analog Input (SELᴇᴄᴛ 8 AI)	±20 mA or ±10 V Jumper Selectable*	5	X
4 Analog Input / 4 Analog Output (SELᴇᴄᴛ 4 AI / 4 AO)[2]	±20 mA or ±10 V Jumper Selectable*	6	X
Serial Communication Card (SELᴇᴄᴛ EIA-232/485)*		A	0
8 Digital Input (SELᴇᴄᴛ 8 DI)	125 Vdc/Vac*	3	A
	24 Vdc/Vac*	3	B
	48 Vdc/Vac*	3	C
	110 Vdc/Vac*	3	D
	220 Vdc/Vac*	3	G
	250 Vdc/Vac*	3	H
4 Digital Input / 3 Digital Output (2 Form C, 1 Form B) (SELᴇᴄᴛ 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

SELᴇᴄᴛ I/O Card Option Slot D

No Card	Empty	0	X
3 Digital Input / 4 Digital Output / 1 4–20 mA Analog Output (SELᴇᴄᴛ 3 DI / 4 DO / 1 AO)[1]	125 Vdc/Vac DI, Electromechanical DO*	B	A
	24 Vdc/Vac DI, Electromechanical DO*	B	B

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Category	Specification	Code	Code
	48 Vdc/Vac DI, Electromechanical DO*	B	C
	110 Vdc/Vac DI, Electromechanical DO*	B	D
	220 Vdc/Vac DI, Electromechanical DO*	B	G
	250 Vdc/Vac DI, Electromechanical DO*	B	H
4 Digital Input / 4 Digital Output (SELECT 4 DI / 4 DO)	125 Vdc/Vac DI, Electromechanical DO*	1	A
	24 Vdc/Vac DI, Electromechanical DO*	1	B
	48 Vdc/Vac DI, Electromechanical DO*	1	C
	110 Vdc/Vac DI, Electromechanical DO*	1	D
	220 Vdc/Vac DI, Electromechanical DO*	1	G
	250 Vdc/Vac DI, Electromechanical DO*	1	H
	125 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	A
	24 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	B
	48 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	C
	110 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	D
	220 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	G
	250 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	H
8 Analog Input (SELECT 8 AI)	±20 mA or ±10 V Jumper Selectable*	5	X
4 Analog Input / 4 Analog Output (SELECT 4 AI / 4 AO)[2]	±20 mA or ±10 V Jumper Selectable*	6	X
10 RTD Input (SELECT 10 RTD)*		9	X
8 Digital Input (SELECT 8 DI)	125 Vdc/Vac*	3	A
	24 Vdc/Vac*	3	B
	48 Vdc/Vac DI*	3	C
	110 Vdc/Vac DI*	3	D
	220 Vdc/Vac DI*	3	G
	250 Vdc/Vac DI*	3	H
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 E

Card	Specification	Code	
No Card	Empty	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*	B	A
	24 Vdc/Vac DI, Electromechanical DO*	B	B
	48 Vdc/Vac DI, Electromechanical DO*	B	C
	110 Vdc/Vac DI, Electromechanical DO*	B	D
	220 Vdc/Vac DI, Electromechanical DO*	B	G
	250 Vdc/Vac DI, Electromechanical DO*	B	H
4 Digital Input / 4 Digital Output (SELECT 4 DI / 4 DO)	125 Vdc/Vac DI, Electromechanical DO*	1	A
	24 Vdc/Vac DI, Electromechanical DO*	1	B
	48 Vdc/Vac DI, Electromechanical DO*	1	C
	110 Vdc/Vac DI, Electromechanical DO*	1	D
	220 Vdc/Vac DI, Electromechanical DO*	1	G
	250 Vdc/Vac DI, Electromechanical DO*	1	H
	125 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	A
	24 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	B
	48 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	C
	110 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	D
	220 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	G
	250 Vdc/Vac DI, Fast High-Current Interrupting DO*	C	H
8 Analog Input (SELECT 8 AI)	±20 mA or ±10 V Jumper Selectable*	5	X
4 Analog Input / 4 Analog Output (SELECT 4 AI / 4 AO)[2]	±20 mA or ±10 V Jumper Selectable*	6	X
3-Phase AC Voltage Input (SELECT 3 AVI)	300 Vac Maximum*	7	1
3 AC Current (Motor Differential) / 3-Phase AC Voltage Input (SELECT 3 ACI / 3 AVI)	Voltage: 300 Vac Maximum Current: 1 A and 5 A*	7	2
8 Digital Input (SELECT 8 DI)	125 Vdc/Vac DI*	3	A
	24 Vdc/Vac DI*	3	B
	48 Vdc/Vac DI*	3	C
	110 Vdc/Vac DI*	3	D
	220 Vdc/Vac DI*	3	G

4 Digital Input / 3 Digital Output (2 Form C, 1 Form B) (SELᴇᴄᴛ 4 DI / 3 DO)	250 Vdc/Vac DI*									3	H				
	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				

SELᴇᴄᴛ I/O Card Option Slot Z

4 AC Current Input (SELᴇᴄᴛ 4 ACI)	1 A Phase, 1 A Neutral									8	1			
	1 A Phase, 5 A Neutral									8	2			
	1 A Phase, 2.5 mA High Sense Neutral									8	3			
	5 A Phase, 5 A Neutral									8	5			
	5 A Phase, 1 A Neutral									8	6			
	5 A Phase, 2.5 mA High Sense Neutral									8	7			

Conformal Coat

None													0
Conformally Coated Circuit Boards*													1

Accessories

Literature		
	Printed Instruction Manual[3]	P M 7 1 0 - 0 1

* Additional Cost
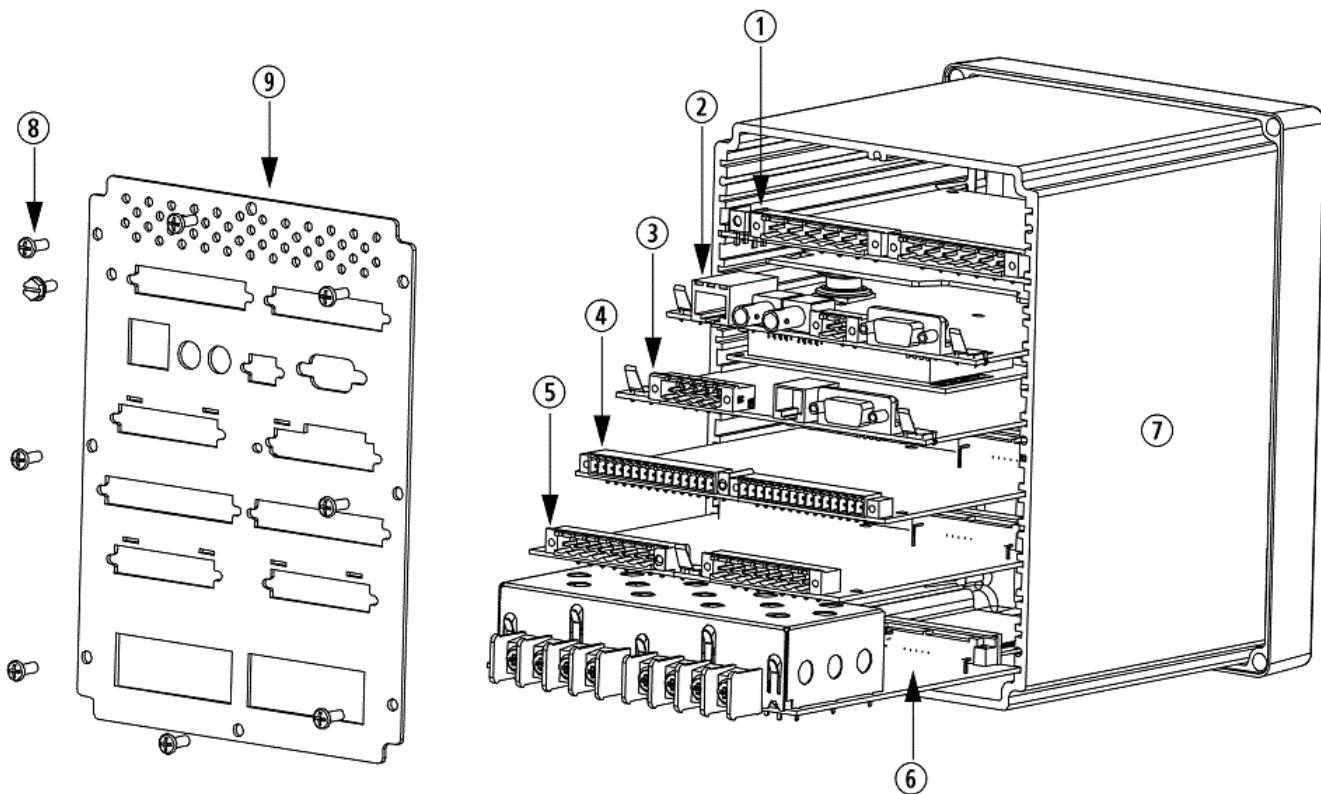[1] Only one (1) 3 DI /4 DO / 1 AO card per chassis.
[2] Only one (1) 4 AI / 4 AO card per chassis.
[3] One complimentary printed instruction manual is available upon request with each product purchased.

NOTES:
- Base unit includes slots A, B (EIA-232), Z, HMI, and front EIA-232 port.
- Order 3 ACI / 3 AVI card for motor differential protection and ac voltage input.
- Order 3 AVI card for ac voltage input only.
- Download ᴀᴄSELᴇʀᴀᴛᴏʀ QuickSet SEL-5030 Software for free at https://selinc.com/products/5030/.   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-710 can be ordered with a CD manual.
- The SEL-710 option cards are orderable separately for field installation. Use WI-5932 and contact your SEL representative to order option cards.
- For SEL-710 mounting accessories including adaptor plates, dust protectors, etc., go to the SEL Mounting Selector.
- Use an SEL-2505 Remote I/O Module (with SEL-2812 compatible ST fiber-optic port) to connect to fiber-optic, serial Port 2 on the relay, or use an SEL-2505 with an EIA-232 (DB-9) serial port to connect to EIA-232 Port 3 on the relay.

Chassis Card Slot Configuration

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

⑥ SELᴇᴄᴛ 4 ACI Card (Slot Z)
⑦ Device Case
⑧ Rear-Panel Mounting Screws
⑨ Rear Panel

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

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