

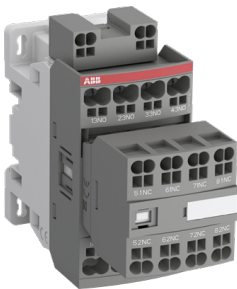


PRODUCT-DETAILS

# NF44EK-11

## NF44EK-11 24-60V50/60HZ 20-60VDC

### Contactor Relay



| General Information    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type  | NF44EK-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Product ID             | 1SBH137005R1144                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| EAN                    | 3471523153110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Catalog Description    | NF44EK-11 24-60V50/60HZ 20-60VDC Contactor Relay                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Long Description       | <p>The NF44EK-11 is a 690 V IEC or 600 UL 8-pole contactor relay with Push-in Spring terminals, used for switching auxiliary and control circuits. Only one push is all you need for extremely fast wiring: faster than ever installation, easier than ever wiring, reliable as ever connections.</p> <p>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.</p> <p>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.</p> |
| Ordering               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Minimum Order Quantity | 1 piece                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Popular Downloads                 |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100214C0202 |
| Instructions and Manuals          | 1SBC101054M6801 |
| CAD Dimensional Drawing           | 2CDC001079B0201 |

| Dimensions                 |          |
|----------------------------|----------|
| Product Net Width          | 45 mm    |
| Product Net Depth / Length | 110.5 mm |
| Product Net Height         | 92.3 mm  |
| Product Net Weight         | 0.33 kg  |

| Technical                                                         |                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Auxiliary Contacts NO                                   | 4                                                                                                                                                                                                                                             |
| Number of Auxiliary Contacts NC                                   | 4                                                                                                                                                                                                                                             |
| 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<br>Main Circuit 690 V                                                                                                                                                                                                 |
| Rated Frequency (f)                                               | Auxiliary Circuit 50 / 60 Hz<br>Control Circuit 50 / 60 Hz                                                                                                                                                                                    |
| Conventional Free-air Thermal Current (I <sub>th</sub> )          | acc. to IEC 60947-5-1, $\Theta = 40\text{ °C}$ 16 A                                                                                                                                                                                           |
| Rated Operational Current AC-15 (I <sub>e</sub> )                 | (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 <sub>cw</sub> ) | 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 <sub>e</sub> )                 | (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 <sub>i</sub> )                        | acc. to IEC 60947-5-1 690 V<br>acc. to UL/CSA 600 V                                                                                                                                                                                           |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> )               | 6 kV                                                                                                                                                                                                                                          |
| Maximum Mechanical Switching Frequency                            | 6000 cycles per hour                                                                                                                                                                                                                          |
| Rated Control Circuit Voltage (U <sub>c</sub> )                   | 50 Hz 24 ... 60 V<br>60 Hz 24 ... 60 V                                                                                                                                                                                                        |

|                                          |                                                                                                                                                                                                                                                                        |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          | DC Operation 20 ... 60 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 |
| 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<br>Auxiliary Circuit | Flexible with Ferrule 1/2x 0.5 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 0.5 ... 1.5 mm <sup>2</sup><br>Flexible 1/2x 0.5 ... 2.5 mm <sup>2</sup><br>Rigid Solid 1/2x 1 ... 2.5 mm <sup>2</sup>                                                  |
| Connecting Capacity<br>Control Circuit   | Flexible with Ferrule 1/2x 0.5 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 0.5 ... 1.5 mm <sup>2</sup><br>Flexible 1/2x 0.5 ... 2.5 mm <sup>2</sup><br>Rigid Solid 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 IP20<br>acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20                                                                                                                                      |
| Terminal Type                            | Push-in Spring Terminals                                                                                                                                                                                                                                               |

## Technical UL/CSA

|                                                 |                            |
|-------------------------------------------------|----------------------------|
| Connecting Capacity<br>Auxiliary Circuit UL/CSA | Rigid Solid 1/2x 18-14 AWG |
| Connecting Capacity<br>Control Circuit UL/CSA   | Rigid Solid 1/2x 18-14 AWG |

## Environmental

|                                           |                                                                                                                                                                                                                                                     |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air<br>Temperature                | Close to Contactor for Storage -60 ... +80 °C<br>Near Contactor for Operation in Free Air -40 ... 70 °C<br>Near Contactor for Operation in Free Air (0.85 ... 1.1 Uc) -40 ... +60 °C<br>Near Contactor for Operation in Free Air (Uc) -40 ... 70 °C |
| Climatic Withstand                        | Category B according to IEC 60947-1 Annex Q                                                                                                                                                                                                         |
| Maximum Operating<br>Altitude Permissible | Without Derating 3000 m                                                                                                                                                                                                                             |
| Resistance to Vibrations                  | 4g Closed Position & 2g Open position 5 ... 300 Hz                                                                                                                                                                                                  |

## Material Compliance

|                                                   |                                                                        |
|---------------------------------------------------|------------------------------------------------------------------------|
| Conflict Minerals<br>Reporting Template<br>(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<br>Control Act - TSCA            | 2CMT2023-006525                                                        |
| WEEE B2C / B2B                                    | Business To Business                                                   |
| WEEE Category                                     | 5. Small Equipment (No External Dimension More Than 50 cm)             |

## ABB EcoSolutions

|                                            |                 |
|--------------------------------------------|-----------------|
| Environmental Product<br>Declaration - EPD | 1SBD250584E3000 |
|--------------------------------------------|-----------------|

## Certificates and Declarations

|                                     |                         |
|-------------------------------------|-------------------------|
| ABS Certificate                     | ABS_20-2060694-PDA      |
| CB Certificate                      | CB_SE-93051M2           |
| CCC Certificate                     | 2020980303000185        |
| CQC Certificate                     | CQC2019010303267993     |
| Declaration of<br>Conformity - CCC  | CQC2011010303465426     |
| Declaration of<br>Conformity - CE   | 1SBD250005U1000         |
| Declaration of<br>Conformity - UKCA | 1SBD250036U1000         |
| DNV Certificate                     | DNV_TAE00001BV-5        |
| LR Certificate                      | LRS_LR2003684TA-02      |
| RINA Certificate                    | RINA_ELE142224XG        |
| RMRS Certificate                    | RMRS_1802702280         |
| UL Certificate                      | UL_20180227_E252354_2_1 |

## Container Information

|                                   |               |
|-----------------------------------|---------------|
| Package Level 1 Units             | box 1 piece   |
| Package Level 1 Width             | 93 mm         |
| Package Level 1 Depth /<br>Length | 111 mm        |
| Package Level 1 Height            | 45 mm         |
| Package Level 1 Gross<br>Weight   | 0.349 kg      |
| Package Level 1 EAN               | 3471523153110 |
| Package Level 2 Units             | box 18 piece  |
| Package Level 2 Width             | 250 mm        |
| Package Level 2 Depth /<br>Length | 300 mm        |
| Package Level 2 Height            | 315 mm        |
| Package Level 2 Gross<br>Weight   | 15.705 kg     |
| Package Level 3 Units             | 1080 piece    |

## Classifications

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| Object Classification<br>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<br>Code (IGCC) | 4763 >> Power contactor, DC switching |
| E-Number (Finland)                    | 3707949                               |

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## Categories

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

