

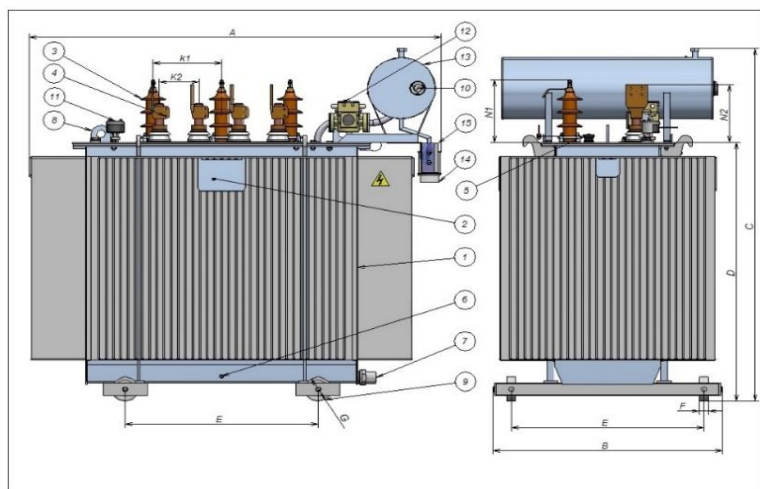
**Technical Specification for  
Three Phase Liquid-Immersed  
Transformer 21 0.42kVA**



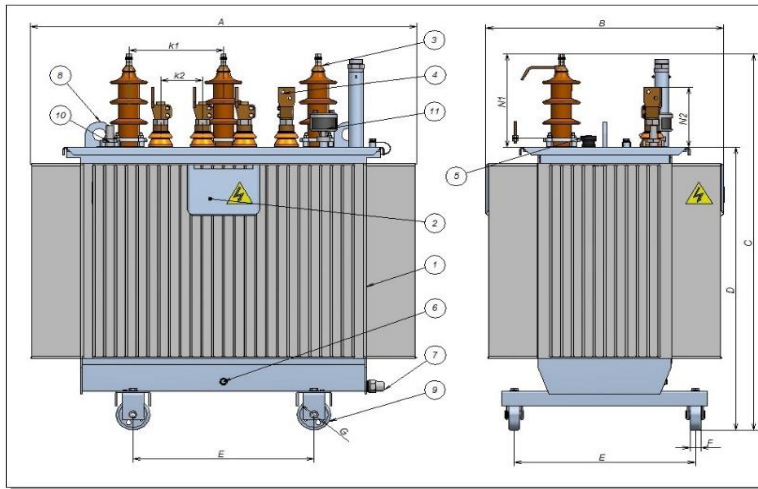
Description	Unit	offered							
		63 kVA	100 kVA	160 kVA	250 kVA	400 kVA	630 kVA	800 kVA	1000 kVA
<b>1 Ratings</b>									
Applied standard		IEC 60076							
Rated voltage	kV	21/ 0.42							
Rated power	kVA	63	100	160	250	400	630	800	1000
Windings material		Al / Al							
Max. rated voltage, HV side (Um)	kV	24							
HV rated lightning impulse withstand voltage (1.2/50µs)	kV	125							
HV rated power frequency withstand voltage (1 min)	kV	50							
LV Rated lightning impulse withstand voltage (1.2/50µs)	kV	-							
LV Rated power frequency withstand voltage (1 min)	kV	8							
Vector group symbol	-	Yes							
Rated frequency	Hz	50							
Type of regulation - off load	%	± 3 x 2.5							
Impedance voltage (at 75°C) uk (±10% tolerance)	%	4.5	4.5	4.5	4.5	4.5	6	6	6
Altitude above sea level	m	1000							
Type of cooling		ONAN							
Design (maximum ambient) temperature:	°C	40							
Maximum temperature rise in top oil	K	60							
Maximum winding temperature rise	K	65							
Losses, acc. to EN 50588-1:2015 and EU Regulation № 548/2014									
* No-load losses	W	105	145	210	300	430	600	650	770
* Load losses (at 75°C)	W	1270	1750	2350	3250	4600	6500	8400	10500
* Total losses	W	1375	1895	2560	3550	5030	7100	9050	11270
<b>2 Main Accessories</b>									
HV bushings type (DIN 42531)		20Nf250							
LV bushings type (DIN 42539)		3/250	3/250	3/250	3/630	3/630	3/1000	3/1000	3/2000
Tap changer		Yes							
LV terminal flags		No	No	No	No	No	Yes	Yes	Yes
Oil temperature indicator		Yes	Yes	Yes	Yes	Yes	Yes*	Yes*	Yes*
Oil level indicator		Yes							
Pressure relief valve		Yes							
Oil draining device		Yes							

	Bidirectional wheels		Yes							
<b>3</b>	<b>General Data</b>									
Total Weight	kg	650	815	1030	1215	1655	2300	2845	3305	
Oil Weight	kg	165	210	255	290	370	525	625	710	
Overall Dimensions										
a) Length (A) tolerance ( $\pm 50$ )	mm	905	1035	1095	1115	1215	1435	1500	1685	
b) Width (B) tolerance ( $\pm 50$ )	mm	750	750	820	840	890	975	980	1015	
c) Height (C) tolerance ( $\pm 50$ )	mm	1305	1330	1405	1520	1630	1650	1830	1900	
d) Wheel track / Skid base (D)	mm	520	520	520	520	670	670	670	820	
<b>4</b>	<b>Insulated Liquid</b>									
Inhibited naphthenic, PCB free transformer oil, in accordance with IEC 60296-2012.										
<b>5</b>	<b>Protective coatings</b>									
<b>The outer surfaces of the tank and other metal structures, exposed to the atmospheric conditions should be treated as follows:</b>										
<ul style="list-style-type: none"> <li>• Blast cleaning to minimum Sa 2½ near "white metal". Use a spray nozzle technology with grains of steel that makes the surface rough in order to apply the primer with a higher grade;</li> <li>• Degreasing and cleaning;</li> <li>• Priming - use an anticorrosive primer PF-07, applied by industrial equipment for fully cover by flow coating or brush for confined spaces. Primer's viscosity by VZ-4 - 18÷20. D.F.T. - <math>25 \pm 5\mu\text{m}</math>;</li> <li>• Painting - middle coat - use an alkyd enamel RAL 7033 with viscosity by VZ-4 - 18÷20. Applied by flowcoat for coverage of <math>30 \pm 5\mu\text{m}</math>;</li> <li>• Painting - final coat - use an alkyd enamel RAL 7033 with viscosity by VZ-4 - 18÷20. Applied by spray gun for coverage of <math>20 \pm 5\mu\text{m}</math>;</li> </ul>										
<b>The total thickness of the outer coating is minimum <math>75 \pm 5\mu\text{m}</math></b>										
<b>6</b>	<b>Testing</b>									
The transformer will be subjected to routine and type tests according to IEC 60076 Standards, also in accordance with the Client's requirements.										
<b>7</b>	<b>Transportation</b>									
Transformers are transported fully assembled and filled with insulating liquid, on wooden sledges to the possibility of lifting by a forklift truck.										

\*with contacts



1. Tank
2. Rating plate
3. HV Bushing
4. LV Bushing
5. Tap changer
6. Earthing nut
7. Oil draining device
8. Lifting lugs
9. Bidirectional wheels
10. Oil level indicator
11. Bimetallic thermometer



1. Tank
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9. Bidirectional wheels
10. Oil level indicator
11. Contact thermometer
12. Buchholz relay
13. Expand vessel
14. Dehydrating breather
15. Protection box

Subject to alterations and errors

