



**Specification for Type ST Plug-in Relay  
Biased Neutral Track Relay  
High D.A./P.U. Ratio  
4FB Contacts, .5 Ohm**

Characteristic		Original Requirements	Contact/Coil Arrangement	
Coils	Nominal V or I	400-450 mADC – Coils in Parallel	<p align="center">(Front of Relay)</p>	
	Resistance/Tolerance	1.0 Ohm ±5% Each Coil		
Temperature Range		-40C (-40F) to 85C (185F)		
P.U./W.C.	Voltage	.183 Volts Maximum		
	Current	365 milliamps Maximum		
	Speed	Pickup		Regular
Dropaway	Voltage	.128 Volts Minimum		
	Current	256 milliamps Minimum		
Contacts	Speed	Release		Regular
	Arrangement			4FB
	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 F		*See Notes 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)		.020" Minimum Top Core .040" Minimum Bottom Core		
Stop Pin (Fixed)		.008" Minimum		
			<p align="center"><b>Relay register</b> (Rear of Relay)</p> <p align="center">1-2-7-25</p>	

**Notes**

- #1 N.O. Contacts to make with .029" and break with .034" 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.

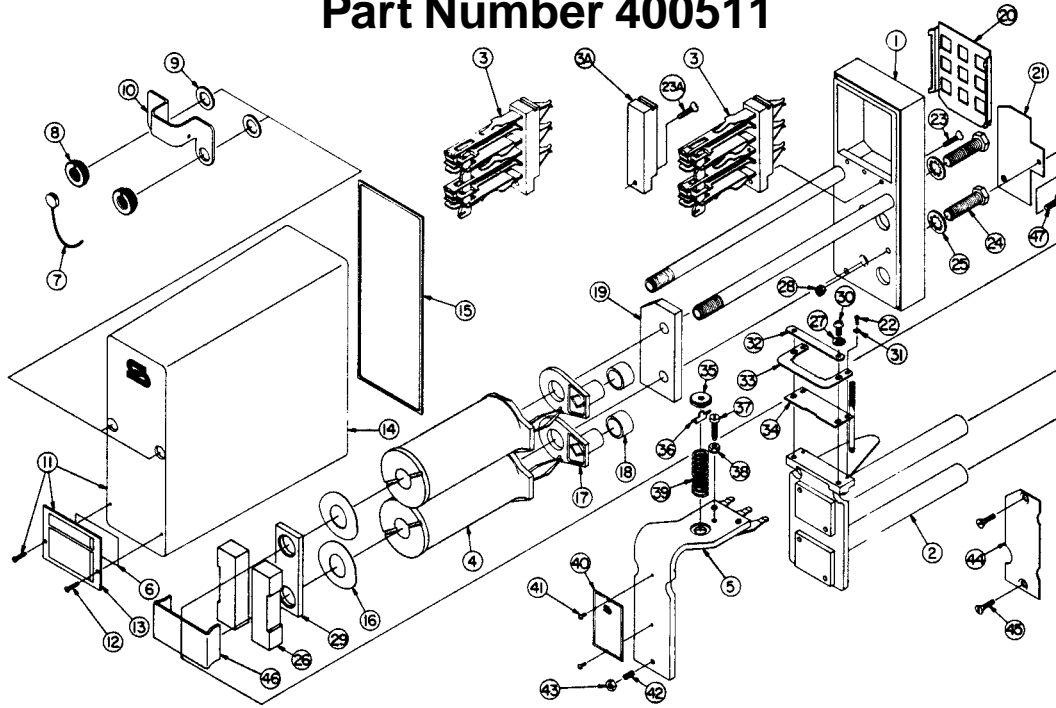
**Field Requirements**

- 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 400511



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	24	Machine Screw, Hex Head, 5/16"-24 X 1.125"	2	420053-12
2	Frame Assembly, Coil	1	420053-71X	25	Washer, Spring Lock, I, 5/16"	2	420053-13
3	Stack, 2F Contact	2	420052-1X	26	Magnet	2	420053-47
3A	Stack, Blank	1	420052-3	27	Washer, Spring Lock, I, #8	2	420050-33
4	Coil Assembly, 1 Ohm	2	420051-17X	28	Nut, Hex, #8-32 X .345"	1	420053-8
5	Armature	1	420053-5X	29	Plate, Shunting	2	420053-79
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	420053-137
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	Plate, Code Pin	1	420050-56X
21	Plate, Code	1	420050-514	45	Machine Screw, Flat Head, #6-32 X .5"	2	420050-36
22	Machine Screw, Fillister Head, #4-40 X .250"	2	420053-14	46	Clip, Spring	1	420053-46
23	Machine Screw, Flat Head, #6-32 X .531"	3	420050-36	47	Screw, Flat Head, #8-32 X .345"	1	420053-88
23A	Machine Screw, Flat Head, #6-32 X .375"	1	420052-2				

## Safetran Systems Corporation

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