

## PRODUCT-DETAILS

# OTDC500FV11

## OTDC500FV11 DC Switch-disconnector



### General Information

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | OTDC500FV11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Product ID            | 1SCA158226R1001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| EAN                   | 6417019873312                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Catalog Description   | OTDC500FV11 DC Switch-disconnector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Long Description      | <p>A fully optimized two-pole DC switch-disconnector for 1500V utility-scale photovoltaic power plants covering 315-630A current range. The new design offers both a size reduction and an increase in efficiency and performance to help manufacturers adapt to the industry's rapid adoption of 1500V DC solutions.</p> <p>The two-pole 1500V DC concept helps manufacturers improve system efficiency, reducing switch losses by up to 35 percent. Measuring just 150mm wide and 122mm high, the OTDC range of 1500V DC switches is also up to 30 percent smaller than conventional solutions.</p> <p>The compact size of the new OTDC range makes it possible for manufacturers to reduce the size of combiner boxes and inverters.</p> <p>Main characteristics for this particular OTDC type:<br/>Disconnect single PV circuit, Approved according to IEC 60947-1, -3</p> |

### Ordering

|                        |              |
|------------------------|--------------|
| Minimum Order Quantity | 1 piece      |
| Customs Tariff Number  | 85353010     |
| Country of Origin      | Finland (FI) |

## Popular Downloads

|                                   |                                                                                  |
|-----------------------------------|----------------------------------------------------------------------------------|
| Data Sheet, Technical Information | 1SCC301022C0201                                                                  |
| Instructions and Manuals          | 1SCC301099M0201<br>9AKK107492A6191                                               |
| Mechanical Drawings               | OTDC315-630FV11_stp<br>OTDC315-630FV11_igs<br>1SCC307658F0001<br>1SCC307659F0001 |
| Wiring Diagram                    | 1SCC301030K0201                                                                  |

## Dimensions

|                            |                    |
|----------------------------|--------------------|
| Product Frame Size         | M                  |
| Product Net Width          | 157.5 mm<br>6.2 in |
| Product Net Height         | 211 mm<br>8.3 in   |
| Product Net Depth / Length | 135 mm<br>5.3 in   |
| Product Net Weight         | 3.5 kg<br>7.7 lb   |

## Technical

|                                                    |                                             |
|----------------------------------------------------|---------------------------------------------|
| Connection Configuration                           | Single circuit 2a, 2b                       |
| Rated Operational Current DC-21B ( $I_g$ )         | (1500 V) 500 A                              |
| Rated Operational Current DC-22B                   | (1500 V) 400 A                              |
| Rated Operational Current DC-PV1                   | (1500 V) 500 A                              |
| Rated Operational Current DC-PV2                   | (1500 V) 500 A                              |
| Conventional Free-air Thermal Current ( $I_{th}$ ) | 500 A                                       |
| Conventional Thermal Current ( $I_{the}$ )         | Fully Enclosed 500 A                        |
| Rated Impulse Withstand Voltage ( $U_{imp}$ )      | 12 kV                                       |
| Rated Insulation Voltage ( $U_i$ )                 | 1500 V                                      |
| Rated Operational Voltage                          | 1500 V                                      |
| Rated Short-Circuit Making Capacity ( $I_{cm}$ )   | (1500 V DC) 10 kA                           |
| Rated Short-time Withstand Current ( $I_{cw}$ )    | (1500 V DC) 10 kA<br>for 1 s 10 kA          |
| Power Loss                                         | at Rated Operating Conditions per Pole 20 W |
| Pollution Degree                                   | 3                                           |
| Handle Type                                        | Handle and shaft not included               |
| Shaft Diameter                                     | 12 mm<br>0.47 in                            |

|                              |                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switches Operating Mechanism | Mechanism Between the Poles<br>11 (Between the Poles)                                                                                                                                                                                                                                                                                                                                      |
| Position of Line Terminals   | Top In - Bottom Out<br>Bottom In - Top Out                                                                                                                                                                                                                                                                                                                                                 |
| Operating Mode               | Front Operated                                                                                                                                                                                                                                                                                                                                                                             |
| Standards                    | IEC 60947-1, -3                                                                                                                                                                                                                                                                                                                                                                            |
| Special Functions            | No                                                                                                                                                                                                                                                                                                                                                                                         |
| Mounting Type                | Base mounting                                                                                                                                                                                                                                                                                                                                                                              |
| Number of Circuits           | 1                                                                                                                                                                                                                                                                                                                                                                                          |
| Number of Poles              | 2                                                                                                                                                                                                                                                                                                                                                                                          |
| Degree of Protection         | Front IP20                                                                                                                                                                                                                                                                                                                                                                                 |
| Terminal Type                | Lug terminals                                                                                                                                                                                                                                                                                                                                                                              |
| Terminal Width               | 30 mm<br>1.2 in                                                                                                                                                                                                                                                                                                                                                                            |
| Tightening Torque            | Cable Lug 30...40 N·m                                                                                                                                                                                                                                                                                                                                                                      |
| Mechanical Durability        | 10000 cycle                                                                                                                                                                                                                                                                                                                                                                                |
| Utilization                  | Photovoltaic                                                                                                                                                                                                                                                                                                                                                                               |
| Utilization Category         | Switching of resistive loads, including moderate overloads - occasional actuation (DC-21B)<br>Switching of mixed resistive and inductive loads, including moderate overloads (i.e. shunt motors) - occasional actuation (DC-22B)<br>Switching of single PV string(s) without reverse and overcurrents (DC-PV1)<br>Switching of several PV string(s) with reverse and overcurrents (DC-PV2) |

## Environmental

|             |                                   |
|-------------|-----------------------------------|
| RoHS Status | Following EU Directive 2011/65/EU |
|-------------|-----------------------------------|

## Certificates and Declarations (Document Number)

|                                   |                                    |
|-----------------------------------|------------------------------------|
| CCC Certificate                   | CQC2019010302206498                |
| Declaration of Conformity<br>- CE | 1SCC301227D2701                    |
| DNV GL Certificate                | 1SCC301231D0201                    |
| Instructions and Manuals          | 1SCC301099M0201<br>9AKK107492A6191 |
| RoHS Information                  | 1SCC301227D2701                    |

## Container Information

|                                |                  |
|--------------------------------|------------------|
| Package Level 1 Units          | box 1 piece      |
| Package Level 1 Width          | 220 mm<br>8.7 in |
| Package Level 1 Depth / Length | 250 mm<br>9.8 in |
| Package Level 1 Height         | 210 mm<br>8.3 in |
| Package Level 1 Gross Weight   | 3.8 kg<br>8.3 lb |
| Package Level 1 EAN            | 6417019873312    |

| Classifications            |                                                            |
|----------------------------|------------------------------------------------------------|
| Object Classification Code | Q                                                          |
| ETIM 5                     | EC000216 - Switch disconnecter                             |
| ETIM 6                     | EC000216 - Switch disconnecter                             |
| ETIM 7                     | EC000216 - Switch disconnecter                             |
| WEEE Category              | 5. Small Equipment (No External Dimension More Than 50 cm) |

| Categories                                                            |
|-----------------------------------------------------------------------|
| Low Voltage Products and Systems → Switches → DC Switch-Disconnectors |

