The average generating capacity of photovoltaic installations is increasing every day, in all parts of the world. When it comes to large photovoltaic production installations (over 200 kWp), the power installed has continued to increase at an incredible pace over the last period, and at a higher rate than that of small and medium-sized installations.

When the power generated by a photovoltaic production system exceeds a certain level and use of a low voltage switch-disconnector is required, Tmax PV moulded-case switch-disconnectors are suitable for the purpose.

Tmax PV is the latest T Generation product: from 0 to 1600 A, up to 1100 V DC.

Tmax PV possesses IEC 60947-3 certification.

Tmax PV includes 6 different sizes: from the compact T1 (which can be mounted on DIN rail) to the high-performance T7, available in the two versions, with lever operating mechanism and motor operator.

### Available sizes

<table>
<thead>
<tr>
<th>Switch-disconnectors</th>
<th>Thermal current</th>
<th>Service current (category DC22B)</th>
<th>Rated voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1D</td>
<td>160</td>
<td>160</td>
<td>1100 V DC</td>
</tr>
<tr>
<td>T3D</td>
<td>250</td>
<td>200</td>
<td>1100 V DC</td>
</tr>
<tr>
<td>T4D</td>
<td>250</td>
<td>250</td>
<td>1100 V DC</td>
</tr>
<tr>
<td>T5D</td>
<td>630</td>
<td>500</td>
<td>1100 V DC</td>
</tr>
<tr>
<td>T6D</td>
<td>800</td>
<td>800</td>
<td>1100 V DC</td>
</tr>
<tr>
<td>T7D</td>
<td>1600</td>
<td>1600</td>
<td>1100 V DC</td>
</tr>
<tr>
<td>T7D - M</td>
<td>1600</td>
<td>1600</td>
<td>1100 V DC</td>
</tr>
</tbody>
</table>

Tmax PV reaches a rated insulation voltage up to 1150 V DC.

Tmax PV includes all the advantages of the T Generation:
- excellent performance-dimensions
- vast and complete range of accessories for all requirements
- complete remote control

Product note
Tmax PV: photovoltaic range
T Generation
Tmax PV operating devices are the first moulded-case switch-disconnectors for high direct voltage available on the market. They are of certain interest for all types of photovoltaic installation, where they are the ideal answer for every disconnecting requirement.

Tmax PV moulded-case switch-disconnectors can be used in both parallel switchgears and inverter switchgears.

When used in inverter switchgears, Tmax PV makes it absolutely simple to coordinate the direct side and the alternate side: the same circuit-breaker can be used for both the DC and AC sides.

Moreover, Tmax PV equipment, which are manufactured and tested in accordance with Standard IEC 60947-3, can be used for mixed resistive-inductive loads in all low voltage installations with 1100 V DC and 1600 A rated current.

Tmax PV: photovoltaic range
T Generation

Since it is small in size, T1D PV can be easily installed in the parallel switchgear (also called combiner box). The widest choice, thanks to Tmax PV for disconnecting the DC side of the inverter, from just a few Amperes to 1600 A rated current. ABB is already a partner of some of the most important inverter manufacturers in the world.

First level: string protection

Second level: parallel switchgear

Third level: inverter disconnection on the DC side
Examples of other applications in which *Tmax PV* switch-disconnectors can be efficiently used:

- **Electric traction**
  at the present time, public urban transport vehicles (trolley-buses, streetcars, subway trains) often run on DC power at 600 to 1000 V voltage ratings

- **UPS applications**
  use of uninterruptible power suppliers is becoming more

and more widespread in various types of installation: hospitals, for emergencies (lights, alarms), servers, data centers...

- **Special industrial applications**
  such as: electric arc furnaces, electric welding systems, metal refining plants (aluminium, zinc...)

Since it is small in size, *T1D PV* can be easily installed in the parallel switchgear (also called combiner box).
The order codes for TMAX PV are listed in the table below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Code description</th>
<th>Version/Poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SDA066881R1</td>
<td>T1D 160 PV 4p F FC Cu 1100 V DC</td>
<td>Fixed / 4p</td>
</tr>
<tr>
<td>1SDA066882R1</td>
<td>T3D 200 PV 4p F FC Cu 1100 V DC</td>
<td>Fixed / 4p</td>
</tr>
<tr>
<td>1SDA066883R1</td>
<td>T4D 250 PV 4p F FC Cu 1100 V DC</td>
<td>Fixed / 4p</td>
</tr>
<tr>
<td>1SDA066884R1</td>
<td>T5D 500 PV 4p F FC Cu 1100 V DC</td>
<td>Fixed / 4p</td>
</tr>
<tr>
<td>1SDA066885R1</td>
<td>T6D 800 PV 4p F CuAl 1100 V DC</td>
<td>Fixed / 4p</td>
</tr>
<tr>
<td>1SDA066886R1</td>
<td>T7D 1600 PV 4p F FC CuAl 1100 V DC</td>
<td>Fixed / 4p</td>
</tr>
<tr>
<td>1SDA066887R1</td>
<td>T7D1600 PV 4p F FC CuAl M 1100 V DC</td>
<td>Fixed / 4p</td>
</tr>
</tbody>
</table>

As described, the circuit-breakers are always supplied with front terminal clamps for copper cables or copper/aluminium cables: moreover, depending on the size, they are also complete with accessories, such as insulating plates, terminal covers or phase separators.

For more information please contact:

**ABB SACE**
A division of ABB S.p.A.
L.V. Breakers
Via Baioni, 35
24123 Bergamo - Italy
Tel.: +39 035 395 111
Fax: +39 035 395306-433
[www.abb.com](http://www.abb.com)