

## Alternate Catalog No. NF31E-13 Catalog No. 1SBH137001R1331

**Description:** NF31E-13 100-250V50/60HZ-DC Contactor Relay

**UPC No** 3471523100237

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NF contactor relays are used for switching auxiliary and control circuits. NF contactor relays include an electronic coil interface accepting a wide control voltage  $U_c$  min. ...  $U_c$  max. Only four coils cover control voltages between 24...500 V 50/60 Hz or 20...500 V DC. NF contactor relays can manage large control voltage variations. One coil can be used for different control voltages used worldwide without any coil change. NF contactor relays have built-in surge protection and do not require additional surge suppressors. - Poles: 4-pole contactor relays (mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1 and including the "Mechanically Linked" symbol on the contactor relay side) - Control Circuit: AC or DC operated - Accessories: a wide range of Accessories is available.



Representative Image

### Descriptors

|                      |                 |
|----------------------|-----------------|
| Category             | AF Contactors   |
| Block Contactor Type | Contactor Relay |

### Specifications

|  |  |
|--|--|
| Product Type                                   | AF   |
| Object Classification Code                     | K  |
| Terminal Type                                  | Screw Terminals  |
| Rated Control Circuit Voltage                  | 50 Hz /60 Hz DC Operation 100 ... 250 V  |
| Resistance to Vibrations acc. to IEC 60068-2-6 | 5 ... 300 Hz 4 g closed position / 2 g open position                                     |
| Number of Auxiliary Contacts NO                | 3  |
| RoHS Status                                    | Following EU Directive 2011/65/EU  |
| Reference Ambient Air Temperature              | Close to Contactor for Storage °C<br>Near Contactor for Operation in Free Air °C         |
| Rated Operational Voltage                      | Auxiliary Circuit 690 V<br>Main Circuit 690 V  |
| Number of Auxiliary Contacts NC                | 1  |
| Tightening Torque UL/CSA                       | Auxiliary Circuit 11 IA<br>Control Circuit 11 IA   |
| Maximum Operating Altitude Permissible         | 3000 m   |
| Standards                                      | IEC 60947-5-1 and EN 60947-5-1, UL 508, CSA C22.2 N°14                                   |
| Conventional Free-air Thermal Current          | acc. to IEC 60947-5-1, $q = 40$ °C 16 A  |
| Rated Operational Current AC-15                | (220 / 240 V) 4 A<br>(24 / 127 V) 6 A<br>(500 V) 2 A<br>(690 V) 2 A<br>(400 / 440 V) 3 A |
| Rated Frequency                                | Auxiliary Circuit 50 Hz<br>Auxiliary Circuit 60 Hz                                       |
| Rated Short-time Withstand Current             | for 0.1 s A<br>for 1 s A   |
| Maximum Electrical Switching Frequency         | AC-15 1200 cycles per hour<br>DC-13 900 cycles per hour                                  |
| Rated Insulation Voltage                       | acc. to UL/CSA 600 V<br>acc. to IEC 60947-5-1 and VDE 0110 (Gr. C) 690 V                 |
| Maximum Mechanical Switching Frequency         | 6000 cycles per hour   |

## Specifications

|   |  |
|---|--|
| Operate Time                              | Between Coil De-energization and NC Contact Closing 13 ... 98 ms<br>Between Coil De-energization and NO Contact Opening 11 ... 95 ms<br>Between Coil Energization and NC Contact Opening 38 ... 90 ms<br>Between Coil Energization and NO Contact Closing 40 ... 95 ms |
| Secondary Rated Impulse Withstand Voltage | 6 kV   |
| Rated Operational Current DC-13           | (125 V) 0.55 A / 69 W<br>(24 V) 6 A / 144 W<br>(250 V) 0.27 A / 68 W<br>(48 V) 2.8 A / 134 W<br>(72 V) 1 A / 72 W<br>(110 V) 0.55 A / 60 W<br>(220 V) 0.27 A / 60 W<br>(400 V) 0.15 A / 60 W<br>(500 V) 0.13 A / 65 W<br>(600 V) 0.1 A / 60 W                          |
| Connecting Capacity Control Circuit       | Flexible with Ferrule<br>Flexible with Insulated Ferrule<br>Rigid  |
| Degree of Protection                      | acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20<br>acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20  |
| Connecting Capacity Auxiliary Circuit     | Flexible with Ferrule 1/2x 0.75 ... 2.5 m <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5/2x 0.75 ... 1.5 m <sup>2</sup><br>Rigid 1/2x 1 ... 2.5 m <sup>2</sup>  |
| Wire Stripping Length                     | Auxiliary Circuit 10 mm<br>Control Circuit 10 mm   |

## Classifications

|          |                            |
|----------|----------------------------|
| ETIM 4   | EC000196 - Contactor relay |
| ETIM 6.0 | EC000196 - Contactor relay |
| ETIM 7   | EC000196 - Contactor relay |
| ETIM 5.0 | EC000196 - Contactor relay |

## Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Weight         | 0.27 kg |
| Product Net Depth / Length | 77 mm   |
| Product Net Width          | 45 mm   |
| Product Net Height         | 86 mm   |

## Package Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Width          | 87 mm         |
| Package Level 1 Depth / Length | 79 mm         |
| Package Level 1 EAN            | 3471523100237 |
| Package Level 1 Units          | box 1 piece   |
| Package Level 2 Height         | 315 mm        |
| Package Level 2 Units          | 27 piece      |
| Package Level 3 Units          | 1296 piece    |
| Package Level 2 Depth / Length | 300 mm        |
| Package Level 2 Gross Weight   | 14.58 kg      |

## Ordering

|                        |   |
|------------------------|---|
| Minimum Order Quantity | 1 |
|------------------------|---|