



CLASS 9999 TYPE SM MECHANICAL INTERLOCK KITS — For Use with Types SE and SF — Series A; Size 3 or 4, AC Magnetic Reversing or Multi-Speed Contactors and Starters

CLASSES 8702, 8736 and 8810

GENERAL — Class 9999 Type SM kits are designed to mechanically interlock two Type S, Size 3 or 4, Series A contactors and starters. (See Figure 1). The mechanical interlock is mounted to the base of each contactor with the interlock's operating levers engaging the movable-contact carriers. The beginning stroke of either contact carrier locks the interference, non-jamming type mechanism and prevents the contacts on the other contactor from closing.

ELECTRICAL INTERLOCKING — is necessary for mechanically interlocked devices. Electrical interlocking

prevents simultaneous energization of both contactor coils. One N.C. electrical interlock (Class 9999 Type SX-7) should be positioned on the lower right side of each contactor and wired in series with the coil of the other contactor.

COMPONENT ASSEMBLY — Class 9999 Type SM mechanical interlock kits can be used with basic contactors and starters to assemble reversing or multi-speed controllers. Table 1 lists the kit and mounting dimension required for vertical mounting; Table 2, for horizontally mounted devices.

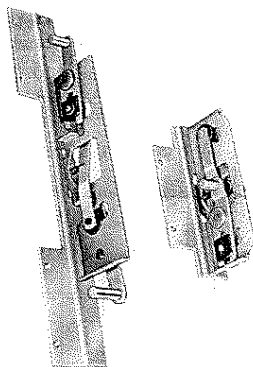


Figure 1 — Class 9999 Type SM-11 mechanical interlock (left) for vertical mounting and Class 9999 Type SM-12 mechanical interlock (right) for horizontal mounting.

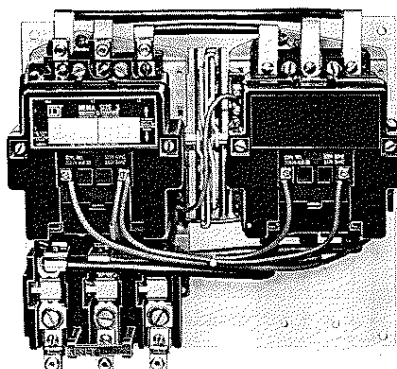


Figure 2 — Horizontal 3-pole reversing starter on separate mounting panel.

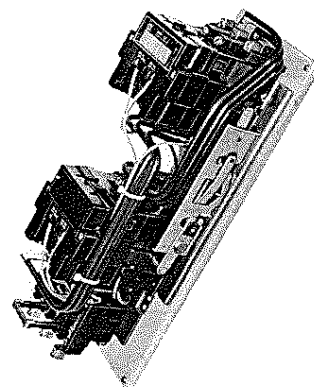


Figure 3 — Vertical 3-pole reversing starter on separate mounting panel.

ASSEMBLY INSTRUCTIONS — The following assembly procedure applies for all devices listed in Tables 1 and 2:

1. Attach mechanical interlock to contactor baseplates using #10-24 self-tapping 3/8" screws provided in the kit. Flanges on the interlock fit under the contactor baseplates. The self-tapping screws go through the interlock into the back of the contactor baseplate.
2. Manually operate each contactor to be sure the interlock operating levers do not bind in the slots of the movable-contact carrier. Each contactor should operate freely.
3. Drill and tap the panel as indicated in Tables 1 and 2 and mount the assembled device with appropriate screws. For vertically mounted devices, see Figure 4 and Table 1 for mounting dimensions. For horizontally mounted devices, see Figure 5 and Table 2 for mounting dimensions.
4. Electrically operate each contactor to check for proper alignment. While one contactor is energized, check the other contactor's movable contact carrier so that it can move at least .01" but not more than .09".
5. Install control wiring and then power wiring.



MOUNTING DIMENSIONS

TABLE 1 — VERTICAL MOUNTING

Description	Class	Size	Maximum Number of Poles		Mech. Interlock Class 9999 Type	Drill Holes	Hole Tap Size	Dimensions in inches (Figure 4) *										
			Top	Bot.				A	B	C	D	E	F	G	H	J	K	L
Reversing Contactor	8702	3	3	3	SM-11	1, 2, 3	1/4 – 20	6	1.50	4.75	10.00	0	6	1.50	4.75	....	....	....
		4	3	3	SM-13	1, 2, 3	5/16 – 18	7	1.72	5.32	12.25	0	7	1.72	5.32	....	....	....
Reversing Starters	8736	3	3	3	SM-11	1, 2, 4	1/4 – 20	6	1.50	4.75	10	0	....	....	....	10.16	0	....
		4	3	3	SM-13	1, 2, 4	5/16 – 18	7	1.72	5.32	12.25	0	....	....	....	11.19	0.06	....
Separate Winding Two-Speed Starters	8810	3	3	3	SM-11	1, 2, 4, 5	1/4 – 20	6	1.50	4.75	10.00	0	....	....	....	10.16	0	8.50
		4	3	3	SM-13	1, 2, 4	5/16 – 18	7	1.72	5.32	12.25	0	....	....	....	11.19	0.06	8.75
						5	1/4 – 20											
Consequent Pole Two-Speed Starters	8810	3	5*	3	SM-11	1	5/16 – 18	7	3.59	9.06	10.50	2.30	....	....	....	10.16	0	8.50
						2, 4, 5	1/4 – 20											
		4	5*	3	SM-13	1, 2, 4	5/16 – 18	7	3.59	9.06	12.25	1.93	....	....	....	11.19	0.06	8.75
						5	1/4 – 20											

* Uses only 5 pole starter in the top position.

* All dimensions $\pm$ 0.02 inches

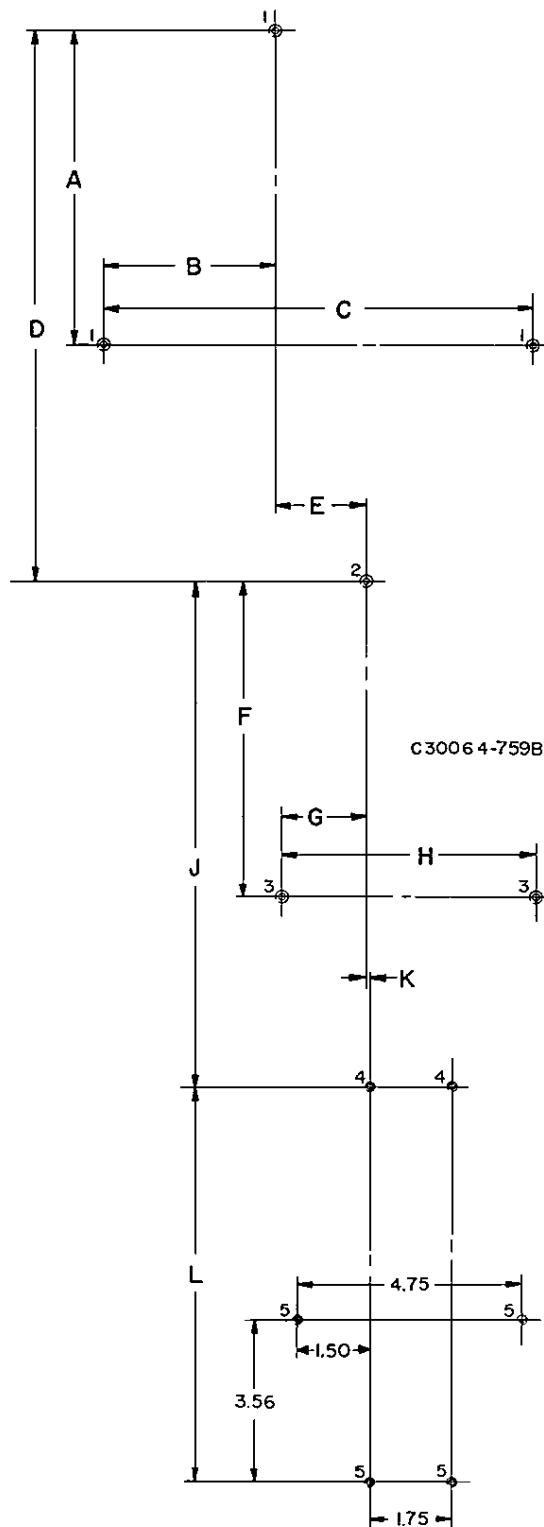


FIGURE 4
Dimensions for
vertical mounting.
See Table 1



MOUNTING DIMENSIONS

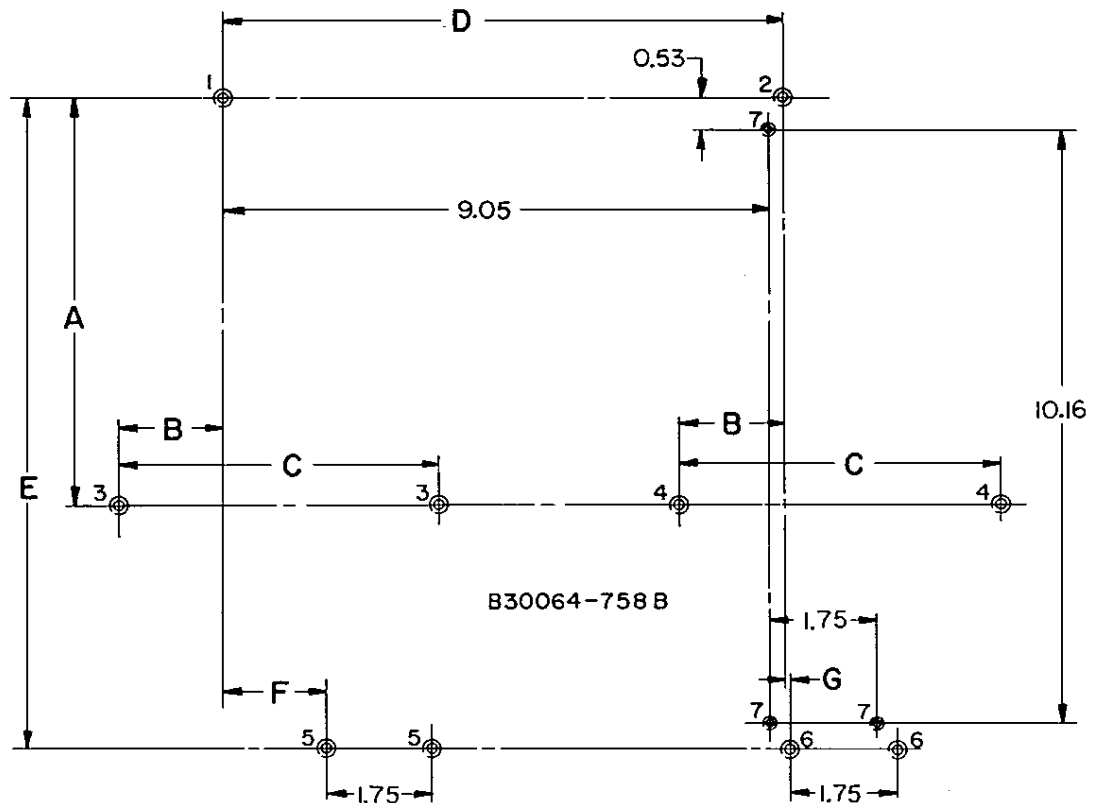
TABLE 2 — HORIZONTAL MOUNTING

Description	Class	Size	Maximum Number of Poles		Mech. Interlock Class 9999 Type	Drill Holes	Hole Tap Size	Dimensions in inches (Figure 5)*						
			Left Hand	Right Hand				A	B	C	D	E	F	G
Reversing Contactor	8702	3	3	3	SM-12	1, 2, 3, 4	1/4 - 20	6	1.50	4.75	6.75	....	....	....
		4	3	3		1, 2, 3, 4	5/16 - 18	7	1.72	5.32	7.37	....	....	....
Reversing Starters	8736	3	3	3		1, 2, 4, 5	1/4 - 20	6	1.50	4.75	6.75	10.16	0	....
		4	3	3		1, 2, 4, 5	5/16 - 18	7	1.72	5.32	7.37	11.19	0.06	....
Separate Winding Multi-Speed Starter	8810	3	3	3		1, 2, 5, 6	1/4 - 20	....	....	....	6.75	10.16	0	0
		4	3	3		1, 2, 5, 6	5/16 - 18	....	....	....	7.31	11.19	0.06	0.06
Consequent Pole Multi-Speed Starter	8810	3	5*	3		1, 5	5/16 - 18	....	....	....	....	11.19	1.69	....
						7	1/4 - 20	....	....	....	....	11.19	1.69	....
		4	5*	3		1, 2, 5, 6	5/16 - 18	....	....	....	9.28	11.19	1.69	0.06

* Uses only 5 pole starter in left hand position.

* All dimensions $\pm$ 0.02 inches.

FIGURE 5
Dimensions for
horizontal
mounting
See Table 2





California Proposition 65 Warning—Nickel Compounds

Advertencia de la Proposición 65 de California— compuestos de níquel

Avertissement concernant la Proposition 65 de Californie— composés de nickel

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