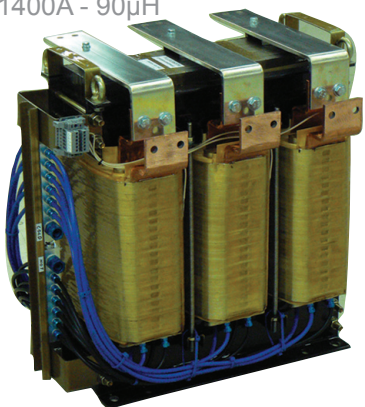


TRAFIX FILTERS

WATER COOLED REACTORS UP TO 3000A

Water cooled reactors

1400A - 90 μ H



General information

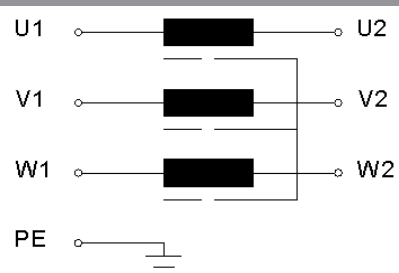
Electrical connection:	3 -phase inductor
Protection class:	Open frame design IP 00
Type of cooling:	Liquid
Running period:	Continuous duty at nominal current
Design lifetime:	20 years

Mechanical specification

Maximum size (LxWxH):	1000 x 1000 x 1000 mm
Maximum weight:	< 1000 kg
Vibration:	EN50178, EN60068-2-6
Impacts:	EN50178, EN60068-2-27

Connections

Electrical connection:	Copper/ aluminium busbars
Protective earth connector:	M8-M12 connector
Liquid cold (in):	Acc. to customer specification
Liquid cold (out):	Acc. to customer specification
Temperature sensor:	Terminal block



Schematic diagram

TRAFOX FILTERS Water cooled reactors

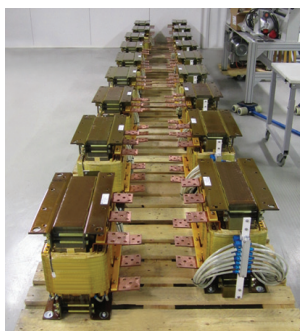
SENSORS

Temperature sensors 2- wired Pt-100 sensors at the hot spot of each winding

ELECTRICAL SPECIFICATIONS

Nominal voltage between phases	U_n	maximum 1500 Vac
Nominal current	I_n	maximum 3000A
Continuous thermal current	I_{th}	3000A
Peak value of current	I_{peak}	
Fundamental frequency	F_{fund}	typically 50-60 Hz
Du/dt voltage	du/dt	maximum 3000V/us
Inverter switching frequency	F_{sw}	typically 1,5-4,0 kHz with laminated steel, 5-10 kHz with amorphous steel
Inverter DC- bus voltage	U_{dc}	to be specified
Current ripple at switching frequency	Proportional to thermal current I_{th}	typically 10%
Isolation test voltage	U_{isol}	2500 Vac (60 seconds)
Insulation resistance	R_{ins}	>2 M Ω
Nominal phase inductance at peak current	L_{nom}	to be specified
Tolerance of the inductance		typical 0...+20%
Maximum inductance difference between phases	< 10%	
Saturation current	I_{sat}	typically $I_{sat}=1,5 \cdot I_{peak}$
Saturation inductance	L_{sat}	typically $L_{sat}=0,70 \cdot L_{nom}$
Leakage capacitance between terminals of one phase	C_{leak}	to be specified
Total power loss	P_{tot}	to be specified
Winding loss	P_{wind}	to be specified
Core loss	P_{core}	to be specified
Temperature class of the insulation		Class H (180 °C)
Electrical insulation system		UL recognized insulation system UL94V0

Customer specified models waiting for delivery:



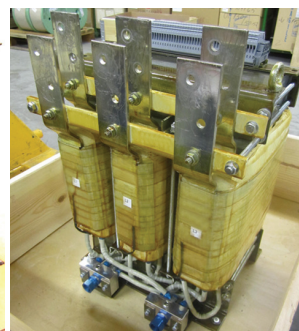
1000A - 100 μ H



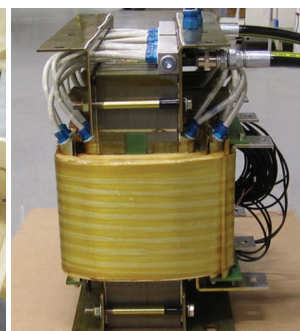
1550A - 90 μ H



340A - 100 μ H



630A - 150 μ H



340A - x μ H

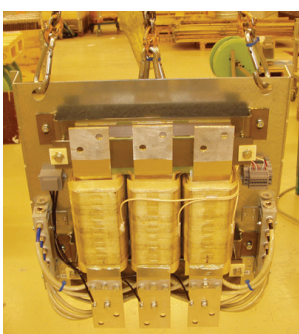
TRAFIX FILTERS **Water cooled reactors**

LIQUID COOLING SYSTEM

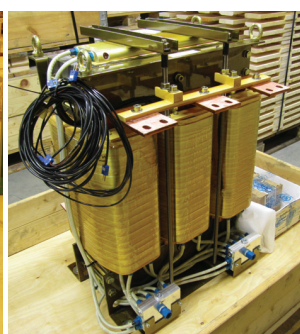
Cooling liquid	Ethylene glycol / water mixture 0/100...40/60%. 30/70% recommended Inhibitor enriched coolants for corrosion prevention.
Temperature of the cooling liquid (in)	Range -40...+55 °C
Nominal temperature of the cooling liquid (in)	+50 °C
Maximum temperature of the cooling liquid (out)	+90 °C
Nominal liquid flow	maximum 10 dm ³ /min
Maximum required liquid flow	maximum 15 dm ³ /min
Minimum heat dissipation to liquid	70% at 40 °C ambient temperature
Maximum pressure drop	0,5 bar at rated liquid flow
Maximum operating pressure	4 bar
Testing pressure	1 min under 9 bar water pressure No leakage or deformation
Selection of materials in direct contact with liquid	Copper free aluminum alloys. Stainless steel materials. Plastic and non-organic gasket materials. No copper or steel.

AMBIENT OPERATING CONDITIONS

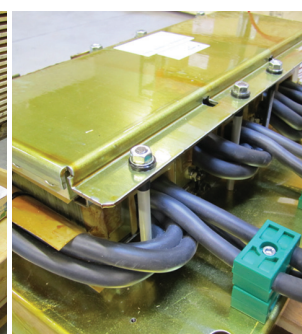
Ambient temperature range in operating condition	5...+65 °C
Ambient air temperature in storage conditions	-40...+80 °C
Air humidity in operating condition	5...96 %
Air humidity in storage conditions	5...99 %
Ambient air pressure	930...1065 mbar
Height from sea level	maximum 1500 m
Maximum heat dissipation to air	Nominal operating condition maximum 30% at 40 °C ambient temperature.



950A - 9μH



1270A - 130μH



800A - 9μH



1000A - 100μH



630A - 150μH

Also 1 phase customer specified models!



1550A - 60 μ H

