



**Specification for Type ST Plug-in Relay  
Neutral Relay, Switch Overload  
2CBO Contacts, .064/135 Ohm  
Overload Rating 12 Amps, High Voltage Machine**

Characteristic		Original Requirements		Contact/Coil Arrangement		
Coils	Nominal V or I	Special-See Ratings				
	Resistance/Tolerance	.064/135 Ohms $\pm$ 5%				
	Temperature Range	-40C (-40F) to 85C (185F)				
P.U./W.C.	Voltage	5.40 Volts Maximum (Control Coil)				
	Current (See Notes Below)	40 milliamps Maximum, 135 Ohm Coil				
	Speed	Pickup	Regular			
Dropaway	Voltage	1.35 Volts Minimum				
	Current	10 milliamps Minimum				
	Speed	Release	Regular			
Contacts	Arrangement	2CBO (Close Before Open)				
	Rating	4 Amps/30 Volts				
	Material	N.O.	Silver/Carbon			
		N.C.	Silver/Silver			
	Contact Gap	N.O.	.030" Minimum			
		N.C.	.025" Minimum			
	Pressure	N.O.	50 Grams Minimum			
		N.C.	28 Grams Minimum			
	Overtravel per Adjustment D	*See Note #1 Below				
	Resistance	N.O.	90 milliohms Maximum @ 10 VDC, 1.0 Amps			
N.C.		30 milliohms Maximum @ 10 VDC, 1.0 Amps				
Armature Travel	.082" Minimum					
Retainer Gap Reference	.002" to .004"					
Residual Screw (Adjustable)	.010" Minimum					
Stop Pin (Fixed)	.008" Minimum					

**Notes**

- #1 N.O. Contacts to make with .056" and break with .061" between armature residual screw and core.  
N.C. Contacts to make with .027" and break with .022" between armature residual screw and core.

**Test Procedure**

Operating values of the 135 ohm coil are listed above.  
After obtaining values for the 135 ohm coil, connect current supply of 10.5 amperes across the .064 ohm coil for 1-1/2 minutes (Connect the DC positive (+) lead to relay terminal 3C and the DC negative (-) lead to relay terminal 3D). Relay must not pickup. Immediately increase current to 12 amperes. Relay must pickup.

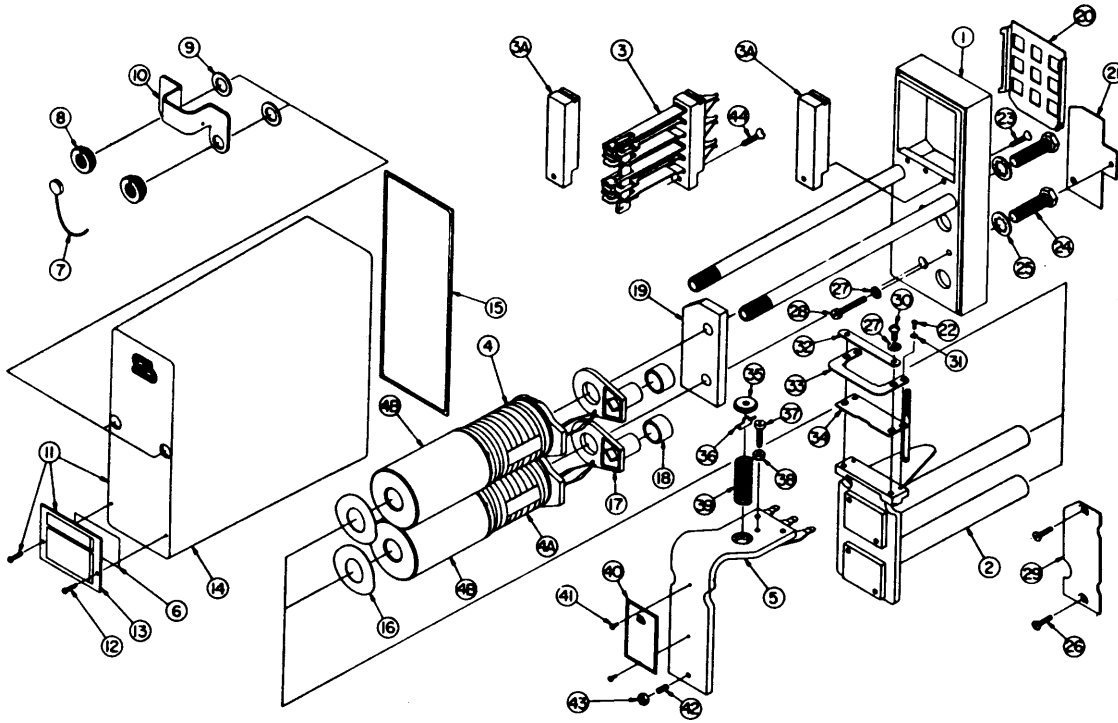
**Field Requirements**

Drop Away Value — Not less than 70% of original marking.  
Pickup/Working Value — Not greater than 110% of original marking.

**Shop Requirements**

Drop Away Value — Not less than 95% of original marking.  
Pickup/Working Value — Not greater than 105% of original marking.

# Type ST Plug-in Relay Assembly and Replacement Parts Part Number 400605



To order, specify description and part number.

Item No.	Description	Qty. Req'd.	Part Number	Item No.	Description	Qty. Req'd.	Part Number
1	Base Assembly, Plug-in Relay	1	420050-X	22	Machine Screw, Fillister Head, #4-40 X .250"	2	420053-14
2	Frame Assembly, Coil	1	420053-X	23	Machine Screw, Flat Head, #6-32 X .375"	2	420052-2
3	Stack, 2CBO Contact	1	420052-9X	24	Machine Screw, Hex Head, 5/16"-24 X 1.125"	2	420053-12
3A	Stack, Blank Contact	2	420052-3	25	Washer, Spring Lock, I, 5/16"	2	420053-13
4	Coil Assembly, 135 Ohm	1	420051-9X	26	Machine Screw, Flat Head, #6-32 X .5"	2	420050-36
4A	Coil Assembly, .064 Ohm	1	420051-11X	27	Washer, Spring Lock, I, #8	3	420050-33
4B	Slug, Copper	2	420051-2	28	Machine Screw, Fillister Head, #8-32 X .937"	1	420050-32
5	Armature	1	420053-1X	29	Plate, Code Pin	1	420050-78
6	Label, Paper Identification	1	420050-3	30	Machine Screw, Pan Head, #8-32 X .375"	2	420053-16
7	Seal, Lead	1	420050-8	31	Washer, Spring Lock, I, #4	2	420053-15
8	Nut, Knurl, Locking	2	420050-5	32	Plate, Retainer	1	420053-3
9	Washer, Flat Rubber	2	420050-7	33	Retainer, Armature	1	420053-2
10	Bracket, Cover	1	420050-4	34	Plate, Hinge	1	420053-1
11	Cover Assembly	1	420050-2X	35	Nut, Spring Post	1	420053-6
12	Tap Screw, Round Head, #4 X .375"	2	420050-35	36	Key, Spring Retainer	1	420053-5
13	Cover, Nameplate	1	420050-2	37	Screw, Tailstop	1	420053-9
14	Molded Cover, Clear	1	420050	38	Nut, Tailstop	1	420053-8
15	Gasket, Cover	1	420050-1	39	Spring, Compression	1	420053-43
16	Washer, Spring	2	420053-7	40	Nameplate, Type ST Relay	1	420053-112
17	Insulator, Terminal Retainer	2	420051	41	Phillips Screw, Pan Head, #4-40 X .187"	2	420053-18
18	Seal, Rubber	2	420051-1	42	Screw, Residual	1	420053-11
19	Plate, Base	1	420053	43	Nut, Residual	1	420053-10
20	Seal, Dust	1	420052	44	Machine Screw, Flat Head, #6-32 X .531"	1	420050-36
21	Plate, Code	1	420050-548				

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