Film Capacitors – Power Factor Correction

Harmonic filter reactor

Series/Type: **B44066D***M***
Ordering code: **B44066D7100M440**

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Version: 1

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Characteristics

- Highest linearity
- Temperature control via micro switch in inner coil
- International approvals
- Highest life time by high quality materials
- Low losses
- High overloading capability
- Safety device, temperature micro switch
- Low noise



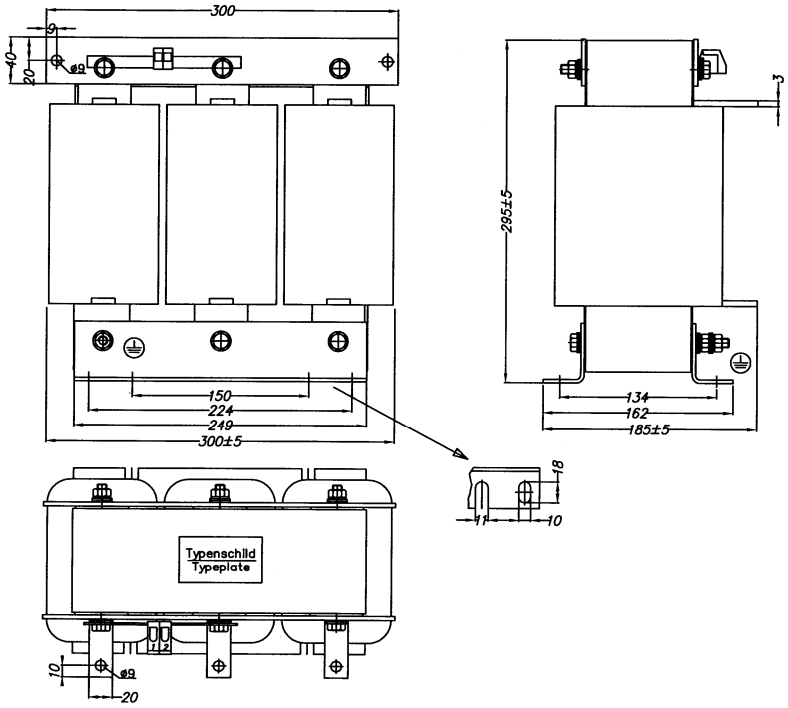
Technical data and specifications			
De-tuning factor	P	7	%
Effective filter output	Q_C	100	kvar
Rated voltage[1]	V_R	440	V
Rated frequency	f_r	50	Hz
Ambient temperature / Insulation class		40 °C/H	
Capacitance, delta (tot.)	C	1529 (= 3 • C delta)	µF
Inductivity	L	3 • 0.464	mH
Linear up to		254	A
Effective current[2]	I_{rms}	148.7	IA
Rated harmonic voltages ($3^{rd}/5^{th}/7^{th}/11^{th}/13^{th}$)		0.5/6/5/3.5/3	%
Temperature protection (NC)		yes	
Total losses	P_D	410	W
Total weight		49	kg

1) Voltage rise up to 106% of rated voltage is considered in current I_{eff}.

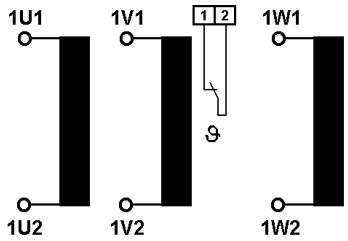
2) $I_{eff} = \sqrt{(I_1^2 + I_3^2 + ...I_x^2)}$

Connection	
Line	1U1-1V1-1W1
Capacitors	1U2-1V2-1W2
Temperature control	1-2

Dimensional drawing



Connection diagram



Cautions and warnings

- Do not install the reactor in case of any visible damages.
- Installation must be done by skilled personnel only.
- Do not use or store harmonic filter reactors in corrosive atmosphere, especially where chloride gas, sulphide gas, acid, alkali, salt or similar substances are present.
- Do not touch the device during operation: all electrically active parts of this equipment such as windings, electronic components, leads, fuses and terminals carry a dangerous voltage which can lead to burns or electric shock.
- Covers which protect these electrically active parts from being touched must not be opened or removed during operation.
- Before any assembly or maintenance work is started, all installations and equipment must be disconnected from the power source.
- Noncompliance with these instructions may lead to death, serious injury or major damage to equipment.

In order to exclude impermissible temperatures and thus overload of the insulation system, the following cautions must additionally be observed:

- Only those protective devices specified on the type plates, such as fuses and motor protection switches, may be used. It is mandatory to observe the set values specified for the motor protection switches. Any temperature- sensitive protective devices such as temperature switches and temperature sensors must be connected in accordance with the installation instructions.
- High temperatures are permissible for the surfaces under rated operating conditions, and especially in the event of overload. Depending on the temperature class and type of loading, these may attain values of up to 260 °C and may also affect adjacent components which have been packed too densely.
- The insertion position should be selected so that any cooling ducts present within the winding are arranged vertically and that the current of cooling air is not impeded by adjacent components, connecting leads etc.
- The maximum voltage of the insulating system specified on the type plate must not be exceeded. Noncompliance with these instructions may lead to considerable damage to equipment or fire due to impermissibly high temperatures.
- We strongly recommend to make use of the integrated temperature switch (NC). It will open when the maximum operation temperature for the reactor is reached. Note: This switch is a warning device only. It will not disconnect the reactor. Overheating may lead to failure of the device and subsequently to severe damage to the equipment and/or serious injury or death of human beings.

Note

For detailed information about PFC capacitors and cautions, refer to the latest version of EPCOS PFC Product Profile.

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