

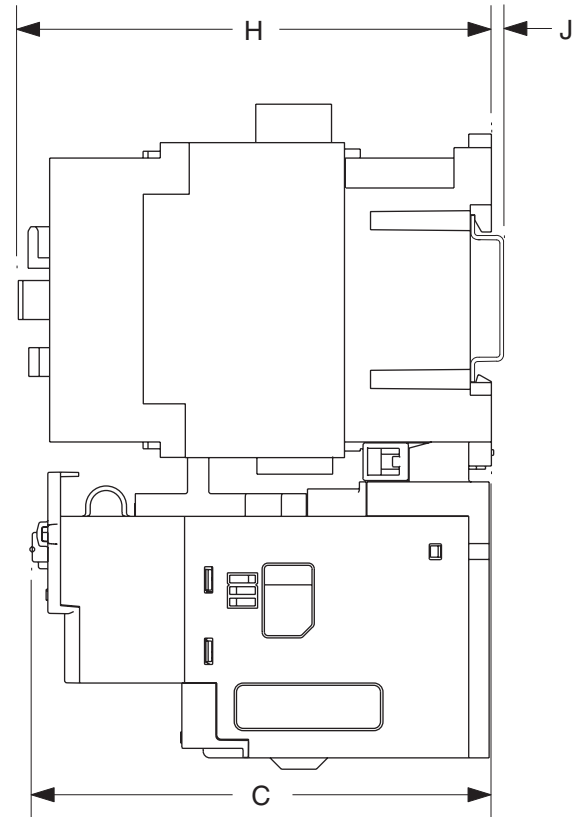
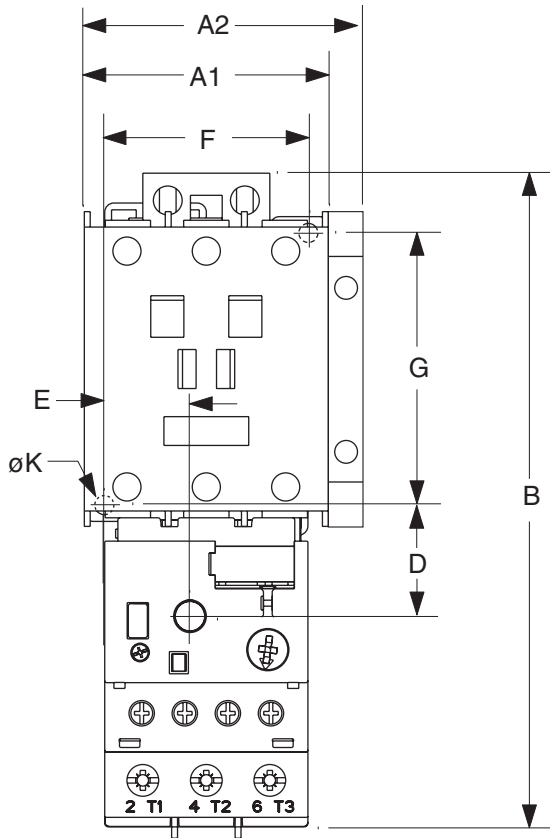


Full Voltage Non-Reversing Starter NEMA Size 0, 1, 2

(Cat 309-AO_, -BO_, -CO_)

Dimensions are shown in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

⚠ WARNING	To prevent electrical shock, disconnect from power source before installing or servicing. Install in suitable enclosure. Keep free from contaminants. (Follow NFPA70E requirements)
⚠ AVERTISSEMENT	Avant le montage et la mise en service, couper l'alimentation secteur pour éviter toute décharge. Prévoir une mise en coffret ou armoire appropriée. Protéger le produit contre les environnements agressifs. (Vous devez respecter la norme NFPA70E).
⚠ ADVERTENCIA	Desconéctese de la corriente eléctrica, antes de la instalación o del servicio, a fin de impedir sacudidas eléctricas. Instálelo en una caja apropiada. Manténgalo libre de contaminantes. (Cumpla con los requisitos NFPA70E).



CAT. NO.		A1	A2	B	C	D	E	F	G	H	J	øK
309-AO_	in (mm)	1.76 (45)	--	5.77 (147)	3.35 (85.2)	0.96 (24.5)	0.55 (13.9)	1.38 (35)	2.36 (60)	3.40 (86.5)	0.08 (2)	0.17 (4.5)
309-BO_	in (mm)	--	2.12 (54)	5.77 (147)	3.98 (101)	0.96 (24.5)	0.55 (13.9)	1.38 (35)	2.36 (60)	4.09 (104)	0.08 (2)	0.17 (4.5)
309-CO_	in (mm)	--	2.48 (63)	5.77 (147)	3.98 (101)	0.96 (24.5)	0.74 (18.4)	1.77 (45)	2.36 (60)	4.09 (104)	0.08 (2)	0.17 (4.5)

Electronically Controlled DC-Coil Only

NOTICE	(IEC / EN 60947-1) This product has been designed for environment A. Use of this product in environment B may cause unwanted electromagnetic disturbances in which case the user may be required to take adequate mitigation measures.
REMARQUE	(IEC / EN 60947-1) Ce produit on l'utilise dans l'environnement A. L'utilisation de ce produit dans l'environnement B peut créer des perturbations électromagnétiques. En ce cas, l'utilisateur doit prendres mesures pour diminuer les perturbatione électromagnétiques.
AVISO	(IEC / EN 60947-1) Este producto se puede usar en el ambiente A. El uso en el ambiente B puede causar perturbaciones electromagnéticas. En ese caso de uso, el usuario debe tomar medidas de disminuir las perturbaciones electromagnéticas.

AB Parts

	Main Connections Raccordements Principale Collegamenti Principale		Control Connections Borne de Commande Morsetti di Comando
	Size 0	Size 1 and 2	Size 0, 1 and 2
	#16 - 10 AWG 13 - 22 lb-in	#14 - 4 AWG 22 - 31 lb-in	#16 - 12 AWG 9 - 13 lb-in
	#2		#1
	1 x 6 mm		0.6 x 3.5 mm

	Main Connections Raccordements Principale Collegamenti Principale		Control Connections Borne de Commande Morsetti di Comando
	Size 0	Size 1 and 2	Size 0, 1 and 2
	1x #14 - 6 AWG 18 - 26 lb-in	#24 - 10 AWG 4 - 6 lb-in	1x #24 - 10 AWG 4 - 6 lb-in
	2x #14 - 6 AWG 24 - 36 lb-in	#24 - 12 AWG 4 - 6 lb-in	2x #24 - 12 AWG 4 - 6 lb-in
	#2		#1
	1 x 6 mm		0.6 x 3.5 mm

E1 PLUS Features Caractéristiques du E1 PLUS Características del E1 PLUS

Push To Test
Enfoncer pour tester
Presione para probar

Push to Reset
Enfoncer pour réinitialiser
Presione para reiniciar

Rotate to Manually Trip
Faire pivoter pour déclencher manuellement
Rotar para disparar manualmente

193*-EE

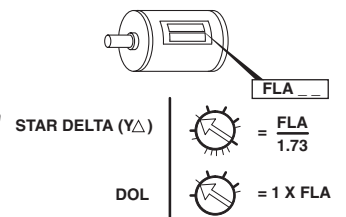
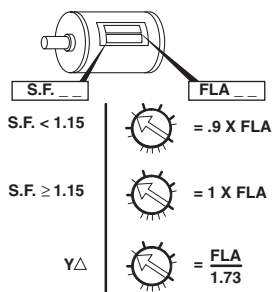
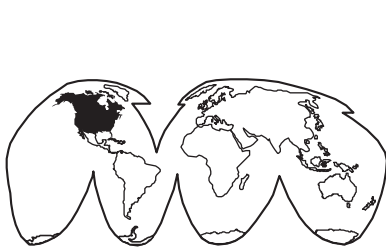
RESET MODE
 A M
A = Automatic/Manual Reset Mode
A = Mode de réinitialisation automatique/manuel
A = Modo de reinicio automático/manual

TRIP CLASS
 10 15
 20 30
M = Manual Reset Mode
M = Mode de réinitialisation manuel
M = Modo de reinicio manual

Selectable Trip Class
Classe de déclenchement sélectionnable
Clase de disparo seleccionable

- **Trip Indicator Window**
Yellow indicator not visible: Not Tripped.
Yellow indicator visible: Tripped.
- **Fenêtre d'indicateur de déclenchement**
Indicateur jaune non visible : pas de déclenchement
Indicateur jaune visible : déclenchement
- **Ventana indicadora de disparo**
Indicador amarillo no visible: No disparado
Indicador amarillo visible: Disparado

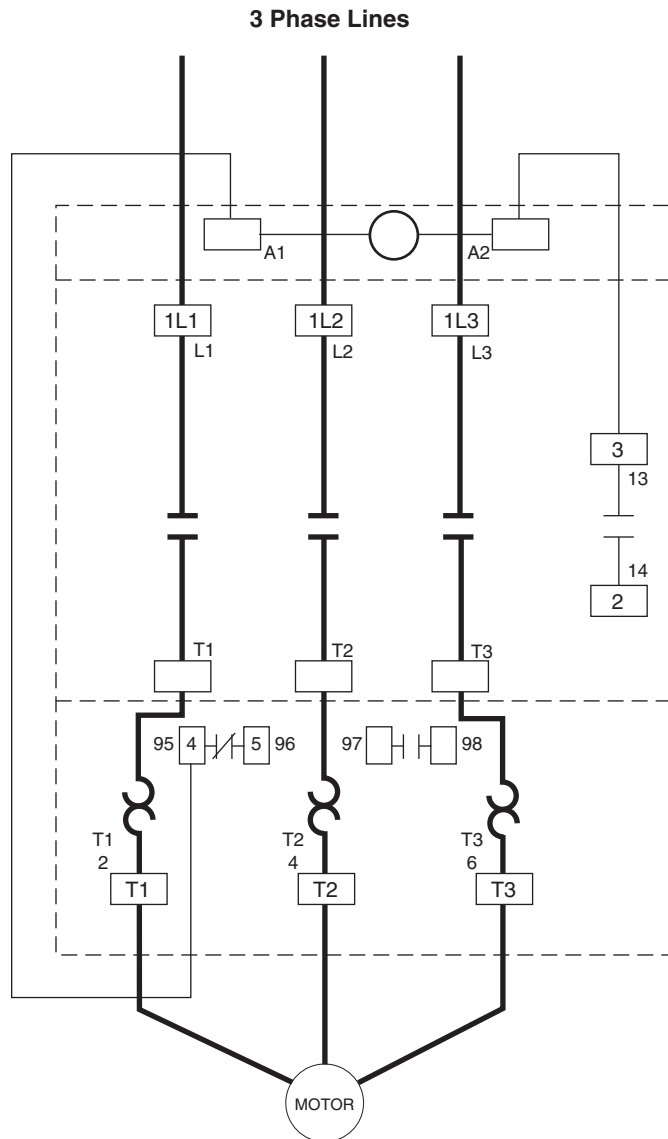
- To adjust trip current, turn dial until the desired current is aligned with the ▲ pointer. Trip rating is 120% of dial setting.
- Pour régler l'intensité de déclenchement, tournez le cadran jusqu'à ce que le pointeur ▲ soit sur l'intensité voulue. La valeur nominale de déclenchement est de 120% du réglage cadran.
- Para ajustar la corriente del disparo, gire el dial hasta que la corriente deseada esté alineada con la marca ▲. La capacidad nominal del disparo es el 120% del posicionamiento del dial.



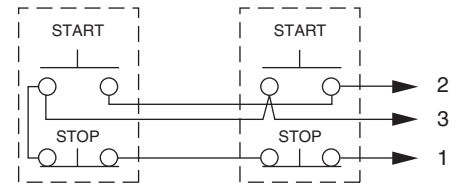
Starter Catalog Number	Standard Fault Ratings			High Fault Ratings	
	Short Circuit Rating	Fuse Rating Class K5 600V Max.	Circuit Breaker Rating	Short Circuit Rating	Fuse Rating Class J 600V Max.
309-AO*	5,000 A.	40 A.	40 A. 480 V max.	100,000 A.	40 A.
309-BO*	5,000 A.	100 A.	100 A. 600 V max.	100,000 A.	50 A.
309-CO*	5,000 A.	150 A.	125 A. 600 V max.	100,000 A.	70 A.

Starter Catalog Number	High Fault Ratings			
	Short Circuit Rating	Circuit Breaker Rating 480 V Max.	Short Circuit Rating	Circuit Breaker Rating 600 V Max.
309-BO*	50,000 A.	50 A.	30,000 A.	50 A.
309-CO*	50,000 A.	50 A.	30,000 A.	50 A.

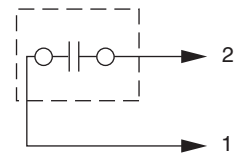
Wiring Diagram
 Schéma de câblage
 Diagrama de cableado



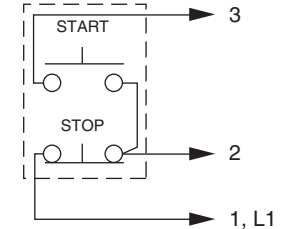
2 Station
 3-Wire Control



2-Wire Control



3-Wire Control



NOTICE

Additional control circuit overcurrent protection may be required. Refer to the National Electrical Code. The current rating of the control circuit conductors furnished with this device is 15 Amps. Use 75° C copper wire only.

Maintain this equipment in accordance with guidelines of NFPA-70B, Electrical Equipment Maintenance.

Select the motor branch circuit overcurrent protection in accordance with the National Electrical Code or the Canadian Electrical Code; except, use fuses only.

AB Parts

Renewal Parts

	AC Coil Voltage	Coil Part No.		
		Size 0	Size 1	Size 2
Coils	24 V 50 / 60 HZ	TA855	TC855	TD855
	110 V / 50 HZ 120 V / 60 HZ	TA473	TC473	TD473
	220 V / 50 HZ 240 V / 60 HZ	TA474	TC474	TD474
	440 V / 50 HZ 480 V / 60 HZ	TA475	TC475	TD475
	550 V / 50 HZ 600 V / 60 HZ	TA476	TC476	TD476
Overload Relays	Current Range	Size 0	Catalog No.	
	1.0 - 5.0 Amps	193-EECB	Size 1	Size 2
	5.4 - 27 Amps	193-EEEB		
	5.4 - 27 Amps		193-EEED	
	9 - 45 Amps			193-EEFD
Auxiliary Contact			100-SB10	100-SB10