

## Sinusoidal filters for frequency inverters SKY3FSM32-400 to 2500-400 without a cooler

### Function and description:

Low pass filter is created by combination of inductance L and condensers C. The low pass filters switching frequency of the frequency changer. As result is sinusoidal phase to phase voltage on the filter output.



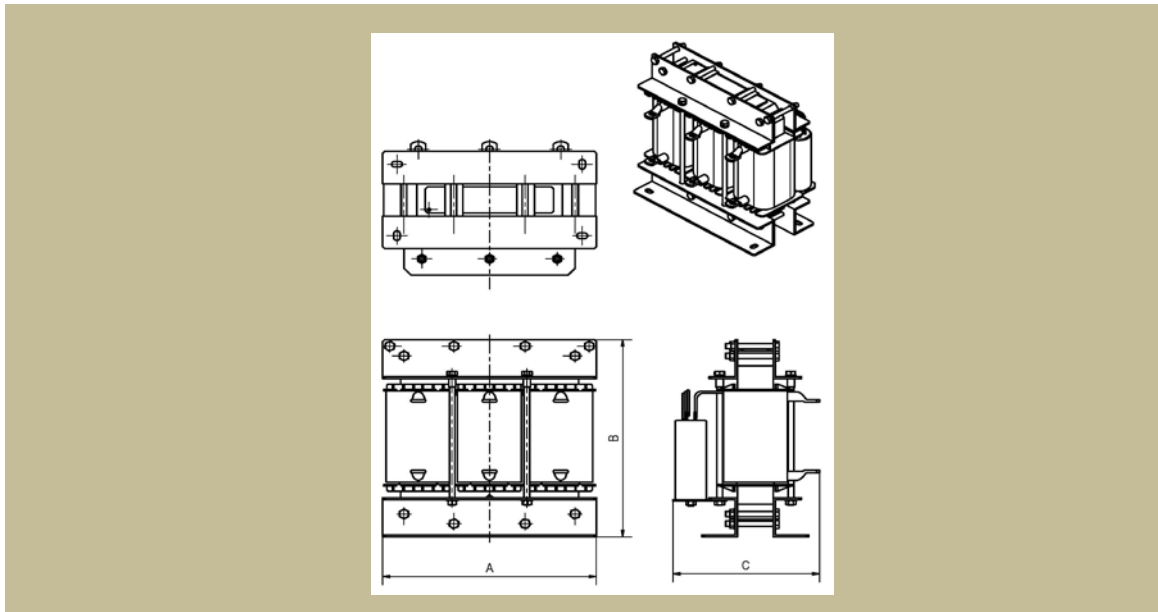
### TECHNICAL PARAMETERS:

Operating nominal voltage	Un : 3x 0-400 Vac
Extent of operating frequencies fn (for In)	Fn : 0-50 Hz
Extent of operating currents	In : 3x 120-2500A
Switching frequency of the inverter	SFr : 5-12kHz
Short-term overcurrent capacity: 50% In	
Thermal class: B	
Protection class: IP00	
Extent of operating temperature: -10°C + 40°C	

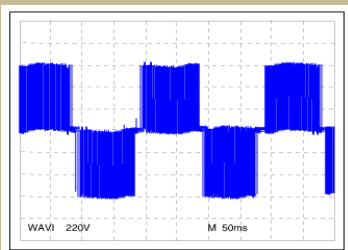
Type	Nominal current [A]	Voltage drop [%]	Weight [kg]	basic dimensions [mm]		
				A	B	C
				length	height	width
SKY3FSM32-400	32	< 9	20	240	240	220
SKY3FSM36-400	36	< 9	21	240	240	220
SKY3FSM40-400	40	< 9	21	240	240	220
SKY3FSM42-400	42	< 9	21	240	240	220
SKY3FSM48-400	48	< 9	22	240	240	220
SKY3FSM50-400	50	< 9	22	240	240	220
SKY3FSM60-400	60	< 9	23	240	240	220
SKY3FSM72-400	72	< 9	38	300	295	270
SKY3FSM75-400	75	< 9	38	300	295	270
SKY3FSM80-400	80	< 9	43	300	295	270
SKY3FSM90-400	90	< 9	45	300	295	270
SKY3FSM95-400	95	< 9	46	300	295	270
SKY3FSM100-400	100	< 9	46	300	295	270
SKY3FSM110-400	110	< 9	47	300	295	278
SKY3FSM120-400	120	< 9	48	300	295	278
SKY3FSM150-400	150	< 9	65	380	350	275
SKY3FSM160-400	160	< 9	75	380	350	275
SKY3FSM180-400	180	< 9	78	380	350	275
SKY3FSM200-400	200	< 9	95	380	350	305
SKY3FSM210-400	210	< 9	96	380	350	305
SKY3FSM260-400	260	< 9	96	450	400	348
SKY3FSM270-400	270	< 9	97	450	400	348
SKY3FSM300-400	300	< 9	150	510	455	333
SKY3FSM320-400	320	< 9	153	510	455	333
SKY3FSM325-400	325	< 9	155	510	455	333
SKY3FSM400-400	400	< 9	160	510	460	410
SKY3FSM410-400	410	< 9	162	510	460	410
SKY3FSM450-400	450	< 9	165	510	460	410
SKY3FSM460-400	460	< 9	165	510	460	410
SKY3FSM480-400	480	< 9	170	510	460	410
SKY3FSM510-400	510	< 9	210	510	460	410
SKY3FSM600-400	600	< 9	220	510	460	355
SKY3FSM610-400	610	< 9	220	510	460	355
SKY3FSM650-400	650	< 9	225	510	460	355
SKY3FSM800-400	800	< 9	320	510	484	778,5
SKY3FSM840-400	840	< 9	320	510	484	778,5
SKY3FSM1000-400	1000	< 9	320	510	484	778,5
SKY3FSM1140-400	1140	< 9	320	510	484	778,5
SKY3FSM1160-400	1160	< 9	330	510	484	778,5
SKY3FSM1200-400	1200	< 9	380	550	484	798,5
SKY3FSM1450-400	1450	< 9	400	550	484	798,5
SKY3FSM1480-400	1480	< 9	400	550	484	798,5
SKY3FSM1500-400	1500	< 9	400	550	484	798,5
SKY3FSM2000-400	2000	< 9	580	580	710	613
SKY3FSM2500-400	2500	< 9	580	850	710	613

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

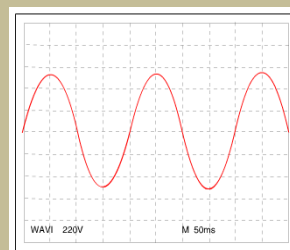
#### Dimensional drawing: SKY3FSM32 to 2500 - 400



#### Course of symmetrical voltage:



course of the symmetrical voltage on output terminals of the changer



course of the symmetrical voltage behind the sinusoidal filter

#### Use:

It is used where we have big distance between the changer and motor. Also it is used where we need to decrease the size of electromagnetic emission and where must be kept low rate of voltage rise  $du/dt$  on the motor. By using the sinusoidal filter it is provided against early ageing of motor winding insulation.

#### Dimensioning, wiring:

It is dimensioned according to the indicated label values. When installing into switchboards it is necessary to count with power loss of the filter and provide for removal of heat loss by the help of a suitably placed ventilator. It is also necessary to beware of setting of the switching frequency of the changer. The higher is the switching frequency, the lower are radio-frequency losses. Therefore it is important to keep to the minimal size of the switching frequency that is indicated on the sinusoidal filter label.