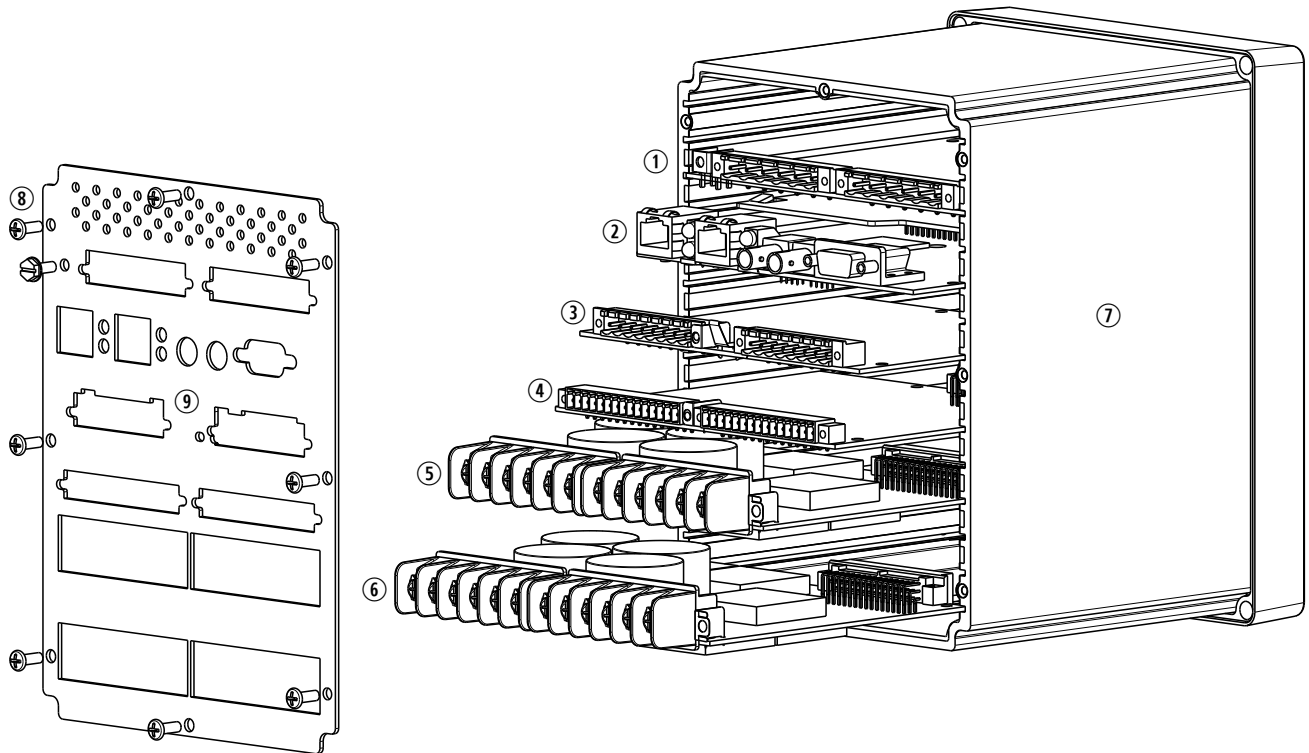




SEL-700G Card Options



- ① SELECT Power Supply with I/O (Slot A)
- ② SELECT Processor and Communications Card (Slot B)
- ③ SELECT I/O Expansion Card (Slot C: see table)
- ④ SELECT I/O Expansion Card (Slot D: see table)
- ⑤ SELECT I/O Expansion Card (Slot E: see table)
- ⑥ SELECT ACI/AVI Card (Slot Z)
- ⑦ Device Case
- ⑧ Rear-Panel Mounting Screws
- ⑨ Rear Panel

Refer to the Model Option Table on the SEL website for ordering details.

Card Type	Rear-Panel Slot					
	A	B	C	D	E	Z
SELECT PSIO/2 DI/3 DO ^a	●	n/a	n/a	n/a	n/a	n/a
SELECT CPU/COM ^a	n/a	●	n/a	n/a	n/a	n/a
SELECT EIA-232/485	n/a	n/a	●	n/a	n/a	n/a
SELECT DeviceNet	n/a	n/a	●	n/a	n/a	n/a
SELECT 3 DI/4 DO/1 AO (one card per relay)	n/a	n/a	●	●	●	n/a
SELECT 4 DI/4 DO	n/a	n/a	●	●	●	n/a
SELECT 8 DI	n/a	n/a	●	●	●	n/a
SELECT 8 DO	n/a	n/a	●	●	●	n/a
SELECT 4 AI/4 AO (one card per relay)	n/a	n/a	●	●	●	n/a
SELECT 4 DI/3 DO (2 Form C, 1 Form B)	n/a	n/a	●	●	●	n/a
SELECT 10 RTD	n/a	n/a	n/a	●	n/a	n/a
SELECT 3 ACI (1 A)/4 AVI (MOT... x71x...)	n/a	n/a	n/a	n/a	●	n/a
SELECT 3 ACI (1 A)/2 AVI (MOT ... x72x...)	n/a	n/a	n/a	n/a	●	n/a

Refer to the Model Option Table on the SEL website for ordering details.

Card Type	Rear-Panel Slot					
	A	B	C	D	E	Z
SELECT 3 ACIE (1 A) (MOT ... x73x...)	n/a	n/a	n/a	n/a	●	n/a
SELECT 2 AVI (MOT ... x74x...)	n/a	n/a	n/a	n/a	●	n/a
SELECT 3 ACI (5 A)/4 AVI (MOT...x75x...)	n/a	n/a	n/a	n/a	●	n/a
SELECT 3 ACI (5 A)/2 AVI (MOT...x76x...)	n/a	n/a	n/a	n/a	●	n/a
SELECT 3 ACIE (5 A) (MOT...x77x...)	n/a	n/a	n/a	n/a	●	n/a
SELECT 4 ACI (1 A ph, 1 A neut)/3 AVI (MOT...x81x...)	n/a	n/a	n/a	n/a	n/a	●
SELECT 4 ACI (1 A ph, 5 A neut)/3 AVI (MOT...x82x...)	n/a	n/a	n/a	n/a	n/a	●
SELECT 3 ACIZ (1 A ph) (MOT...x83x...)	n/a	n/a	n/a	n/a	n/a	●
SELECT 1 ACI (1 A neut) (MOT...x84x...)	n/a	n/a	n/a	n/a	n/a	●
SELECT 4 ACI (5 A ph, 5 A neut)/3 AVI (MOT...x85x...)	n/a	n/a	n/a	n/a	n/a	●
SELECT 4 ACI (5 A ph, 1 A neut)/3 AVI (MOT...x86x...)	n/a	n/a	n/a	n/a	n/a	●
SELECT 3 ACIZ (5 A ph) (MOT...x87x...)	n/a	n/a	n/a	n/a	n/a	●
SELECT 1 ACI (5 A neut) (MOT...x88x...)	n/a	n/a	n/a	n/a	n/a	●

^a Refer to the SEL-700G MOT for power supply and CPU board variants.

The SEL-700G offers flexibility in tailoring I/O to your specific application. The SEL-700G has six rear-panel slots, labeled as Slots A, B, C, D, E, and Z. Optional digital/analog I/O cards are available for the SEL-700G in Slots C, D, and E. Optional communications cards are available only for Slot C, an RTD card is available only for Slot D, the 1 A/5 A CT combinations for voltage/current cards are available only on slots E and Z. The previous figure and table show the slot allocations for the cards.

Because installations differ substantially, the SEL-700G offers a variety of card configurations that provide options for the many diverse applications. Choose the combination of option cards most suited for your application from the selection.

Warnings

DANGER

Disconnect or de-energize all external connections before opening this device. Contact with hazardous voltages and currents inside this device can cause electrical shock resulting in injury or death.

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Disconnect or de-energize all external connections before opening this device. Contact with hazardous voltages and currents inside this device can cause electrical shock resulting in injury or death..

WARNING

Equipment components are sensitive to electrostatic discharge (ESD). Undetectable permanent damage can result if you do not use proper ESD procedures. Ground yourself, your work surface, and this equipment before removing any cover from this equipment. If your facility is not equipped to work with these components, contact SEL about returning this device and related SEL equipment for service.

WARNING

Have only qualified personnel service this equipment. If you are not qualified to service this equipment, you can injure yourself or others, or cause equipment damage.

Card Installation for Slots C, D, E, and Z

Use the following procedure to install or replace any one of the cards into Slots C, D, E, or Z of the base unit:

1. Save the settings and event report data before installing the new card in the relay.
2. Remove the power supply voltage ① from terminals A01+ and A02-, and then remove the ground wire from the green ground screw.
3. Disconnect all the connection plugs.
4. Loosen the eight (8) screws on the rear ⑧ and remove the rear cover.
5. Remove the plastic filler plate covering the slot associated with the card being installed.

6. Insert or replace the card in the correct slot.

For proper electromagnetic interference protection, make sure the contact fingers on the printed circuit board are bent at approximately a 130° angle relative to the board.

7. Before reattaching the rear cover, check for and remove any foreign material that may remain inside the SEL-700G case.
8. Carefully reattach the rear cover.
9. Tighten the eight (8) screws that secure the rear cover to the case ⑧.
10. Apply power supply voltage ① to terminals A01+ and A02–, and reconnect the ground wire to the green ground screw.
11. If the card is in the proper slot, the front panel displays the following:

```
STATUS FAIL
X Card Failure
```

If you *do not* see this message and the **ENABLED** light is turned on, the card was inserted in the wrong slot. Begin again at *Step 2*.

If you *do* see this message, then proceed to *Step 12*.

12. Press the **ESC** pushbutton.
13. Press the **Down Arrow** pushbutton until **STATUS** is highlighted.
14. Press the **ENT** pushbutton.

The front panel displays the following:

```
STATUS
Relay Status
```

15. Press the **ENT** pushbutton.

The front panel displays the following:

```
Serial Num
00000000000000000000000000000000
```

16. Press the **ENT** pushbutton.

The front panel displays the following:

```
Confirm Hardware
Config (Enter)
```

17. Press the **ENT** pushbutton.

The front panel displays the following:

```
Accept New Config?
No Yes
```

18. Select **Yes** and press the **ENT** pushbutton.

The front panel displays the following:

```
Config Accepted.
Enter to Reboot
```

19. Press **ENT**.

The relay restarts and the **ENABLED** light is turned on to indicate the card was installed correctly.

After reconfiguration, the relay updates the part number, except for the digits shown below. These digits remain unchanged, i.e., these digits retain the same character as before the reconfiguration. A communications card (DeviceNet or EIA-232/485) installed in Slot C will be reflected as an empty slot in the part number. A regular 4 DI/4 DO card and a hybrid 4 DI/4 DO card have the same device ID. When interchanging these two cards, the part number for the respective slots should be updated manually. Use the **STATUS** command to view the part number.

```
PART NUM = 0700G11ACA1D7281020X
                ↑↑↑↑↑↑↑↑↑↑
```

Use the **PARTNO** command from the 2AC level to enter the exact part number of the relay.

NOTE: If you are switching between SEL-700G0, SEL-700G0+, SEL-700G1, SEL-700G1+, SEL-700GT, SEL-700GT+, and SEL-700GW models, perform the **R_S** command after accepting the new configuration.

20. Update the side-panel drawing with the drawing sticker provided in the option card kit. If necessary, replace the rear panel with the one applicable for the card and attach the terminal marking label provided with the card to the rear-panel cover.
21. Reconnect all connection plugs, and add any additional wiring/connectors required by the new card.

Slot B CPU Board Replacement

When replacing the Slot B card, please do the following:

1. Ensure that the card has the latest firmware from the factory.
2. Review the firmware revision history for the changes that were made; note that new settings added, if any, might affect existing settings in the relay or its application.
3. Save all the settings and event reports before replacing the card.
4. If the IEC 61850 protocol option was used previously, verify that the IEC 61850 protocol is still operational after the replacement. If not, reenable it. Refer to *Protocol Verification for Relays With IEC 61850 Option* in *Appendix B: Firmware Upgrade Instructions* of the instruction manual.

Perform the following steps to replace the existing CPU board with a new board.

1. Turn off the power to the relay.
2. Use a ground strap between yourself and relay.
3. Disconnect the terminal blocks and CT/PT wires.
4. Remove the rear panel.
5. Remove the main board from its slot and insert the new board.
6. Install the new rear panel and reconnect the terminal blocks and CT/PT wires.
7. Apply new side stickers to the relay.
8. Turn on the relay and log in via terminal emulation software.
9. Issue the **STA** command and accept the new configuration.
10. From Access Level 2, type **CAL** to enter the CAL level.

Do not modify any calibration settings other than those listed in this procedure.

The CAL level default password is CLARKE.

11. From the CAL level issue the **SET C** command.
12. Enter the relay serial number and part number to the appropriate values, type **END**, and then save the settings.
13. Issue the **STA C** command to reboot the relay.
14. Issue the **STA** command to verify that the serial and part numbers of your relay are correct.

Slot A Power Supply Card

If replacing a power supply card, change the part number accordingly, using the **PARTNO** command from the 2AC level. Install new side stickers on the relay.

