

Single-phase interference suppression filters - series C: for currents 600-2500 A

Description:

It is a simple LC circuit consisting of chokes and condensers. In single-phase filters of series SKY1FLxxC is a composed choke formed by 2 windings. The used safety condensers of type X are being wired among phases for filtration of symmetrical component. The condensers of type Y are being wired towards the ground for filtration of asymmetric component. They are delivered with terminals in a metal case.

Functions of the interference suppression filters:

The LC filter is formed by low-pass filter 0 – 9kHz. It reduces a level of radio frequency interference in conductors from the side of appliance and also increases its resistance to interference from the surroundings. The filters function either way. The most effective they are from 150kHz to 30MHz.



TECHNICAL PARAMETERS:

Nominal operating voltage
 Extent of operating frequencies f_n (for I_n)
 Extent of operating currents
 Short-term overcurrent capacity : 50% I_n
 Thermal class : B
 Protection class : IP00
 Extent of operating temperature : $-10^{\circ}\text{C} + 40^{\circ}\text{C}$

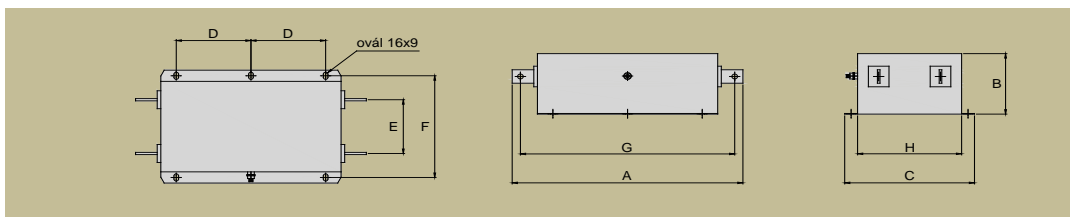
U_n : 230 Vac
 F_n : 50-60 Hz
 I_n : 600-2500A

Type	Nominal current [A]	Leakage current 1*) [mA]	Weight [kg]	Conductor cross section [mm]	basic dimensions [mm]							
					A	B	C	D	E	F	G	H
					length	height	width	pitch	pitch	pitch	pitch	other
SKY1FL600C	600	< 140	11	30x5 Ø11	448	135	252	145	120	227	416	202
SKY1FL1000C	1000	< 140	15	30x10 Ø11	442	135	252	145	120	227	410	202
SKY1FL1600C	1600	< 140	28	50x10 2xØ13	580	160	320	165	160	294	460/540	260
SKY1FL2500C	2500	< 140	30	100x10 4xØ13	500	180	348,5	100	100	310	380/460	280

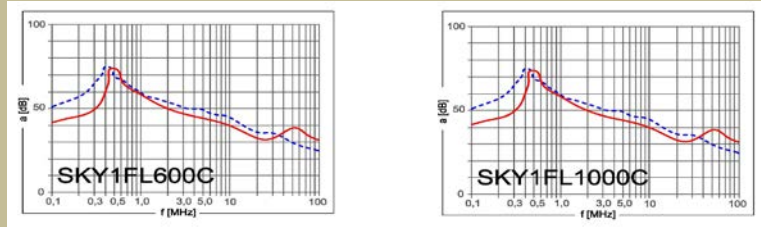
* After a deal there is a possibility of modification of the filter construction according to the customer's request.

1*) Leakage current measurement was performed according to the standard ČSN EN 60950.

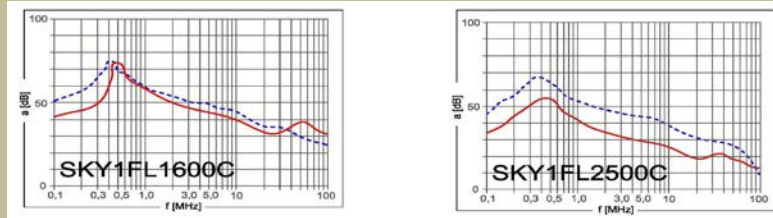
Dimensional drawing for : SKY1FL600C - SKY1FL2500C



Attenuation characteristic:

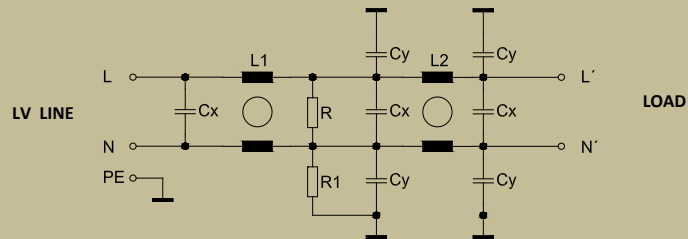


--- asymmetric — symmetrical (measurements in the system 50/50 Ohm)



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Diagram:



Use:

It is used to frequency converters and appliances which need supplemental interference suppression. For example: soft starters, pulse resources, thyristor controls and electronic units.

Dimensioning, wiring:

They are dimensioned according to indicated label nominal voltage and current values. Short-circuit protection must not exceed nominal current value. When installing into switchboards it is necessary to count with power loss of the filters although it is not as large as the power loss in chokes or in sinusoidal filters. But also it is necessary to provide for sufficient heat removal.

When connecting it is necessary to meet the EMC requirements. There must not be any paralleling of interference-suppressed and non-interference-suppressed circuits. The grounding connections must be as short as possible and it is necessary to avoid any ground loops.