



# Switch Overload Relay

## DC Neutral Relays

KB Signaling's AREMA-compliant Switch Overload Relays prevent motor overload when used with either low- or high-voltage switch machines. These relays automatically reset when the switch call is removed and support repeated switch machine operation to dislodge obstructions.



**KB SIGNALING™**

# Switch Overload Relay DC Neutral Relays

## General Description

KB Signaling's Switch-Overload Relays remove energy from a switch-control relay when a switch machine motor is overloaded by an obstruction. This family of relays is designed to ensure the relay picks up when an overload current is detected and remains picked (held) until the switch request is removed- automatically resetting the relay. These Switch-Overload Relays are used with switches using operating voltages of either 20 or 24 VDC (low) or 110 VDC (high) voltage levels and works seamlessly with KB Signaling's 5E, 5F, and 5R Switch Machines.

The Switch-Overload Relay's low-resistance coil picks up on motor overload current; its high-resistance coil holds the relay in the picked position with the switch-control circuit energized. When this relay picks up, the Switch Control Relay releases to cut switch machine motorenergy. Once control circuit's energy is removed, the Switch-Overload relay releases, permitting switch movement reversal.

KB Signaling's Switch-Overload Relays are available in size B1. For additional information, refer to publication P1457.

## Customer Benefits

### Slow-Pickup Characteristics

This relay's slow-pickup characteristics blow-out prevent relay operation when a power surge occurs during normal switch motor start-up. Its slow-acting properties also permit repeated switch operations to dislodge a switch obstruction without causing an overload condition, unless the switch call remains.

### Medium-Duty Make-Before-Break Relay Contacts

Most Switch-Overload Relays have make before-break (MBB) contacts. When the overload relay's front make-contacts pick up, the switch call relay remains in position until the overload hold coil is energized. Then, the Switch Overload Relay's back break-contact removes power from the Switch Control Relay.

### Extra Heavy-Duty Contacts with Magnetic Blow-out

Switch-Overload Relay model 56001-785-01 operates similarly to the other overload relays with the exception of using extra heavy-duty (EHD) silver back (B) contacts with magnetic blowouts (mag). This contact configuration ensures the relay opens the switch machine motor circuit.

This relay is equipped with 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.

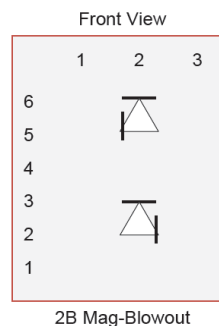
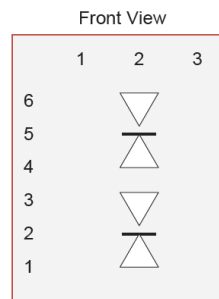
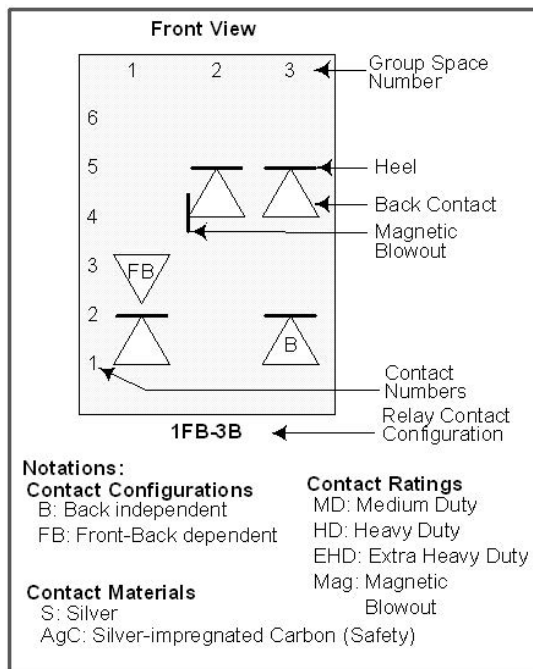


# Switch Overload Relay DC Neutral Relays

## Relay Ordering Information

| Contacts | Nom Resistance (Ω) | Switch Machine Oper. Voltage | Application Notes                     | Relay Switch Overload Range (Amps) | Application Limit (Amps) | Ordering Information |              | Replacement Ordering Information            |
|----------|--------------------|------------------------------|---------------------------------------|------------------------------------|--------------------------|----------------------|--------------|---------------------------------------------|
|          |                    |                              |                                       |                                    | Max Pick -Up             | Relay Cat No.        | Relay P/N    | Group P/N*                                  |
| 2B       | U 1225<br>L 0.068  | High                         | S-S EHD<br>Mag-Blowout on 2B contacts | 10.5-12                            | U 0.045                  | A62-0432             | 56001-785-01 | 56012-108-38 2B S-S (EHD) Mag               |
| 2FB      | U 530<br>L 0.064   | High                         | MBB contact                           | 9-13                               | U 0.024                  | A62-0605             | 56001-943-03 | 56012-108-06 2FB<br>AgC-S (MD),<br>S-S (HD) |
|          | U 220<br>L 0.68    | High                         | MBB contact;<br>Shock Indication      | 9.5-13                             | U 0.077                  | A62-0718             | 56001-981-01 |                                             |
|          |                    |                              | Make Before Break Contact             |                                    |                          | A62-0545             | 56001-785-21 |                                             |
|          | U 135<br>L 0.58    | High                         | MBB contact;<br>Shock Indication      | 9-13                               | U 0.042                  | A62-0766             | 56001-916-03 |                                             |
|          |                    |                              | MBB contact                           |                                    |                          | A62-0431             | 56001-916-01 |                                             |
|          |                    | Low                          | MBB contact                           | 13-17                              | U 0.072                  | A62-0430             | 56001-916-02 |                                             |

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



Contact your KB Signaling Business Development Manager  
 Call 1-800-825-7090, or Email us at [kbsignaling.techsupport@knorr-bremse.com](mailto: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](http://www.kb-signaling.com)

