

## BLOCKING REACTORS



The linearity of blocking reactors can be calculated in the following formula:

$$I_{lin} = 1,2 \cdot (I_1 + I_2 + \dots + I_{n-1} + I_n) = 1,2 \cdot \Sigma I$$

at which point the inductance may not go below 95 % of the rated value.

The blocking reactor inductance tolerance is  $\pm 3\%$  (or as specified by customer). All blocking reactors bear a serial number. The first two digits of the serial number indicate the year of manufacture.

The thermal dimensioning of blocking reactors is provided by the customer or calculated in the formula:

$$I_{th} = 1,05 \cdot \Sigma \sqrt{(I_1^2 + I_2^2 + \dots + I_{n-1}^2 + I_n^2)}$$

in which

$$I_1 = 1,06 \cdot I_{ln}$$

(in other words, a potential excess voltage of 6 % is tolerated).

Blocking reactors manufactured by Trafotek comply with standards IEC76 and IEC289. The product numbers of Trafotek reactors also indicate their type and can be used as a reference number for orders. These product numbers are unique for each reactor type.

In folio products, aluminium bus bars are used as outlets. At customer request, copper bus bars can also be used. The blocking reactors are manufactured to comply with enclosure class IP00 requirements (can also be enclosed on request). The reactors can be equipped with thermal protection.

### MAIN FEATURES:

- vacuum impregnation
- inductance tolerance  $\pm 3\%$
- small size and weight in relation to capacity
- small losses in relation to capacity
- foil winding
- linearity
 
$$I_{lin} = 1,2 \cdot (I_1 + I_2 + \dots + I_{n-1} + I_n) = 1,2 \cdot \Sigma I,$$
 at which point the inductance may not go below 95 % of the rated value.
- serial numbering: each reactor is tested and approved in compliance with the relevant requirements
- aluminum bus bar outlets

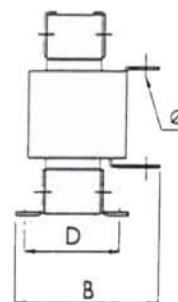
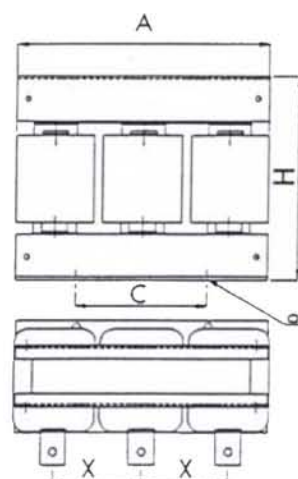
The reactors can be manufactured and tested in compliance with the requirements of various standards and classification societies. The inductance tolerance and linearity can also be tailored to customer specifications. Optional equipment can be installed for individual customers as required.

## 400V BLOCKING REACTORS WITH 204 HZ TUNING FREQUENCY

Reactive power	Voltage	Inductance	Height	Width	Depth	Weight
[kVAr]	U [V]	L [mH]	H [mm]	A [mm]	B [mm]	m [kg]
30	400	1.050	230	290	153	20.5
50	400	0.658	212	290	166	27.0
60	400	0.526	229	290	166	26.0
75	400	0.439	212	290	166	28.0

The Table shows some features of typical blocking reactors. The basic frequency of the blocking reactors in this Table is 50 Hz, the tuning frequency 204 Hz. In other words, they are 6% blocking reactors. As our products undergo further development, we reserve the right to modifications in the values given in this Table.

In addition to blocking reactors specified in the Table, we also manufacture reactors with other values.



Typical structure of a blocking reactor