

# OCBP1 SERIES TRANSFORMERS

**OCBP1 series transformers (single-phase, dry-type, for explosion-proof and mining equipment) rating 0.05...1.0 kV·A, with up to 660 V primary winding voltage, are intended for power supply of control circuits in mining and explosion-proof electrical equipment.**

Transformers may also be manufactured of 115, 230, 240, 400, 415, 440 and 550 V primary winding voltage.

Transformers are applicable under moderate or tropical climatic conditions.

Transformers of the same type but of varying climatic versions are identical as to all electrical parameters, design, overall and mounting dimensions and differ only in protective coating.



Transformers employ a strip-wound split-type magnetic core of cold-rolled electrical steel. Transformer coils are bobbin-type, made of copper wire with heat-resistant insulation. Assembled transformers are impregnated with wet-strong insulating varnish in a vacuum impregnator.

Transformer terminal clamps are arranged on insulating blocks of arc-resistant plastic.

Transformers have reinforced insulation which provides better safety in maintenance and they feature enhanced resistance to network overvoltage.

When agreed upon with a Customer the transformers may be manufactured with connections and voltages differing from those given in the Table below.

Transformer type	No-load current		Short-circuit voltage		Efficiency	
	Rated	Tolerance limits	Rated	Tolerance limits	Rated	Tolerance limits
OCBP1-0.05	20	+30	15.0	+10	81.5	-2
OCBP1-0.08			11.0		85.5	
OCBP1-0.16	16		8.0		88.5	
OCBP1-0.25			5.0		89.5	
OCBP1-0.4			4.5		92.5	
OCBP1-0.63M	12		3.5		93.5	
OCBP1-1.0M			3.5		94.5	

*Note: Tolerance limits are given per cent as to nominal value*

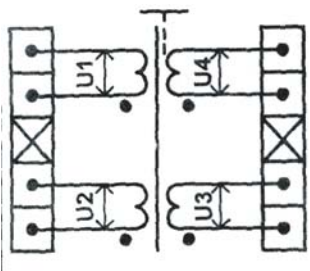
### Triple-wound transformer with secondary winding taps

Circuit diagram of triple-wound transformer (of 1/1/1-0-0 winding connection/ vector group)	Transformer type	Secondary winding rated power, kV·A		Winding rated voltage, V		
				of primary	of secondary	
		U <sub>2</sub>	U <sub>3</sub>	U <sub>1</sub>	U <sub>2</sub>	U <sub>3</sub>
	OCBP1-0.05	0.025	0.025	220	110; 127	42

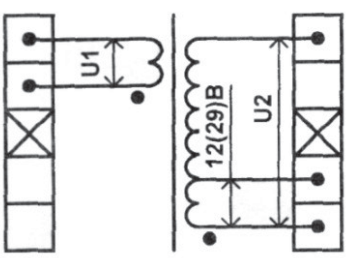
### Triple-wound transformer

Circuit diagram of triple-wound transformer (of 1/1/1-0-0 winding connection/ vector group)	Transformer type	Secondary winding rated power, kV·A		Winding rated voltage, V		
				of primary	of secondary	
		U <sub>2</sub>	U <sub>3</sub>	U <sub>1</sub>	U <sub>2</sub>	U <sub>3</sub>
	OCBP1-0.05	0.015	0.015	36	110; 127	18
		0.030	0.020	380; 660	36; 110; 127	36
		0.035	0.015	36; 380; 660	24; 29; 36; 42	5; 12; 24
	OCBP1-0.08	0.048	0.032	380; 660	24; 29; 36; 42; 110; 127	18
				36; 110; 127	24 36	

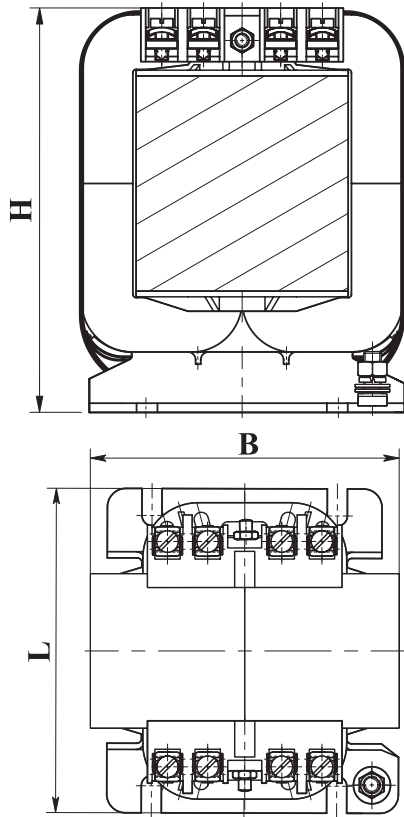
## Quadruple-wound transformer

Circuit diagram of quadruple-wound transformer (of 1/1/1/1-0-0-0 winding connection/vector group)	Transformer type	Secondary winding rated power, kV·A			Winding rated voltage, V			
					of primary		of secondary	
		U <sub>2</sub>	U <sub>3</sub>	U <sub>4</sub>	U <sub>1</sub>	U <sub>2</sub>	U <sub>3</sub>	U <sub>4</sub>
	OCBP1-0.16	0.080	0.072	0.008	380; 660	36	110; 127	18; 24; 36
	OCBP1-0.25	0.125	0.113	0.012				
	OCBP1-0.4	0.200	0.180	0.020				

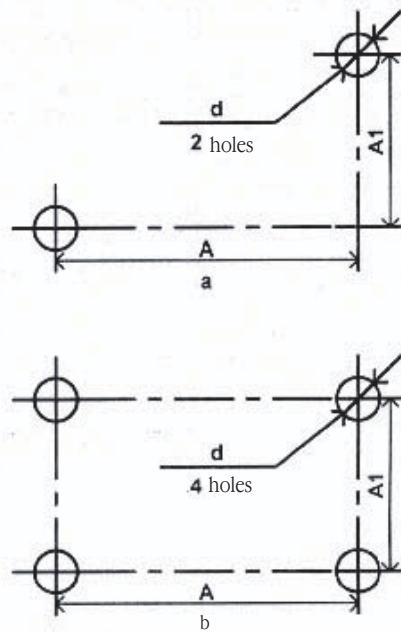
## Double - wound transformer with secondary winding taps

Circuit diagram of double-wound transformer (of 1/1-0 winding connection/ vector group)	Transformer type	Secondary winding rated power, kV·A	Winding rated voltage, V	
			of primary	of secondary
			U <sub>1</sub>	U <sub>2</sub>
	OCBP1-0.05	0.05	380; 660	36, with tapping - 12; 36, with tapping - 29
	OCBP1-0.08	0.08		
	OCBP1-0.16	0.16		
	OCBP1-0.25	0.25		110, with tapping - 12; 127, with tapping - 12
	OCBP1-0.4	0.4		
	OCBP1-0.63M	0.63		
	OCBP1-1.0M	1.0		

## OVERALL, MOUNTING DIMENSIONS



Arrangement of holes for transformer mounting



a - for 0.05 and 0.08 kV·A transformers  
b - for other transformers

Transformer type	B	L	H	A	A <sub>1</sub>	d	Mass
	mm						kg
OCBP1-0.05	85	70	90	52	58	6.5	1.2
OCBP1-0.08		86			73		1.8
OCBP1-0.16	105	90	107	60	78		2.7
OCBP1-0.25		106	130	80	90		3.9
OCBP1-0.4	135		140				5.5
OCBP1-0.63M	165	105	150	100	85		7.4
OCBP1-1.0M		115	170	105	125		10.5