



Switch-Control Relay

Neutral and Biased-Neutral Relays

KB Signaling's DC Switch-Control Relays control operating energy to all brands of low- and high-voltage switch machines according to application requirements.



KB SIGNALING™

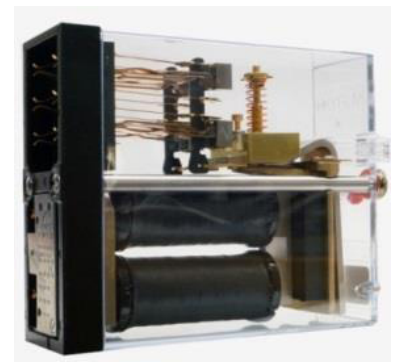
Switch-Control Relay Neutral and Biased-Neutral Relays

General Description

VDC (low), 110 VDC (high) or both voltage levels. These relays work seamlessly with KB Signaling's 5E, 5F, 5R, and Model 6 Switch Machines, as well as Hitachi's (formerly Ansaldo) M-3 and M-23 switch machines.

The Neutral Switch-Control Relays use silver cadmium oxide (SCdO) heavy-duty (HD) contacts designed to work in the current range of 0.300 to 10 A at a maximum of 30 V. Biased-Neutral Switch-Control Relays use either a complete set of extra heavy-duty (EHD) contacts or a combination of extra heavy-duty and medium-duty (MD) contacts with magnetic blowouts (mag). These extra heavy-duty contacts are comprised of either silver cadmium oxide (SCdO), silver-impregnated carbon to silver (AgC-S), or a combination of both. Switch-Control Relays using EHD contacts use clips to hold magnets close to the contacts to enable relays to "blow" or disperse an electric arc before it has a chance to grow and burn the contact material.

- The relay that uses AgC-S (EHD) mag contacts exclusively has operating ranges of 0.300 to 4 A continuous with a 50 A surge and at up to 120 V.
- Relays that use SCdO (EHD) mag contacts either exclusively or in combination with AgC-S (MD) contacts have EHD operating current ranges of 0.300 to 15 A continuous with a 50 A surge and up to 175 V.



Switch-Control Relays are available in size B1. This relay is plugboard mounted for easy installation and access to test points. For additional information on KB Signaling Switch Control Relays, refer to publication P1457.

Neutral Relay Order Information

Contacts	Nom Resistance (Ω)	Switch Machine Oper. Voltage	Application Notes	Front Contact Opening	Application Limits (Amps)		Ordering Information		Replacement Ordering Information		
					Max Pick Up	Drop Away	Relay Cat No.	Relay P/N	Gr 1 P/N*	Gr 2 P/N*	Gr 3 P/N*
4FB	500	Low		0.090 in. (2.28 mm)	0.0143	0.0034	A62-0427	56001-917-01	56012-108-40 2FB SCdO-SCdO (HD), SCdO-SCdO (HD)		56012-108-40 2FB SCdO-SCdO (HD), SCdO-SCdO (HD)
2FB-5F-1B	U 0.045 L 450	High	Designed for use with Model 6; performs Switch-Control Relay and switch machine snubbing functions	0.090 in. (2.28 mm)	L 0.033	U 2.0 L 0.0067	A62-0424	56001-785-99	56012-108-01 3F SCdO-SCdO (HD)	56012-108-20 2F-1B SCdO-SCdO (HD), SCdO-SCdO (HD)	56012-108-20 2F-1B SCdO-SCdO (HD), SCdO-SCdO (HD)

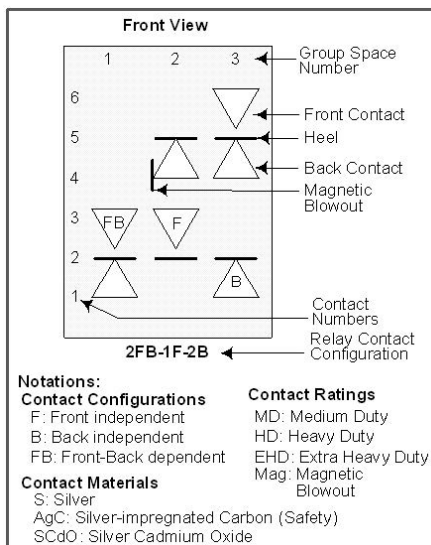
Note: Shaded Cat. No. and P/N is discontinued.

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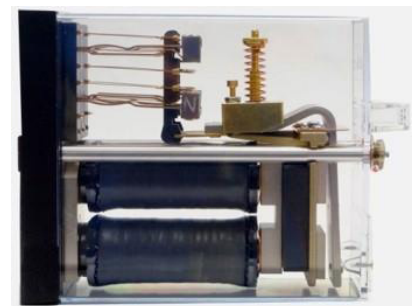
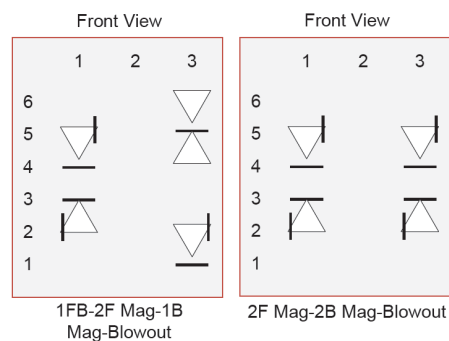
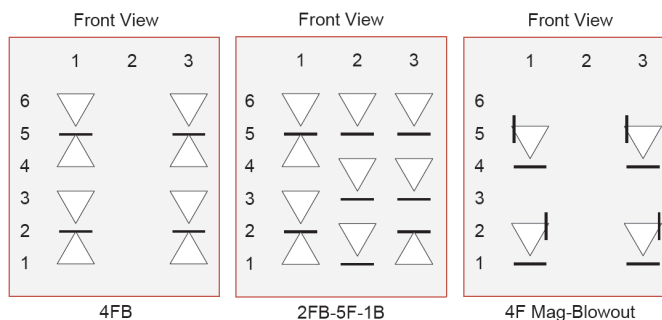
Biased-Neutral Relay Ordering Information

Contacts	Nom Re- sistance (Ω)	Switch Machine Oper. Voltage	Application Notes	Front Contact Opening	Application Limits (Amps)		Ordering Information		Replacement Ordering Information	
					Max Pick-Up	Drop Away	Relay Cat No.	Relay P/N	Gr 1 P/N*	Gr 3 P/N*
4F	2100	Low or High	EHD Mag blow-out on 4F contacts	0.125 in. (3.175 mm)	0.0097	0.003		56001-989-01	56012-108- 42 2F AgC-S (EHD) Mag	56012-108- 42 2F AgC-S (EHD) Mag
1FB-2F- 1B	500	Low or High	EHD Mag blow- out on 2F-1B; 1FB AgC-S MD Safety contacts	0.125 in. (3.175 mm)	0.020	0.0054		56001-988-01		56012-108- 46 1FB-1F AgC-S(M- D)-S-S(HD), SCdO-SCdO (EHD) Mag
2F-2B	500	Low or High	EHD Mag blow-out on 2F-2B Shock Indication	0.125 in. (3.175 mm)	0.020	0.0054	A62-0721	56001-926-03	56012-108- 13 1F-1B SCdO-SCdO (EHD) Mag, SCdO-SCdO (EHD) Mag	56012-108- 13 1F-1B SCdO-SCdO (EHD) Mag, SCdO-SCdO (EHD) Mag
			EHD Mag blow- out on 2F-2B				A62-0429			
	2100	Low or High	EHD Mag blow- out on 2F-2B	0.125 in. (3.175 mm)	0.0097	0.0019	A62-0604	56001-942-01		

* Relay Reference



Relay Contact Arrangement



Contact your KB Signaling Business Development Manager
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