

Three-phase interference suppression filters - series B: for currents 60 - 400 A

Description:

It is a simple LC circuit consisting of chokes and condensers. In three-phase filters of series SKY3FLxxB is a composed choke formed by 3 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 Un: 3x230/400 Vac
Extent of operating frequencies fn (for In) Fn: 50-60 Hz
Extent of operating currents In: 60-400A
Short-term overcurrent capacity : 50% In
Thermal class : B
Protection class : IP00
Extent of operating temperature : -10°C + 40°C

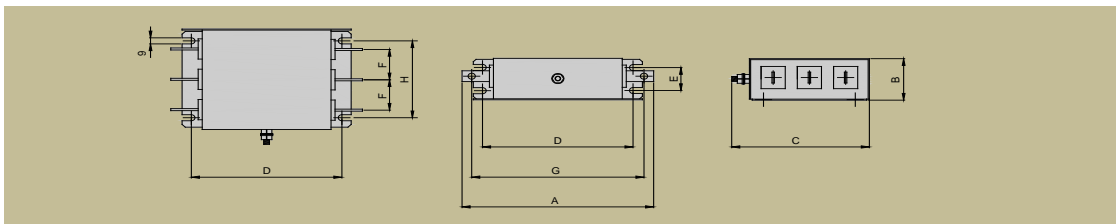
Type	Nominal current [A]	Leakage current 1*) [mA]	Weight [kg]	Conductor cross section [mm]	basic dimensions [mm]							
					A	B	C	D	E	F	G	H
					length	height	width	pitch	pitch	pitch	pitch	pitch
SKY3FL60BP	60	< 80	2,2	20x3 Ø9	238	61,5	171	187	34	45	214	114
SKY3FL80BP	80	< 80	2,2	20x3 Ø9	238	61,5	171	187	34	45	214	114
SKY3FL100BP	100	< 80	3,2	20x3 Ø9	308	61,5	171	257	34	45	284	114
SKY3FL100BPI	100	< 80	3,2	20x3 Ø9	308	61,5	171	257	34	45	284	114
SKY3FL100BP **	100	< 80	3,3	20x3 Ø9	308	61,5	171	257	34	45	284	114
SKY3FL150BP	150	< 80	3,2	20x3 Ø9	308	61,5	171	257	34	45	284	114
SKY3FL150BPI	150	< 80	3,2	20x3 Ø9	308	61,5	171	257	34	45	284	114
SKY3FL200BP	200	< 80	3,8	20x3 Ø9	357	61,5	171	302	34	45	333	114
SKY3FL250BP	250	< 80	3,8	20x3 Ø9	357	61,5	171	302	34	45	333	114
SKY3FL250BP-500 V	252	< 80	3,8	20x3 Ø9	357	61,5	171	302	34	45	333	114
SKY3FL250BPIT	251	< 80	3,8	20x3 Ø9	357	61,5	171	302	34	45	333	114
SKY3FL320BP	320	< 80	7,2	25x5 Ø11	395	61,5	202	332	34	60	361	138
SKY3FL400BP	400	< 80	7,5	25x5 Ø11	395	61,5	202	332	34	60	361	138

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

** With cover.

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

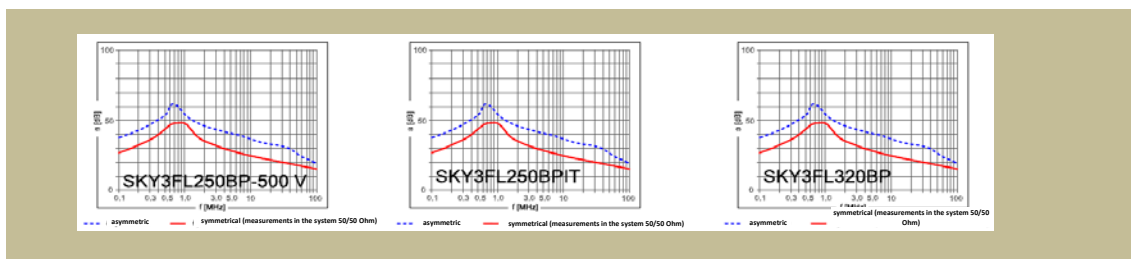
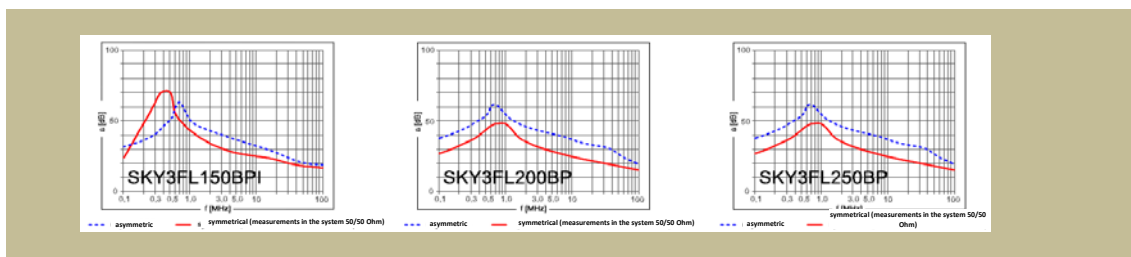
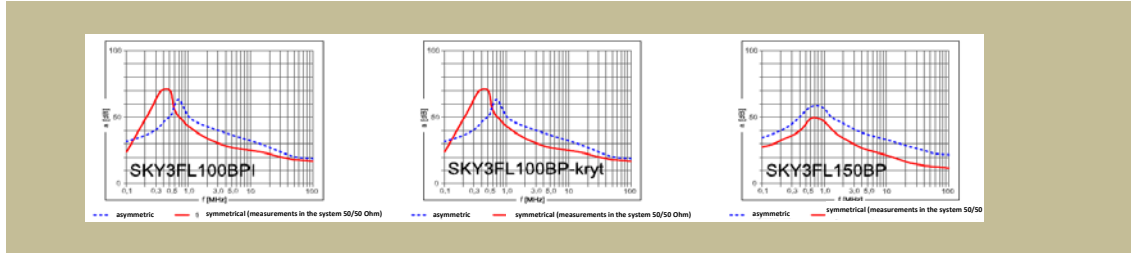
Dimensional drawing for : SKY3FL60BP - SKY3FL400BP



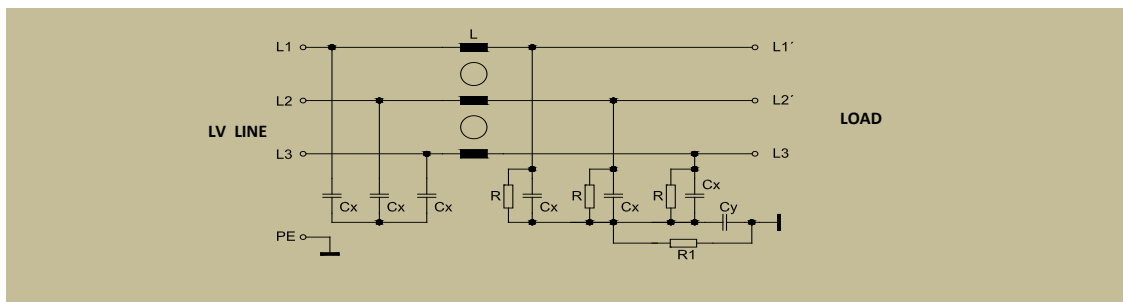
Three plots showing the frequency spectrum of SKY3FL60BP, SKY3FL80BP, and SKY3FL100BP. Each plot shows a red line for symmetrical measurements and a blue line for asymmetric measurements. The x-axis is frequency f [MHz] on a log scale from 0.1 to 100. The y-axis is gain A [dB] from 0 to 100. The plots show a peak around 1 MHz and a secondary peak around 10 MHz.

Legend:

- Asymmetric (Blue line)
- Symmetrical (measurements in the system 50/50 Ohm) (Red line)



Wiring diagram:



Use:

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

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.