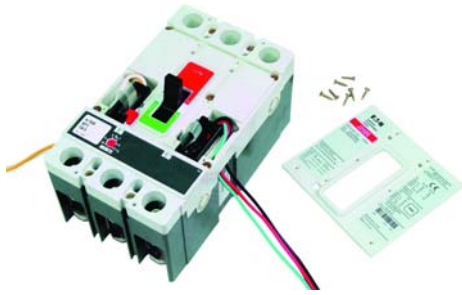


## Series C Internal Accessories



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## Internal Accessories

## Product Overview

**Alarm Switch**

For remote indication of automatic trip operation. Does not function with manual switching; however, it will operate when either a shunt trip or undervoltage release is operated. A “make” contact closes and a “break” contact opens when the alarm/lockout switch operates. The switch automatically resets when the circuit breaker is reset.

**Auxiliary Switch**

The auxiliary switch provides circuit breaker contact status information by monitoring the position of the molded cross bar that contains the moving contact arms. The auxiliary switch is used for remote indication and interlock system verification, and consists of one or two SPDT switches housed in a plug-in module. Each SPDT switch has one “a” and one “b” contact. When the circuit breaker contacts are open, the “a” contact is open and the “b” contact is closed.

**Auxiliary Switch and Alarm Switch Combination**

Each catalog number listed in tables on **Pages V4-T2-416** and **V4-T2-417** includes one auxiliary switch and one alarm switch. In an auxiliary switch ASL switch combination, the auxiliary switch is always mounted on the side of the plug-in module next to the center pole of the circuit breaker.

**Shunt Trip**

The shunt trip provides remote controlled tripping of the circuit breaker. The shunt trip consists of an intermittent rated solenoid with a tripping plunger and a cutoff switch assembled to a plug-in module. When required for ground fault protection applications, certain AC rated shunt trips, as noted in the electrical rating table, are suitable for operation at 55 percent of rated voltage.

Select shunt trip catalog number for the voltage within the indicated voltage range. Shunt trip coils are designed to be applied at specific AC or DC voltages within the voltage range shown. Electrical ratings are also shown on applicable circuit breaker accessory nameplates.

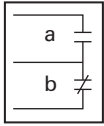
**Low Energy Shunt Trip**

Low energy shunt trip devices are designed to operate from low energy output signals from dedicated current sensors typically applied in ground fault protection schemes. However, with a proper control voltage source, they may be applied in place of conventional trip devices for special applications. Flux paths surrounding permanent magnets used in the shunt trip assembly hold a charged spring poised in readiness to operate the circuit breaker trip mechanism.

When a 100 microfarad capacitor charged to 28 Vdc is discharged through the shunt trip coil, the resultant flux opposes the permanent magnet flux field, which releases the stored energy in the spring to trip the circuit breaker. As the circuit breaker resets, the shunt trip reset arm is actuated by the circuit breaker handle, resetting the shunt trip. The plug-in module is mounted in retaining slots in the top of the trip unit. Coil is intermittent-rated only. Cutoff provisions required in control circuit.

## Auxiliary Switch

## Auxiliary Switch



## G-Frame Auxiliary Switch (RH Only)

Electrical Ratings			Contact Arrangement	Factory Suffix	Catalog Number <sup>①②</sup>
Volts	Frequency	Amperes			
240	50/60 Hz	6	1a/1b	A3	1288C74G03
240	50/60 Hz	6	2a/2b	A6	1288C73G03

## F-Frame and HMCP (F) Auxiliary Switch

Number of Contacts A and B	Mounting Location (Pole)	Factory Mounted Connection Type and Location 18-Inch (457.2 mm) Pigtail Leads				Factory Installation Kit <sup>④</sup>	
		Same Side Suffix Number	Rear <sup>③</sup> Suffix Number	Opposite Side Suffix Number	Terminal Block Same Side Suffix Number	Pigtail Leads Catalog Number	Terminal Block Catalog Number
		1	Left <sup>⑤</sup>	A01	A02	A03	A04
	Left <sup>⑤</sup>	A15 <sup>⑦</sup>	A16 <sup>⑦</sup>	A17 <sup>⑦</sup>	—	E1X1PK	—
	Right or Neutral <sup>⑥</sup>	A05	A06	A07	A08	A1X1PK	A1X1RTK <sup>⑧</sup>
	Right or Neutral <sup>⑥</sup>	A18 <sup>⑦</sup>	A19 <sup>⑦</sup>	A20 <sup>⑦</sup>	—	—	—
2	Left <sup>⑤</sup>	A09	A10	—	A11	A2X1LPK	A2X1LTK
	Left <sup>⑤</sup>	A21 <sup>⑦</sup>	A22 <sup>⑦</sup>	—	—	E2X1LPK	—
	Right or Neutral <sup>⑥</sup>	A12	A13	—	A14	A2X1RPK	A2X1RTK <sup>⑧</sup>
	Right or Neutral <sup>⑥</sup>	A23 <sup>⑦</sup>	A24 <sup>⑦</sup>	—	—	E2X1RPK	—

F-Frame with Electronic Trip Unit Auxiliary Switch <sup>⑨</sup>

Number of Contacts A and B	Mounting Location (Pole)	Factory Mounted Connection Type and Location 18-Inch (457.2 mm) Pigtail Leads				Factory Installation Kit <sup>④</sup>	
		Same Side Suffix Number	Rear <sup>③</sup> Suffix Number	Opposite Side Suffix Number	Terminal Block Same Side Suffix Number	Pigtail Leads Catalog Number	Terminal Block Catalog Number
		<b>Trip Unit Type 310+</b>					
1	Right	A30	A31	A32	—	—	—
<b>Trip Unit Type 210+</b>							
1	Right	A33	A34	A35	—	—	—

## J-Frame and HMCP (J) Auxiliary Switch

Number of Contacts A and B	Mounting Location (Pole)	Factory Mounted Connection Type and Location 18-Inch (457.2 mm) Pigtail Leads				Field Mounted Factory Installation Kit <sup>⑩</sup>	
		Same Side Suffix Number	Rear <sup>③</sup> Suffix Number	Opposite Side Suffix Number	Terminal Block Same Side Suffix Number	Pigtail Leads Catalog Number	Terminal Block Catalog Number
		1	Left	A01	A02	A03	A04
	Right <sup>⑪</sup>	A05	A06	A07	A08	A1X2PK	A1X2RTK <sup>⑪</sup>
2	Left	A09	A10	—	A11	A2X2PK	A2X2LTK
	Right <sup>⑪</sup>	A12	A13	—	A14	A2X2PK	A2X2RTK <sup>⑪</sup>

## Notes

- ① Includes 24-inch external pigtail leads, 18 AWG (16–0.010).
- ② A maximum of two internal accessories may be mounted in a three-pole circuit breaker. Suitable for mounting in right pole only of two- or three-pole breaker.
- ③ Standard pigtail lead exit location.
- ④ Not listed with Underwriters Laboratories; for field installation.
- ⑤ Pigtail wire size: 18 AWG (0.82 mm<sup>2</sup>).
- ⑥ Not for use on F-Frame with electronic trip unit.
- ⑦ 125 volts (max.), 50/60 Hz switch for use in electronic circuit of 100 micro amperes and 15 Vdc minimum.
- ⑧ Not for use on four-pole circuit breakers.
- ⑨ Only for use on three-pole F-Frame breakers with electronic trip unit. Installation auxiliary switch for FD electronic breakers on right pole must be performed at breaker factory.
- ⑩ Listed with Underwriters Laboratories for field installation or interchangeable trip unit breakers under E64983.
- ⑪ Standard mounting location—leads exit rear of breaker.