

## Three-phase interference suppression filters - series B: for currents 20-50 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  
 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 : IP20  
 Extent of operating temperature :  $-10^{\circ}\text{C} + 40^{\circ}\text{C}$

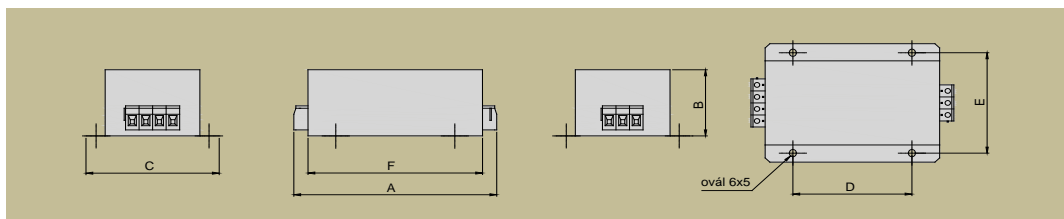
$U_n$ : 3x230/400 Vac  
 $f_n$ : 50-60 Hz  
 $I_n$ : 20-50A

| Type       | Nominal current [A] | Leakage current 1*) [mA] | Weight [kg] | Conductor cross section [mm <sup>2</sup> ] | basic dimensions [mm] |             |            |            |            |            |
|------------|---------------------|--------------------------|-------------|--|-----------------------|-------------|------------|------------|------------|------------|
|            |                     |                          |             |  | A<br>length           | B<br>height | C<br>width | D<br>pitch | E<br>pitch | F<br>other |
| SKY3FL20B  | 20                  | < 80                     | 1,1         | 4 - 6                                      | 150                   | 55          | 98         | 88         | 83         | 129        |
| SKY3FL25B  | 25                  | < 80                     | 1,1         | 4 - 6                                      | 150                   | 55          | 98         | 88         | 83         | 129        |
| SKY3FL32B  | 32                  | < 80                     | 1,2         | 6 - 10                                     | 158                   | 55          | 98         | 88         | 83         | 129        |
| SKY3FL40B  | 40                  | < 80                     | 1,1         | 6 - 10                                     | 158                   | 55          | 98         | 88         | 83         | 129        |
| SKY3FL50B  | 50                  | < 80                     | 1,1         | 6 - 10                                     | 158                   | 55          | 98         | 88         | 83         | 129        |
| SKY3FL50BN | 50                  | < 80                     | 1,1         | 6 - 10                                     | 158                   | 55          | 98         | 88         | 83         | 129        |
| SKY3FL50BI | 50                  | < 80                     | 1,1         | 6 - 10                                     | 158                   | 55          | 98         | 88         | 83         | 129        |

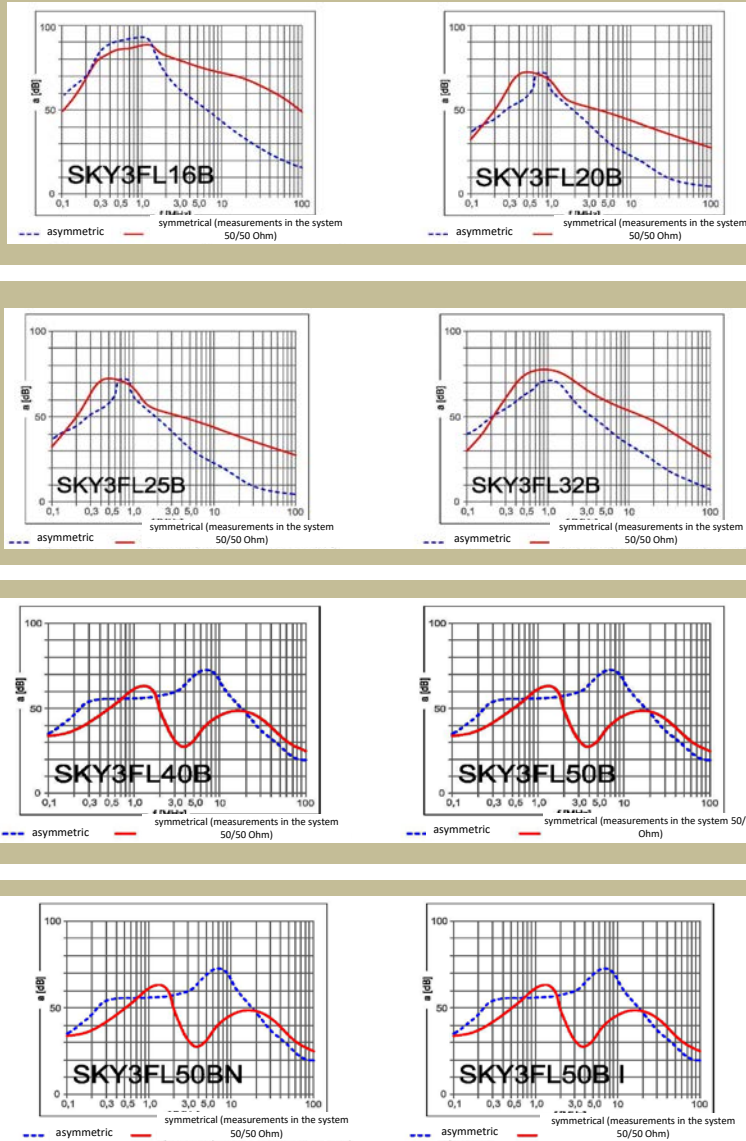
\* After a deal there is a possibility of modification of the filter construction according to the customer's request.

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

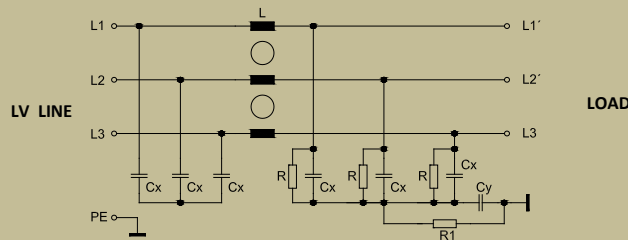
### Dimensional drawing for : SKY3FL20B - SKY3FL50B



**Attenuation characteristic:**



**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.