PRODUCT-DETAILS

NF31E-12

NF31E-12 48-130V50/60HZ-DC Contactor Relay



General Information

Extended Product Type	NF31E-12
Product ID	1SBH137001R1231
EAN	3471523100220
Catalog Description	NF31E-12 48-130V50/60HZ-DC Contactor Relay
Long Description	The NF31E-12 is a 690 V IEC or 600 UL 4-pole contactor relay with screw terminals, used for switching auxiliary and control circuits. Thanks to the AF technology, the contactor relay has a wide control voltage range (48-130 V 50/60 Hz and DC), managing large control voltage variations, reducing panel energy consumptions and ensuring distinct operations in unstable networks. Furthermore, surge protection is built-in, offering a compact solution. NF contactor relays have a block type design, can be easily extended with add-on auxiliary contact blocks and an additional wide range of accessories. These contactor relays include mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1 and are side-marked with the "Mechanically Linked" symbol.

Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

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Popular Downloads

Data Sheet, Technical Information	1SBC100214C0202
Instructions and Manuals	1SBC101027M6801
CAD Dimensional Drawing	2CDC001079B0201

Dimensions

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

Technical

Number of Auxiliary Contacts NO	3
Number of Auxiliary Contacts NC	1
Standards	IEC/EN 60947-1, IEC/EN 60947-5-1, UL 508, CSA C22.2 No. 14-13
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, Θ = 40 °C 16 A
Rated Operational Current AC-15 (I_e)	(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_e)	(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 48 ... 130 V 60 Hz 48 ... 130 V DC Operation 48 ... 130 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	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm²

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Auxiliary Circuit	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 Rigid Stranded 1/2x 1 ... 2.5 mm²
Connecting Capacity Control Circuit	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 Rigid Stranded 1/2x 1 ... 2.5 mm²
Wire Stripping Length	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 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
Resistance to Vibrations	4g Closed Position & 2g Open position 5 ... 300 Hz

Material Compliance

Conflict Minerals Reporting Template (CMRT)	9AKK108467A5658
REACH Declaration	2CMT2021-006202
RoHS Information	2CMT2021-006277
RoHS Status	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019
Toxic Substances Control Act - TSCA	2CMT2023-006525
WEEE B2C / B2B	Business To Business
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)

Circular Value

End of Life Instructions	1SBC101080M6801

Eco Transparency

Environmental Product Declaration - EPD	1SBD250584E3000 2TFP200035A1001

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Certificates and Declarations

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_TAE00001BV-5
EAC Certificate	EAC_RU C-FR ME77 B03544
GOST Certificate	GOST_POCCFR.ME77.B06804.pdf
KC Certificate	KC-HW02016-21031A
LR Certificate	LRS_LR2003684TA-02
RINA Certificate	RINA_ELE142224XG
RMRS Certificate	RMRS_1802702280
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	0.27 kg
Package Level 1 EAN	3471523100220
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	14.58 kg
Package Level 3 Units	1296 piece

Classifications

Object Classification Code	K
ETIM 7	EC000196 - Contactor relay
ETIM 8	EC000196 - Contactor relay
ETIM 9	EC000196 - Contactor relay
eClass	V11.0 : 27371001
UNSPSC	39121529
IDEA Granular Category Code (IGCC)	4763 >> Power contactor, DC switching
E-Number (Finland)	3706407
E-Number (Sweden)	3211451

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Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → NF Contactor Relays



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