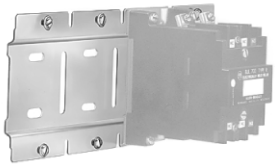
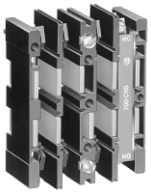
Renewal Parts and Accessories

Accessories for Bulletin 700-R, -RM Relays

	Description		Pkg. Qty.	Cat. No. ❶
	**Universal Mounting Strips** Simplifies panel layout. These indexed strips are easily cut to the required length and bolted, riveted, or spot-welded in place. Relays are installed adjacent to one another on the mounting strip with the captive mounting screws provided. Rows of relays on mounting strip form their own wiring trough.	4 Relays per Strip	5	700-MP4
		8 Relays per Strip	5	700-MP8
		12 Relays per Strip	5	700-MP12
		16 Relays per Strip	5	700-MP16
	**Front Deck** A front deck can be attached to Bulletin 700 2-, 3-, or 4-pole AC and DC Type R or RM relays.	Front Deck with one N.O. Contact Cartridge (700-R Relay)		700-RA10
		Front Deck with one N.C. Contact Cartridge (700-R Relay)		700-RA01
		Front Deck with one N.O. Contact Cartridge (700-RM Relay)		700-RB10
		Front Deck with one N.C. Contact Cartridge (700-RM Relay)		700-RB01
 *Cat. No. 700-CR5*  *Cat. No. 700-CR6*  *Cat. No. 700-CR9*	**Contact Cartridges** These cartridges are used to increase the number of poles of a relay. A dummy cartridge is also available to fill empty space not occupied by a contact cartridge.  N.O. N.C.	N.O. Contact Cartridge - Green (700-R Relay)		700-CR5
		N.C. Contact Cartridge - Yellow (700-R Relay)		700-CR6
		N.O. Contact Cartridge - Blue (700-RM Relay)		700-CR7
		N.C. Contact Cartridge - Red (700-RM Relay)		700-CR8
		"DUMMY" Cartridge - Black (700-R and -RM Relays)		700-CR9
	**Surge Suppressor** When the circuit to a DC operating coil is opened, the inductive energy stored in the coil can generate very high transient voltages. With the addition of the appropriate surge suppressor, the stored energy is absorbed and dissipated limiting the voltage spikes. A surge suppressor is not required with AC 700-R or -RM relays because the AC operating coil transients are suppressed by a full wave rectifier connected to the coil.	12V DC (700-R Relay)	1	199-FSMA9
		12V DC (700-RM Relay)	2	
		24V DC (700-R Relay)	1	
		24V DC (700-RM Relay)	2	
		48V DC (700-R Relay)	1	
		48V DC (700-RM Relay)	2	
		115…125V DC (700-R Relay)	1	199-FSMA10
		115…125V DC (700-RM Relay)	2	
		230…250V DC (700-R Relay)	1	199-FSMA11
		230…250V DC (700-RM Relay)	2	
	**Bulletin 700-PS Solid-State Timing Unit** You can attach a Bulletin 700-PS solid-state timing unit to 4-pole 700-R or -RM relays. An adaptor kit, **Cat. No. 700-N26**, is required. See page 40-235 for description.			
	Bulletin 852S Solid-State Timing Unit You can attach a Bulletin 852S solid-state timing unit to 4-pole 700-R or -RM relays.			

❶ All Cat. Nos. are factory stocked.

The relay's operating coil DOES NOT require changing with the addition of a front deck assembly.

INDICATOR COVER — The indicator, located in the cover assembly, is actuated by magnetic flux from the operating coil. Its purpose is to indicate that the coil is energized or de-energized. It DOES NOT indicate contact operation or condition.

ADDING TIMER — The Bulletin 852S solid state timer can be added to any single deck relay. Do not remove the indicator cover of the single deck relay. Remove mounting plate from Bulletin 852S and use the special long mounting screws and springs included with the timer to secure the timer to the relay.

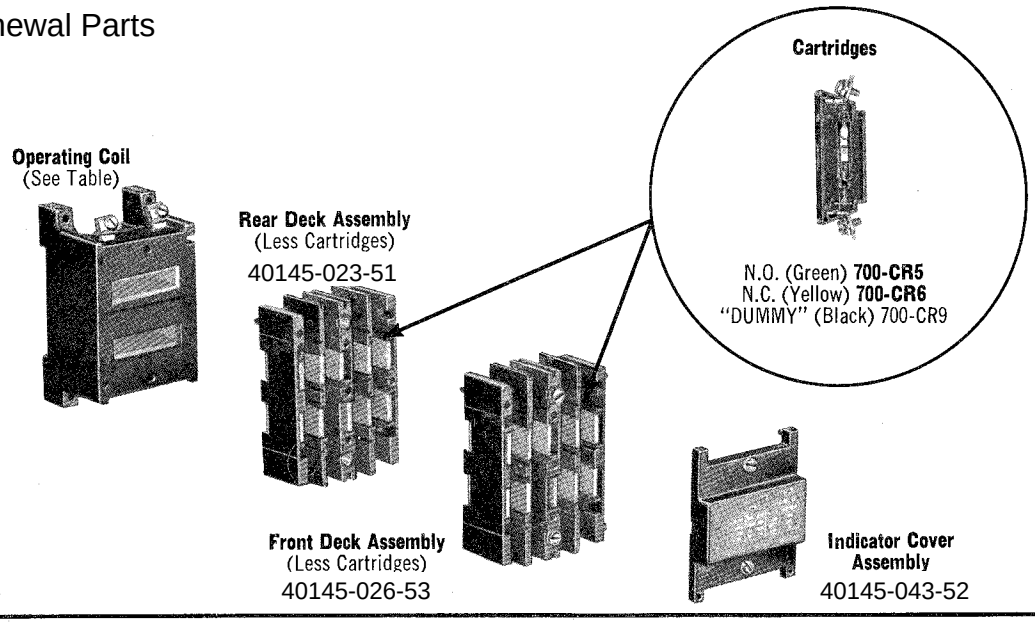
NOTE: When a Bulletin 852S timer is mounted on a relay, the indicator will no longer be visible.

CONTACT OVERLAP — Normally open contacts may close before the normally closed contacts open on energization of the coil or the vice versa on de-energization. This condition known as "contact overlap" may occur because of the inherent characteristics of this device. If positive non-overlap is required, consult the factory.

SURGE SUPPRESSION — Because Type R relays with AC coils have inherent suppression, no transient suppression is required. Type R relays with DC coils may require external transient suppression. See table below for the proper surge suppressor required for the DC coils.

ORDERING INFORMATION — Your order cannot be entered unless the following information is given: Part number, description of part, the catalog number and series letter of relay. This parts list applies also to these relays when used on control apparatus listed under other Bulletin numbers.

700R Renewal Parts



OPERATING COILS

Volts	Hz	Coil No.	Amperes	Volt-Amperes
24	60	77AB27	.190	3.40
24	50		.260	6.00
48	60	77AB134	.130	5.60
48	50		.123	5.90
120	60	77AB86	.048	5.85
110	50		.044	4.90
240	60	77AB83	.020	4.95
220	50		.018	4.15
12	DC	77D151	.460	5.50
24	DC	77D152	.23	5.50
28	DC	77D204	.207	5.81
32	DC	77D153	.192	6.13
48	DC	77D166	.115	5.50
64	DC	77D154	.093	5.99
115-125	DC	77D155	.042-.045	4.9-5.7
230-250	DC	77D156	.019-.021	4.4-5.3

ADDING FRONT DECK — A second or front deck may be added to any relay having a rear deck only, increasing the maximum number of poles available to a total of eight, either N.O. or N.C. or combinations thereof. To add the front deck, first remove the cover by loosening the two captive screws. Inspect the front deck to be sure all ten metal flux fingers are in place. Place the front deck on the rear deck and secure deck with captive screws. Replace the cover. The decks are keyed to provide proper orientation. The coil of the relay does not have to be changed when a front deck is added to the relay. See Figure 2.

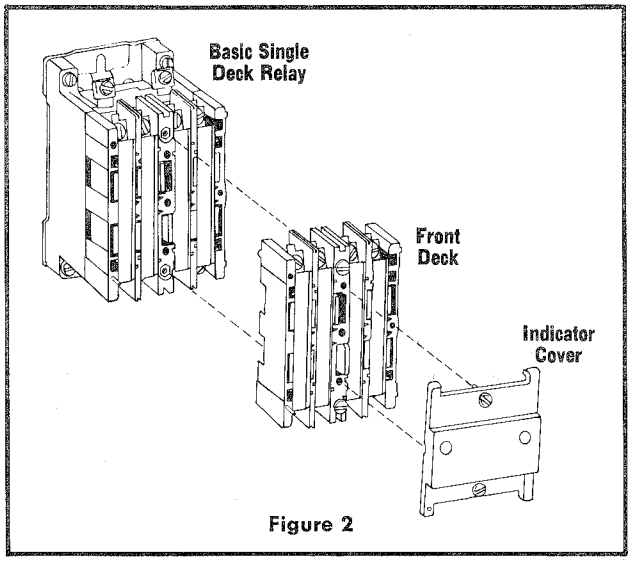


Figure 2

ADDING TIMER — The Bulletin 852S Solid State Timer can be added to any single deck relay. Do not remove the cover of the single deck relay. Remove mounting plate from Bulletin 852S and use the special long mounting screws and springs included with the timer to secure the timer to the relay.

INDICATOR — Red indicates last coil signal received. The indicator in the cover is operated by magnetic flux from the coil and **does not** indicate contact condition or whether contacts are operating. **NOTE:** When the Bulletin 852S Timer is mounted on the relay, the indicator will no longer be visible.

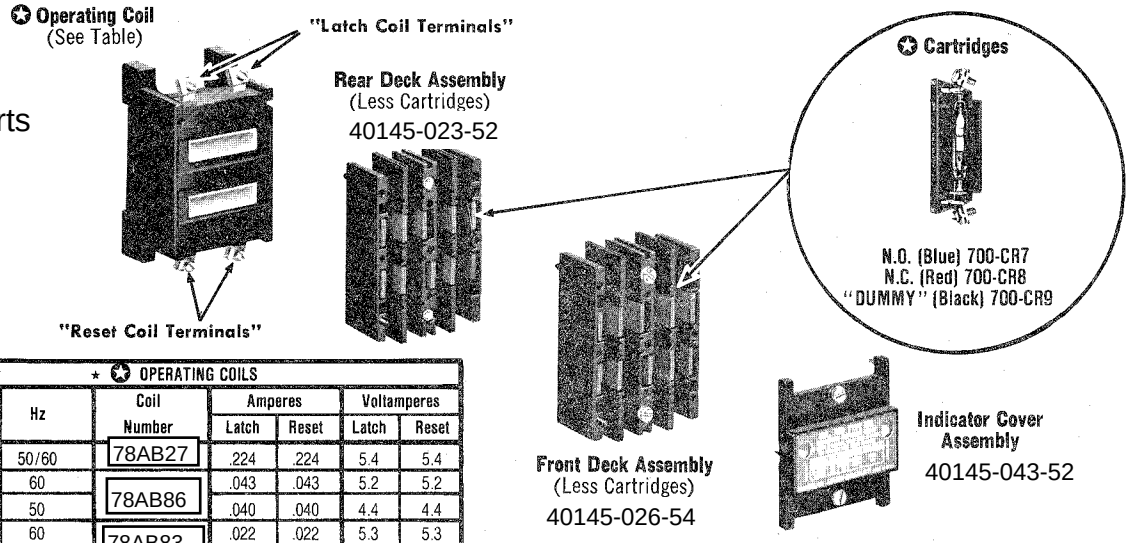
COIL — The type RM relay does not require coil clearing contacts. Both the latch and reset coils are electrically isolated from each other and may be energized continuously and at the same time.

CONTACT OVERLAP — Because of the inherent characteristics of this device, the normally open contacts may close before the normally closed contacts open on energization of the coil and the normally closed contacts may close before the normally open contacts open on de-energization.

SURGE SUPPRESSION — Type RM relays with AC coils use rectifier circuits integrally molded into the coils. Because Type RM relays with AC coils do not generate transients, **no** suppression is required. For most external system transients the rectifier circuit is protected by an internal varistor. Type RM relays with DC coils may require transient suppression. See table below for the proper surge suppressor required for the DC coils.

ORDERING INFORMATION — Your order cannot be entered unless the following information is given: Part number, description of part, the catalog number and series letter of relay. This instruction sheet applies also to these relays when used on control apparatus listed under other Bulletin numbers.

700RM Renewal Parts



★ ✪ OPERATING COILS						
Volts	Hz	Coil Number	Amperes		Voltamperes	
			Latch	Reset	Latch	Reset
24	50/60	78AB27	.224	.224	5.4	5.4
120	60	78AB86	.043	.043	5.2	5.2
110	50		.040	.040	4.4	4.4
240	60	78AB83	.022	.022	5.3	5.3
220	50		.020	.020	4.4	4.4
12	DC	78D151	.145	.145	1.7	1.7
24	DC	78D152	.074	.074	1.8	1.8
28	DC	78D204	.055	.055	1.5	1.5
32	DC		.062	.062	2.0	2.0
48	DC	78D166	.036	.036	1.7	1.7
115	DC	78D155	.013	.013	1.5	1.5
125	DC		.014	.014	1.8	1.8
230	DC	78D156	.006	.006	1.5	1.5
250	DC		.007	.007	1.8	1.8

★ Added or changed since previous issue.

NOTE — Parts indicated with ✪ are recommended spare parts.

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Important User Information

Because of the variety of uses for the products described in this publication, those responsible for the application and use of this control equipment must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards.

The illustrations, charts, sample programs and layout examples shown in this guide are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Rockwell Automation does not assume responsibility or liability (to include intellectual property liability) for actual use based upon the examples shown in this publication.

Allen-Bradley publication SGI-1.1, *Safety Guidelines for the Application, Installation and Maintenance of Solid-State Control* (available from your local Allen-Bradley office), describes some important differences between solid-state equipment and electromechanical devices that should be taken into consideration when applying products such as those described in this publication.

Throughout this document we use notes to make you aware of safety considerations:

ATTENTION

Identifies information about practices or circumstances that can lead to personal injury or death, property damage or economic loss

IMPORTANT

Identifies information that is critical for successful application and understanding of the product.

Use only replacement parts and devices recommended by Rockwell Automation to maintain the integrity of the equipment. It is the user's responsibility to ensure that the renewal part number selected is properly matched to the model, series and revision level of the equipment being serviced.

ATTENTION

Servicing energized Industrial Control Equipment can be hazardous. Severe injury or death can result from electrical shock, burn, or unintended actuation of controlled equipment. Recommended practice is to disconnect and lockout control equipment from power sources, and release stored energy, if present.

Refer to **National Fire Protection Association Standard No. NFPA70E, Part 2 and (as applicable) OSHA rules for Control of Hazardous Energy Sources (Lockout/Tagout) and OSHA Electrical Safety Related Work Practices** for safety related work practices, including procedural requirements for lockout/tagout, and appropriate work practices, personnel qualifications and training requirements where it is not feasible to de-energize and lockout or tagout electric circuits and equipment before working on or near exposed circuit parts.