

GENERAL DESCRIPTION

Drastic variations in load currents, on power lines, generate radio frequency interferences.

Normally defined as "conducted" emission noise, interference through the power line wires, flows throughout all the line. Additionally the "radiated" emission noise is transmitted by the wires through the air, as if these were antennas.

This difference is only theoretical because the voltage and currents, changing through time, correspond with the radiated noise. Every radiated noise induced on the power wires, work as receiving antennas, producing an equivalent conducted signal. LC filters, then, are key in power line distribution to avoid these interferences in the electrical network.

The typical LC filter has circuit configuration, as noted in the following catalog pages.

L1 = Compensated Coil
Cx = Class X Capacitor
R = Resistor

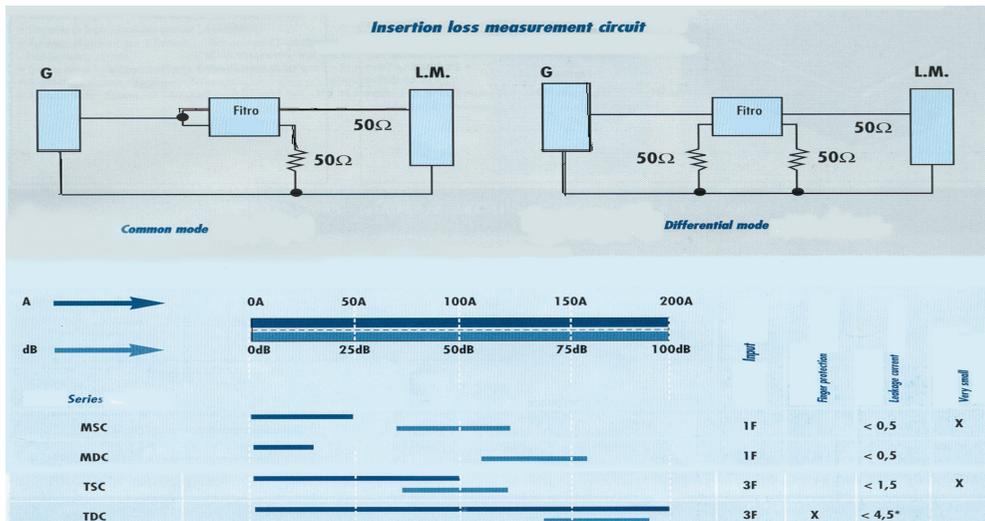
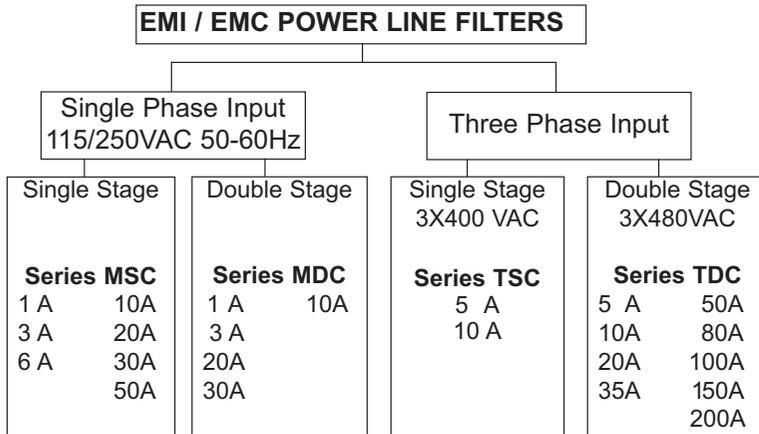
L2-L3 = Black Coil
Cy = Class Y Capacitor

L1 and Cx are used for suppression of the different mode noise. L2, L3, Cy and L. are included for noise in the command mode.

The typical insertion loss of the single stage filter is approximately 30 to 50 dB. Values around 80 dB result from double stage filters. Extremely important is the connection to the ground, which must be very low impedance. Without a low independence ground the filter suppression is reduced.

Advantages of each DETAS power line filter is it's design with wide input voltage and wide output current range. Another advantage is the very high insertion loss and the very low leakage current to ground, as caused by the y capacitors. These allow the DETAS filters to meet the UL544-UL1286 and EN60335-1 standards.

The series TDC and NET are specially designed with three phase input and high insertion losses and as such are specially designed for frequency converters. These series can tolerate input voltages over 500 VAC and are protected against the transients on power lines. The very low leakage current, the small dimensions and, as stated, the very high insertion loss makes these models a performance "leader" in this category.



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