

## PRODUCT-DETAILS

# NFZ31E-23

## NFZ31E-23 100-250V50/60HZ-DC Contactor Relay



### General Information

Extended Product Type	NFZ31E-23
Product ID	1SBH136001R2331
EAN	3471523101838
Catalog Description	NFZ31E-23 100-250V50/60HZ-DC Contactor Relay

#### Long Description

NFZ contactor relays are used for switching auxiliary and control circuits. NFZ contactor relays include an electronic coil interface accepting a wide control voltage  $U_c \text{ min. } \dots U_c \text{ max.}$  Only four coils cover control voltages between 24...250 V 50/60 Hz or 12...250 V DC. NFZ 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  $\geq 24 \text{ V DC } 500 \text{ mA}$  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: AC or DC operated - Accessories: a wide range of Accessories is available.

### Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

### Popular Downloads

Instructions and Manuals	1SBC101027M6801
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## Dimensions

Product Net Width	45 mm
Product Net Depth / Length	77 mm
Product Net Height	86 mm
Product Net Weight	0.31 kg

## Technical

Number of Auxiliary Contacts NO	3
Number of Auxiliary Contacts NC	1
Standards	IEC 60947-5-1 and EN 60947-5-1, UL 508, CSA C22.2 N°14
Rated Operational Voltage	Auxiliary Circuit 690 V
Rated Frequency (f)	Auxiliary Circuit 50 / 60 Hz Control Circuit 50 / 60 Hz
Conventional Free-air Thermal Current ( $I_{th}$ )	acc. to IEC 60947-5-1, $\Theta = 40^\circ\text{C}$ 16 A
Rated Operational Current AC-15 ( $I_a$ )	(500 V) 2 A (690 V) 2 A (24 / 127 V) 6 A (220 / 240 V) 4 A (400 / 440 V) 3 A
Rated Short-time Withstand Current Low Voltage ( $I_{cw}$ )	for 0.1 s 140 A for 1 s 100 A
Maximum Electrical Switching Frequency	(AC-15) 1200 cycles per hour (DC-13) 900 cycles per hour
Rated Operational Current DC-13 ( $I_a$ )	(24 V) 6 A / 144 W (48 V) 2.8 A / 134 W (72 V) 1 A / 72 W (110 V) 0.55 A / 60 W (125 V) 0.55 A / 69 W (220 V) 0.27 A / 60 W (250 V) 0.27 A / 68 W (400 V) 0.15 A / 60 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W
Rated Insulation Voltage ( $U_i$ )	acc. to IEC 60947-5-1 690 V acc. to UL/CSA 600 V
Rated Impulse Withstand Voltage ( $U_{imp}$ )	6 kV
Maximum Mechanical Switching Frequency	6000 cycles per hour
Rated Control Circuit Voltage ( $U_c$ )	50 Hz 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 V
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
Mounting on DIN Rail	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715 TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715
Mounting by Screws (not supplied)	2 x M4 screws placed diagonally
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup> Rigid Solid 1/2x 1 ... 2.5 mm <sup>2</sup>

Connecting Capacity Control Circuit	Rigid Stranded 1/2x 1 ... 2.5 mm²
	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm²
	Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm²
	Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm²
	Rigid Solid 1/2x 1 ... 2.5 mm²
Wire Stripping Length	Rigid Stranded 1/2x 1 ... 2.5 mm²
	Auxiliary Circuit 10 mm Control Circuit 10 mm
Degree of Protection	acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20
Terminal Type	Screw Terminals

## Technical UL/CSA

Connecting Capacity Auxiliary Circuit UL/CSA	Rigid Solid 1/2x 18-14 AWG
	Rigid Stranded 1/2x 18-14 AWG
Tightening Torque UL/CSA	Auxiliary Circuit 11 in-lb Control Circuit 11 in-lb

## Environmental

Ambient Air Temperature	Close to Contactor for Storage -60 ... +80 °C Near Contactor for Operation in Free Air -40 ... 70 °C
Climatic Withstand	Category B according to IEC 60947-1 Annex Q
Maximum Operating Altitude Permissible	Without Derating 3000 m
Resistance to Vibrations acc. to IEC 60068-2-6	5 ... 300 Hz 4 g closed position / 2 g open position
Resistance to Shock acc. to IEC 60068-2-27	Closed, Shock Direction: B1 25 g Open, Shock Direction: B1 5 g Shock Direction: A 30 g Shock Direction: B2 15 g Shock Direction: C1 25 g Shock Direction: C2 25 g
RoHS Status	Following EU Directive 2011/65/EU

## Certificates and Declarations (Document Number)

ABS Certificate	ABS_20-2060694-PDA
BV Certificate	BV_2634H24899C0
CB Certificate	CB_SE-93051M2
CCC Certificate	2020980303000185
CQC Certificate	CQC2019010303267993
Declaration of Conformity - CCC	CQC2011010303465426
Declaration of Conformity - CE	1SBD250005U1000
Declaration of Conformity - UKCA	1SBD250036U1000
DNV Certificate	DNV-GL_TAE00001BV-3
DNV GL Certificate	DNV-GL_TAE00001BV-3
EAC Certificate	EAC_RU C-FR ME77 B03544
Environmental Information	1SBD250151E1000
	1SBC100222M0201
GL Certificate	DNV-GL_TAE00001BV-3
GOST Certificate	GOST_POCCFR.ME77.B07174.pdf
Instructions and Manuals	1SBC101027M6801
KC Certificate	KC-HW02016-21031A

LR Certificate	LRS_C1400038
REACH Declaration	2CMT2021-006202
RINA Certificate	RINA_ELE240318XG
RMRS Certificate	RMRS_1802702280
RoHS Information	2CMT2021-006277
UL Certificate	UL_20180227_E252354_2_1
UL Listing Card	UL_E252354

## Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	87 mm
Package Level 1 Depth / Length	79 mm
Package Level 1 Height	47 mm
Package Level 1 Gross Weight	0.31 kg
Package Level 1 EAN	3471523101838
Package Level 2 Units	box 27 piece
Package Level 2 Width	250 mm
Package Level 2 Depth / Length	300 mm
Package Level 2 Height	315 mm
Package Level 2 Gross Weight	16.74 kg
Package Level 3 Units	1296 piece

## Classifications

Object Classification Code	K
ETIM 4	EC000196 - Contactor relay
ETIM 5	EC000196 - Contactor relay
ETIM 6	EC000196 - Contactor relay
ETIM 7	EC000196 - Contactor relay
ETIM 8	EC000196 - Contactor relay
eClass	V11.0 : 27371003
UNSPSC	39121529
IDEA Granular Category Code (IGCC)	4763 >> Power contactor, DC switching
E-Number (Finland)	3706413
E-Number (Sweden)	3211461

## Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors

