

OCC SERIES TRANSFORMERS

OCC series transformers (single-phase, dry-type, for watercraft applications), rating 0.04...0.25 kV·A, are intended for supplying power to control and signalling circuits of electrical devices on ships of marine or river craft.

Transformers are designed to be connected to a.c. networks of 50, 60 Hz frequency, with 220, 380, 440 or 690 V primary voltage and 24 to 220 V secondary voltage. Transformers are designed to be incorporated into splash-protected, waterproof units and they are operable under:

- ambient temperature – from -40 to $+60^{\circ}$ C
- relative air humidity – up to 98% at 40° C



Transformers stay operable under repetitive ship oscillatory motions of up to 45° .

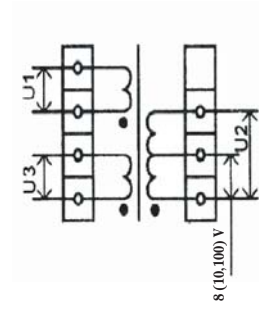
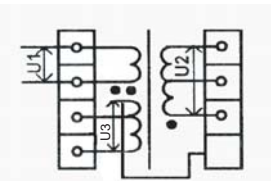
Transformers are resistant to vibration and they withstand impact loads of 5g acceleration.

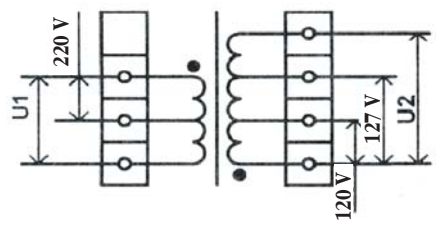
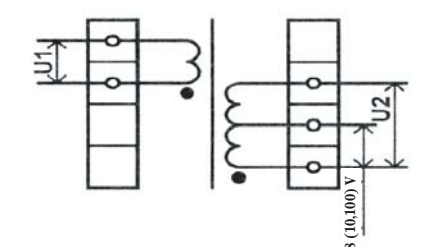
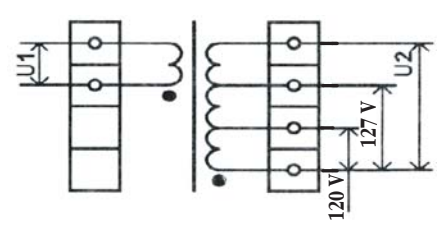
Structurally transformers employ a strip-wound shell core, split-type, and coils of copper wire. Coil and transformer assemblies are impregnated with moisture-proof insulating varnish in a vacuum impregnator. Live parts of transformer terminal clamps are capped by plastic covers with openings provided for external wires lead-in.

Transformer type	No-load current		Short-circuit voltage, V		Efficiency percentage	
	Rated	Tolerance limits	Rated	Tolerance limits	Rated	Tolerance limits
OCC-0.04	30	+ 20	12.0	+ 10	83.0	- 2
OCC-0.063			9.0		86.0	
OCC-0.1	28		5.5		89.0	
OCC-0.16	25		4.5		90.0	
OCC-0.25	20		4.0		92.0	

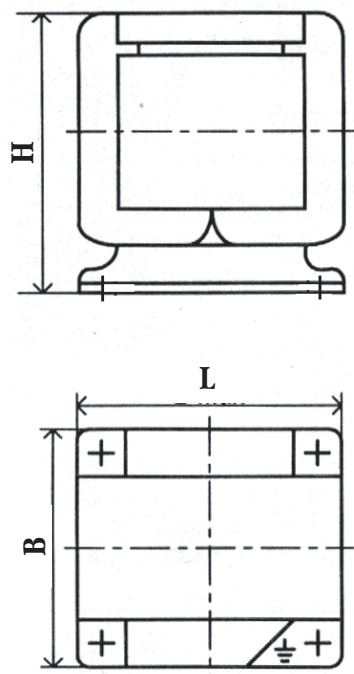
- Notes: 1. Parameters are given for 50 Hz network frequency.
 2. Tolerance limits are given per cent as to nominal value.

Winding connection/vector group 1/1-0	Transformer type	Secondary winding rated power, kV·A	Winding voltage, V		
			of primary	of secondary	
				rated value	tolerance limits
			U_1	U_2	
	OCC-0.04	0.04	220; 380	24; 36; 127; 220	-2... +2 -3... +3 -6... +6 -11... +11
	OCC-0.063	0.063			
	OCC-0.1	0.1			
	OCC-0.16	0.16			
	OCC-0.25	0.25			

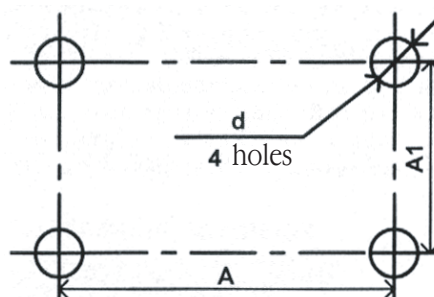
Winding connection/vector group 1/1/1-0-0	Transformer type	Secondary winding rated power		Winding voltage, V				
		U ₂	U ₃	of primary	of secondary			
					nominal value	tolerance limits	nominal value	tolerance limits
		U ₁	U ₂		U ₃			
	OCC-0.1	0.075	0.025	220; 380	36, with tapping - 10;	-3...+3 -1.5...+1.5	24	-2...+2
	OCC-0.16	0.1	0.06		127, with tapping - 8;	-6...+6 -1.5...+1.5		
	OCC-0.25	0.19			220, with tapping - 100	-11...+11 -5...+5		
	OCC-0.1	0.075	0.025	220	11, with tapping - 10	-0.8...+0.8	12, with tapping - 10	-0.8...+0.8

Winding connection/vector group 1/1-0	Transformer type	Secondary winding rated power	Winding voltage, V		
			of primary	of secondary	
				nominal value	tolerance limits
U ₁	U ₂				
	OCC-0.16	0.16	380, with tapping - 220	220,	-11...+11
	OCC-0.25	0.25		with tapping - 127; with tapping - 120	-6...+6 -5...+5
	OCC-0.25	0.25	690	36, with tapping - 10; 127, with tapping - 8; 220, with tapping - 100	-3...+3 -1.5...+1.5 -6...+6 -1.5...+1.5 -11...+11 -5...+5
	OCC-0.25	0.25	690	220, with tapping - 127; with tapping - 120	-11...+11 -6...+6 -6...+6

OVERALL, MOUNTING DIMENSIONS



Arrangement of holes
for transformer mounting



Transformer type	B	L	H	A	A ₁	d	Mass
	mm						kg
OCC-0.04	120	90	105	52	58	5.5	1.5
OCC-0.063		105			73		2.0
OCC-0.1	140	115	125	70	75	6.5	3.0
OCC-0.16	145	125	145		90		4.3
OCC-0.25	175		150	92	93	6.2	