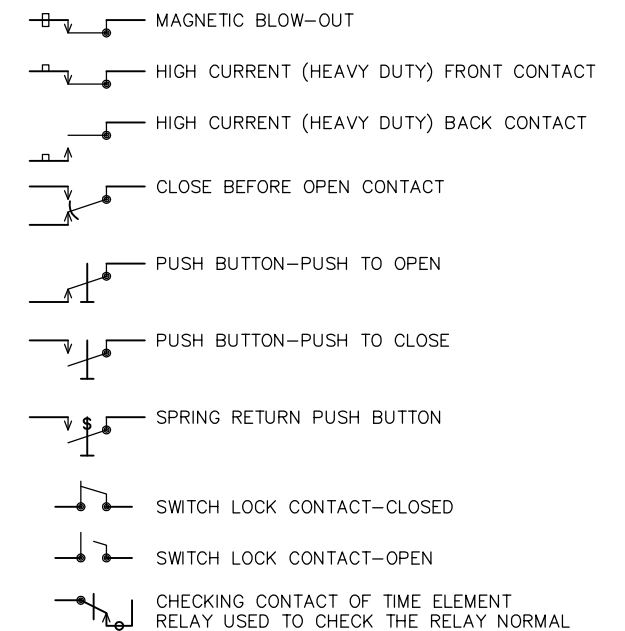


**ACCEPTABLE PLUG-IN RELAYS FOR USE ON CALTRAIN PROJECTS**

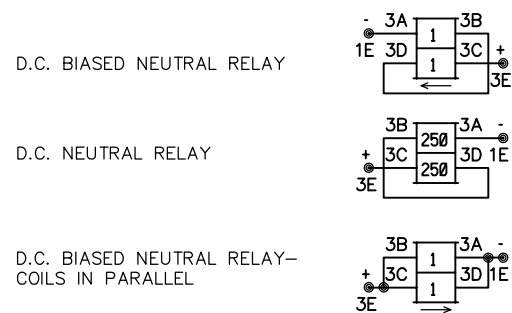
RELAY DESCRIPTION	BASE TYPE	BASE DWG #	CONTACT CONFIGURATION	ALSTOM	OLD SPTC TAB	INVENSYS	OLD SPTC TAB
RELAY, 2 OHM BIASED NEUTRAL TRACK	B1	1	4FB-2F-1B	A62-120	RTM	400510	RTN
RELAY, 0.5 OHM BIASED NEUTRAL TRACK	B1	2	4FB-2F-1B	A62-120	RTM	400510	RTN
RELAY 500 OHM BIASED NEUTRAL REGULAR RELEASE	B1	3	6FB	A62-125	RBM	400500	RBN
RELAY, 60 OHM NEUTRAL FLASHER	B1	4	4FB	A62-195	REF	400700-X	RFH
RELAY, 100/100 OHM NEUTRAL POWER TRANSFER	B1	5	6FB HD	A62-579	RXR	400801-X	RXT
RELAY, 450/.069 OHM NEUTRAL LIGHT OUT	B1	7	4FB	A62-217	RXS	400302	RXU
RELAY, 500 OHM BIASED NEUTRAL SWITCH CONTROL	B1	9	2F-2B EHD	A62-429	RWN	400520	RWT
RELAY, MICROCHRON TIMING 1 SEC TO 19 MIN 59 SEC	B2	10	2FB-3F-2B	A62-627	RUK	NONE	
RELAY, .064/135 OHM NEUTRAL SWITCH OVERLOAD	B1	11	2CBO	A62-430	RWO	400601	RWU
RELAY, 24 OHM NEUTRAL SLOW RELEASE	B1	13	2FB	A62-365	RLY	400221	
RELAY, 500 OHM NEUTRAL REGULAR RELEASE	B1	14	6FB	A62-262	RLT	400000	RLT1
RELAY, 500 OHM NEUTRAL REGULAR RELEASE	B1	15	6FB HD	A62-580	RLV	400023	RLV1

NOTE: SEE SD-5104 FOR CONTACT ARRANGEMENT

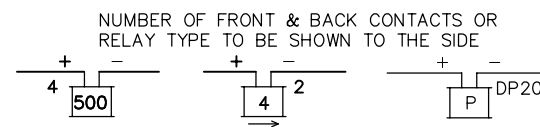
**RELAY CONTACTS WITH SPECIAL CHARACTERISTICS**



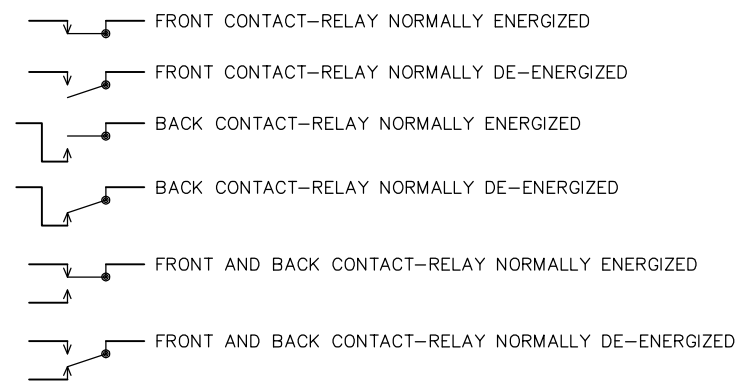
**VITAL PLUG-IN RELAYS**



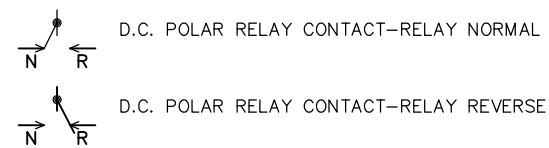
**RELAY RESISTANCE OR TYPE TO BE SHOWN IN BOX**



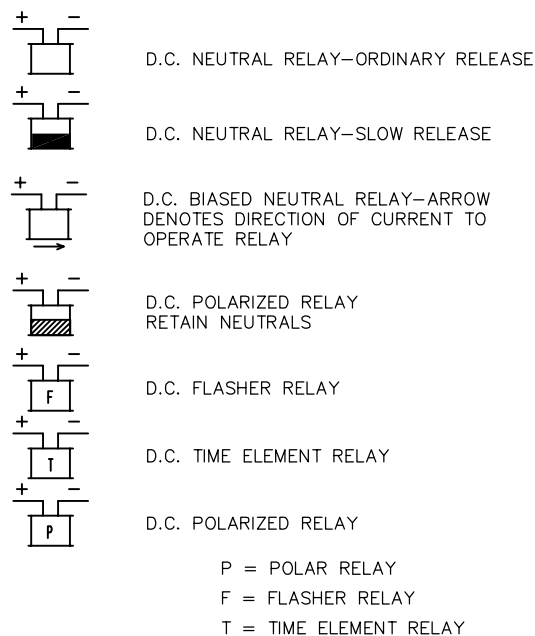
**RELAY CONTACTS - TWO POSITION RELAYS**



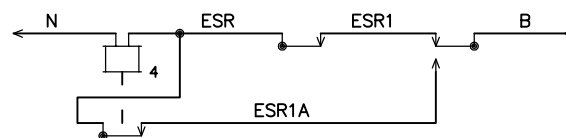
**RELAY CONTACTS - THREE POSITION RELAYS**



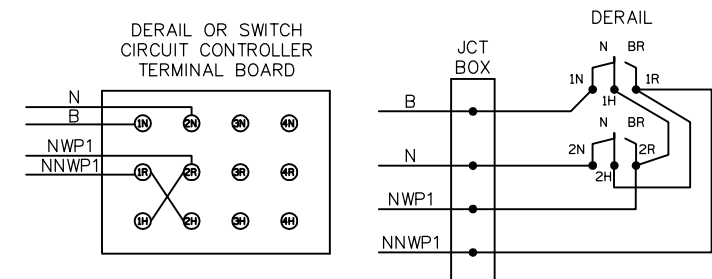
**SHELF RELAY SYMBOLS**



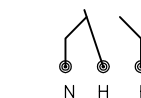
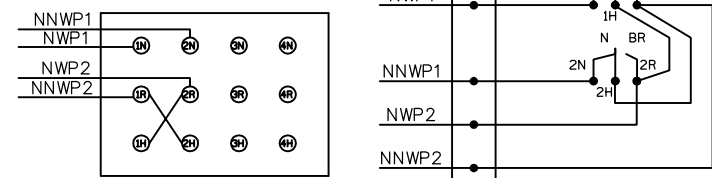
**TYPICAL CIRCUIT**



**SWITCH CIRCUIT CONTROLLER WIRING**



**SECOND SWITCH IN SWITCH AND DERAIL COMBINATION OR CROSSOVER CIRCUIT CONTROLLER TERMINAL BOARD**



SWITCH CIRCUIT CONTROLLER CONTACT

NOTE: ALSTOM, FORMALLY GRS  
INVENSYS, FORMERLY SAFETRAN

**PENINSULA CORRIDOR JOINT POWERS BOARD**

APPROVED BY:

*Bernard Anagnost* *Stephen Chen*  
ENGINEERING MANAGER DEPUTY DIRECTOR OF ENGINEERING



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**STANDARD DRAWINGS**

SIGNAL AND COMMUNICATION  
GENERAL SIGNAL  
RELAYS & RELAY CONTACTS  
SHELF & VITAL RELAYS

CADD FILE NO.: SD-5103	
REV 0	DATE 093011
SIGNAL	
STANDARD NO.: SD-5103	

REV	DATE	BY	CHK	APP	DESCRIPTION