

## **EMC filters**

### **Cautions and warnings**

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## Cautions and warnings

for power EMC-, output-, LCL-, feedthrough-filters, filters for shielded rooms, LeaXield

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- Please note further advice in our website [www.tdk-electronics.tdk.com/pemc\\_filters\\_qti](http://www.tdk-electronics.tdk.com/pemc_filters_qti)
- It shall be ensured that only qualified persons (electricity specialists) are engaged on work such as planning, assembly, installation, operation, repair and maintenance. They must be provided with the corresponding documentation.
- Danger of electric shock: The products contain components that store an electric charge. Dangerous voltages can continue to exist at the product terminals for longer than five minutes even after the power has been switched off.
- The protective earth connections shall be the first to be made when the product is installed and secured against loosening by defined tightening torque. Remove them at last, when uninstalling. Depending on the magnitude of the leakage currents, the particular specifications for making the protective-earth connection must be observed.
- Impermissible overloading of the product, such as with circuits able to cause resonances, impermissible voltages at higher frequencies etc. can lead to bodily injury and death as well as cause substantial material damages (e.g. destruction of the product housing).
- The products must be protected in the application against impermissible exceeding of the rated currents by overcurrent protective devices.
- For leakage currents  $>10$  mA, a fixed connection of the protective earth conductor to the public power grid is required. This means that connection via plug connectors is not permitted. The protective conductor must have a minimum cross-section of  $10 \text{ mm}^2$  Cu or  $16 \text{ mm}^2$  Al over its entire length. Alternatively, two separate protective conductors with the minimum cross-section specified in each case can also be connected.
- For leakage currents  $3.5 \text{ mA} < I_{LK}^a) \leq 10 \text{ mA}$ , the following solutions are possible:
  - Stationary device with fixed connection
  - Stationary device with type B plug-in connection (industrial plug-in connection according to IEC 60309) and cross-section  $\geq 2.5 \text{ mm}^2$
  - Stationary device with type A plug-in connection (non-industrial plug-in device) and additional second protective earth connection
  - Movable equipment with type A plug-in connection and additional second protective earth connection in premises with restricted access
- The products must be protected in the application against impermissible exceeding of the specification parameter.

The converter output frequency must be within the specified range to avoid resonances and uncontrolled warming of the output chokes and output filters.

- The components can become very hot during operation, there is the risk of burns if touched. The product can remain hot for some time after the power is switched off!
- The products are only to be attached to the fixings or mounting holes provided for this purpose in accordance with the data sheet. It is not permitted for the product specified in the data sheet to assume a mechanical function in the final application, in particular any type of tension or pressure on the product must be prevented.

<sup>a)</sup>  $I_{LK}$  = Leakage current