



SEL-734B Data Sheet

Advanced Monitoring and Control System



Major Features and Benefits

The SEL-734B combines volt/VAR based capacitor bank control with power quality monitoring and advanced reporting through Ethernet and multiple serial ports.

The SEL-734B can be configured with low-energy analog (LEA) inputs for voltage and current sensing to connect industry standard current and voltage sensors. The SEL-734B can also be configured with voltage and current inputs to connect voltage transformers, current transformers, or industry standard voltage and current sensors.

- **One Controller, Many Applications.** The SEL-734B adapts to multiple applications ranging from basic three-pole control to intelligent single-pole control. Configurable logic and integrated communications ensure that the SEL-734B supports future system demands.
- **Preconfigured Control Strategies.** SEL offers a selection of ACSELERATOR QuickSet® SEL-5030 Software templates that support control strategies from basic voltage-based control to advanced single-pole kVAR control with voltage override. Some of the software templates also support other control strategies such as current, power factor, time, temperature, and time with temperature override.
- **Plug-and-Play Configurations.** SEL offers a selection of compact enclosures and full-size enclosures for application in different environments and installation sites. Rugged military-grade cables allow direct connections from the SEL-734B controller to line-post sensors and capacitor switches.
- **Advanced Power Quality Monitoring and Trending.** All SEL-734B models include harmonic measurements, load profile trending, voltage sag/swell/interruption (VSSI) recording, and waveform capture. The Advanced Power Quality and Monitoring option measures harmonics to the 50th order, captures waveforms at 8 kHz, and offers 192 channels of profile trending.
- **SEL DNA™ (Distribution Network Automation) Ready.** Capacitor controls are integral to system-wide volt/VAR control schemes. The SEL-734B integrates seamlessly into system-wide distribution control schemes to linearize voltage profiles and minimize VAR-induced I^2R losses.
- **Auxiliary Power Supply to Power Accessories.** The SEL-734B can be configured with an optional 15 Vdc auxiliary power supply. The auxiliary power supply can be used to power accessories such as radios, clocks, and cellular routers.

Power Quality and Recording Options

The SEL-734B is available with two different power quality and recording options. These features and their specifications are shown in *Table 1*.

Table 1 SEL-734B Feature Availability

Power Quality and Recording Option	Standard: SEL-734	Advanced: SEL-734P
Available Memory	32 MB	128 MB
Load Profile Recorder		
Channels	16	192
Recorders	1	12
Acquisition rates	1, 5, 10, 15, 30, 60 minutes	3–59 s, 1, 5, 10, 15, 30, 60 minutes
Storage at 5-Minute Intervals in Days		
12 Channels	770	2400
96 Channels	N/A	280
Flicker Measurement	N	Y
Highest Harmonic Order	15th	50th
Waveform Event Reports		
Storage capacity in events	64	16–3155
Event duration	0.25 s	0.25, 0.5, 1, 2, 5, or 10 s
Sample rate	1 kHz	1 kHz or 8 kHz
Sequential Events Recorder		
Number of events	>21,000	>21,000
Voltage Sag/Swell/Interruption Recorder		
Typical number of summary events	60	60
Number of detailed rows	>11,000	>11,000
Time-of-Use		
Number of self-reads	15	15

The enclosure version of the SEL-734B is available in two form factors: compact and full size.

SEL-734B Compact Enclosure

Applications

The compact enclosure provides single-phase voltage and single-phase current monitoring (6-Jaw and 7-Pin) and three-pole control in a small outdoor IP45-rated fiberglass enclosure. The compact enclosure can be configured to have socket-based connectors or a 7-pin connector. The socket-based enclosure is available in two different 6-Jaw form factors (Option A, Option B) and one 4-Jaw form factor. The 7-Pin enclosure also has two options, including a 7-position terminal block for end-user access or a 7-pin circular connector on the bottom for a control and measurement cable connection to a junction box.

Control Strategies

The compact enclosure supports the following capacitor bank control strategies:

- Voltage
- kVAR*
- Power Factor*
- Current*
- Time-Based
- Temperature-Based
- Time With Temperature Override Control

Features

- SCADA, Auto, and Manual control modes
- Front-panel control and indicators
- Hunting prevention
- Adaptive voltage and kVAR processing*
- Voltage sensor phase and magnitude correction
- Current sensor phase and magnitude correction*
- Neutral unbalance alarm and lockout**
- Integrated 15 Vdc power supply for accessories
- LEA current measurement inputs*
- Harmonic measurements and lockout
- Overvoltage lockout
- Door switch with SCADA alarm***

* Available with the 6-Jaw and 7-Pin versions only.

** Available only with the 6-Jaw Option A and 7-Pin versions.

*** Available only with the socket-based enclosures that are equipped with a ground lug.



Figure 1 Compact Enclosure With Terminal Block Connector

Interface Options

The following field interfaces are available in the compact enclosure:

- 4-Jaw Socket-Based
- 6-Jaw Option A Socket-Based
- 6-Jaw Option B Socket-Based
- 7-Pin Connector-Based (Connectorized)
- 7-Position Terminal Block (Self-Wired)

4-Jaw and 6-Jaw Option A and Option B Socket-Based Models

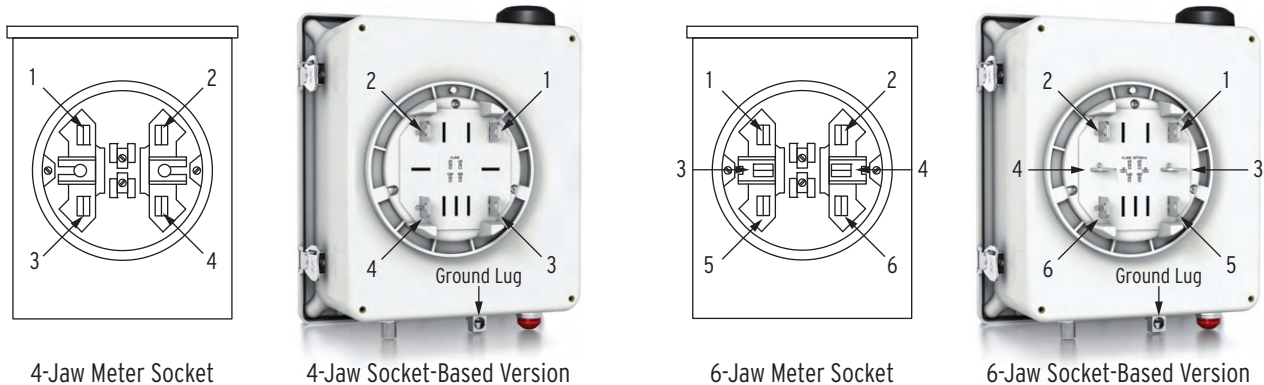


Figure 2 Compact Enclosure Rear Plug and Meter Socket

Table 2 Socket Stab Configurations^a

Enclosure Socket Option	Socket Stab Number and Function					
	1	2	3	4	5	6
4-Jaw	+CPT	–CPT	OPEN	CLOSE	—	—
6-Jaw Option A	+CPT	–CPT	•IN	•IA	OPEN	CLOSE
6-Jaw Option B	IA	–CPT	+CPT	OPEN	•IA	CLOSE

^a Where:

+CPT: 120 Vac Control Power Transformer, Positive Polarity

–CPT: 120 Vac Control Power Transformer, Neutral

OPEN: Open Operating Signal Output Contact

CLOSE: Close Operating Signal Output Contact

•IA: Phase Current Sensor Input, Positive Polarity

IA: Phase Current Sensor, Common

•IN: Neutral Current Sensor Input, Positive Polarity

NOTE: The ground lug is isolated from the control power transformer neutral.

7-Pin Compact Enclosures

Table 3 Pinout of 7-Pin Compact Enclosure

Pin Number	Description
A	120 Vac Control Power Transformer, Positive Polarity
B	Open Operating Signal Output Contact
C	Close Operating Signal Output Contact
D	Neutral Current Sensor, Common
E	Neutral Current Sensor Input, Positive Polarity
F	Phase Current Sensor Input, Positive Polarity
G	120 Vac Control Power Transformer, Neutral

Connectorized

The enclosure contains one Amphenol® MS1302A20-15P circular connector that routes all measurement and control signals.

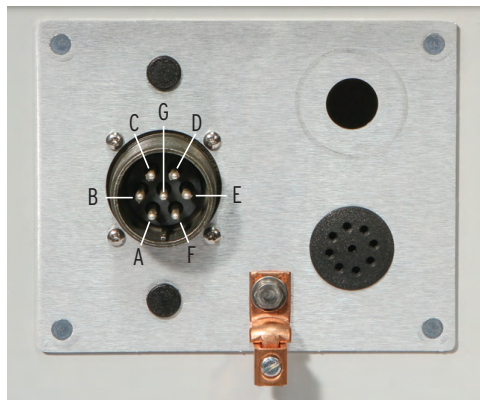


Figure 3 Bottom View of the Compact Connectorized Enclosure

Terminal Block (7-Position)

This enclosure contains an accessible terminal block, allowing you to connect your own wires for measurement and control signals.

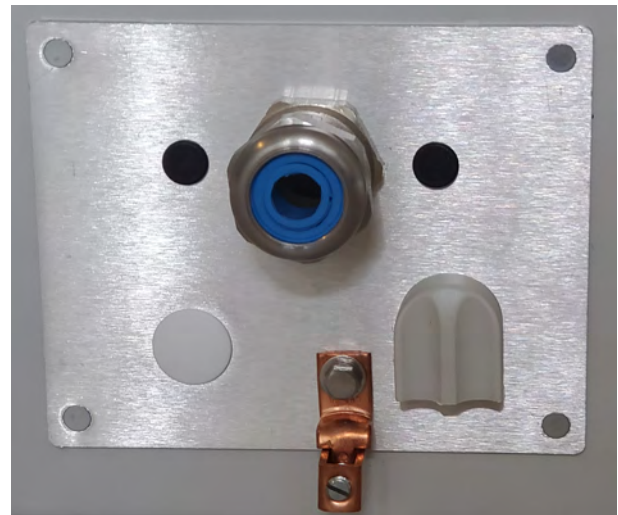


Figure 4 Bottom View of the Compact 7-Position Terminal Block Enclosure

SEL-734B Full-Size Enclosure

Applications

The full-size enclosure allows three-phase monitoring and ganged three-phase or individual phase control. Two enclosure styles offer flexibility: a combined sensor connector option and an individual sensor connector option. The combined sensor connector is intended for three-phase monitoring. Individual sensor connectors provide the option of single-phase monitoring or three-phase monitoring. Both styles are available in standard IP45-rated outdoor fiberglass enclosures.

Control Strategies

The full-size enclosure supports the following control strategies:

- Voltage Control—Ganged three-phase or individual/single-phase
- VAR Control—Ganged three-phase or individual/single-phase
- Time Control—Ganged three-phase or individual/single-phase

- Temperature Control—Ganged three-phase or individual/single-phase
- Time with Temperature Override Control—Ganged three-phase or individual/single-phase

Features

- SCADA, Auto, and Manual control modes
- Front-panel control and indicators
- Hunting prevention
- Sensor phase and magnitude correction
- Neutral unbalance alarm and lockout
- LEA voltage measurement inputs
- LEA current measurement inputs
- Switch monitoring through 52a/52b contacts and alarm
- Harmonic measurements
- Fault detection and indication
- Overvoltage lockout
- 15 Vdc power supply for accessories

Full-size enclosures include additional space to install one or more of the following SEL accessories:

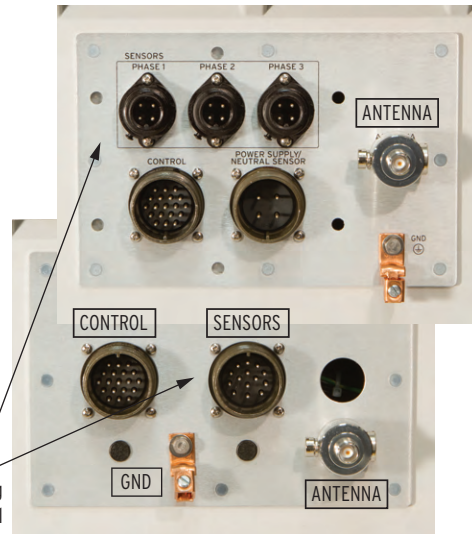
- SEL-2401 Satellite-Synchronized Clock
- SEL-3061 Cellular Router
- Other accessories

Available with door alarm



Additional space for accessories

Three-phase monitoring
supports single-pole control



Multiple connector options for
simple plug-and-play installation

Figure 5 Full-Size Enclosure

Interface Options

The following field interfaces are available in the full-size enclosure:

- Combined sensor connector
- Individual sensor connectors

Combined Sensor Connector

The enclosure contains one 14-pin connector for all sensors and one 19-pin connector for three capacitor switches. The 14-pin connector connects to three primary current/voltage sensors and one neutral current sensor. The 19-pin connector connects to three capacitor bank switches.

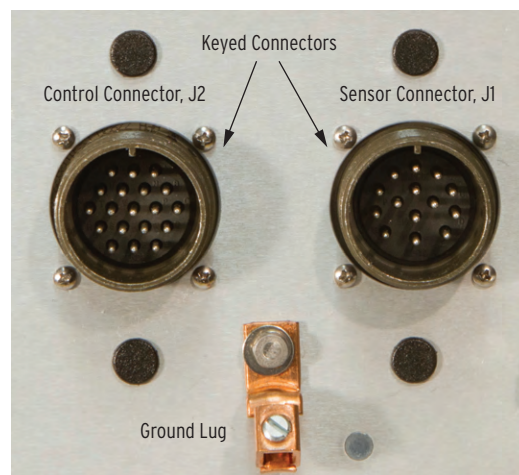


Figure 6 Combined Sensor Connector Option

Table 4 14-Pin Sensor Connector Assignment

Pin Number	Description
A	Reserved
B	Reserved
C	Neutral Sensor, Positive Polarity
D	Neutral Sensor, Common
E	A-Phase Voltage Sensor
F	B-Phase Voltage Sensor
G	C-Phase Voltage Sensor
H	Voltage Sensors Common
J	A-Phase Current Sensor, Positive Polarity
K	Reserved
L	B-Phase Current Sensor, Positive Polarity
M	Current Sensors Common
N	C-Phase Current Sensor, Positive Polarity
P	Reserved

Table 5 19-Pin Control Connector Assignment

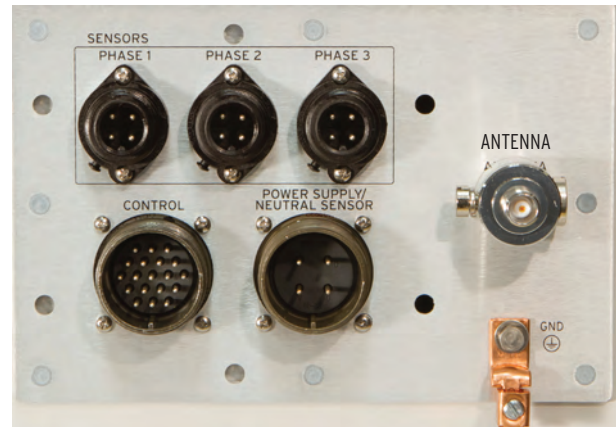
Pin Number	Description
A	120 Vac Control Power Transformer
B	Control Power Transformer Neutral
C	Open A-Phase
D	Close A-Phase
E	Reserved
F	Open B-Phase
G	Close B-Phase
H	Reserved
J	Open C-Phase
K	Close C-Phase
L	Reserved
M	A-Phase 52a Auxiliary Contact
N	A-Phase 52b Auxiliary Contact
P	B-Phase 52a Auxiliary Contact
R	B-Phase 52b Auxiliary Contact
S	C-Phase 52a Auxiliary Contact
T	C-Phase 52b Auxiliary Contact
U	Reserved
V	Reserved

Individual Sensor Connectors

Three 4-pin connectors, located on the bottom of the enclosure, route each measurement signal to the SEL-734B.

Operators can choose to use one, two, or all three sensor inputs. Settings allow you to configure the SEL-734B for a different number of sensors. The enclosure contains the following connectors:

- Three 4-pin connectors connect to each primary sensor
- One 4-pin connector connects to a neutral current sensor and a 120 Vac control power transformer (CPT)
- One 19-pin connector connects to three capacitor bank switches

**Figure 7 Individual Sensor Connector Option****Table 6 4-Pin Sensor Connectors**

Pin Number	Description
1	A-, B-, or C-Phase Current Sensor
2	Current Sensor Common
3	A-, B-, or C-Phase Voltage Sensor
4	Voltage Sensor Common

Table 7 19-Pin Control Connector Assignment

Pin Number	Description
A	Not Connected
B	System Neutral
C	Open A-Phase
D	Close A-Phase
E	Reserved
F	Open B-Phase
G	Close B-Phase
H	Reserved
J	Open C-Phase
K	Close C-Phase
L	Reserved
M	A-Phase 52a Auxiliary Contact
N	A-Phase 52b Auxiliary Contact
P	B-Phase 52a Auxiliary Contact
R	B-Phase 52b Auxiliary Contact
S	C-Phase 52a Auxiliary Contact
T	C-Phase 52b Auxiliary Contact
U	System Neutral
V	System Neutral

Table 8 Pinout of Power Supply and Neutral Connector

Pin Number	Description
A	120 Vac Control Power Transformer
B	Control Power Transformer Neutral
C	Neutral Sensor, Positive Polarity
D	Neutral Sensor, Common

Enclosure Model Features

Table 9 provides a complete reference about the available options.

Table 9 Control Features of Enclosure Models

Available Control Strategies	Enclosure/Field Interface				
	Full Size	Compact			
		4-Jaw	6-Jaw Option A	6-Jaw Option B	7-Pin (Connectorized and Terminal Block)
Ganged Phase Control	x	x	x	x	x
Individual Phase Control	x				
Voltage Control	x	x	x	x	x
kVAR Control	x		x	x	x
Power Factor Control			x	x	x
Current Control			x	x	x
Time/Temp-Based Control	x	x	x	x	x
Available Features					
Adaptive Voltage and kVAR Processing			x	x	x
Neutral Unbalance Alarm and Lockout	x		x		x
Switch Monitoring	x				
Capacitor Fault Detection	x		x		x
Integrated 15 Vdc Power Supply	x	x	x	x	x
Harmonic Lockout		x	x	x	x
Overvoltage Lockout	x	x	x	x	x
Phase Overcurrent Fault Detection	x				
Hunting Lockout	x	x	x	x	x
Hunting Delay (Short-Term Hunting Problems)		x	x	x	x
Emergency Voltage Control	x	x	x	x	x
Separate Open and Close Delay Timers	x	x	x	x	x

Enclosure Accessory Options

Table 10 provides a complete reference of the available compact enclosure accessory options.

Table 10 Compact Enclosure Accessory Options

Options	4-Jaw	6-Jaw Option A	6-Jaw Option B	7-Pin (Connectorized)	7-Pin (Terminal Block)
None	x	x	x		x
Accessory Tray	x	x	x		
Integrated 15 Vdc Power Supply for Accessories (40 W) and Accessory Tray	x	x	x	x	x
Integrated 15 Vdc Power Supply for Accessories (40 W)	x	x	x		
Radio Surge Arrester With N-Type Female Terminations, Integrated 15 Vdc Power Supply for Accessories, and Accessory Tray	x	x	x		
SEL-2401 Satellite-Synchronized Clock, Integrated 15 VDC Power Supply for Accessories (40 W), and Accessory Tray	x	x	x		

Table 11 provides a complete reference of the available full-size enclosure accessory options.

Table 11 Full-Size Enclosure Accessory Options

Options	Combined Sensor Option	Individual Sensor Option
None	x	x
Integrated 15 Vdc Power Supply (40 W)	x	x
Integrated 15 Vdc Power Supply (40 W), SEL-2401 Satellite-Synchronized Clock	x	
Integrated 15 Vdc Power Supply (40 W), SEL-3061 Cellular Router	x	
Integrated 15 Vdc Power Supply (40 W), SEL-3061 Cellular Router, SEL-2401 Satellite-Synchronized Clock	x	

Specifications^a

Compliance

Designed and manufactured under an ISO 9001 certified quality management system

Radiated Emissions: FCC Part 15; Class A

SEL-734B Device: UL Listed to U.S. and Canadian safety standards (File E212775, File E220228; NRAQ, NRAQ7, File E475839; NRAQ, NRAQ7, File E470448)

General

Frequency and Rotation

60/50 Hz system frequency must be specified at time of order.

ABC/ACB phase rotation is user settable.

Frequency tracking range: 45 to 65 Hz
(V_A or V_C required for frequency tracking).

Power Supply

Continuous Operating Limits

125/250 Volt Supply: 85–264 Vac (50/60 Hz)
85–275 Vdc

24/48 Volt Supply: 19–58 Vdc

12/24 Volt Supply: 9.6–36 Vdc

VA Rating: <40 VA/15 W maximum
<20 VA/7 W typical

Interruption (IEC 60255-11:1979)

100 ms at 250 Vac/Vdc

50 ms at 125 Vac/Vdc

50 ms at 48 Vdc

10 ms at 24 Vdc

Ripple

(IEC 60255-11:1979): 5% for dc inputs

Terminal Voltage Dropout: <40 V within 1 minute of power removal

Rated Insulation Voltage
(IEC 60664-1:2002): 300 Vac

Dielectric Test Voltage: 2.8 kVdc

Rated Impulse Voltage
(IEC 60664-1:2002): 4000 V

Instantaneous Metering/Monitoring

Instantaneous (25 ms): Accuracies are specified at 23°C and at nominal system frequency unless noted otherwise.

Frequency: ±0.01 Hz

Power (kW) per Phase and Total: ±2%

Reactive Power (kVAR) per Phase and Total: ±2%

Apparent Power (kVA) per Phase and Total: ±2%

Power Factor, at Unity PF: ±2%

Harmonic Accuracy per IEC 61000-4-7 (2002-08)

THD and THDG: ±5% typical, ±10% worst case

K-Factor: ±5% typical, ±10% worst case

Distortion Power: ±3% typical, ±10% worst case

Flicker PST: ±5% over the range 0.5–25 PST
(10-minute interval)

PLT: ±5% over the range 0.5–25 PLT
(2-hour interval)

Three-Phase Voltage Measurement Inputs, Low-Energy Analog (Full-Size Enclosure)

Three-Phase Wye (Line-to-Neutral) Voltage Measurement

Input Impedance: 10 MΩ
Range: 0.40–25 Vac
Accuracy: ±0.2%
Maximum Rating: 300 V continuous
600 V for 10 seconds

Single-Phase AC Voltage Measurement Inputs (Compact Enclosure)

Input Impedance: 10 MΩ
Range: 57–150 V
Accuracy: ±0.15%
Maximum Rating: 300 V continuous
600 V for 10 seconds

Current Measurement Inputs, Low-Energy Analog

Single-phase input for compact enclosure models

Three-phase inputs for full-size enclosure models

Neutral current measurement input on select models

Input Impedance: 1 MΩ
Range: 0.1–12.5 Vac
Accuracy: ±2%
Maximum Rating: 100 V continuous
200 V for 10 seconds

15 Vdc Integrated Power Supply

Continuous Operating Limits

Rated Input Voltage: 110–240 Vac (50/60 Hz)
110–250 Vdc

Input Voltage Range: 85–264 Vac (50/60 Hz)
85–275 Vdc

Input Current: <1 A at 85 Vac
<1 A at 85 Vdc

Output Voltage: 15 Vdc ±5% for accessories, as power supply only

Output Current: 2.75 A for accessories, as power supply only

Ride-Through Performance (With a 25 W Auxiliary Load)

120 Vac Input: 50 ms
125 Vdc Input: 20 ms

Safety

Isolation Rating: 2.5 kVac minimum at 60 Hz

Insulation Rating: 300 Vrms (IEC 60664-2:2002)

Impulse Rating: 4 kVpk (1.2/50 μs per IEC 60664-1:2002)

Overvoltage Category: II (IEC 60664-1:2000)

Insulation Type: Reinforced for Input-to-Output
(IEC 60664-1:2000)
Basic for Input-to-Input
(IEC 60664-1:2000)

Compact Enclosure Output Contacts

Output ratings were determined with IEC 60255-23:1994, using the simplified method of assessment.

Make Rating: 250 Vdc, 7.2 kVA (Cos theta = 1), 30 A
per IEEE C37.90-1989

Carry: 8 A at 120 Vac, 50/60 Hz

Durability:	>100,000 cycles for: Three motor-operated switches as high as 1/4 HP each Three solenoid-operated switches as high as 12 A each
Pickup/Dropout Time:	<35 ms
Maximum Operating Voltage:	240 V
Rated Insulation Voltage:	300 V

Full-Size Enclosure Output Contacts

Make Rating:	3.6 kVA (Cos theta = 0.3), 30 A per IEEE C37.90-1989
Break Rating:	360 VA (Cos theta = 0.3)
Carry:	3 A at 120 Vac, 50/60 Hz
1 s Rating:	50 A
Durability:	>10,000 cycles at rated conditions
Pickup/Dropout Time:	<25 ms
Maximum Operating Voltage:	250 V
Rated Insulation Voltage:	300 V

Physical

Operating Temperature

SEL-734B Device:	IEC 60068-2: -40° to +85°C (-40° to +185°F)
LCD:	-20° to +70°C (-4° to +158°F)
Device in Compact Enclosure With Integrated 15 Vdc Power Supply	
0 W of Accessories:	-40° to +65°C (-40° to +149°F)
15 W of Accessories:	-40° to +60°C (-40° to +140°F)
40 W of Accessories:	-40° to +50°C (-40° to +122°F)
Without Direct Sunlight:	Increase max. temperatures by 15°C (27°F)
Device in Full-Size Enclosure	
0 W of Accessories:	-40° to +70°C (-40° to +158°F)
15 W of Accessories:	-40° to +65°C (-40° to +149°F)
30 W of Accessories:	-40° to +55°C (-40° to +131°F)
Without Direct Sunlight:	Increase max. temperatures by 15°C (27°F)

Operating Environment

Pollution Degree:	2 (SEL-734B Device)
Maximum Altitude:	2000 m
Maximum Humidity:	95% RH

Dimensions

SEL-734B Device Dimensions:	5.7" x 6.63" x 7.56"
Compact Enclosure Exterior Dimensions:	13.7" x 11.8" x 8.0"
Full-Size Enclosure Exterior Dimensions:	18.0" x 16.0" x 10.9"

Weight

6-Jaw Compact Enclosure Model:	8.8 kg (19.4 lb) (including SEL-2401 and SEL-3061)
Full-Size Enclosure Model:	12.0 kg (26.5 lb) (including SEL-2401 and SEL-3061)

Dielectric Test

LEA Current Measurement Inputs:	1.0 kVac for 1 s
Voltage Inputs:	2.2 kVac for 1 s
Optoisolated Inputs and Output Contacts:	2.2 kVac for 1 s
AC Power Supply:	3.11 kVdc for 1 s

Processing Specifications

AC LEA Inputs

16 samples per power system cycle for instantaneous quantities	
8000 samples per second for rms quantities and harmonics	
3 dB low-pass filter cut-off frequency of 3000 Hz	
Control Processing:	25 ms processing interval

Type Tests

Electromagnetic Compatibility

Emissions:	Canada ICES-001(A) / NMB-001(A)
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Electromagnetic Compatibility Immunity

Surge Withstand Capability:	IEEE C37.90.1-2002 Elec. Relays 2.5 kV oscillatory, 4 kV fast transient IEC 60255-22-1:2007 2.5 kV peak common, 2.5 kV peak differential mode, 1.0 kV peak common mode on communications ports
Surge Immunity:	IEC 62052-11:2003 SEL-734B Device: 4 kV for current, voltage, and power supply mains; 1 kV for LEA inputs and auxiliary circuits Compact Socket-Based Enclosure: 6 kV for power supply mains, 4 kV for voltage inputs, 1 kV for LEA current inputs and auxiliary circuits Full-Size Enclosure: 6 kV for power supply mains, 1 kV for LEA inputs and auxiliary circuits
Power Frequency Magnetic Field Immunity:	IEC 61000-4-8:2009 1000 A/m for 3 seconds, 100 A/m for 1 minute
Pulse Magnetic Field Immunity:	IEC 61000-4-9:1993, 1000 A/m
Electrostatic Discharge Immunity:	IEC 61000-4-2:2008 Elec. disturbance, Section 2: ESD, Severity Level: 4 IEC 60255-22-2:2008 Elec. disturb. Section 2: ESD, Severity Level: 4; both polarities at Levels 1, 2, 3, and 4
Radiated Radio Frequency Immunity:	IEC 61000-4-3:2010 Severity Level: X (15 V/m) IEC 60255-22-3:2007 Elec. relays, Section 3: Radiated electromagnetic field disturb., Severity Level: 3 (10 V/m) ANSI C12.20 (1998) Severity Level: 15 V/m
Conducted Radio Frequency Immunity:	IEC 61000-4-6:2008 Severity Level: 3
Fast Transient/Burst Immunity:	IEC 61000-4-4:2011 Severity Level: 4

Environmental Tests

Cold:	IEC 60068-2-1:2007 Envir., Test Ad, Severity: 16 hours at -40°C	SEL-734B in Compact Socket-Based Enclosure:	IEEE C62.41:2002 Location Category B (6 kV) on LEA voltage measurement inputs and power supply inputs IEC 61000-4-5:2006 6 kV on power supply, voltage inputs, and auxiliary power supply IEC 61000-4-5:2005 Level 2 (1 kV) on LEA current measurement inputs and auxiliary circuits
Dry Heat:	IEC 60068-2-2:2007 Envir., Part 2: Test Bd SEL-734B device, Severity: 16 hours at +85°C Device in Cabinet, Severity: 16 hours at +70°C		
Damp Heat, Cyclic:	IEC 60068-2-30:2005 Basic envir., Part 2: Test Db Severity: 25° to 55°C, 6 cycles, 95% humidity	SEL-734B in Full-Size Enclosure:	IEC 61000-4-5:2005 6 kV on power supply inputs, Level 2 (1 kV) on LEA current measurement inputs and auxiliary circuits
Enclosure Protection:	IEC 60529:2001, IP45		
Seismic (Compact Enclosure Only):	IEC 60255-21-3:1993 Class 2 Response (Method A)	Impulse Voltage Test:	IEC 60060-1 4 kV on power supply, ac current inputs, and voltage inputs

Safety

Dielectric Strength/Impulse:	IEC 60255-5:2000 Elec. relays, Part 5: Insulation, Section 6: 2.5 kVac on ac current inputs, contact inputs, and contact outputs 3.1 kVdc on power supply 2.2 kVdc on EIA-485 port for 60 sec. Severity: 2500 Vac on analog inputs, contact inputs, and contact outputs 3100 Vdc on power supply IEC 60255-5:2000 0.5 Joule, 5 kV on power supply, contact inputs, contact outputs, ac current inputs, and voltage inputs Section 8: Impulse Voltage: 2200 Vdc on EIA-485, Severity Level: 0.5 Joule, 5 kV
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High-Voltage Line Surges

SEL-734B Device:	IEC 61000-4-5:2005 Level 4 (4 kV) on LEA voltage measurement inputs and power supply inputs. Level 2 (1 kV) on LEA current measurement inputs and auxiliary circuits
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^a Unless specified otherwise, all ratings apply to the SEL-734B device.

Notes

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