



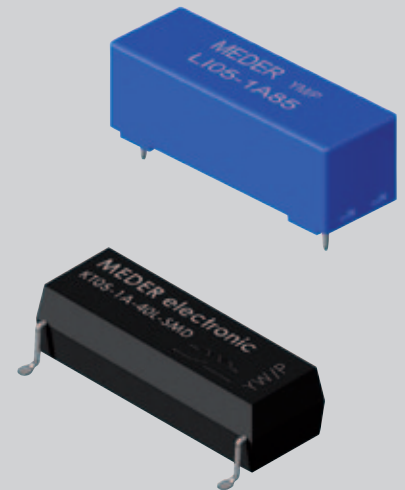
Solar Plant

Monitor Isolation Control

If the solar panels would absorb the energy that the sun releases in two minutes, they could provide the entire population on earth with electricity for one year. This, of course is unrealistic, therefore it is important to maximise the efficiency with an excellent isolation. Without proper isolation, currents would flow off into the ground, which will not only cause a loss of power, but may also be very dangerous.

The isolation resistance composed of the PV module, the DC cable and the inverter. Inverters without internal transformers are not isolated from the power net. According to DIN VDE 0126-1-1, however, the isolation must not drop below a certain minimum. Because of the missing galvanic isolation, it is not possible to measure the isolation resistance while the system is in operation. Therefore the isolation resistance is measured before the inverter is connected to the power net (current sensitive fault protection). Modern inverters have an integrated isolation control which monitors all components for potential failures. This control system poses high requirements for the Relay.

Reed Relays designed by Standex-Meder meet those requirements perfectly. Despite its small size, the Relay has an isolation resistance of up to $>10^{13}$ Ohm. Another advantage is the low power consumption. Reed Relays only need energy during the switching process, which has a positive influence on the overall efficiency of the inverter. Because of the high number of switching cycles ($>10^9$), the Reed Relay is suitable for long life applications.



3 Good Reasons:
Low power consumption
Long life expectancy
Hermetically sealed

