

## PRODUCT-DETAILS

# TNL31ERT 77-143V DC

## TNL31ERT 77-143V DC Contactor Relay



### General Information

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | TNL31ERT 77-143V DC                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Product ID            | 1SBH143060R6231                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| EAN                   | 3471522364067                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Catalog Description   | TNL31ERT 77-143V DC Contactor Relay                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Long Description      | <p>TNL... contactor relays are used for switching auxiliary circuits and control circuits - Poles: 4-pole contactor relays (mechanically linked contact elements available) - Control circuit: DC operated with solid core magnet circuit. The polarity on the coil terminals (A1+ and A2-) must be respected - Accessories: a wide range of accessories is available TNL... contactor relays are fitted with low consumption DC coils and offer a large coil voltage range.</p> |

### Ordering

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

### Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SNC001003C0202 |
| Instructions and Manuals          | 1SBC101006M5501 |
| Dimension Diagram                 | FPTE307902      |

## Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 44 mm   |
| Product Net Depth / Length | 97 mm   |
| Product Net Height         | 78 mm   |
| Product Net Weight         | 0.52 kg |

## Technical

|                                                    |                                                                                                                                                                                                                                                                         |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts NO                         | 0                                                                                                                                                                                                                                                                       |
| Number of Main Contacts NC                         | 0                                                                                                                                                                                                                                                                       |
| Number of Auxiliary Contacts NO                    | 3                                                                                                                                                                                                                                                                       |
| Number of Auxiliary Contacts NC                    | 1                                                                                                                                                                                                                                                                       |
| Rated Operational Voltage                          | Auxiliary Circuit 690 V<br>Main Circuit 690 V                                                                                                                                                                                                                           |
| Rated Frequency (f)                                | Supply 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 ( $I_e$ )          | (500 V) 2 A<br>(690 V) 2 A<br>(24 / 127 V) 6 A<br>(220 / 240 V) 4 A<br>(380 / 400 V) 3 A                                                                                                                                                                                |
| Short-Circuit Protective Devices                   | Auxiliary Circuit - gG Type Fuses 10 A                                                                                                                                                                                                                                  |
| Maximum Electrical Switching Frequency             | 1200 cycles per hour                                                                                                                                                                                                                                                    |
| Rated Operational Current DC-13 ( $I_e$ )          | (24 V) 6 / 144 A<br>(48 V) 2.8 / 134 A<br>(72 V) 1 / 72 A<br>(125 V) 0.55 / 69 A<br>(250 V) 0.3 / 75 A                                                                                                                                                                  |
| 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                                                                                                                                                                                                                                                                    |
| Mechanical Durability                              | > 20 million                                                                                                                                                                                                                                                            |
| Maximum Mechanical Switching Frequency             | 6000 cycles per hour                                                                                                                                                                                                                                                    |
| Rated Control Circuit Voltage ( $U_c$ )            | DC Operation 77 ... 143 V                                                                                                                                                                                                                                               |
| Coil Consumption                                   | Holding DC ( $U_{min} / U_{max}$ ) 2.5 / 8.5 W<br>Pull-in DC ( $U_{min} / U_{max}$ ) 2.5 / 8.5 W                                                                                                                                                                        |
| Operate Time                                       | Between Coil De-energization and NC Contact Closing 16 ... 27 ms<br>Between Coil De-energization and NO Contact Opening 10 ... 17 ms<br>Between Coil Energization and NC Contact Opening 20 ... 70 ms<br>Between Coil Energization and NO Contact Closing 50 ... 100 ms |
| Connecting Capacity Auxiliary Circuit              | Rigid or Flexible with Cable Lug 0.75 ... 2.5 mm <sup>2</sup>                                                                                                                                                                                                           |
| Degree of Protection                               | acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP10                                                                                                                                                                                                       |
| Terminal Type                                      | Ring-Tongue Terminals                                                                                                                                                                                                                                                   |

## Environmental

|                                        |                                                                       |
|----------------------------------------|-----------------------------------------------------------------------|
| Climatic Withstand                     | acc. to IEC 60068-2-30 and 60068-2-11 - UTE C 63-100 specification II |
| Maximum Operating Altitude Permissible | 3000 m                                                                |

Resistance to Shock acc.  
to IEC 60068-2-27

Half-sine Pulse for 11 ms, No Change in Contact Position, Open, Shock  
Direction: A 10 m/s<sup>2</sup>  
Half-sine Pulse for 11 ms, No Change in Contact Position, Closed, Shock  
Direction: A 20 m/s<sup>2</sup>  
Half-sine Pulse for 11 ms, No Change in Contact Position, Closed, Shock  
Direction: B1 15 m/s<sup>2</sup>  
Half-sine Pulse for 11 ms, No Change in Contact Position, Closed, Shock  
Direction: B2 10 m/s<sup>2</sup>  
Half-sine Pulse for 11 ms, No Change in Contact Position, Closed, Shock  
Direction: C1 20 m/s<sup>2</sup>  
Half-sine Pulse for 11 ms, No Change in Contact Position, Closed, Shock  
Direction: C2 14 m/s<sup>2</sup>  
Half-sine Pulse for 11 ms, No Change in Contact Position, Open, Shock  
Direction: B1 5 m/s<sup>2</sup>  
Half-sine Pulse for 11 ms, No Change in Contact Position, Open, Shock  
Direction: B2 10 m/s<sup>2</sup>  
Half-sine Pulse for 11 ms, No Change in Contact Position, Open, Shock  
Direction: C1 8 m/s<sup>2</sup>  
Half-sine Pulse for 11 ms, No Change in Contact Position, Open, Shock  
Direction: C2 8 m/s<sup>2</sup>

RoHS Status

Following EU Directive 2011/65/EU

## Certificates and Declarations (Document Number)

|                                    |                                              |
|------------------------------------|----------------------------------------------|
| CB Certificate                     | CB_SE_66912A1                                |
| CCC Certificate                    | CCC_2012010304558126<br>CCC_2006010304170816 |
| CQC Certificate                    | CQC2012010304558126                          |
| CSA Certificate                    | CSA_1041746                                  |
| cUR Certificate                    | UL_20140915-E252354_4_2                      |
| Declaration of<br>Conformity - CCC | 2020980303000256                             |
| Declaration of<br>Conformity - CE  | 1SBD250808U1000                              |
| EAC Certificate                    | EAC_RU C-FR ME77 B01006                      |
| Environmental<br>Information       | 1SBD250127E1002                              |
| GOST Certificate                   | GOST_POCCFRME77B07174                        |
| Instructions and<br>Manuals        | 1SBC101006M5501                              |
| RoHS Information                   | 1SBD250808U1000                              |
| UL Certificate                     | UL_20140915-E252354_4_2                      |
| UL Listing Card                    | E252354                                      |

## Container Information

|                                   |               |
|-----------------------------------|---------------|
| Package Level 1 Units             | 1 piece       |
| Package Level 1 Width             | 86 mm         |
| Package Level 1 Depth /<br>Length | 141 mm        |
| Package Level 1 Height            | 51 mm         |
| Package Level 1 Gross<br>Weight   | 0.52 kg       |
| Package Level 1 EAN               | 3471522364067 |
| Package Level 2 Units             | box 28 piece  |
| Package Level 2 Gross<br>Weight   | 14.56 kg      |

## Classifications

|                               |   |
|-------------------------------|---|
| Object Classification<br>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 : 27371018           |
| UNSPSC | 39121500                   |

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## Categories

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

