

**ED3KH,  
MV compensation reactor**

50 kvar up to 1 Mvar



Approvals

**CE RoHS**

Technical data

<b>Power of compensation</b>	50-1000 kvar
<b>Rated voltage</b>	3-20 kV
<b>Rated frequency</b>	50 Hz, 60 Hz
<b>Cooling</b>	AN, AF – air natural or air forced
<b>Ambient temperature</b>	40°C – land design
	45°C – maritime design
	>50°C – special design
<b>Insulation class</b>	F (155°C), H (180°C)
<b>Winding material</b>	aluminium, copper
<b>Optional equipment</b>	Temperature sensors, wheels, fans, vibro insulators
<b>Mounting</b>	Standing, vertical
<b>Degree of protection</b>	IP00
<b>Standards compatibility</b>	PN-EN 60076-1 PN-EN 60076-6

**Function**

Increased capacitive power consumption is observed in broad cable grids which are typical for wind farms and mining industry. Uncompensated reactive power in the system leads to many negative effects:

- Extra fees for power factor overdrawn
- Additional power losses in transmission lines and transformers
- System instability due to voltage increase when grid has capacitive character

ED3KH compensation reactors are used to keep inductive character of a grid. Inductive power of a reactor reduces capacitive power, ensuring that grid operates within a proper Q/P coefficient range.

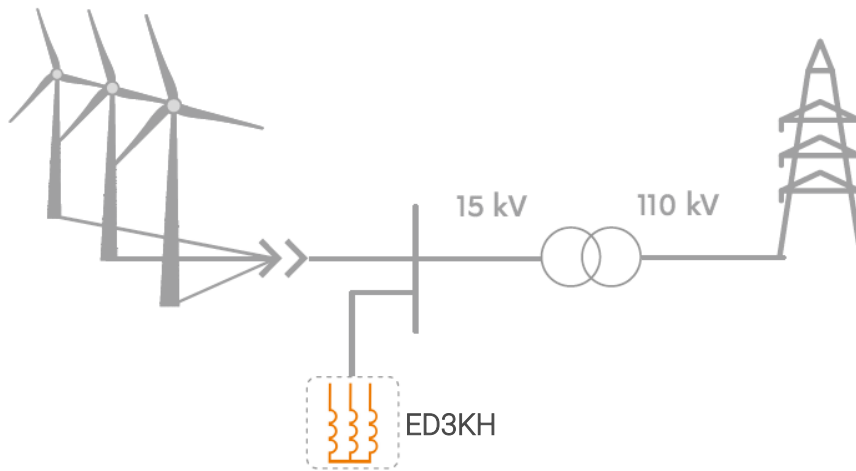
**Benefits**

- No fees for capacitive power
- Stable, inductive power factor
- Reduction of active losses
- Release of grid capacity thanks to reduction of effective value of the current

**Application**

- Reactive power compensation systems
- Onshore & offshore wind power plants
- Compensation of broad cable grids
- Mining industry

### Typical application schematic



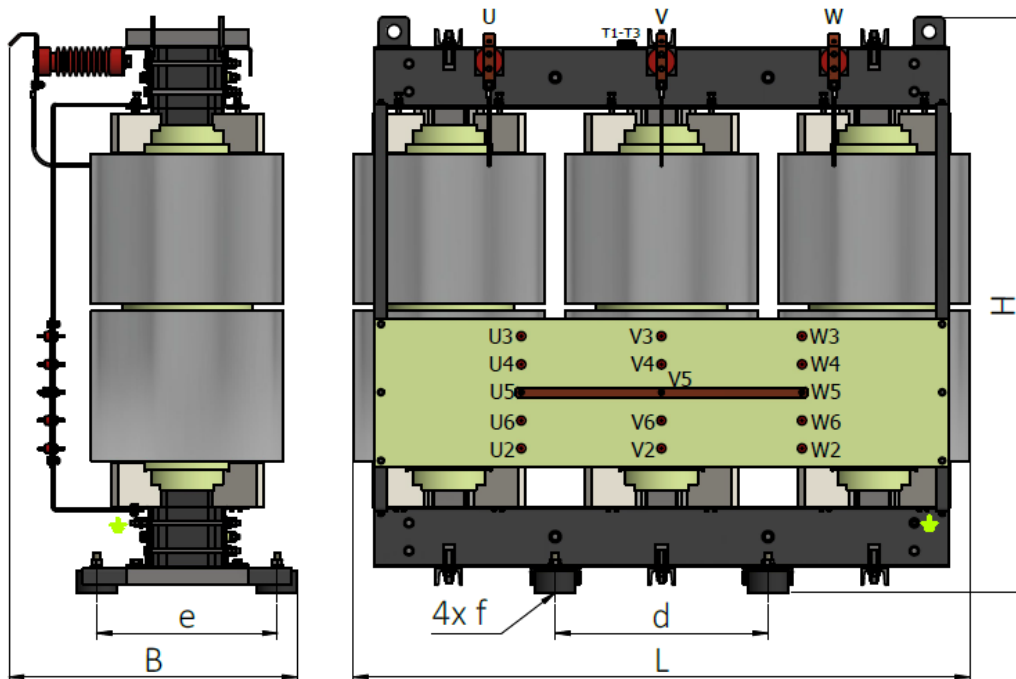
### Dimensions

The table consists of exemplary power sizes of the compensation reactors. Specified dimensions are available for request.

No.	Type	L	B	H	d	e	f
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
1	<b>ED3KH-150kvar±2x2,5% 15750V 5,5A AL</b>	1180	620	1220	410	330	M12
2	<b>ED3KH-300kvar±2x2,5% 15750V 11,0A AL</b>	1360	650	1270	470	350	M12
3	<b>ED3KH-350kvar±2x2,5% 15750V 12,8A AL</b>	1370	650	1320	470	350	M12
4	<b>ED3KH-600kvar±2x2,5% 15750V 22,0A AL</b>	1540	720	1450	530	450	M16
5	<b>ED3KH-800kvar±2x2,5% 15750V 29,3A AL</b>	1580	740	1530	540	450	M16

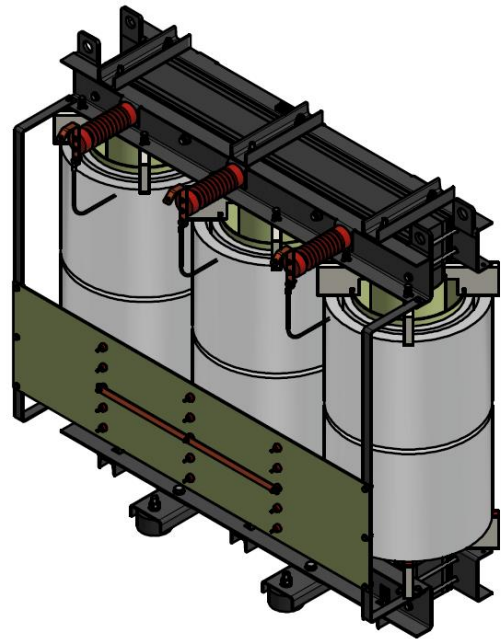
Manufacturer reserves the right to make changes resulting from the continuous development of products offered

### Drawings



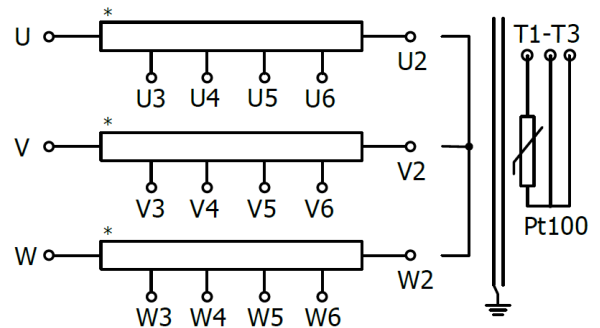
## Sample technical data

Dane techniczne	
<b>Power</b>	600 kvar $\pm 2 \times 2,5\%$
<b>Rated voltage</b>	15750 V
<b>Inductance</b>	1316mH $\pm 2 \times 2,5\%$
<b>Rated current</b>	22 A
<b>Insulation class</b>	T40F
<b>Type of duty</b>	S1
<b>Degree of protection</b>	IP00
<b>Cooling</b>	AN
<b>Frequency</b>	50 Hz
<b>Insulation level</b>	LI/AC 95/38 kV
<b>Material of winding</b>	Al
<b>Material of terminals</b>	Cu



## Wiring diagram

Wiring			
Q (U=15750 V)	Inductance	Input terminals	Star point connection
600 kvar +5%	$L_n - 5\%$	U, V, W	U3 - V3 - W3
600 kvar +2,5%	$L_n - 2,5\%$	U, V, W	U4 - V4 - W4
600 kvar	$L_n$	U, V, W	U5 - V5 - W5
600 kvar -2,5%	$L_n + 2,5\%$	U, V, W	U6 - V6 - W6
600 kvar -5%	$L_n + 5\%$	U, V, W	U2 - V2 - W2



## Contactless temperature measurement

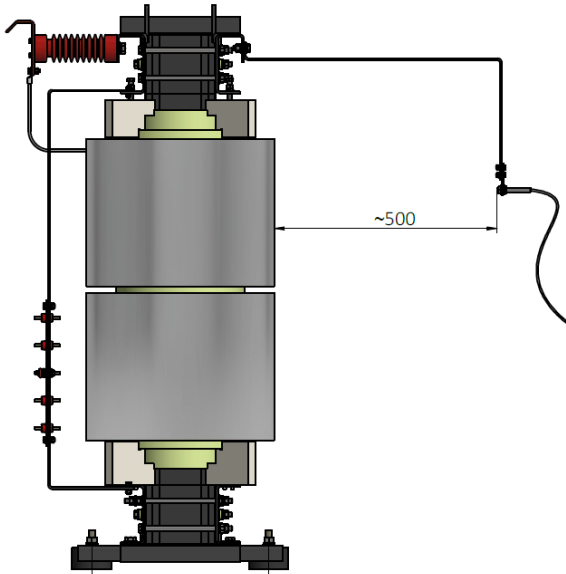
ED3KH reactor can be equipped with contactless temperature measurement system based on pyrometric sensor. Sensor and transmitter are mounted to the special pole or independent construction (wall, fence) in appropriate distance.

Parts of the system:

- Pyrometric sensor with transmitter
- Apar AR600 temperature regulator
- Connection cable

Minimum mounting distance between sensor and reactor is 0,5 m.

### Pyrometric sensor mounting



### Type code

<b>E</b>	<b>D</b>	<b>3</b>	<b>K</b>	<b>H</b>	<b>150kvar±2x2,5%</b>	<b>15750V</b>	<b>5264mH±2x2,5%</b>	<b>5,5A</b>	<b>AL</b>	<b>T40F</b>
Manufacturer symbol	Instrument type	Number of phases	Application type		Power of compensation	Rated voltage	Rated inductance	Rated current	Material of windings Blank if copper	Insulation class

### 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](mailto:info@elhand.pl)



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