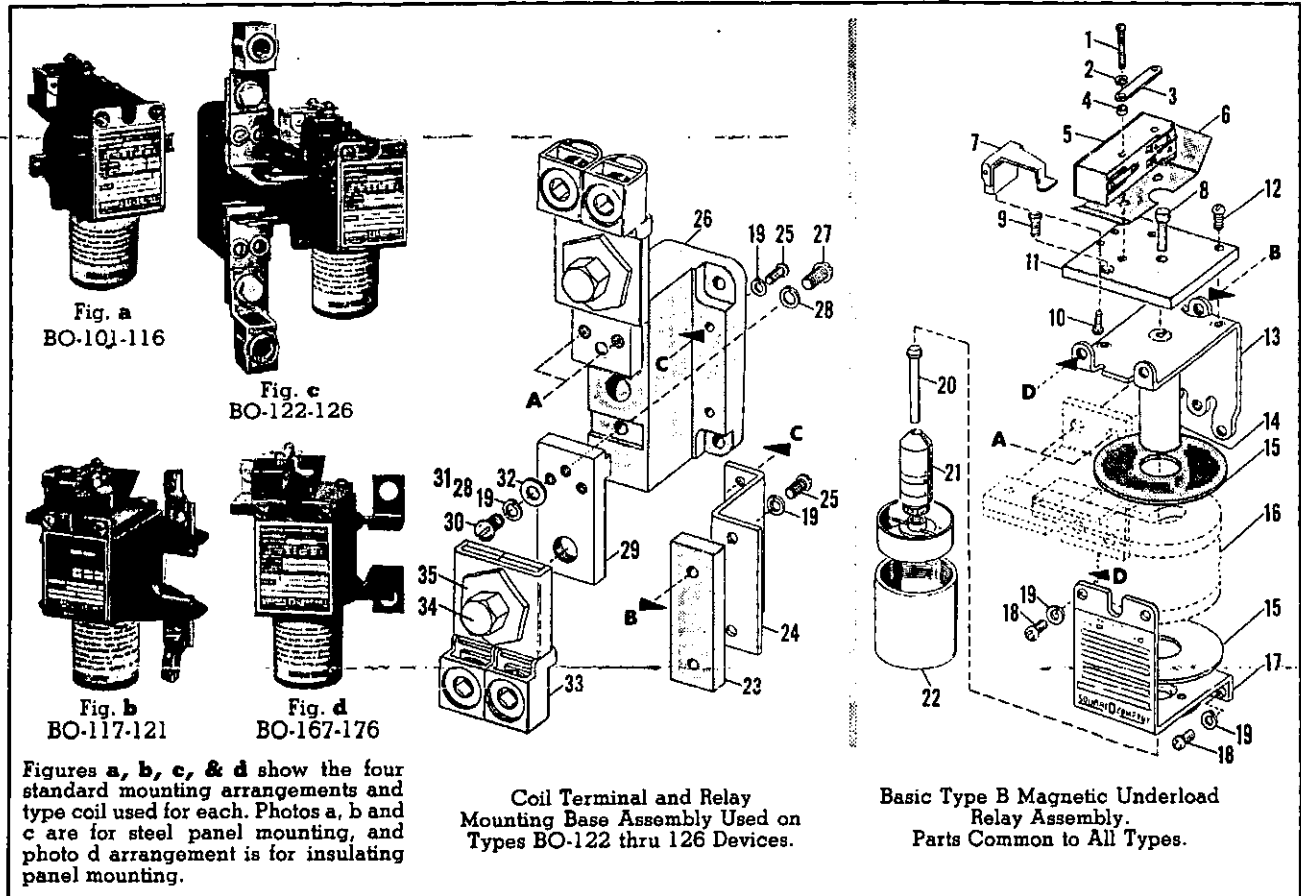




## Class 9055 — Dashpot Type — Magnetic Current Relays Type B, Series A Underload Trip Type



Figures a, b, c, & d show the four standard mounting arrangements and type coil used for each. Photos a, b and c are for steel panel mounting, and photo d arrangement is for insulating panel mounting.

**Application** — Type B underload relays are similar to Type A overload relays, except that single pole, double throw, snap switch action contacts are provided, time delay is much shorter by using lighter grade dashpot oils, and the RESET CURRENT is much higher — 88 to 90% on ac and 80-85% on dc of the trip current setting. At the minimum time setting, the time delay is sufficient to prevent "relay flutter" on low momentary overloads. The RESET TIME is fast due to the one way valve (located in the bottom of the dashpot piston, on Item 21) which opens when the current drops below the reset value.

Due to these characteristics, the Type B underload relays are widely used when an overload on one motor is to stop or start another motor in order to relieve the load on the first motor. Likewise, due to the high consistent reset current, Type B relays may also be used to detect an undesirable condition of underload.

**Contact Assembly** — The basic single pole, double throw snap switch contact mechanism, Item 5, can be removed by loosening the two screws, Item 1, and removing Items 1, 2, 3, and 4. Lift the snap switch, Item 5, up slightly to clear the top of the trip pin, Item 8, while simultaneously lifting the tongue portion on Item 7, in order that the snap switch can be slipped between Items 7 and 8. Reassemble the snap switch contact mechanism in the reverse procedure as given above.

**Setting Current Trip Point** — Unscrew dashpot, Item 22, and remove the plunger and piston assembly, Item 21, and

plunger pin, Item 20. Care should be taken that the exposed dashpot oil does not become contaminated. The plunger portion of Item 21, is the upper assembly. Loosen knurled nut at base of plunger. While observing the position of the pointer in the slot in the side of the plunger, turn the piston with respect to the plunger to correlate the position of the pointer with the scale marked H (high) — M (medium) — L (low) to the approximate setting desired. The H-M-L scale markings correspond to the high, medium, and low trip current values respectively given on the device nameplate. After the trip setting has been made, assemble Items 20, 21, and 22 to the relay portion, making sure that the plunger pin, Item 20, is in its proper position in the top of the plunger, and the knurled nut has been tightened to lock the plunger at the adjusted setting.

**Time Delay Setting** — To adjust the time delay feature on the device, unscrew dashpot, Item 22, and remove the plunger and piston assembly, Item 21, and plunger pin, Item 20. Care should be taken that the exposed dashpot oil does not become contaminated. The bottom of the piston assembly has three holes, one small and two large, which may be closed or opened in various combinations to give five distinctively different time delays using one type oil. Holes may be opened or closed by rotating the disc that is located on the inner surface of the bottom of the piston assembly, Item 21. After the time delay setting has been made, reassemble Items 20, 21 and 22 to the relay section, making sure that the plunger pin, Item 20, is in its proper position in the top of the plunger on Item 21.



**ORDERING INSTRUCTIONS:** Specify quantity, part number, and description of part, giving complete nameplate data of the device. For example: 1—750-D27-G4, plunger and piston assembly for Class 9055 Type BO-110 with Serial No. 205643-750-S674-G10.

Item No.	Description	Part Number	PARTS LIST								
			Photo Fig. a	Photo Fig. b			Photo Fig. c				Photo Fig. d
			BO-101 thru BO-116	BO-117 L or R thru BO-119 L or R	BO-120 L or R and BO-121 L or R	BO-122 L or R and BO-123 L or R	BO-124 L or R	BO-125 L or R	BO-126 L or R	BO-167 L or R thru BO-176 L or R	
1	Screw #6—32x1 1/8"	21001-12360	2	2	2	2	2	2	2	2	
2	Lockwasher #6	23701-00120	2	2	2	2	2	2	2	2	
3	Stop Bar	1496-X74	1	1	1	1	1	1	1	1	
4	Spacer	1496-X73	2	2	2	2	2	2	2	2	
5	Snap Switch Contact Moch.	26299-00001	1	1	1	1	1	1	1	1	
6	Liner	750-X172	1	1	1	1	1	1	1	1	
7	Snap Sw. Operating Lever Ass'y.	750-L56-G1	1	1	1	1	1	1	1	1	
8	Trip Pin	750-X124	1	1	1	1	1	1	1	1	
9	Screw #8—32x3/8"	21201-14120	1	1	1	1	1	1	1	1	
10	Screw #6—32x1/2"	21902-12161	2	2	2	2	2	2	2	2	
11	Bakelite Base	750-X139	1	1	1	1	1	1	1	1	
12	Screw #8—32x1/2"	21902-14141	1	1	1	1	1	1	1	1	
13	Upper Frame	750-D2-G1	1	1	1	1	1	1	1	1	
14	Fibre Tube	750-X15	1	1	1	1	1	1	1	1	
15	Coil Washer	153-D15-X4	3								
	†Coil Washer	739-D13-X1		2	2						
	‡Coil Washer	153-D1-X6				2	2	2	2	2	
16	Magnet Coil	See Coil Table Below	1	1	1	1	1	1	1	1	
17	Lower Frame	750-D3-G1	1	1	1	1	1	1	1	1	
18	Screw #10—24x3/8"	21001-16100	4	4	4	4	4	4	4	4	
19	Lockwasher #10	23701-00160	4	4	4	12	8	8	8	4	
20	Plunger Pin	250-X47	1	1	1	1	1	1	1	1	
21	Plunger and Piston Assembly	750-D27-G4	1	1	1	1	1	1	1	1	
22	Dashpot	750-D71-X1	1	1	1	1	1	1	1	1	
23	Spacer	750-D146-X1									
24	Support Bracket	750-L33-X1				1	1	1			
	Support Bracket	750-L36-X1							1		
25	Screw #10—24x3/8"	71001-16120				2	2		2		
	Screw #10—24x3/8"	21001-16200				2	2	4	2		
26	Coil Term. & Relay Mtg. Base	31006-039-01				1	1	1	1		
27	Screw 1/4—20x1 1/8"	21001-20280				2	2	2	2		
28	Lockwasher 1/4"	23701-00200				2	6	6	2		
29	Lug Terminal	750-D139-X1				2	2	2	2		
	Lug Terminal	750-D138-X1					2	2			
30	Screw #10—24x3/8"	21001-16140				4					
	Screw 1/4—20x1 1/8"	21001-20160					4	4			
	Hex. Hd. 3/8—16x3/8"	21401-24230							2		
31	Lockwasher 3/8"	23701-00240							2		
32	Washer #10	23601-00160				4					
	Washer 1/4"	23601-00200					4	4			
	Washer 3/8"	23601-00240							2		
33	†Terminal Lug Ass'y †	281-M2-G1		2							
	†Terminal Lug Ass'y †	281-M2-G2			2						
	†Terminal Lug	25050-34401				2					
	†Terminal Lug	25076-04800					2	2			
	Terminal Lug	25076-04800							2		
34	Hex. Hd. 3/8—16x3/8"	21401-24240				2					
	Hex. Hd. 1/2—13x1"	21401-28320					2	2			
	Hex. Hd. 1/2—13x1 1/4"	21401-28560							2		
35	Lockwasher 3/8"	23701-00240				2					
	Lockwasher 1/4"	23709-00080					2	2			
	*Lockwasher 1/4"	23701-00280							2		
	*Washer 1/4"	23601-00280							2		
	*Hex. Nut 1/2—13	23002-00280							2		
AA	*Std. Dashpot Oil (1 oz. bottle)	Cl. 9055 Type R4U	1	1	1	1	1	1	1	1	

†Terminal lug assembly consists of a lug, screw, nut, washer, and lockwasher.  
‡Not physically the same shape as shown on exploded drawing. \*Not shown on exploded drawing.

**MAGNET COIL SELECTION TABLE**

Type BO- (R or L Hand)	Photo Fig.	Magnet Coil Item 16 Above	Type BO- (R or L Hand)	Photo Fig.	Magnet Coil Item 16 Above	Type BO- (R or L Hand)	Photo Fig.	Magnet Coil Item 16 Above	Type BO- (R or L Hand) ▲	Photo Fig.	Magnet Coil Item 16 Above
BO-101	a	739-S26-W26	BO-110	a	739-S26-W17	BO-119	b	739-S5-W7	BO-168R	d	739-S1-W6R
									BO-168L	d	739-S1-W6L
BO-102	a	739-S26-W25	BO-111	a	739-S26-W16	BO-120	b	739-D14-G1	BO-169R	d	739-S14-W6R
									BO-169L	d	739-S14-W6L
BO-103	a	739-S26-W25A	BO-112	a	739-S26-W15	BO-121	b	739-D15-G1	BO-170	d	739-D1-G1
BO-104	a	739-S26-W24	BO-113	a	739-S26-W14	BO-122	c	750-D142-G4	BO-171	d	739-D2-G1
BO-105	a	739-S26-W24A	BO-114	a	739-S26-W13	BO-123	c	750-D142-G3	BO-172	d	739-D70-G1
BO-106	a	739-S26-W22	BO-115	a	739-S26-W12	BO-124	c	750-D135-G1	BO-173	d	739-D3-G1
BO-107	a	739-S26-W21	BO-116	a	739-S26-W10	BO-125	c	750-D143-G1	BO-174	d	739-D59-G1
BO-108	a	739-S26-W20	BO-117	b	739-S5-W8	BO-126	c	750-F94-G1	BO-175	d	739-D56-G1
BO-109	a	739-S26-W18	BO-118	b	739-S5-W6	BO-167	d	739-S1-W8	BO-176	d	739-D68-G1

▲Exception — Types BO-168R, 168L, 169R and 169L each use separate right and left hand coils.

•New part number.

**SQUARE D COMPANY**

Supersedes 262AS dated December, 1962