

**SEL-2414**  
Transformer Monitor

**SEL-2414 Base Unit**

- Vertical Chassis
- Front Panel
  - Large LCD Display
  - 4 Programmable Pushbuttons w/LEDs
  - 7 Programmable LEDs
  - Operator Control Interface
  - EIA-232 Port
- Processor and Communications Board
  - EIA-232 Port
  - IRIG-B Time Code Input
- Power Supply Card with 2 DI, 3 DO
- 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
  - Ymodem File Transfer
  - SEL MIRRORRED BITS

Part Number:

2	4	1	4																
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**Chassis**

Vertical Panel Mount				2																
Vertical Surface Mount*				3																

**SELEct I/O Card Option Slot A**

Power Supply 125/250 Vdc/Vac	24 Vdc/Vac Digital Input					1	B													
	48 Vdc/Vac Digital Input					1	C													
	110 Vdc/Vac Digital Input					1	D													
	125 Vdc/Vac Digital Input					1	A													
	220 Vdc/Vac Digital Input					1	G													
	250 Vdc/Vac Digital Input					1	H													
Power Supply 24/48 Vdc	24 Vdc/Vac Digital Input					2	B													
	48 Vdc/Vac Digital Input					2	C													
	110 Vdc/Vac Digital Input					2	D													
	125 Vdc/Vac Digital Input					2	A													
	220 Vdc/Vac Digital Input					2	G													
	250 Vdc/Vac Digital Input					2	H													

**SELEct I/O Card Option Slot C**

No Card	Empty					0	X													
EIA-232 & EIA-485 Serial Communication Card*						A	0													
<b>4 DI and 4 EM DO</b>																				
4 Digital Input / 4 Digital Output <sup>(1)</sup>	24 Vdc/Vac DI*					1	B													
	48 Vdc/Vac DI*					1	C													
	110 Vdc/Vac DI*					1	D													
	125 Vdc/Vac DI*					1	A													

A	C	D	E	Z	B
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	220 Vdc/Vac DI*						1	G							
	250 Vdc/Vac DI*						1	H							
<b>4 DI and 4 Fast HC Interrupting DO</b>															
	24 Vdc/Vac DI*						B	B							
	48 Vdc/Vac DI*						B	C							
	110 Vdc/Vac DI*						B	D							
	125 Vdc/Vac DI*						B	A							
	220 Vdc/Vac DI*						B	G							
	250 Vdc/Vac DI*						B	H							
4 Digital Input and 3 Electromechanical Digital Output (2 Form C and 1 Form B)	24 Vdc/Vac DI*						C	B							
	48 Vdc/Vac DI*						C	C							
	110 Vdc/Vac DI*						C	D							
	125 Vdc/Vac DI*						C	A							
	220 Vdc/Vac DI*						C	G							
	250 Vdc/Vac DI*						C	H							
	8 Digital Output	8 Form A Electromechanical DO*						2	X						
	8 Form B Electromechanical DO*						2	A							
	6 Form A and 2 Form B Electromechanical DO*						2	B							
	6 Form B and 2 Form A Electromechanical DO*						2	C							
8 Digital Input	24 Vdc/Vac*						3	B							
	48 Vdc/Vac*						3	C							
	110 Vdc/Vac*						3	D							
	125 Vdc/Vac*						3	A							
	220 Vdc/Vac*						3	G							
	250 Vdc/Vac*						3	H							
8 Analog Input	8 Inputs: $\pm 20$ mA or $\pm 10$ V Jumper Selectable*						5	X							
	4 Inputs: $\pm 20$ mA or $\pm 10$ V Jumper Selectable 4 Inputs: $\pm 300$ V Only*						5	2							
	4 Analog Input / 4 Analog Output <sup>(2)</sup> 4 Outputs*						6	X							

**SELECT I/O Card Option Slot D**

No Card	Empty						0	X							
10 RTD/TC Inputs	RTD and Thermocouple Analog Inputs*						9	1							
10 RTD Input	RTD Analog Input*						9	X							

		Option Slot												
		A	C	D	E	Z	B							
4 Digital Input and 3 Electromechanical Digital Output (2 Form C and 1 Form B)	24 Vdc/Vac DI*						C	B						
	48 Vdc/Vac DI*						C	C						
	110 Vdc/Vac DI*						C	D						
	125 Vdc/Vac DI*						C	A						
	220 Vdc/Vac DI*						C	G						
	250 Vdc/Vac DI*						C	H						
8 Digital Output	8 Form A Electromechanical DO*						2	X						
	8 Form B Electromechanical DO*						2	A						
	6 Form A and 2 Form B Electromechanical DO*						2	B						
	6 Form B and 2 Form A Electromechanical DO*						2	C						
8 Digital Input	24 Vdc/Vac*						3	B						
	48 Vdc/Vac*						3	C						
	110 Vdc/Vac*						3	D						
	125 Vdc/Vac*						3	A						
	220 Vdc/Vac*						3	G						
	250 Vdc/Vac*						3	H						

**SELECT I/O Card Option Slot E**

No Card	Empty						0	X						
3 AC Voltage Input	300 Vac Maximum*						7	1						
3 AC Current / 3 AC Voltage Input	300 Vac Maximum, 5A Phase*						7	4						
4 Digital Input and 3 Electromechanical Digital Output (2 Form C and 1 Form B)	24 Vdc/Vac DI*							C	B					
	48 Vdc/Vac DI*							C	C					
	110 Vdc/Vac DI*							C	D					
	125 Vdc/Vac DI*							C	A					
	220 Vdc/Vac DI*							C	G					
	250 Vdc/Vac DI*							C	H					
8 Digital Output	8 Form A Electromechanical DO*						2	X						
	8 Form B Electromechanical DO*						2	A						
	6 Form A and 2 Form B Electromechanical DO*						2	B						
	6 Form B and 2 Form A Electromechanical DO*						2	C						
8 Digital Input	24 Vdc/Vac*						3	B						
	48 Vdc/Vac*						3	C						

Option Slot

A	C	D	E	Z	B
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	110 Vdc/Vac*									3	D							
	125 Vdc/Vac*									3	A							
	220 Vdc/Vac*									3	G							
	250 Vdc/Vac*									3	H							
8 Analog Input	8 Inputs: ±20 mA or ±10 V Jumper Selectable*									5	X							
	4 Inputs: ±20 mA or ±10 V Jumper Selectable 4 Inputs: ±300 V Only*									5	2							
4 Analog Input / 4 Analog Output <sup>(2)</sup>	4 Inputs: ±20 mA or ±10 V Jumper Selectable 4 Outputs*									6	X							

**SELECT I/O Card Option Slot Z**

No Card	Empty											0	X					
4 AC Current Input	1 Amp Phase, 1 Amp Neutral*											8	1					
	1 Amp Phase, 5 Amp Neutral*											8	2					
	5 Amp Phase, 5 Amp Neutral*											8	5					
	5 Amp Phase, 1 Amp Neutral*											8	6					
4 Digital Input and 3 Electromechanical Digital Output (2 Form C and 1 Form B)	24 Vdc/Vac DI*											C	B					
	48 Vdc/Vac DI*											C	C					
	110 Vdc/Vac DI*											C	D					
	125 Vdc/Vac DI*											C	A					
	220 Vdc/Vac DI*											C	G					
	250 Vdc/Vac DI*											C	H					
8 Digital Output	8 Form A Electromechanical DO*											2	X					
	8 Form B Electromechanical DO*											2	A					
	6 Form A and 2 Form B Electromechanical DO*											2	B					
	6 Form B and 2 Form A Electromechanical DO*											2	C					
8 Digital Input	24 Vdc/Vac*											3	B					
	48 Vdc/Vac*											3	C					
	110 Vdc/Vac*											3	D					
	125 Vdc/Vac*											3	A					
	220 Vdc/Vac*											3	G					
	250 Vdc/Vac*											3	H					
8 Analog Input	8 Inputs: ±20 mA or ±10 V Jumper Selectable*											5	X					

		Option Slot																
		A	C	D	E	Z	B											
	4 Inputs: ±20 mA or ±10 V Jumper Selectable 4 Inputs: ±300 V Only*												5	2				
4 Analog Input / 4 Analog Output <sup>(2)</sup>	4 Inputs: ±20 mA or ±10 V Jumper Selectable 4 Outputs*													6	X			

**SELECT Processor Card Communications Slot B**

Processor Board	All Slot B Options Include: Ports - EIA-232 Front & Rear. Protocols - SEL ASCII, Compressed ASCII, Fast Meter, Fast Operate, Modbus RTU, SEL MIRRORRED BITS															0	0	0
	Previous Option Plus DNP3 *															0	0	3
<b>Fiber-Optic Serial</b>																		
	Fiber-Optic Serial Port Multimode ST*															1	0	0
	Previous Option Plus DNP3*															1	0	3
<b>Copper Ethernet</b>																		
	10/100BASE-T Ethernet, Modbus TCP*															0	1	0
	Previous Option Plus DNP3, DNP3 LAN/WAN*															0	1	3
	Previous Option Plus IEC 61850*															0	1	4
	Dual 10/100BASE-T Ethernet, Modbus TCP <sup>(3)</sup> *															0	6	0
	Previous Option Plus DNP3, DNP3 LAN/WAN <sup>(3)</sup> *															0	6	3
	Previous Option Plus IEC 61850 <sup>(3)</sup> *															0	6	4
<b>Fiber-Optic Ethernet</b>																		
	Single 100BASE-FX Ethernet (LC), Modbus TCP <sup>(3)</sup> *															0	4	0
	Previous Option Plus DNP3, DNP3 LAN/WAN <sup>(3)</sup> *															0	4	3
	Previous Option Plus IEC 61850 <sup>(3)</sup> *															0	4	4
	Dual 100BASE-FX Ethernet (LC), Modbus TCP <sup>(2,3)</sup> *															0	8	0
	Previous Option Plus DNP3, DNP3 LAN/WAN <sup>(2,3)</sup> *															0	8	3
	Previous Option Plus IEC 61850 <sup>(2,3)</sup> *															0	8	4
<b>Fiber-Optic Serial and Copper Ethernet</b>																		
	10/100BASE-T Ethernet, Fiber-Optic Serial Port Multimode ST, Modbus TCP*															1	1	0

Option Slot

		A	C	D	E	Z	B			
	Previous Option Plus DNP3, DNP3 LAN/WAN*							1	1	3
	Previous Option Plus IEC 61850 <sup>(3)*</sup>							1	1	4
	Dual 10/100BASE-T Ethernet, Fiber-Optic Serial Port Multimode ST, Modbus TCP <sup>(3)*</sup>							1	6	0
	Previous Option Plus DNP3, DNP3 LAN/WAN <sup>(3)*</sup>							1	6	3
	Previous Option Plus IEC 61850 <sup>(3)*</sup>							1	6	4
<b>Fiber-Optic Serial and Fiber-Optic Ethernet</b>										
	Single 100BASE-FX Ethernet (LC), Fiber-Optic Serial Port Multimode ST, Modbus TCP <sup>(3)*</sup>							1	4	0
	Previous Option Plus DNP3, DNP3 LAN/WAN <sup>(3)*</sup>							1	4	3
	Previous Option Plus IEC 61850 <sup>(3)*</sup>							1	4	4
	Dual 100BASE-FX Ethernet (LC), Fiber-Optic Serial Port Multimode ST, Modbus TCP <sup>(2,3)*</sup>							1	8	0
	Previous Option Plus DNP3, DNP3 LAN/WAN <sup>(2,3)*</sup>							1	8	3
	Previous Option Plus IEC 61850 <sup>(2,3)*</sup>							1	8	4

**Conformal Coat**

None										0
Conformal Coated Circuit Boards*										1

**Accessories**

SEL-241X Wetting Voltage Jumper Kit, Eight 4 Prong Jumpers*	9	1	5	9	0	0	2	3	6
Wetting Voltage Jumpers Bulk, 100 pack 4-Prong Jumpers*	9	1	5	9	0	0	2	4	1
90 Degree Connector Kit*	9	1	5	9	0	0	2	2	2
NEMA4 Outdoor Enclosure + FT-1 Cutout, Vertical*	9	1	5	9	0	0	0	6	6
NEMA4 Outdoor Enclosure, No FT-1 Cutout, Vertical*	9	1	5	9	0	0	0	9	3
Dust-Protection Assembly*	9	1	5	9	0	0	1	7	0
Single Vertical 7xx/24xx Bracket*	9	1	5	9	0	0	0	5	0
Two Vertical 7xx/24xx Bracket*	9	1	5	9	0	0	0	5	1
Vertical 7xx/24xx + FT-1 Test Switch Bracket*	9	1	5	9	0	0	0	5	2
Fixed Wall-Mount Bracket*	9	1	5	9	0	0	0	4	7
Hinged Wall-Mount Bracket, Vertical*	9	1	5	9	0	0	1	3	6
Indoor Enclosure + FT-1 Test Switch, Vertical*	9	1	5	9	0	0	0	6	5
Indoor Enclosure, No FT-1 Test Switch, Vertical*	9	1	5	9	0	0	0	9	1

Mounting Gasket*	9 1 5 9 0 0 0 9 7
Literature	
Printed Instruction Manual	P M 2 4 1 4 - 0 1

**\*Additional Cost**

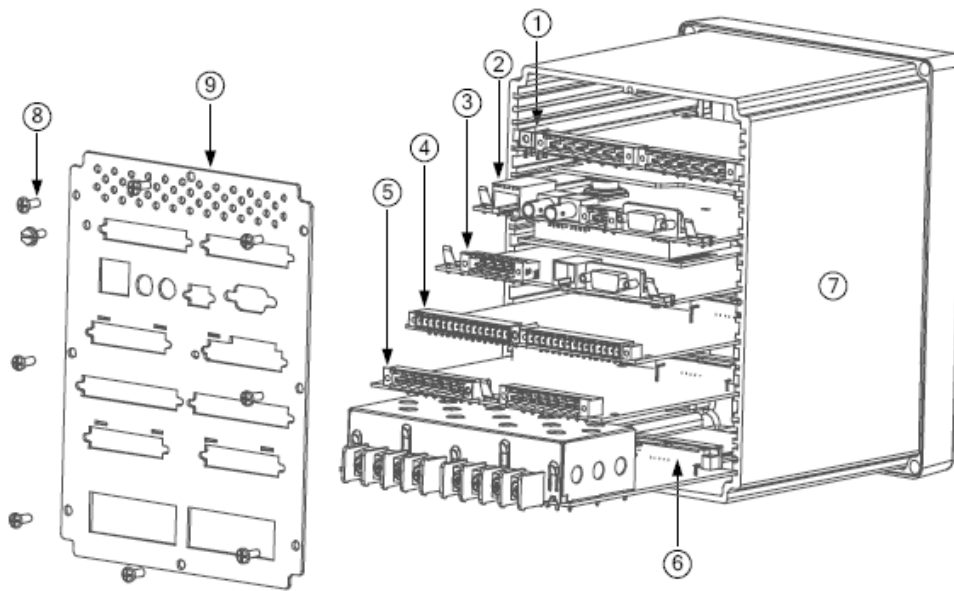
- (1) Unless otherwise specified, all digital outputs are Form A.
- (2) Only one (1) 4 AI / 4 AO card per chassis.
- (3) IRIG only available through serial connection (i.e, no dedicated IRIG connector).

**Additional Accessories:**

- 1. acSELEATOR QuickSet SEL-5030 software ([www.selinc.com](http://www.selinc.com)) or on CD upon request.
- 2. Comes standard with a CD instruction manual or printed instruction manual upon request.
- 3. External AC powered RTD module SEL-2600A.
- 4. External DC powered RTD module SEL-2600D.
- 5. Option cards are orderable separately for field installation, contact your SEL representative and reference the SELEct I/O Card guide on the web (WI-5932).
- 6. Replacement rear panel cover plate options, contact your SEL representative.

Note: The SEL-2414 comes standard with a CD manual. One complimentary printed instruction manual is available upon request with each product purchased.

## Chassis Card Slot Configuration



- 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 I/O Expansion 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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