

MV Current limiting reactor
ED3PH

Up to 2000 A



Approvals

CE RoHS

Technical data

Rated voltage	Up to 15,75 kV
Rated current	Up to 2000 A
Reactance voltage drop	2%-8%
Rated frequency	50 Hz, 60 Hz
Cooling	AN – air natural
Ambient temperature	40°C – land design
	45°C – maritime design
	>50°C – special design
Insulation class	F (155°C), H (180°C)
Winding material	Aluminium, copper
Mounting	Vertical
Degree of protection	IP00
Standards compatibility	PN-EN 60076-6

Function

Current limiting air reactors are inductive components connected to the main supply. They act as an additional reactance installed in series to the current path thus short-circuit current value is lowered.

During regular operation (in no fault condition), linear current flows through the reactor which generates a voltage drop and small power loss. Reducing value of the short-circuit current allows the selection of switchgear, cables and electrical equipment with reduced short-circuit strength.

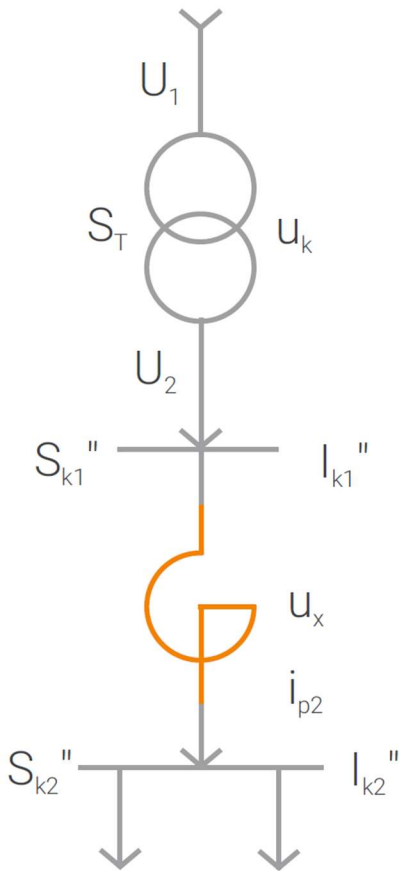
Benefits

- Reduction of short-circuit at the point of common coupling
- Use of devices with lower short-circuit strength
- Reduction of minimum cable cross-section required by short-circuit conditions

Application

- Power supply systems with cogeneration units
- Switchgears located near the high power generation units
- MV networks

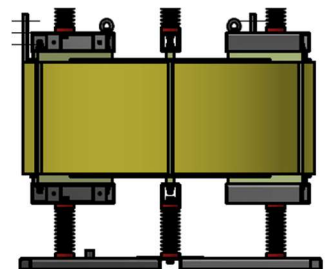
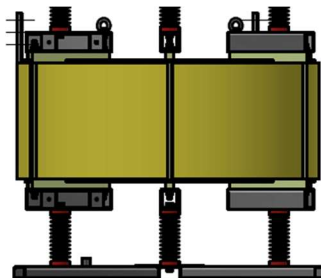
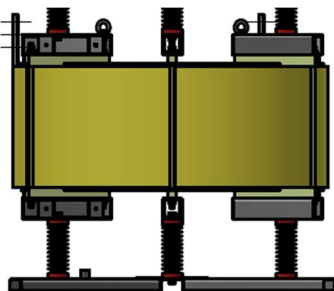
Typical application diagram



- U_1 – voltage, HV side, **kV**
- S_T – power HV transformer, **MVA**
- u_k – HV transformer short-circuit voltage WN/SN, %
- U_2 – voltage, MV side, **kV**
- S_{k1}'' – short-circuit power before reactor installation, **MVA**
- I_{k1}'' – initial symmetrical short-circuit current before reactor installation, **kA (RMS)**
- u_x – reactance voltage drop, %
- S_{k2}'' – short-circuit power after reactor installation, **MVA**
- I_{k2}'' – initial symmetrical short-circuit current after reactor installation, **kA (RMS)**
- i_{p2} – peak short-circuit current, **kA (peak)**

Mounting

Depending on available space, the three coils of a current limiting reactor can be mounted on top of each other or side by side. The reactors are mounted on support insulators and a special construction



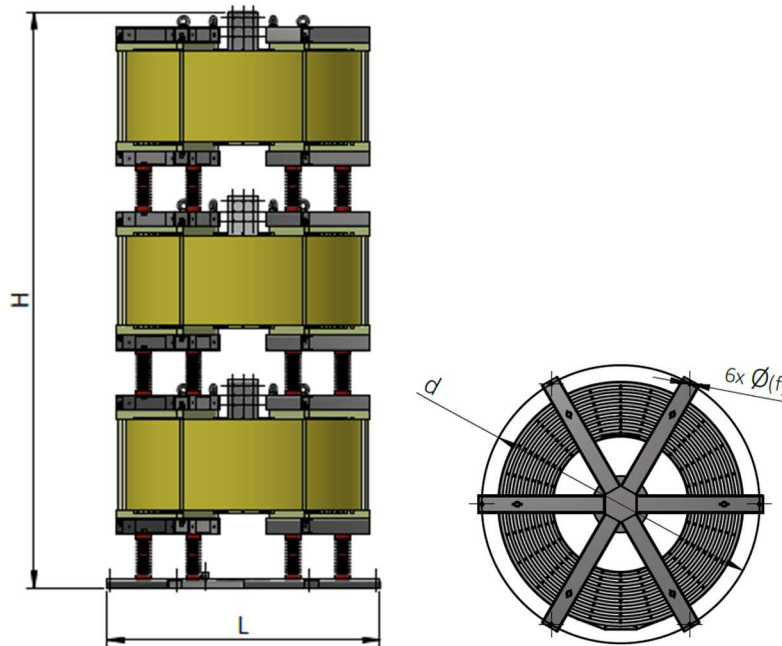
Dimension

The table consist of exemplary rector data. Specified dimensions are available for request.

No.	Type	L	H	d	f
		[mm]	[mm]	[mm]	[mm]
1	ED3PH-0,35mH/2000A 6,3kV 50Hz T40F AL	1262	2660	1232	Φ13

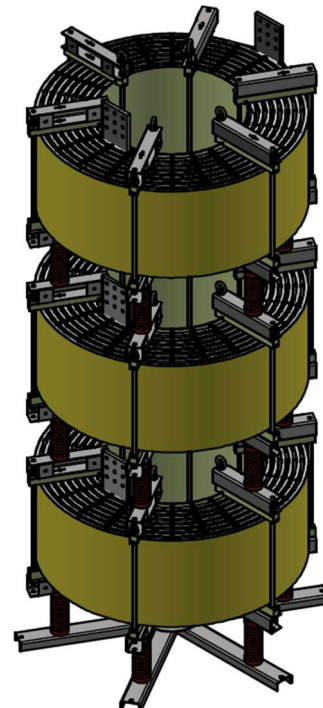
Manufacturer reserves the right to make changes resulting from the continuous development of products offered

Drawings



Sample technical data

Technical data		
Rated inductance	0,35	mH
Rated current	2000	A
Rated voltage	6,3	kV
Rated frequency	50	Hz
Reactance voltage drop	6	%
Initial symmetrical short-circuit current before reactor installation	76	kA
Initial symmetrical short-circuit current after reactor installation	16	kA
Permissible peak short-circuit current	45	kA (peak)
Lightning impulse (LI) test / AC withstand voltage test	LI60/AC20	kV
Max ambient temperature	40	°C
Insulation class	F	
Climatic / Environmental class	C1/E0	
Type of duty	S1	
Windings material	Aluminium	
Terminals material	Aluminium	



Type code

E	D	3	P	H	0,035mH/2000A	6,3kV	50Hz	T40F	AL	
Manufacturer symbol	Instrument type	Number of phases	Application type		Inductance / Rated current	Rated voltage	Rated frequency	Insulation class	Material of windings Blank if copper	Degree of protection Blank if IP00

Special execution

Products with parameters exceeding the catalogue card can be made upon prior contact.

Contact

Elhand Transformatory Sp. z o.o.



ul. Klonowa 60
42-700 Lubliniec
Śląskie, Polska



+48 (34) 34 73 100



info@elhand.pl



<https://www.linkedin.com/company/elhand-transformatory/>

V01.21

