



**Specification for Type ST Plug-in Relay  
Neutral Track Relay  
4FB-2F-1B Contacts, 1.8 Ohm**

Characteristic		Original Requirements	Contact/Coil Arrangement	
<b>Coils</b>	Nominal V or I	150-160 mADC	<p align="center">(Front of Relay)</p>	
	Resistance/Tolerance	.09 Ohms ±5% each Coil		
Temperature Range		-40C (-40F) to 85C (185F)		
<b>P.U./W.C.</b>	Voltage	.234Volts Maximum		
	Current	130 milliamps Maximum		
	Speed	Pickup		Regular
<b>Dropaway</b>	Voltage	.135 Volts Minimum		
	Current	75 milliamps Minimum		
	Speed	Release		Regular
<b>Contacts</b>	Arrangement	4FB-2F-1B		<p align="center"><b>Relay register</b> (Rear of Relay)</p>
	Rating	4 Amps/30 Volts		
	Material	N.O.	Silver/Carbon	
		N.C.	Silver/Silver	
	Dynamic Gap		.020" Minimum	
	Contact Gap		.050" Minimum	
	Pressure	N.O.	40 Grams Minimum	
		N.C.	14 Grams Minimum	
	Overtravel per Adjustment C		*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		.073" 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 .025" and break with .030" between armature residual screw and core.  
N.C. Contacts to make with .057" and break with .052" between armature residual screw and core.
- #2 Adjust armature compression spring to have one ounce (28.4 grams) minimum at the adjustable residual screw to just raise the armature stop screw from its stop.

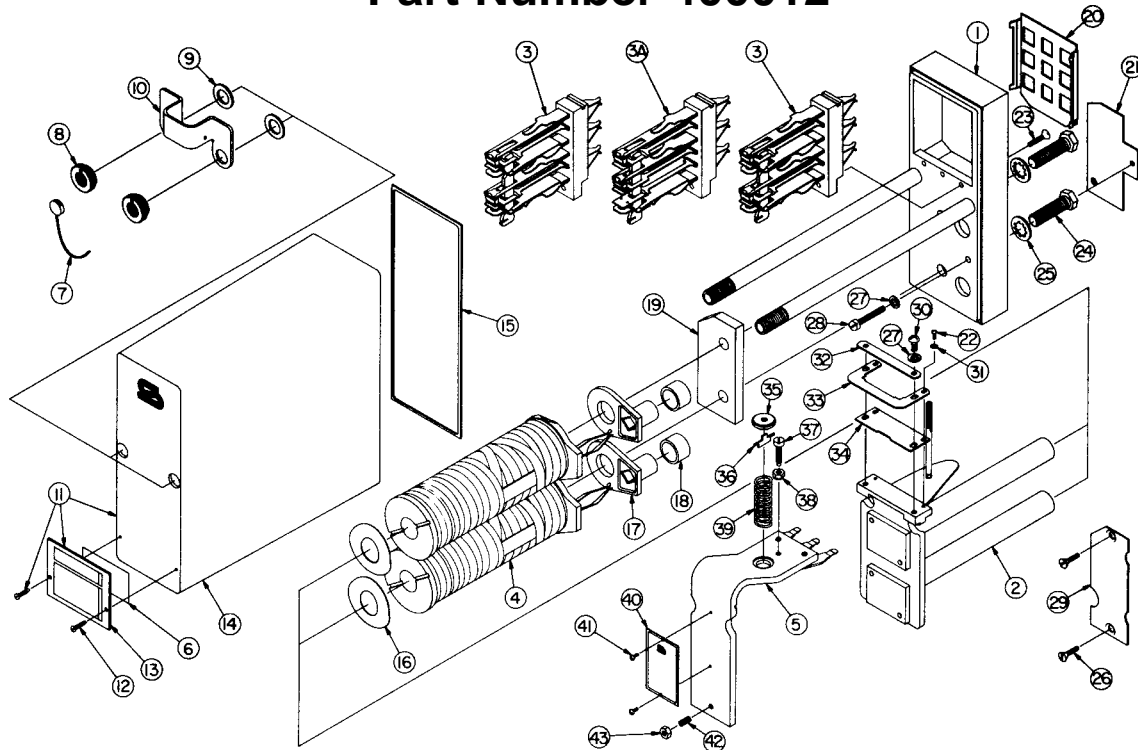
**Field Requirements**

Drop Away Value — Not less than 85% 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 400012



**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 .531"	3	420050-36
3	Stack, 2FB Contact	2	420052-1X	24	Machine Screw, Hex Head, 5/16" -24 X 1.125"	2	420053-12
3A	Stack, 2F-1B Contact	1	420052-2X	25	Washer, Spring Lock, I, 5/16"	2	420053-13
4	Coil Assembly, 0.9 Ohm	2	420051-24X	26	Machine Screw, Flat Head, #6-32 X .5"	2	420050-36
5	Armature	1	420053-1X	27	Washer, Spring Lock, I, #8	3	420050-33
6	Label, Paper Identification	1	420050-3	28	Machine Screw, Fillister Head, #8-32 X .937"	1	420050-32
7	Seal, Lead	1	420050-8	29	Plate, Code Pin	1	420050-45X
8	Nut, Knurl, Locking	2	420050-5	30	Machine Screw, Pan Head, #8-32 x .375"	2	420053-16
9	Washer, Flat Rubber	2	420050-7	31	Washer, Spring Lock, I, #4	2	420053-15
10	Bracket, Cover	1	420050-4	32	Plate, Retainer	1	420053-3
11	Cover Assembly	1	420050-2X	33	Retainer, Armature	1	420053-2
12	Tap Screw, Round Head, #4 X .375"	2	420050-35	34	Plate, Hinge	1	420053-1
13	Cover, Nameplate	1	420050-2	35	Nut, Spring Post	1	420053-6
14	Molded Cover, Clear	1	420050	36	Key, Spring Retainer	1	420053-5
15	Gasket, Cover	1	420050-1	37	Screw, Tailstop	1	420053-9
16	Washer, Spring	2	420053-7	38	Nut, Tailstop	1	420053-8
17	Insulator, Terminal Retainer	2	420051	39	Spring, Compression	1	420053-4
18	Seal, Rubber	2	420051-1	40	Nameplate, Type ST Relay	1	420053-51
19	Plate, Base	1	420053	41	Phillips Screw, Pan Head, #4-40 X .187"	2	420053-18
20	Seal, Dust	1	420052	42	Screw, Residual	1	420053-11
21	Plate, Code	1	420050-504	43	Nut, Residual	1	420053-10

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