

Representative Image

# Alternate Catalog No. NFZ31E-20
# Catalog No. 1SBH136001R2031

**Description: NFZ31E-20 12-20VDC Contactor Relay**

**UPC No 3471523101807**

**Home > Contactors & Starters > UL Listed IEC Contactors > AF Contactors**

NFZ contactor relays are used for switching auxiliary and control circuits. NFZ contactor relays include an electronic coil interface accepting a wide control voltage Uc min. ... Uc max. Only four coils cover control voltages between 24...250 V 50/60 Hz or 12...250 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 NFZ contactor relays allow direct control by PLC-output ≥ 24 V DC 500 mA and obtain a reduced holding coil consumption. NFZ contactor relays withstand short voltage dips and voltage sags (SEMI F47-0706 compliance) between 24...250 V 50/60 Hz NFZ 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: DC operated for NF..Z-20 contactors. Only NF..Z-20 contactor relays need to respect the polarity on the coil terminals (A1+ and A2-). - Accessories: a wide range of Accessories is available.

## 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 | DC Operation 12 ... 20 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 |

by ABB

## 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 m²<br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5/2x 0.75 ... 1.5 m²<br>Rigid 1/2x 1 ... 2.5 m² |
| 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 | 0.31kg |
| 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 | 3471523101807 |
| 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 | 16.74 kg |

## Ordering

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