



Representative Image

## Alternate Catalog No. NFZB31E-21 Catalog No. 1SBH136061R2131

**Description:** NFZB31E-21 24-60V50/60HZ 20-60VDC Contactor Relay

**UPC No** 3471523105614

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

NFZB contactor relays comply with the latest railway rolling stock standards and allow installation in passengers or driver cabins for trains frequently operating tunnels or undergrounds. They are used for switching auxiliary and control circuits. Improve the compactness of the installations thanks to reduced dimension and side-by-side mounting requiring less 15% width (without spacing) from -40 °C up to +70 °C. Meet all main rolling stocks standards: IEC 60947-4-1, IEC 60947-5-1, IEC 60077-1/-2 and applicable parts of EN 50155 standards, shocks and vibration withstand conforming to IEC 61373 cat. 1, class B. Reach the highest levels in fire and smoke behaviour with compliance to European standard EN 45545-2 (HL2, HL3 hazard levels) in group mounting. Reduce train energy with lighter devices and requiring 68% less coil energy consumption in operation. Electronic coil interface handling large DC voltage fluctuation voltage, including several Uc DC control voltages used for battery supply and accepting sinusoidal AC 50/60 Hz control supplies included inside U<sub>min</sub>... U<sub>max</sub> voltage range. Max permitted AC 50/60 Hz control voltage must not be exceeded (see technical data). Wide range of auxiliary contact blocks for front and side mounting.

### 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 24 ... 60 V DC Operation 20 ... 60 V
Number of Auxiliary Contacts NO	3
RoHS Status	Following EU Directive 2011/65/EU
Reference Ambient Air Temperature	Close to Contactor for Storage °C Near Contactor for Operation in Free Air °C
Rated Operational Voltage	Auxiliary Circuit 690 V
Number of Auxiliary Contacts NC	1
Maximum Operating Altitude Permissible	3000 m
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 (24 / 127 V) 6 A (500 V) 2 A (690 V) 2 A (400 / 440 V) 3 A
Rated Frequency	Main Circuit 50Hz Main Circuit 60 Hz
Rated Short-time Withstand Current	for 0.1 s A for 1 s A
Maximum Electrical Switching Frequency	AC-15 1200 cycles per hour DC-13 900 cycles per hour
Rated Insulation Voltage	acc. to IEC 60947-5-1 and VDE 0110 (Gr. C) 690 V
Maximum Mechanical Switching Frequency	6000 cycles per hour
Operate Time	Between Coil De-energization and NC Contact Closing 13 ... 98 ms Between Coil De-energization and NO Contact Opening 11 ... 95 ms Between Coil Energization and NC Contact Opening 38 ... 90 ms Between Coil Energization and NO Contact Closing 40 ... 95 ms


**by ABB**

## Specifications

Secondary Rated Impulse Withstand Voltage	6 kV
Rated Operational Current DC-13	(125 V) 0.55 A / 69 W (24 V) 6 A / 144 W (250 V) 0.27 A / 68 W (48 V) 2.8 A / 134 W (72 V) 1 A / 72 W (110 V) 0.55 A / 60 W (220 V) 0.27 A / 60 W (400 V) 0.15 A / 60 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W

## 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	86 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	3471523105614
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
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