



Vital Biased-Neutral Relays

Versatile DC Relay

These Vital Biased-Neutral Relays either meet or exceed AREMA Wayside Equipment Class C Guidelines, ensuring pickup only when the proper voltage polarity is applied. Operating characteristics are not effected either by the magnitude of the reverse voltage or duration.



KB SIGNALING™

Vital Biased-Neutral Relays

Key Benefits

Setting the Signaling Industry Standard

- Reliable operation in rigorous wayside environmental conditions
- Long life
- Low maintenance costs

Quick and Accurate Installation

- Install quickly and easily, making positive mechanical and electrical connections to plugboard terminations
- Registration feature prevents plugging a relay into the wrong board

General Description

KB Signaling's Vital Biased-Neutral Relays provide normal pick-up and release timing, making these relays the ideal solution for a variety of Vital applications. These relays are designed with a neutral structure and equipped with a permanent magnet. The leakage strip, located between the coils and the armature, bridges the cores – ensuring KB Signaling's Vital Biased-Neutral Relays will only pick up if voltage of the proper polarity is applied to the coils. Vital Biased-Neutral Relays maintain operating characteristics under adverse conditions.

The Vital Biased-Neutral Relays application includes use in a DC high-percentage release track relay with track circuits spanning up to 20,000 feet in length. With a low nominal resistance of 0.5 ohm (with coils connected in parallel), this relay provides fast, high shunting sensitivity under poor ballast conditions, while giving excellent protection against foreign current. Vital Biased-Neutral Relays are available in B1 and B2 sizes. Two B1 relays occupy the same space as a B2 relay.

For additional information on KB Signaling Vital Biased-Neutral Relays, refer to publication P1457.

Size B2 Relay Ordering Information

Contacts	Resistance (Ω)	Max Pick Up (Amps)	Ordering Information		Replacement Ordering: Contact Group Nos. 56012-108					
			Relay Catalog No.	Relay P/N	Gr 1	Gr 2	Gr 3	Gr 4	Gr 5	Gr 6
12FB	350	0.0198	A62-0150	56002-720-01	-06	-06	-06	-06	-06	-06
8FB-4F-2B	350	0.0198	A62-0145	56002-719-01	-06	-02	-06	-06	-02	-06

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



Notations:
F: Front contacts
B: Back contacts
FB: Front-Back contacts
GR: Contact Group

Note:
For additional contact material information, refer to Contact Group Characteristics table on the following page.

Vital Biased-Neutral Relays

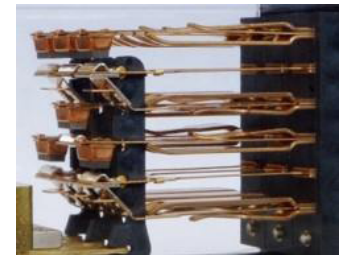
Size B1 Relay Ordering Information

Contacts	Resistance (Ω)	Max Pick-Up (Amps)	Application Notes	Ordering Information		Replacement Ordering: Contact Group Nos. 56012-108		
				Relay Cat. No.	Relay P/N	Gr 1	Gr 2	Gr 3
2FB-4F-2B	2100	0.0061		A62-0555	56001-933-01	-04	-06	-04
2FB-3F-3B	1000	0.0093	Shock Indication	A62-0722	56001-928-02		-06	
2FB-4F-2B	2100	0.0061	HD Safety fronts and backs, DA 0.0019	A62-0665	56001-945-01	-04	-07	-04
	2100	0.0104	HD Safety fronts and backs, DA 0.0038	A62-0743	56001-984-01			
	100	0.026	Line Circuit, HD Safety Front & Back Contacts	A62-0608	56001-953-01			
	1000	0.0093	Shock Indication	A62-0715	56001-927-02	-02	-06	-02
4FB-2F-1B	2100	0.0061	2F-1B HD Safety fronts and backs	A62-0554	56001-932-01	-06	-04	-02
4FB-1F-2B	750	0.0088		A62-0129	56001-925-10	-06	-05	-06
4FB-2F-1B	500	0.0126	HD Safety fronts and backs	A62-0613	56001-956-01	-06	-02	-06
	750	0.0088		A62-0132	56001-921-10			
	1000	0.0094		A62-0624	56001-921-04			
	2100	0.0104		A62-0690	56001-980-01			
	500	0.0126		A62-0122	56001-921-07			
			Shock Indication	A62-0765	56001-921-15			
	375	0.0132		A62-0131	56001-921-14			
	100	0.0275		A62-0126	56001-921-02			
	2	0.165	Track Circuit	A62-0120	56001-921-09			
	0.5	0.411	Track Circuit, Resistance with coils in parallel	A62-0764	56001-987-01			
5F-4B	4	0.126	Track Circuit High 70% Release	A62-0637	56001-963-01	-02	-05	-02
	0.5	0.341	Track Circuit, Resistance with coils in parallel High 70% Release	A62-0633	56001-961-01			
	0.5	0.392	Track Circuit, Resistance with coils in parallel High 72% Release	A62-0639	56001-965-01			
6FB	500	0.0127		A62-0125	56001-922-07	-06	-06	-06
	250	0.0176		A62-0549	56001-922-01			
	100	0.0275	Line Circuit	A62-0543	56001-922-02			
	63	0.032	Line Circuit	A62-0140	56001-922-05			
	4	0.114	Track Circuit	A62-0682	56001-979-01			
	2	0.136	Track Circuit	A62-0654	56001-968-01			
	1	0.247	Track Circuit Shock Indication	A62-0720	56001-922-13			

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

Contact Group Characteristics

Contact Group No.	Contact Configuration	Front Contacts	Back Contacts
56012-108-02	2F-1B	AgC-S (MD)	S-S (HD)
56012-108-04	2F-1B	AgC-S (HD)	S-AgC (HD)
56012-108-05	1F-2B	AgC-S (MD)	S-S (HD)
56012-108-06	2FB	AgC-S (MD)	S-S (HD)
56012-108-07	2FB	AgC-S (HD)	S-AgC (HD)



Notations:
 AgC: Silver-impregnated Carbon
 S: Silver
 MD: Medium-duty contacts

HD: Heavy-duty contacts
 DA: Drop-away

Contact your KB Signaling Business Development Manager
 Call 1-800-825-7090, or Email us at kbsignaling.techsupport@knorr-bremse.com for more information today.

KB Signaling

2712 S. Dillingham Rd
Grain Valley, MO 64029
Phone: +1 800-825-7090
www.kb-signaling.com

