PRODUCT-DETAILS

# NF53E-11

## NF53E-11 24-60V50/60HZ 20-60VDC Contactor Relay



### General Information

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|---|---|
| Extended Product Type | NF53E-11 |
| Product ID | 1SBH137001R1153 |
| EAN | 3471523100619 |
| Catalog Description | NF53E-11 24-60V50/60HZ 20-60VDC Contactor Relay |
| Long Description | The NF53E-11 is a 690 V IEC or 600 UL 8-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 (24-60 V 50/60 Hz and 20-60 V 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

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

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## Popular Downloads

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

## Dimensions

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|---|---|
| Product Net Width | 45 mm |
| Product Net Depth / Length | 110.5 mm |
| Product Net Height | 86 mm |
| Product Net Weight | 0.32 kg |

## Technical

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|---|---|
| Number of Auxiliary Contacts NO | 5 |
| Number of Auxiliary Contacts NC | 3 |
| 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<br>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<br>(690 V) 2 A<br>(24 / 127 V) 6 A<br>(220 / 240 V) 4 A<br>(400 / 440 V) 3 A |
| Rated Short-time Withstand Current Low Voltage ($I_{cw}$) | for 0.1 s 140 A<br>for 1 s 100 A |
| Maximum Electrical Switching Frequency | (AC-15) 1200 cycles per hour<br>(DC-13) 900 cycles per hour |
| Rated Operational Current DC-13 ($I_e$) | (24 V) 6 A / 144 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>(125 V) 0.55 A / 69 W<br>(220 V) 0.27 A / 60 W<br>(250 V) 0.27 A / 68 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 |
| Rated Insulation Voltage ($U_i$) | acc. to IEC 60947-5-1 690 V<br>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 24 ... 60 V<br>60 Hz 24 ... 60 V<br>DC Operation 20 ... 60 V |
| Operate Time | Between Coil De-energization and NC Contact Closing 13 ... 98 ms |

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|---|---|
| | 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 |
| Mounting on DIN Rail | TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715<br>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 mm²<br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm²<br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm²<br>Rigid Solid 1/2x 1 ... 2.5 mm²<br>Rigid Stranded 1/2x 1 ... 2.5 mm² |
| Connecting Capacity Control Circuit | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm²<br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm²<br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm²<br>Rigid Solid 1/2x 1 ... 2.5 mm²<br>Rigid Stranded 1/2x 1 ... 2.5 mm² |
| Wire Stripping Length | Auxiliary Circuit 10 mm<br>Control Circuit 10 mm |
| 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 |
| Terminal Type | Screw Terminals |

## Technical UL/CSA

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

## Environmental

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|---|---|
| Ambient Air Temperature | Close to Contactor for Storage -60 ... +80 °C<br>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<br>Open, Shock Direction: B1 5 g<br>Shock Direction: A 30 g<br>Shock Direction: B2 15 g<br>Shock Direction: C1 25 g<br>Shock Direction: C2 25 g |
| Resistance to Vibrations | 4g Closed Position & 2g Open position 5 ... 300 Hz |

## Material Compliance

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|---|---|
| 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) |

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## ABB EcoSolutions

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|---|---|
| Environmental Product Declaration - EPD | 1SBD250584E3000 |

## Certificates and Declarations

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|---|---|
| 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 |
| 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

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|---|---|
| Package Level 1 Units | box 1 piece |
| Package Level 1 Width | 87 mm |
| Package Level 1 Depth / Length | 113 mm |
| Package Level 1 Height | 47 mm |
| Package Level 1 Gross Weight | 0.32 kg |
| Package Level 1 EAN | 3471523100619 |
| Package Level 2 Units | box 18 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 | 11.52 kg |
| Package Level 3 Units | 864 piece |

## Classifications

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|---|---|
| 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 |

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|---|---|
| IDEA Granular Category Code (IGCC) | 4763 >> Power contactor, DC switching |
| E-Number (Finland) | 3705817 |

## Categories

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



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