

Product note

Tmax PV: photovoltaic range

T Generation



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.

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

Technical Characteristics

Tmax PV switch-disconnectors in compliance with the IEC60947-3

	T1D PV	T3D PV	T4D PV	T5D PV	T6D PV	T7D PV
Conventional thermal current, I _{th} [A]	160	250	250	630	800	1600
Rated service current in category DC22 B, I _e [A]	160	200	250	500	800	1600
Rated service voltage, U _e [V]	1100 V DC	1100 V DC	1100 V DC	1100 V DC	1100 V DC	1100 V DC
Rated impulse withstand voltage, U _{imp} [kV]	8	8	8	8	8	8
Rated insulation voltage, U _i [V]	1150 V DC	1150 V DC	1150 V DC	1150 V DC	1150 V DC	1150 V DC
Test voltage at industrial frequency for 1 minute [V]	3500	3500	3500	3500	3500	3500
Rated short-circuit making capacity, switch-disconnector only, I _{cm} [kA]	1.5	2.4	3	6	9.6	19.2
Rated short-time withstand current for 1s, I _{cw} [kA]	1.5	2.4	3	6	9.6	19.2
Versions	F	F	F	F	F	F
Terminals	FC Cu	FC Cu	FC Cu	FC Cu	FC CuAl	FC CuAl
Mechanical life [No. operations]	25000	25000	20000	20000	20000	10000
Mechanical life [No. Hourly operations]	120	120	120	120	120	60

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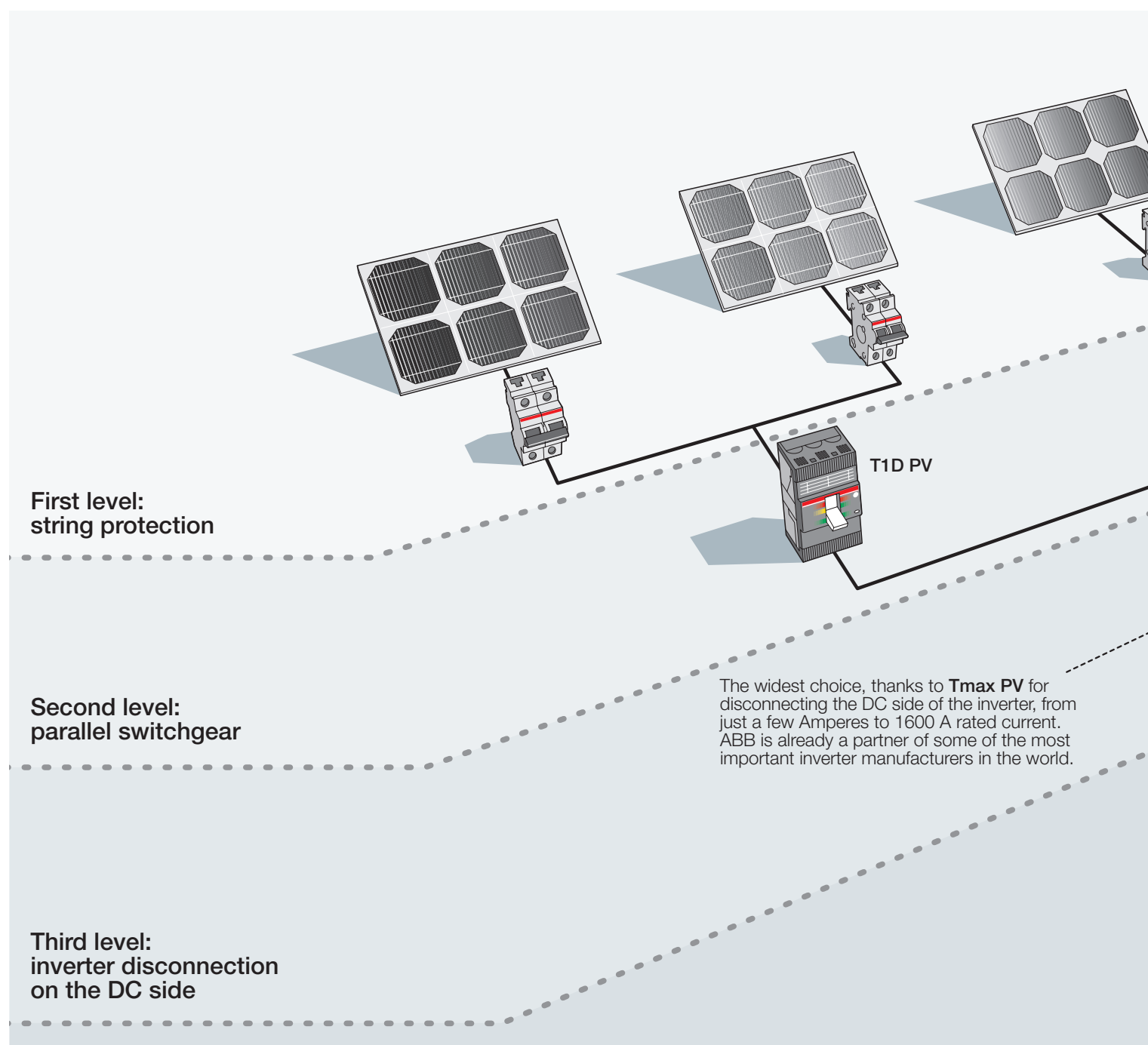
Tmax PV operating devices are the first moulded-case switch-disconnectors for high direct voltage available on the market.

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.



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

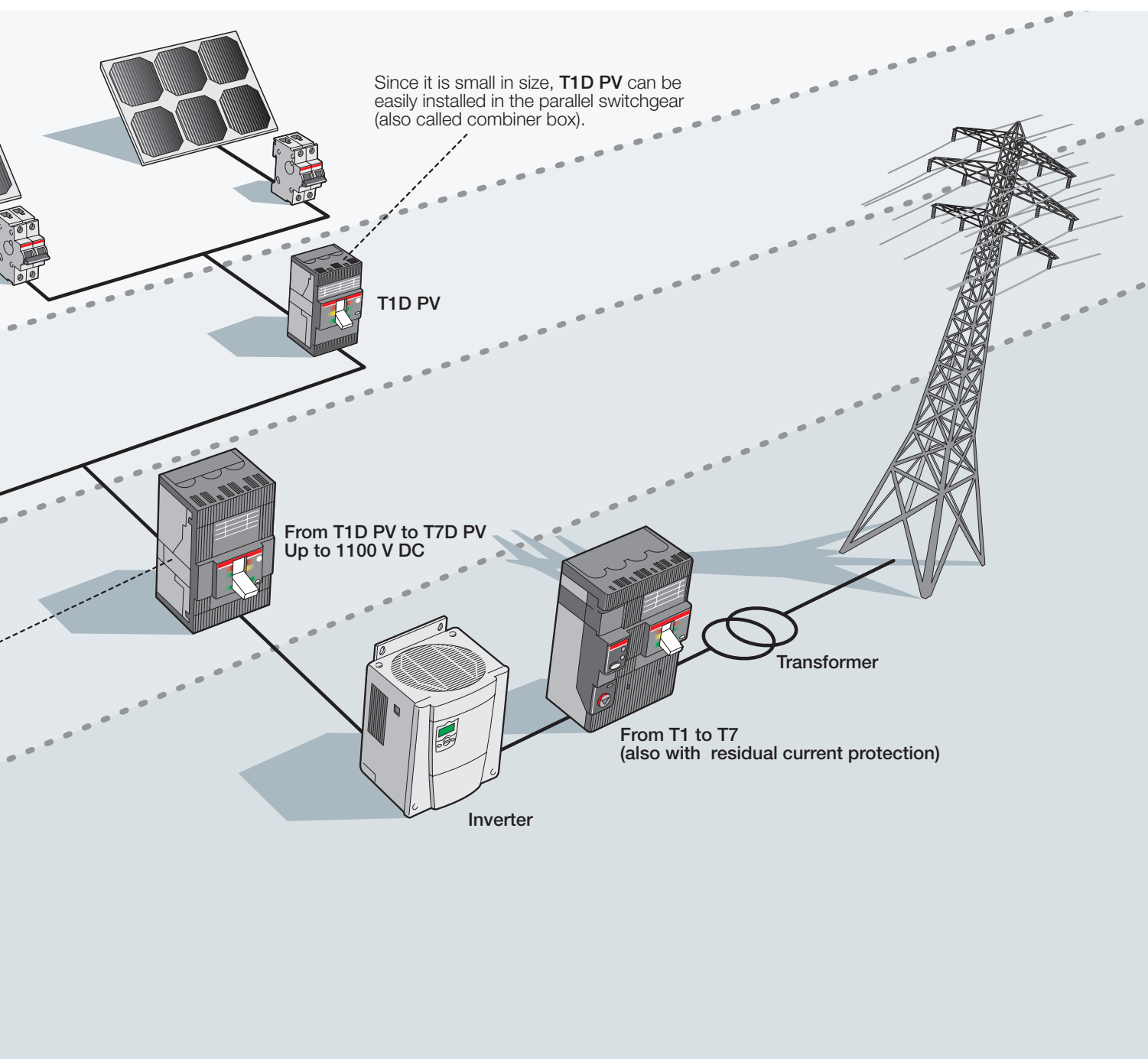
- **UPS applications**

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...)



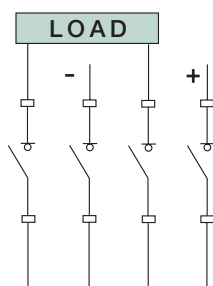
The order codes for TMAX PV are listed in the table below:

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

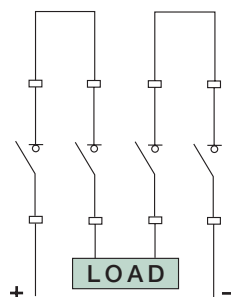
As described, the switch-disconnectors are always supplied with front terminal clamps for copper cables or copper/aluminium cables: moreover, depending on the size, they are also complete with accessories, such as insulating plates, terminal covers or phase separators.

Connection diagrams for insulated net are given below:

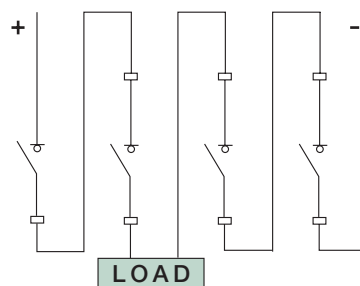
Valid for T1D PV, T3D PV, T6D PV and T7D PV



Valid for T4D PV and T5D PV



Valid for all Tmax PV sizes



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