

## PRODUCT-DETAILS

# NF53E-12

## NF53E-12 48-130V50/60HZ-DC Contactor Relay



### General Information

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | NF53E-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Product ID            | 1SBH137001R1253                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| EAN                   | 3471523100626                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Catalog Description   | NF53E-12 48-130V50/60HZ-DC Contactor Relay                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Long Description      | <p>NF contactor relays are used for switching auxiliary and control circuits. NF contactor relays include an electronic coil interface accepting a wide control voltage <math>U_c</math> min. ... <math>U_c</math> max. Only four coils cover control voltages between 24...500 V 50/60 Hz or 20...500 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. NF contactor relays have built-in surge protection and do not require additional surge suppressors. - Poles: 8-pole contactor relays with a non-removable front-mounted auxiliary contact block (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.</p> |

### Ordering

|                        |          |
|------------------------|----------|
| Minimum Order Quantity | 1 piece  |
| Customs Tariff Number  | 85364900 |

### Popular Downloads

|                          |                 |
|--------------------------|-----------------|
| Instructions and Manuals | 1SBC101027M6801 |
|--------------------------|-----------------|

## Dimensions

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

## Technical

|                                                    |                                                                                                                                                                                                                                                                        |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Auxiliary Contacts NO                    | 5                                                                                                                                                                                                                                                                      |
| Number of Auxiliary Contacts NC                    | 3                                                                                                                                                                                                                                                                      |
| Standards                                          | IEC 60947-5-1 and EN 60947-5-1, UL 508, CSA C22.2 N°14                                                                                                                                                                                                                 |
| Rated Operational Voltage                          | Auxiliary Circuit 690 V<br>Main Circuit 690 V                                                                                                                                                                                                                          |
| Rated Frequency (f)                                | Auxiliary Circuit 50 / 60 Hz                                                                                                                                                                                                                                           |
| Conventional Free-air Thermal Current ( $I_{th}$ ) | acc. to IEC 60947-5-1, q = 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 ( $I_{cw}$ )    | 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 and VDE 0110 (Gr. C) 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 48 ... 130 V<br>50 Hz / 60 Hz 48 ... 130 V<br>60 Hz 48 ... 130 V<br>DC Operation 48 ... 130 V                                                                                                                                                                    |
| 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 |
| Connecting Capacity Auxiliary Circuit              | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup><br>Rigid 1/2x 1 ... 2.5 mm <sup>2</sup>                                  |
| Connecting Capacity Control Circuit                | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup><br>Rigid 1/2x 1 ... 2.5 mm <sup>2</sup>                                  |
| 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 IP40<br>acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20                                                                                                                                      |

Terminal Type

Screw Terminals

## Technical UL/CSA

Tightening Torque  
UL/CSAAuxiliary Circuit 11 IA  
Control Circuit 11 IA

## Environmental

|                                                |                                                                                                                                                                                              |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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         | 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 K40<br>Open, Shock Direction: B1 5 K40<br>Shock Direction: A 30 K40<br>Shock Direction: B2 15 K40<br>Shock Direction: C1 25 K40<br>Shock Direction: C2 25 K40 |
| RoHS Status                                    | Following EU Directive 2011/65/EU                                                                                                                                                            |

## Certificates and Declarations (Document Number)

|                                 |                               |
|---------------------------------|-------------------------------|
| ABS Certificate                 | ABS_15-GE1349500-PDA_90682247 |
| BV Certificate                  | BV_2634H24899B0               |
| CB Certificate                  | CB_SE-93051                   |
| CCC Certificate                 | 2020980303000185              |
| CQC Certificate                 | CQC2019010303267993           |
| cUL Certificate                 | UL_20180227_E252354_2_1       |
| Declaration of Conformity - CCC | CQC2011010303465426           |
| Declaration of Conformity - CE  | 1SBD250005U1000               |
| DNV Certificate                 | DNV-GL_TAE00001BV-3           |
| DNV GL Certificate              | DNV-GL_TAE00001BV-3           |
| EAC Certificate                 | EAC_RU C-FR ME77 B03544       |
| Environmental Information       | 1SBD250152E1000               |
| GL Certificate                  | DNV-GL_TAE00001BV-3           |
| GOST Certificate                | GOST_POCCFR.ME77.B06804.pdf   |
| Instructions and Manuals        | 1SBC101027M6801               |
| LR Certificate                  | LRS_C1400038                  |
| RINA Certificate                | RINA_ELE240318XG              |
| RMRS Certificate                | RMRS_1802702280               |
| RoHS Information                | 1SBD250005U1000               |
| UL Certificate                  | UL_20130206-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 | 113 mm      |

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Height         | 47 mm         |
| Package Level 1 Gross Weight   | 0.32 kg       |
| Package Level 1 EAN            | 3471523100626 |
| 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**

|                            |                            |
|----------------------------|----------------------------|
| Object Classification Code | K                          |
| ETIM 4                     | EC000196 - Contactor relay |
| ETIM 5                     | EC000196 - Contactor relay |
| ETIM 6                     | EC000196 - Contactor relay |
| ETIM 7                     | EC000196 - Contactor relay |
| eClass                     | V11.0 : 27371003           |
| UNSPSC                     | 39121500                   |
| E-Number (Finland)         | 3706428                    |

**Categories**

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

