

# CG APPLICATIONS

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<b>Application Note:</b>	<b>June 2009</b>
<b>Market involved :</b>	<b>Renewable Energy</b>
<b>Product :</b>	<b>DSA D, DSA A, DSA P, DSA S</b>
<b>Customer :</b>	<b>Panel builder, Engineering companies</b>
<b>Subject :</b>	<b>Surge protection for PV systems</b>

## CUSTOMER ISSUE :

A photovoltaic installation is a long-term investment which needs to be protected, also considering any possible damage due to the surges.

The surges could affect the AC side, connected to the public grid, or the DC side (from the string boxes to the inverter), or the serial communication line which is connecting the inverter, the measurement and control instruments, the interface protection, and the acquisition system.

The damages can be considerable, both in terms of faulty or destroyed devices and in terms of energy production stops with the consequent money loss.

## OUR SOLUTION:

Our new range of surge arresters is suitable to completely protect a photovoltaic installation, in sites with no external lightning protection systems (type 2 arresters). All the parts of the system have a specific arrester model: for the DC supply, for the AC connection to the grid, for the data network.

The DC arresters can protect from indirect lightning 3 different range of voltage systems, both with 2- or 3-pole configurations. The latter allows achieving both differential and common mode protection.

The AC arresters are suitable for 1- and 3-phase systems, both TT and TN-S. They protect the system also from surges due to switching on the grid.

## ACHIEVED BENEFITS:

DSA arresters are based on cartridges removable from their bases without using any tool, and are equipped with a green/red status indication and the relevant contact for remote signalling, thanks to which the exhausted cartridges can properly be replaced without leaving the installation unprotected.

The internal wiring and the labelled terminals allow an easy installation and maintenance.

The protection of data lines by means of the compact arrester for 2-wire bus, often dangerously omitted, allows completely protecting the inverter serial port, avoiding damages to the control and acquisition data system.

