

## ΠOC, COC SERIES TRANSFORMERS

**Single-phase, dry-type, ΠOC (track-type) and COC (signal-type) series transformers are intended for use in railway transport as devices for power supply of acting, modernized or newly built control, communication and signalling circuits, as well as in other applications meant for power supply of circuits with similar parameters.**

Transformers are designed for operation in any air conditions, allow any positional arrangement, may be used under impact loads of acceleration up to 6g or under vibratory loads of maximum acceleration 2g within up to 100 Hz frequency range.

As to installation transformers are build-in units.

Transformers employ a strip-wound magnetic core of cold-rolled electrical steel.

Transformer coils are bobbin-type, made of copper wire with heat-resistant insulation, protected by housings.



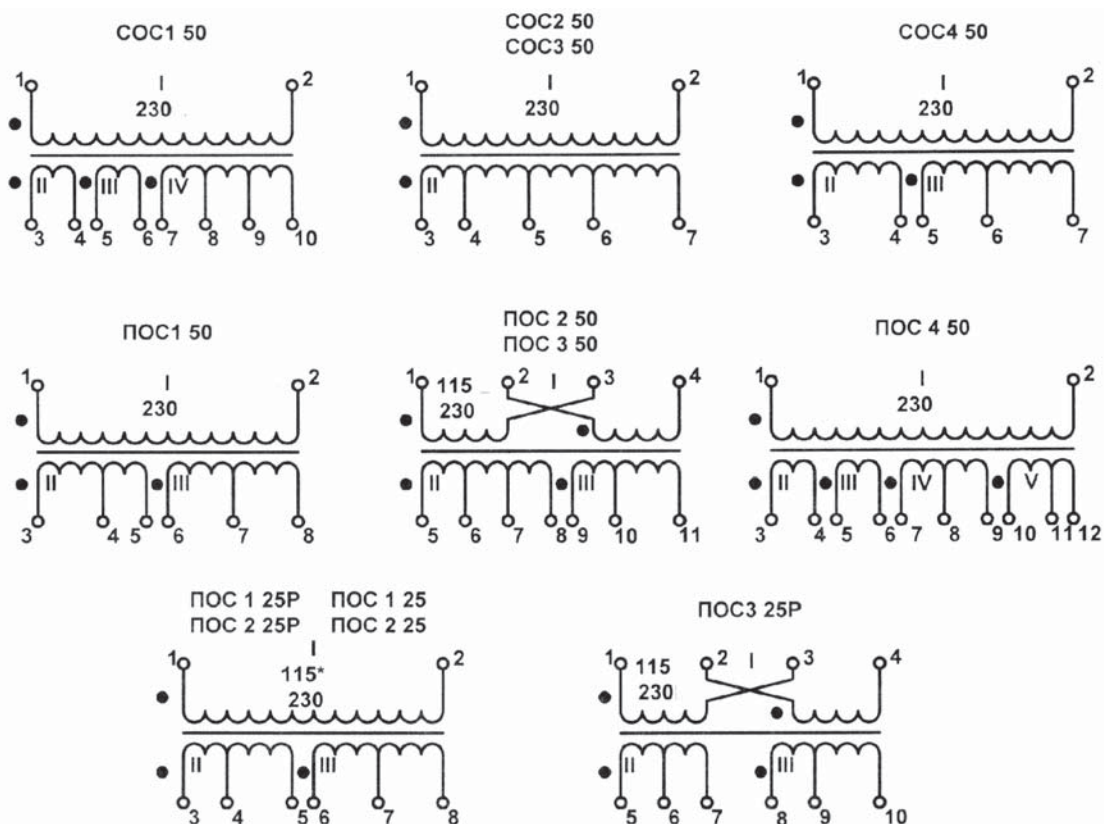
### Voltage values on terminal clamps of transformers secondary windings

Transformer type (rated power, kV·A)	Winding number	Terminal number	Rated voltage, V		Secondary winding current rating, A
			at no load	at rated load	
COC 1 50 (0.135)	II	3-4	14.84	13.95	3.86
	III	5-6	14.84	13.95	
	IV	7-8	4.50	4.00	
		8-9	2.40	2.15	
		9-10	1.02	0.95	
II-III-IV	3-10	-	7.10		
COC 2 50 (0.017)	II	3-4	12.50	11.30	1.15
		4-5	1.40	1.30	
		5-6	1.40	1.30	
		6-7	1.40	1.30	
		3-8	-	15.20	
COC 3 50 (0.027)	II	3-4	13.0	11.80	1.70
		4-5	1.50	1.40	
		5-6	1.50	1.40	
		6-7	1.50	1.40	
		3-8	-	16.0	
COC 4 50 (0.040)	II	3-4	12.77	11.80	2.74
	III	5-6	0.97	0.90	
		6-7	2.06	1.90	
	II-III	5-7	-	2.80	
ΠOC 1 50 (0.035)	II	3-4	5.70	5.20	4.32
		4-5	2.19	2.00	
		3-5	-	7.20	
	III	6-7	0.66	0.60	
		7-8	0.33	0.30	
		6-8	-	0.90	
	II-III	3-8	-	8.10	

Transformer type (rated power, kV·A)	Winding number	Terminal number	Rated voltage, V		Secondary winding current rating, A	Transformer type (rated power, kV·A)	Winding number	Terminal number	Rated voltage, V		Secondary winding current rating, A
			at no load	at rated load					at no load	at rated load	
ПОС2 50 (0.300)	II	5-6	4.62	4.40	17.00	ПОС1 25P ПОС2 25P (0.065)	II	3-4	7.40	7.00	5.42
		6-7	8.09	7.70				4-5	3.70	3.50	
		7-8	4.05	3.85				3-5	-	10.50	
		5-8	-	15.95			III	6-7	1.07	1.00	
		9-10	1.16	1.10				7-8	0.53	0.50	
	III	10-11	0.58	0.55			6-8	-	1.50		
9-11		-	1.65	II-III	3-8	-	12.00				
ПОС3 50 (0.300)	II	5-6	5.70	5.50	1.21	ПОС3 25P (0.065)	II	5-6	7.40	7.00	5.42
		6-7	17.60	16.50				6-7	3.70	3.50	
		7-8	11.40	11.00				5-7	-	10.50	
		5-8	-	33.00			III	8-9	1.07	1.00	
	9-10	74.10	72.00	9-10				0.53	0.50		
	III	10-11	148.20	143.00			8-10	-	1.50		
9-11		-	215.00	II-III	5-10	-	12.00				
ПОС4 50 (0.300)	II-III	5-11	-	248.00	6.82	ПОС1 25 (0.065)	II	3-4	37.00	35.00	1.08
		II	3-4	18.20				17.10	4-5	18.55	
	III		5-6	18.20				17.10	3-5	-	
	IV	7-8	4.65	4.30			III	6-7	5.30	5.00	
		8-9	2.40	2.20				7-8	2.65	2.50	
	V	7-9	-	6.50			6-8	-	7.50		
10-11		2.40	2.20	II-III	3-8	-	60.00				
11-12		1.15	1.10	ПОС2 25 (0.065)	II	3-4	74.00	70.00			
10-12		-	3.30			4-5	37.10	35.00			
II-III-IV-V	3-12	-	44.00		3-5	-	105.00				
	3-12	-	44.00		6-7	10.50	10.00				
					III	7-8	5.30	5.00			
					II-III	6-8	-	15.00			
						II-III	3-8	-	120.00		

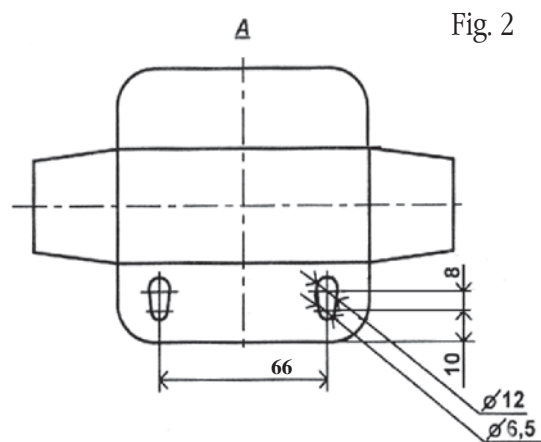
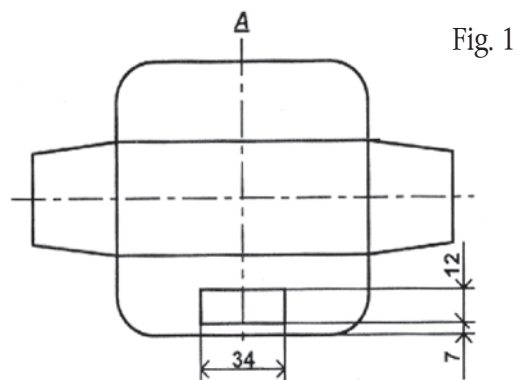
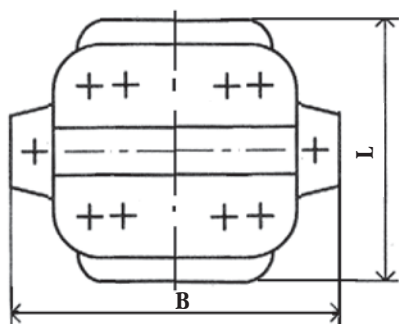
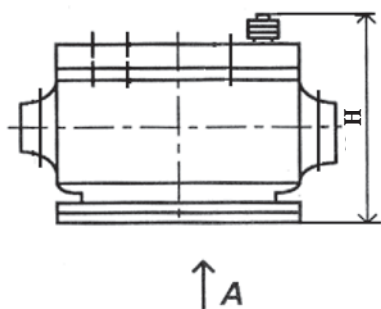
Transformer type	Rated frequency, Hz	No-load current maximum value, A	Rated value	
			Short-circuit voltage	Efficiency
			%	
COC1 50	50	0.04	8	91
COC2 50		0.018		85
COC3 50		0.025	7	87
COC4 50		0.050		
ПОС1 50		0.012	13	85
ПОС2 50		0.210; 0.420	8	93
ПОС3 50			4	
ПОС4 50			5	
ПОС1 25P	25	0.150	11	86
ПОС2 25P		0.75		
ПОС1 25			9	88
ПОС2 25				
ПОС3 25P		0.150; 0.075	11	86

### CIRCUIT DIAGRAMS OF TRANSFORMERS with primary voltage indication



\* - only for ПОС1 25P

### OVERALL, MOUNTING DIMENSIONS

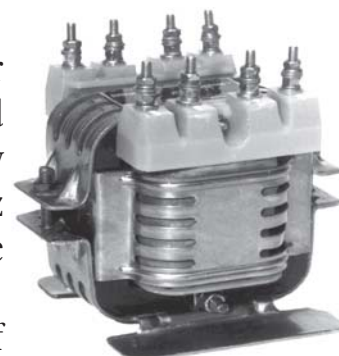


Transformer type	Fig.	B	L	H	Mass
		mm			kg
COC 2 50 COC 3 50 COC 4 50 ПОС 1 50	1	120	85	120	1.5
			100		2.0
ПОС 1 25 ПОС 2 25 ПОС 1 25P ПОС 2 25P ПОС 3 25P COC 1 50	2	145	118	155	4.3
ПОС 2 50 ПОС 3 50 ПОС 4 50					

## ΠOC, COC SERIES TRANSFORMERS (flameproof version)

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Transformers are designed for operation in any air conditions, allow any positional arrangement, may be used under impact loads of acceleration up to 6g or under vibratory loads of maximum acceleration 2g within up to 100 Hz frequency range. As to installation method transformers are build-in units.



Transformers employ a strip-wound magnetic core of cold-rolled electrical steel.

Transformer coils are bobbin-type, made of copper wire with heat-resistant insulation, protected by housings. Transformers are furnished with thermoswitches.

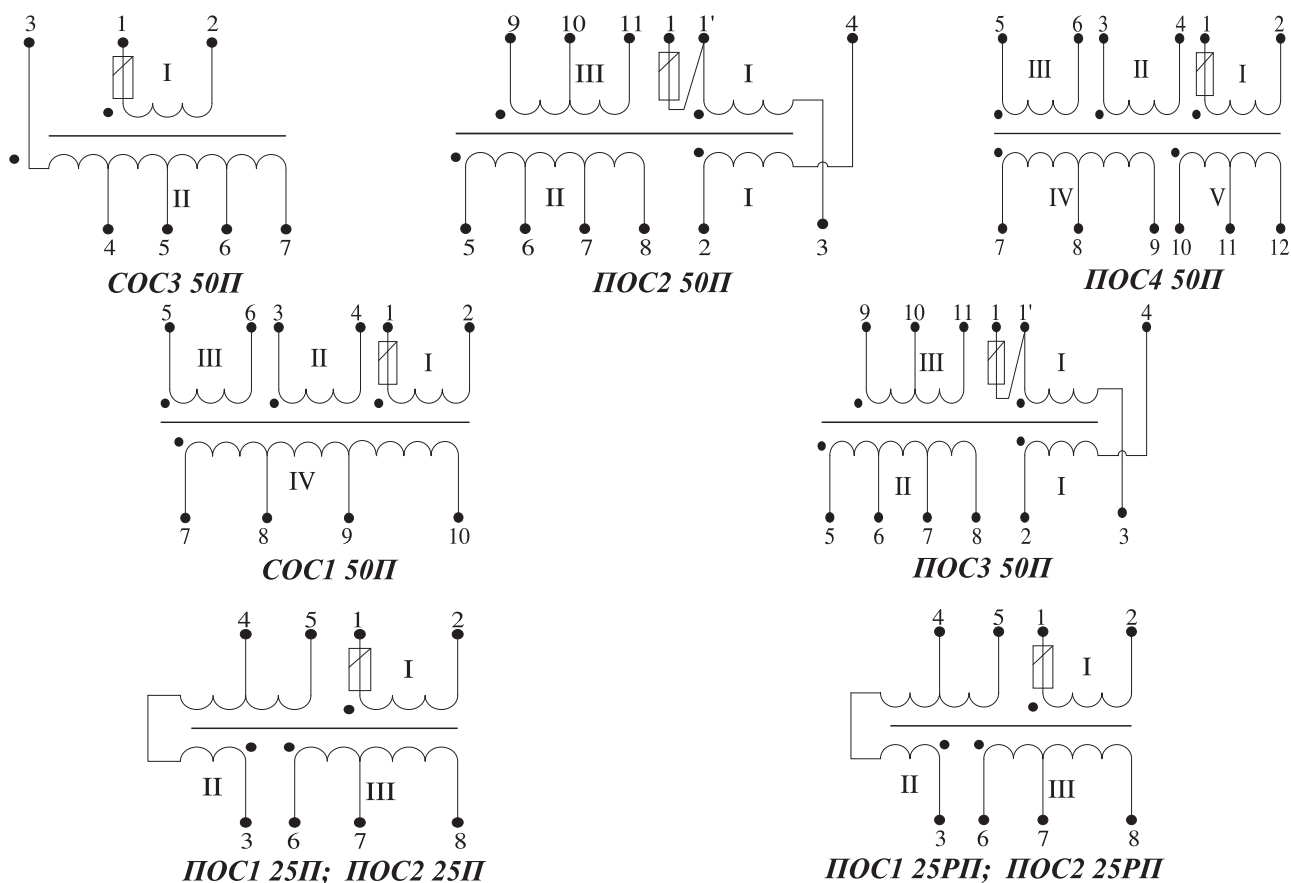
### Voltage values on terminal clamps of transformers secondary windings

Transformer type (rated power, kV·A)	Winding number	Terminal number	Rated voltage, V		Secondary winding current rating, A
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COC 1 50Π (0.135)	II	3-4	14.84	13.95	3.86
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		8-9	2.40	2.15	
		9-10	1.02	0.95	
7-10	-	7.10			
II-III-IV	3-10	-	35.00		
COC 3 50 (0.027)	II	3-4	13.0	11.80	1.70
		4-5	1.50	1.40	
		5-6	1.50	1.40	
		6-7	1.50	1.40	
		3-7	-	16.0	

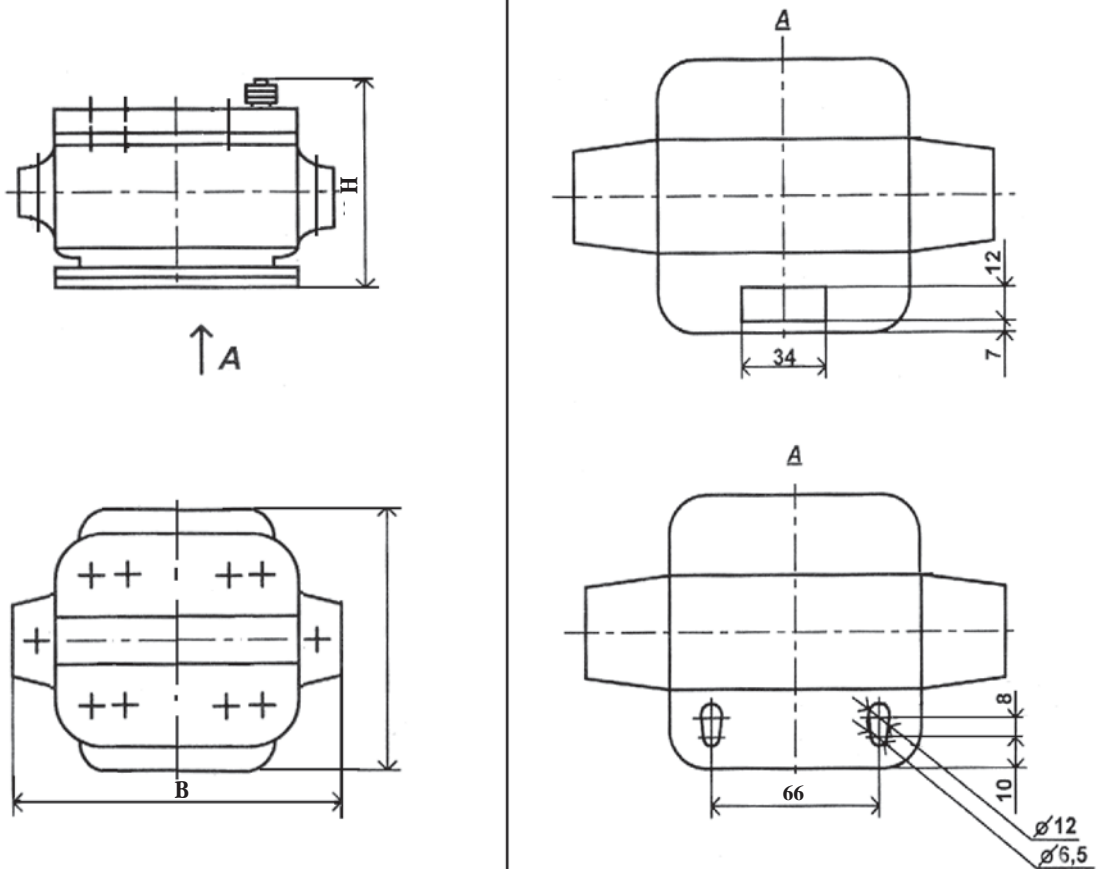
Transformer type (rated power, kV·A)	Winding number	Terminal number	Rated voltage, V		Secondary winding current rating, A	Transformer type (rated power, kV·A)	Winding number	Terminal number	Rated voltage, V		Secondary winding current rating, A
			at no load	at rated load					at no load	at rated load	
ПОС2 50П (0.300)	II	5-6	4.62	4.40	17.00	ПОС1 25ПП ПОС2 25ПП (0.065)	II	3-4	7.40	7.00	5.42
		6-7	8.09	7.70				4-5	3.70	3.50	
		7-8	4.05	3.85				3-5	-	10.50	
		5-8	-	15.95			III	6-7	1.07	1.00	
	III	9-10	1.16	1.10				7-8	0.53	0.50	
		10-11	0.58	0.55				6-8	-	1.50	
II-III	9-11	-	1.65	II-III	3-8	-	12.00				
	5-11	-	17.60								
ПОС3 50П (0.300)	II	5-6	5.70	5.50	1.21	ПОС3 25ПП (0.065)	II	5-6	7.40	7.00	5.42
		6-7	17.60	16.50				6-7	3.70	3.50	
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		5-8	-	33.00			III	8-9	1.07	1.00	
	III	9-10	74.10	72.00				9-10	0.53	0.50	
		10-11	148.20	143.00				8-10	-	1.50	
II-III	9-11	-	215.00	II-III	5-10	-	12.00				
	5-11	-	248.00								
ПОС4 50П (0.300)	II	3-4	18.20	17.10	6.82	ПОС1 25П (0.065)	II	3-4	37.00	35.00	1.08
	III	5-6	18.20	17.10				4-5	18.55	17.50	
	IV	7-8	4.65	4.30				3-5	-	52.50	
		8-9	2.40	2.20			III	6-7	5.30	5.00	
	V	7-9	-	6.50				7-8	2.65	2.50	
		10-11	2.40	2.20				6-8	-	7.50	
II-III-IV-V	3-12	-	44.00	II-III	3-8	-	60.00				
ПОС2 25П (0.065)	II	3-4	74.00	70.00	0.54	ПОС2 25П (0.065)	II	3-4	74.00	70.00	0.54
		4-5	37.10	35.00				4-5	37.10	35.00	
		3-5	-	105.00				3-5	-	105.00	
	III	6-7	10.50	10.00			III	6-7	10.50	10.00	
		7-8	5.30	5.00				7-8	5.30	5.00	
		6-8	-	15.00				6-8	-	15.00	
II-III	3-8	-	120.00	II-III	3-8	-	120.00				

Transformer type	Rated frequency, Hz	No-load current maximum value, A	Rated value	
			Short-circuit voltage	Efficiency
			%	
COC1 50П	50	0.04	8	91
COC3 50П		0.025	7	87
ПОО2 50П		0.210; 0.420	8	93
ПОО3 50П			4	
ПОО4 50П		0.210	5	
ПОО1 25П	25	0.150	11	86
ПОО2 25П		0.075		
ПОО1 25П			9	88
ПОО2 25П				

### CIRCUIT DIAGRAMS OF TRANSFORMERS



### OVERALL, MOUNTING DIMENSIONS



Transformer type	Fig.	B	L	H	Mass
		mm			kg
СОС 3 50П	1	120	100	120	2.1
ПОС 1 25П ПОС 2 25П ПОС 1 25РП ПОС 2 25РП СОС 1 50П	2	145	118	155	4.3
ПОС 2 50П ПОС 3 50П ПОС 4 50П		175	120	165	6.3