

LOW VOLTAGE CURRENT TRANSFORMERS 0.72 kV

- Measuring current transformers
- Protective current transformers







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INTRODUCTION

DESCRIPTION

Low voltage current transformers (for voltage levels up to 0.72 kV) are intended to transform the currents to values which are suitable for measuring and protection devices. Their technical characteristics are in accordance with standards IEC 61869-1 and IEC 61869-2.

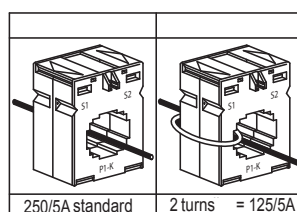
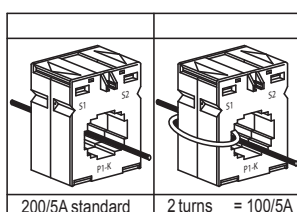
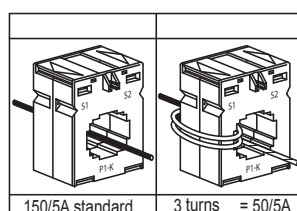
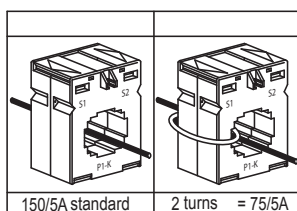
Active part of transformer consists of magnetic core made of cold rolled oriented steel and secondary winding, except current transformer STEM-081 which has both primary and secondary winding as well as magnetic core (in other types of transformers primary winding is cable or rail that passes through the transformer).

Active part of transformer have been covered with epoxy resin or put in polycarbonate insulating enclosure which gives him good insulating characteristics and mechanical protection even in the worst conditions of exploitation.

At almost all types of these current transformers secondary terminals have been covered with plastic cover that can be sealed.

APPLIANCE

These transformers are applicable for indoor mounting in cubicles and substations for rated voltages up to 0.72 kV, transformers ST 081 can be made also for outdoor mounting and they are called ST 081SM. They can be used for current circuits supplying in the measuring or protective devices. Standard versions of the current transformers have the ability to withstand 20% overload continuously (ext.120%) and on some types overload can be even higher upon the customers request.



MOUNTING

Transformers can be mounted in all kinds of positions on the rectangular rails or rounded conductors.

Transformer's holes must be chosen according to the primary conductor dimensions and they have been given in the outline drawings. Transformers also can be mounted on the special base with two fixing straps, that allows primary conductor to pass freely through the transformer.

SPECIAL CONSTRUCTIONS OF CURRENT TRANSFORMERS

There are some special constructions of current transformers like summation-type current transformers, current inter-transformers for differential relay protection and detachable cable transformers. All of them have been explained in details further in the catalogue.

HANDLING

During exploitation transformers must not be with open secondary circuit because it is dangerous for people who work with them as well as for the transformer itself.

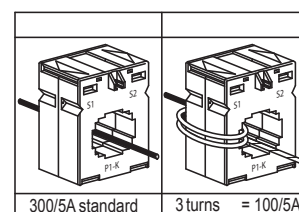
ACCURACY CLASS ENHANCEMENT AT CURRENT TRANSFORMERS WITH HOLE FOR VOLTAGES UP TO 0.72 kV

If you want to achieve better accuracy class with current transformers which has hole for primary conductor, which is often a case when primary current is small, that can be done by looping the primary conductor through the transformers hole.

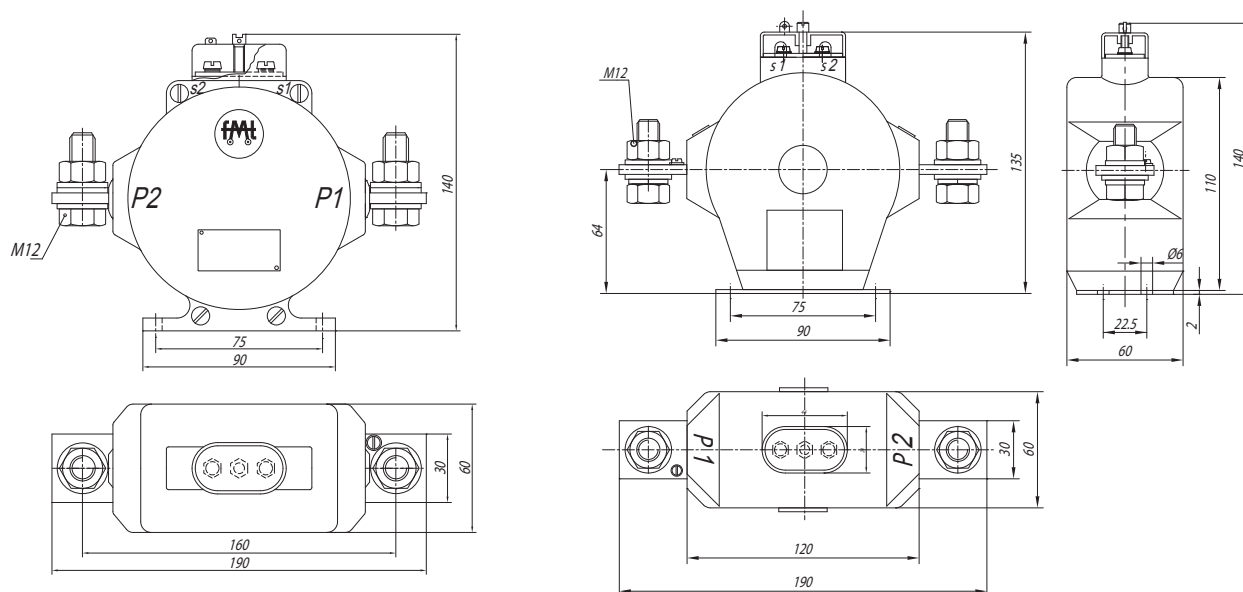
Example: Current transformer with transformation ratio 200/5 A/A can be used as current transformer with transformation ratio 100/5 A/A if we pull primary conductor two times through the transformer's hole. In that case technical characteristics of the transformer remains the same.

Current transformers that have that possibility have been specially marked.

Some examples of that have been given in the following sketches.



STEM 081



STEM 081-1

STEM 081-2



TECHNICAL CHARACTERISTICS FOR STEM 081

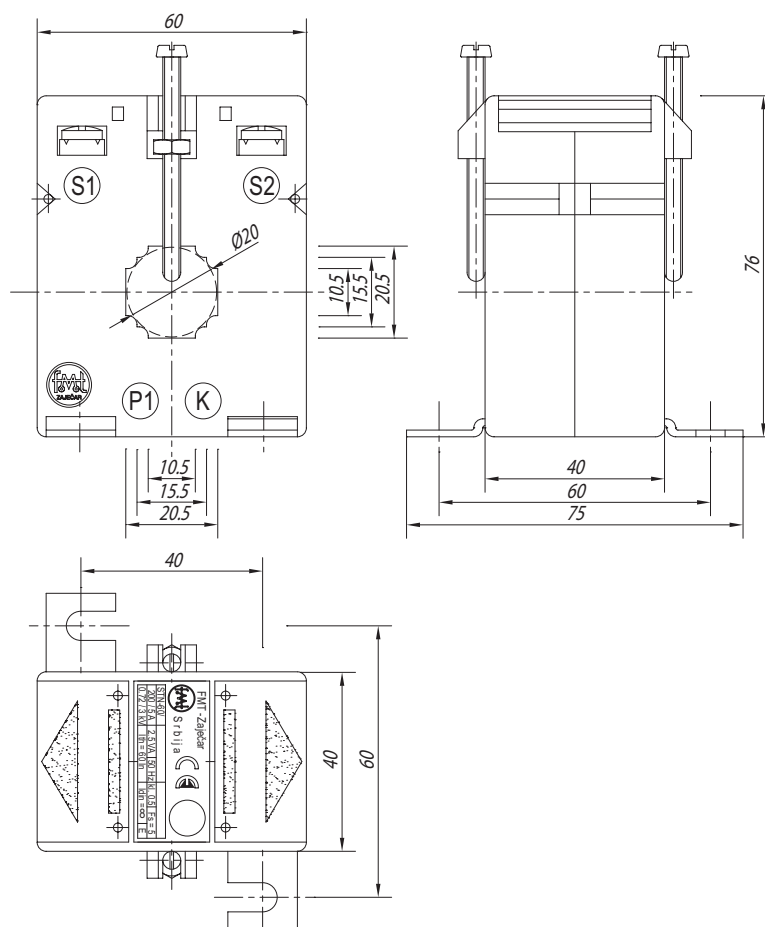
TECHNICAL DATA	STEM 081-1	STEM 081-2
Rated voltage (kV)	0,72	
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3	
Rated frequency (Hz)	50/60	
Rated primary current (A)	1 to 250	
Rated secondary current (A)	5 (or 1)	
Rated short-time thermal current	$I_{th} = 80 I_n$	
Rated dynamic current	$I_{dyn} = 2,5 I_{th}$	
Rated continuous thermal current	$I_{cth} = 1,2 I_n$	
Security factor	FS 5	
Temperature insulation class	E/B	
Mounting	Indoor	
Type of basic insulation	Polycarbonate	Epoxy resin
Valid standards	IEC 61869-1, IEC 61869-2	
Mass (kg)	~1,5	

Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.2	0.5	1
1; 5; 7.5; 10; 12.5; 15; 20; 25; 30; 40; 50; 60; 75; 100; 125; 150; 200; 250	2.5	●	●	●
	5	●	●	●
	10	●	●	●
	15	—	●	●

At the request of the customer features they can be different. The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.



STN 60/20



TECHNICAL CHARACTERISTICS FOR STN 60/20

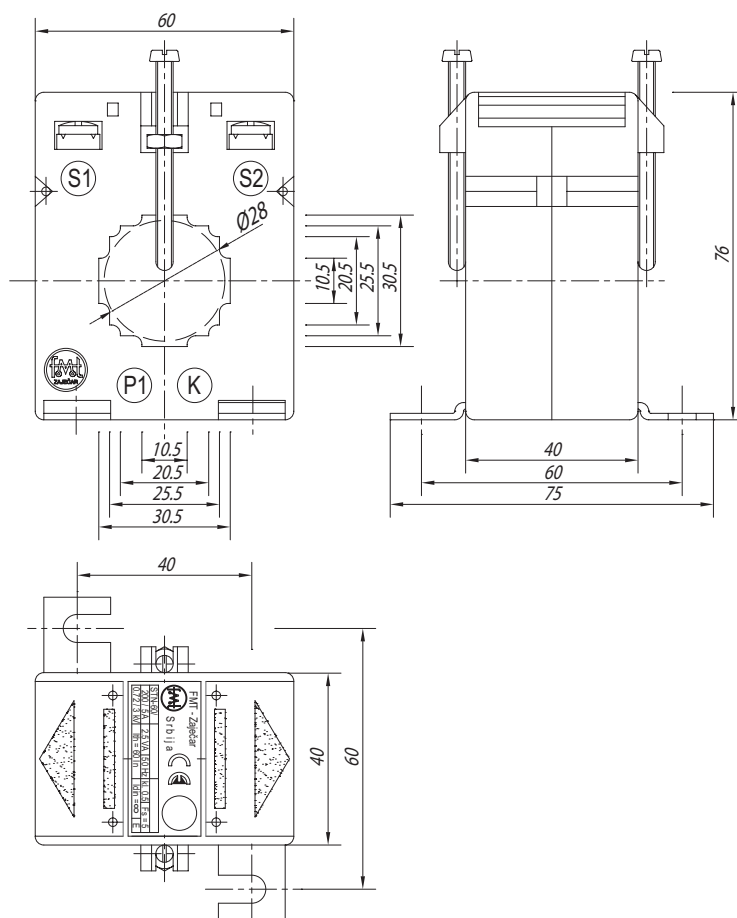
TECHNICAL DATA	STN 60/20
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=60 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Polycarbonate
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~0,48

Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
75	2.5	–	●	●
100	2.5	–	●	●
	5	–	–	●
150	2.5	●	●	●
	5	–	●	●
200	2.5	●	●	●
	5	●	●	●
	10	–	●	●
250; 300	2.5	●	●	●
	5	●	●	●
	10	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

STN 60/30



TECHNICAL CHARACTERISTICS FOR STN 60/30

TECHNICAL DATA	STN 60/30
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=60 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{ctn}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Polycarbonate
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~0,35

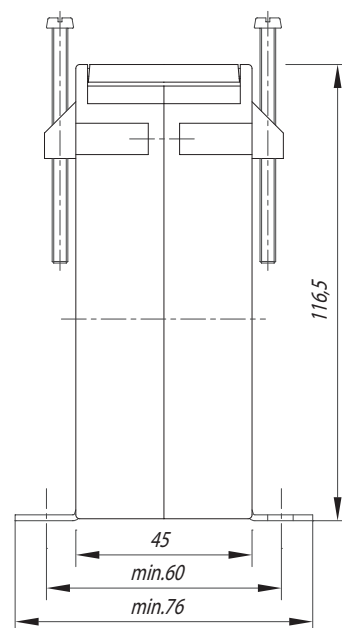
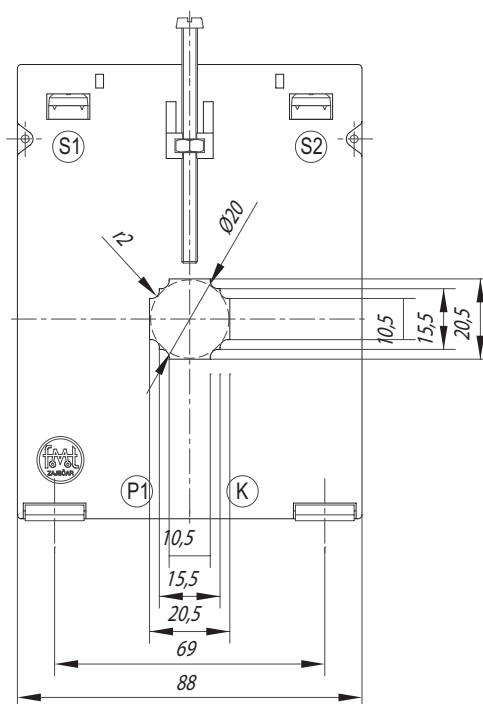
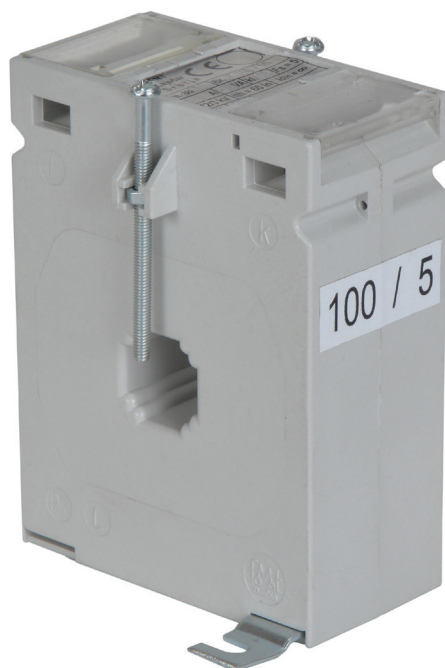
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
150	2.5	–	●	●
200	2.5	●	●	●
	5	–	●	●
250	2.5	●	●	●
	5	●	●	●
300	2.5	●	●	●
	5	●	●	●
400; 500; 600	2.5	●	●	●
	5	●	●	●
	10	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.



STN 88/20



TECHNICAL CHARACTERISTICS FOR STN 88/20

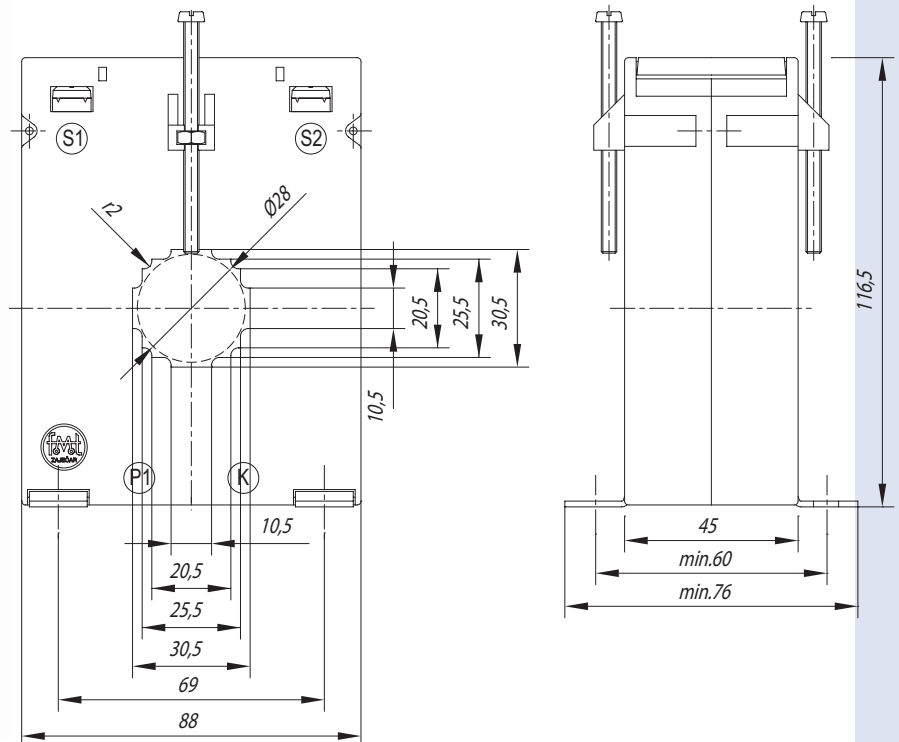
TECHNICAL DATA	STN 88/20
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=60 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Polycarbonate
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~1,3

Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
50	2.5	–	●	●
75	2.5	●	●	●
	5	–	●	●
100	2.5	●	●	●
	5	●	●	●
	10	–	–	●
150	2.5	●	●	●
	5	●	●	●
	10	–	●	●
200; 250; 300	2.5	●	●	●
	5	●	●	●
	10	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

STN 88/30



TECHNICAL CHARACTERISTICS FOR STN 88/30

TECHNICAL DATA	STN 88/30
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=60 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Polycarbonate
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~1,2

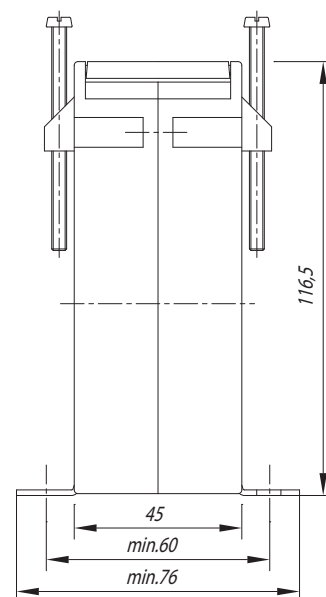
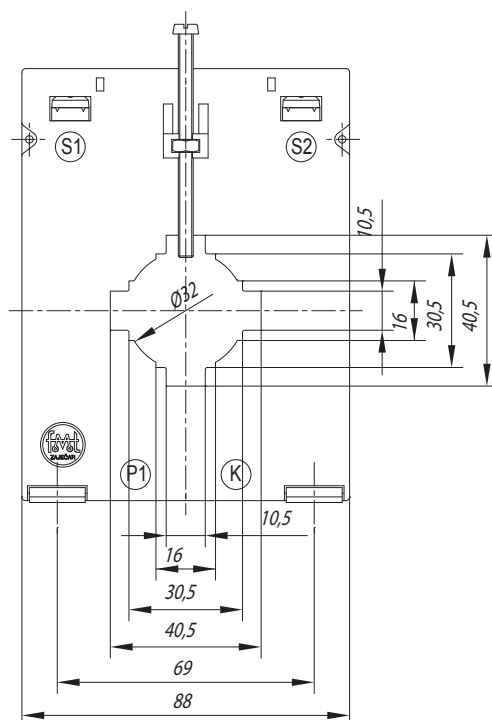
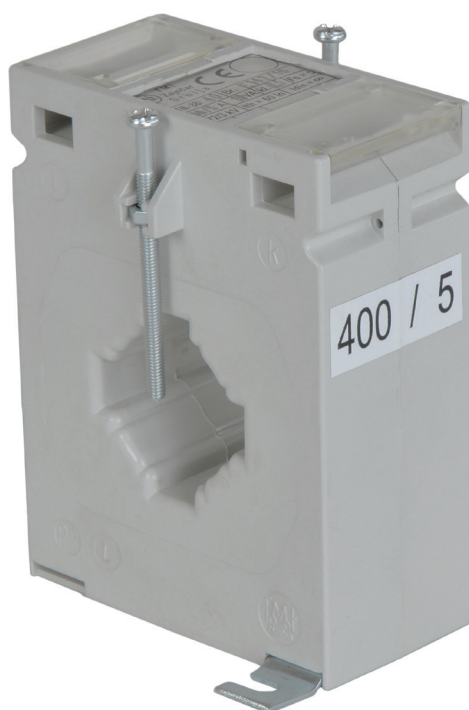
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
50	2.5	–	●	●
	5	–	–	●
100	2.5	●	●	●
	5	●	●	●
	10	–	–	●
150	2.5	●	●	●
	5	●	●	●
	10	–	●	●
200; 250; 300; 400; 500; 600	2.5	●	●	●
	5	●	●	●
	10	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.



STN 88/40



TECHNICAL CHARACTERISTICS FOR STN 88/40

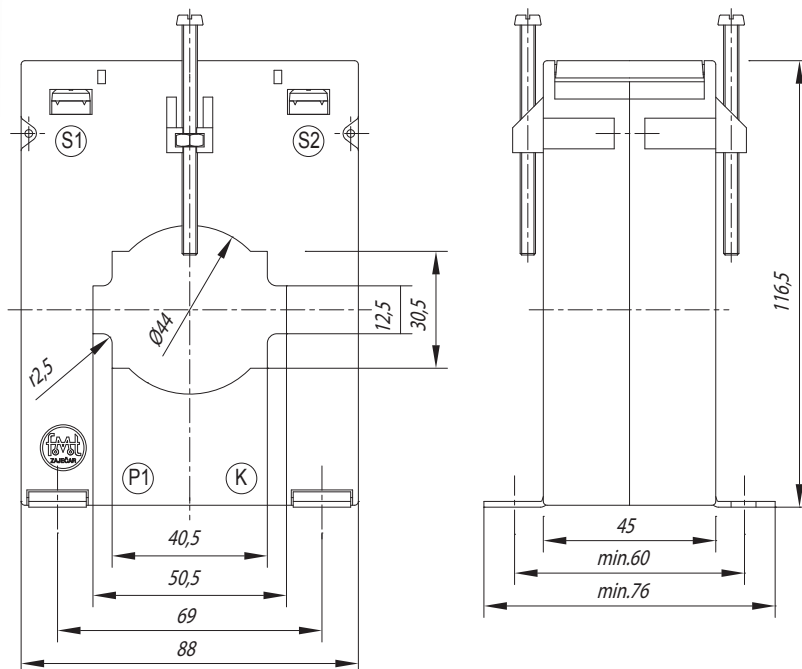
TECHNICAL DATA	STN 88/40
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=60 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Polycarbonate
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~1,1

Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
100	2.5	–	●	●
	5	–	–	●
150	2.5	●	●	●
	5	●	●	●
	10	–	–	●
200	2.5	●	●	●
	5	●	●	●
	10	–	●	●
250; 300; 400; 500; 600; 750; 800	2.5	●	●	●
	5	●	●	●
	10	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

STN 88/50



TECHNICAL CHARACTERISTICS FOR STN 88/50

TECHNICAL DATA	STN 88/50
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=60 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Polycarbonate
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~0,8

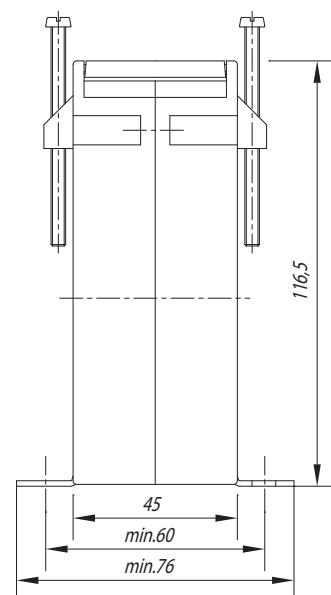
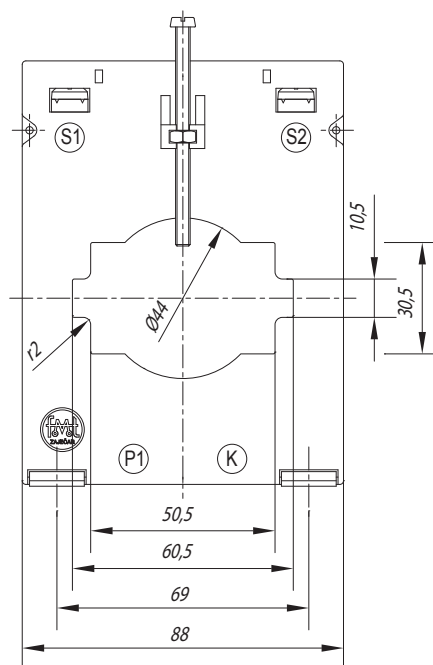
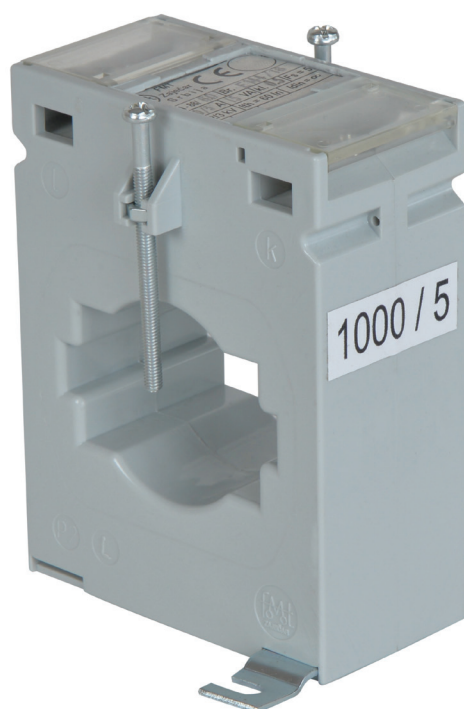
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
150	2.5	●	●	●
	5	●	●	●
200	2.5	●	●	●
	5	●	●	●
	10	–	●	●
250; 300; 400; 500 600; 750; 800; 1000	2.5	●	●	●
	5	●	●	●
	10	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.



STN 88/60



TECHNICAL CHARACTERISTICS FOR STN 88/60

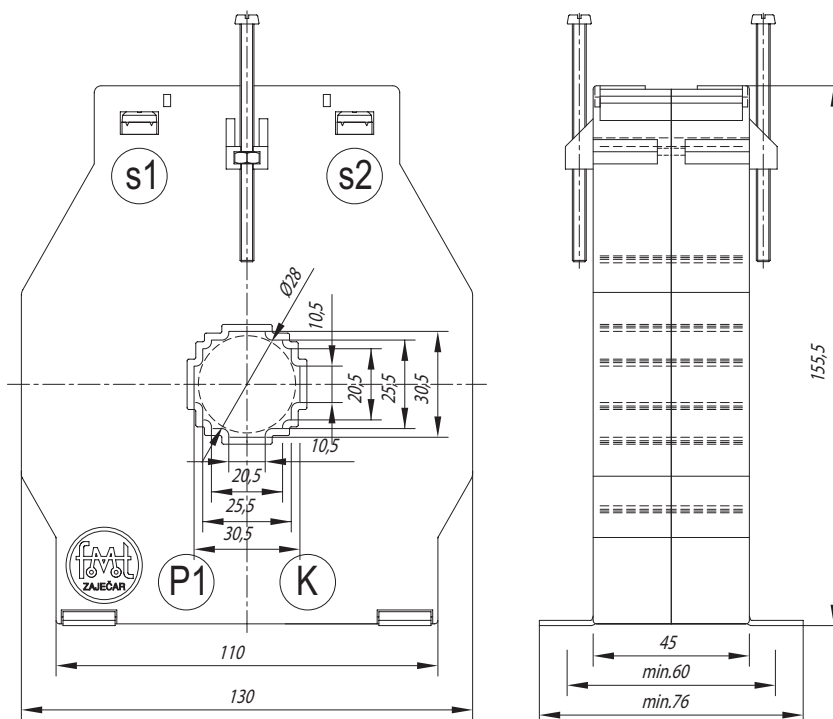
TECHNICAL DATA	STN 88/60
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=60 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Polycarbonate
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~0,65

Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
150	2.5	●	●	●
	5	–	●	●
200	2.5	●	●	●
	5	●	●	●
	10	–	–	●
250	2.5	●	●	●
	5	●	●	●
	10	–	●	●
300	2.5	●	●	●
	5	●	●	●
	10	–	●	●
400; 500; 600; 750; 800; 1000; 1200; 1250	2.5	●	●	●
	5	●	●	●
	10	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

STN 130/30



TECHNICAL CHARACTERISTICS FOR STN 130/30

TECHNICAL DATA	STN 130/30
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=60 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Polycarbonate
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~3,2

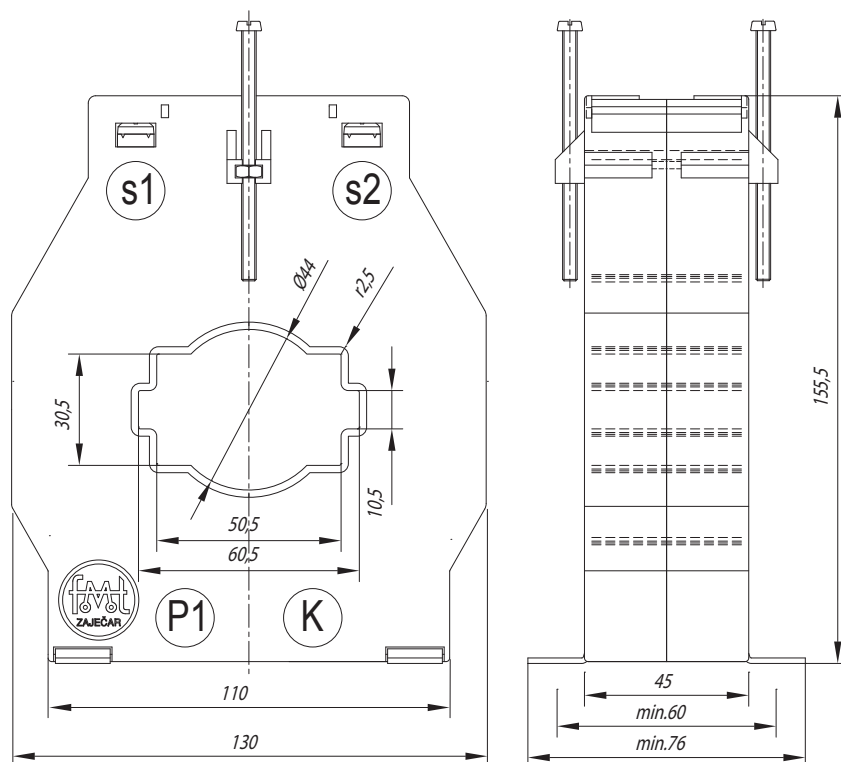
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
50	2.5	●	●	●
	5	●	●	●
	10	–	–	●
75	2.5	●	●	●
	5	●	●	●
	10	–	–	●
100	2.5	●	●	●
	5	●	●	●
	10	–	●	●
150	2.5	●	●	●
	5	●	●	●
	10	–	●	●
200; 250; 300; 400; 500; 600	2.5	●	●	●
	5	●	●	●
	10	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.



STN 130/60



TECHNICAL CHARACTERISTICS FOR STN 130/60

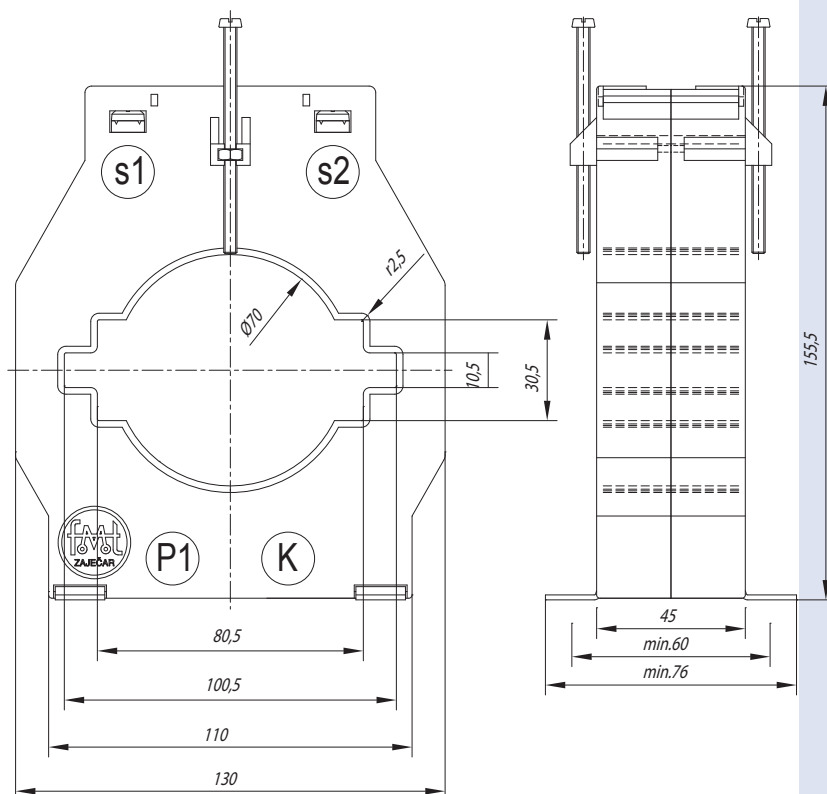
TECHNICAL DATA	STN 130/60
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=60 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Polycarbonate
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~2,7

Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
150; 200	2.5	●	●	●
	5	●	●	●
	10	–	–	●
250; 300; 400; 500; 600; 750; 800; 1000; 1200; 1250	2.5	●	●	●
	5	●	●	●
	10	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

STN 130/100



TECHNICAL CHARACTERISTICS FOR STN 130/100

TECHNICAL DATA	STN 130/100
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=60 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Polycarbonate
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~1,2

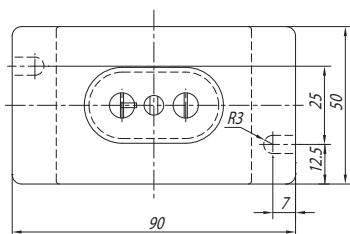
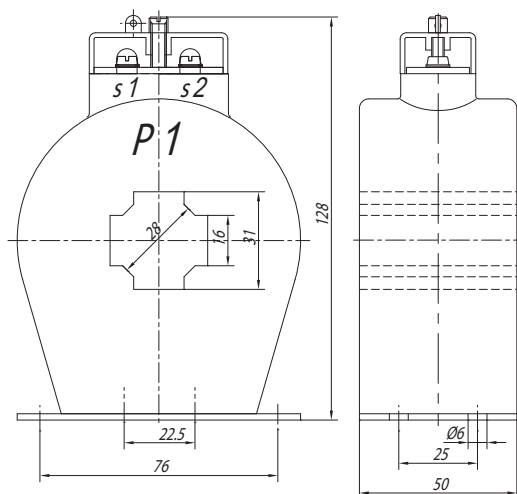
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
800; 1000; 1200; 1250; 1500; 2000; 2500; 3000; 4000	2.5	●	●	●
	5	●	●	●
	10	●	●	●
	15	●	●	●
	30	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.



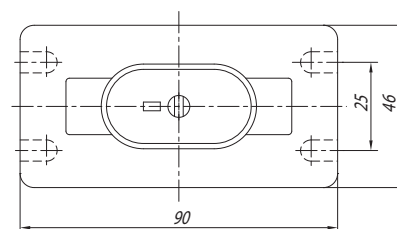
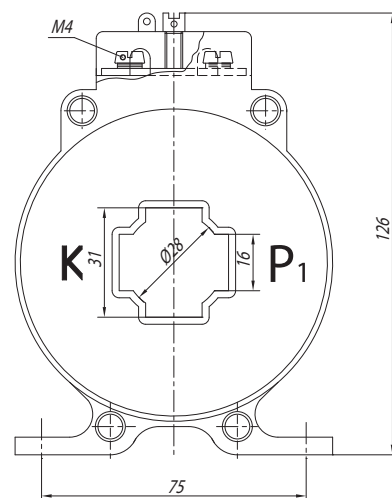
STEN 081-1.1, STEN 081-1.2, STEN 081-1.3, STEN 081-1.4



STEN 081-1.2



STEN 081-1.1



TECHNICAL CHARACTERISTICS FOR STEN 081-1.1, STEN 081-1.2, STEN 081-1.3, STEN 081-1.4

TECHNICAL DATA	STEN 081-1.1	STEN 081-1.2; 1.3; 1.4
Rated voltage (kV)	0,72	
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3	
Rated frequency (Hz)	50/60	
Rated secondary current (A)	5 or 1	
Rated short-time thermal current	$I_{th}=80 I_n$	
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited	
Rated continuous thermal current	$I_{cth}=1,2 I_n$	
Temperature insulation class	E/B	
Mounting	Indoor	
Type of basic insulation	Polycarbonate	Epoxy resin
Valid standards	IEC 61869-1, IEC 61869-2	
Mass (kg)	~0,95	

Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
200; 250	2.5	●	●	●
	5	●	●	●
	10	–	–	●
300; 400	2.5	●	●	●
	5	●	●	●
	10	●	●	●
500; 600	2.5	●	●	●
	5	●	●	●
	10	●	●	●
500; 600	15	●	●	●

Models STEN-081-1.1 and STEN-081-1.2 have the hole Ø28mm; 31x16mm.

Model STEN-081-1.3 has the hole Ø33mm.

Model STEN-081-1.4 has the hole Ø43mm.

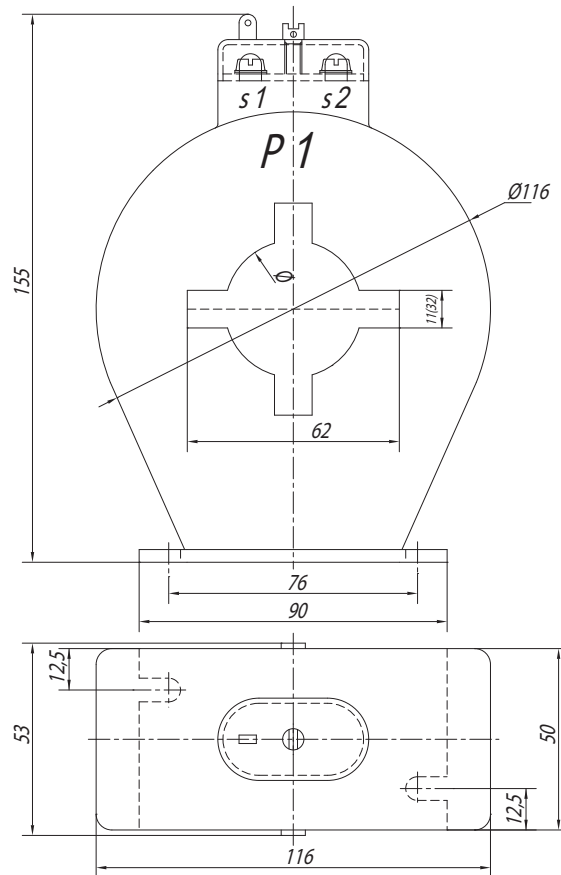
At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

STEN 081-2.1 i STEN 081-2.2



STEN 081-2.1



TECHNICAL CHARACTERISTICS FOR STEN 081-2.1, STEN 081-2.2

TECHNICAL DATA	STEN 081-2.1; STEN 081-2.2
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Epoxy resin
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~1,8

STEN 081-2.1				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
150; 200	2.5	●	●	●
250; 300; 400	2.5	●	●	●
	5	●	●	●
500; 600; 750; 800; 1000; 1200	2.5	●	●	●
	5	●	●	●
	10	●	●	●

STEN 081-2.2				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
200; 250	2.5	●	●	●
300; 400	2.5	●	●	●
	5	●	●	●
500; 600; 750; 800; 1000; 1200; 1500	2.5	●	●	●
	5	●	●	●
	10	●	●	●

Model STEN 081-2.1 has the hole Ø40mm; 62x11mm.

Model STEN 081-2.2 has the hole Ø45mm; 62x32mm.

At the request of the customer features they can be different.

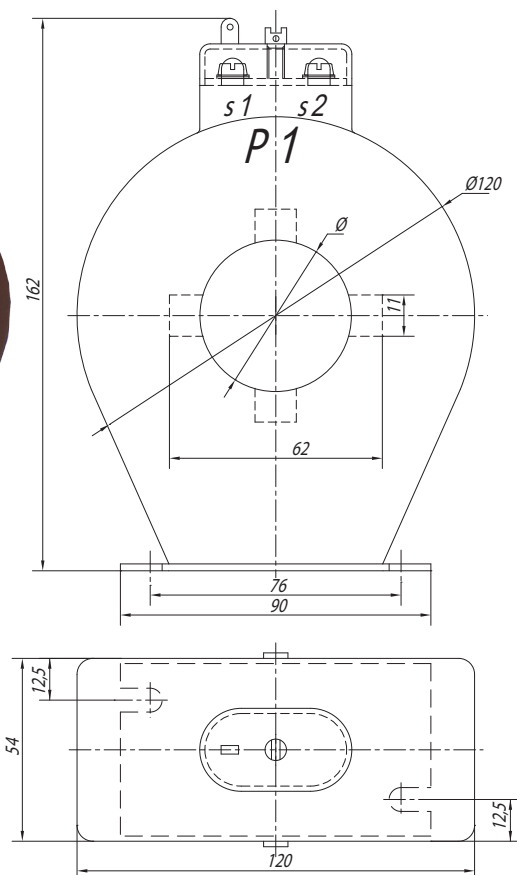
The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.



STEN 081-3.1, STEN 081-3.2 i STEN 081-3.3



STEN 081-3.2



STEN 081-3.3

TECHNICAL CHARACTERISTICS FOR STEN 081-3.1, STEN 081-3.2, STEN 081-3.3

TECHNICAL DATA	STEN 081-3.1, STEN 081-3.2, STEN 081-3.3
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Epoxy resin
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~2,5

STEN 081-3.1				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
300; 400; 500; 600	2.5	●	●	●
	5	●	●	●
	10	●	●	●
	15	●	●	●

STEN 081-3.2, STEN 081-3.3				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
600; 750; 800; 1000; 1200	2.5	●	●	●
	5	●	●	●
	10	●	●	●
	15	●	●	●

Model STEN 081-3.1 has the hole Ø44mm.

Model STEN 081-3.2 has the hole Ø52mm.

Model STEN 081-3.3 has the hole Ø51mm; 62x11mm.

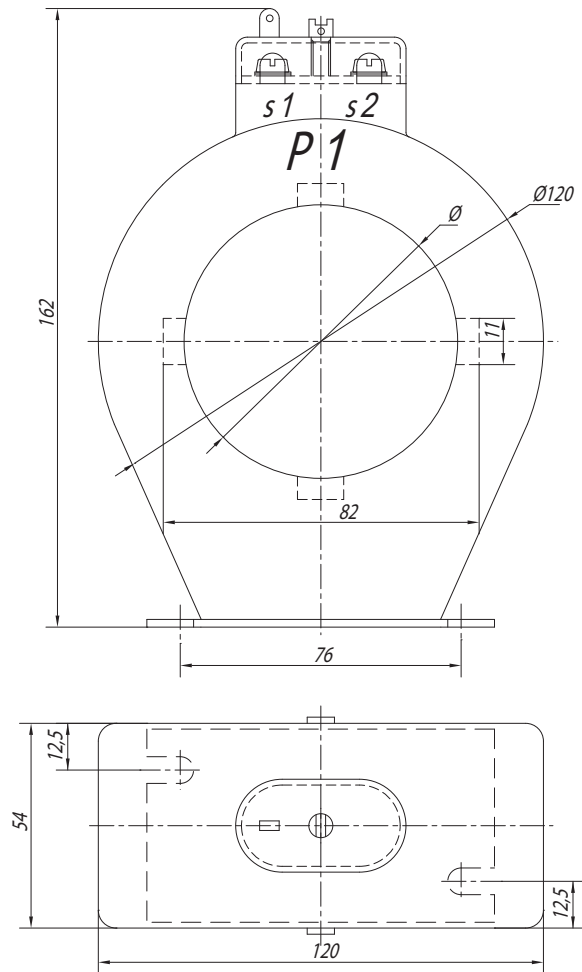
At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

STEN 081-3.4, STEN 081-3.5



STEN 081-3.5



TECHNICAL CHARACTERISTICS FOR STEN 081-3.4, STEN 081-3.5

TECHNICAL DATA	STEN 081-3.4, STEN 081-3.5
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Epoxy resin
Valid standards	IEC 61869-1, IEC 61869-2
Mass (kg)	~1,12

STEN 081-3.4, STEN 081-3.5				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
1000; 1200; 1250; 1500; 1600	2.5	●	●	●
	5	●	●	●
	10	●	●	●
	15	●	●	●

Model STEN 081-3.4 has the hole Ø82mm.

Model STEN 081-3.5 has the hole Ø71mm; 82x11mm.

At the request of the customer features they can be different.

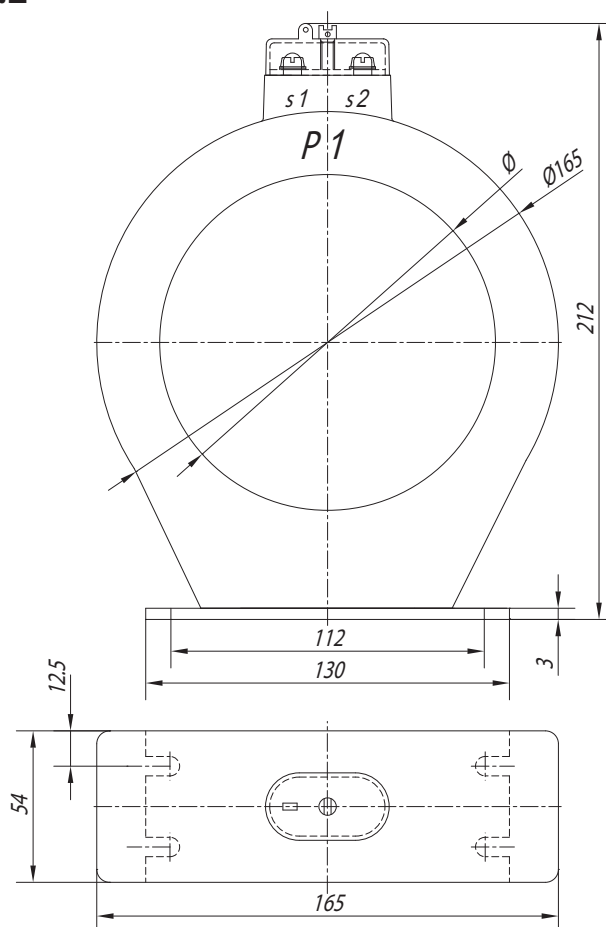
The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.



STEN 081-4.1 i STEN 081-4.2



STEN 081-4.2



TECHNICAL CHARACTERISTICS FOR STEN 081-4.1, STEN 081-4.2

TECHNICAL DATA	STEN 081-4.1, STEN 081-4.2
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Epoxy resin
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~3

STEN 081-4.1				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
750; 800; 1000; 1200; 1250; 1500; 1600; 2000; 2500; 3000	2.5	●	●	●
	5	●	●	●
	10	●	●	●
	15	●	●	●
	30	●	●	●

STEN 081-4.2				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
1000; 1200; 1250; 1500; 1600; 2000; 2500; 3000; 4000	2.5	●	●	●
	5	●	●	●
	10	●	●	●
	15	●	●	●
	30	●	●	●

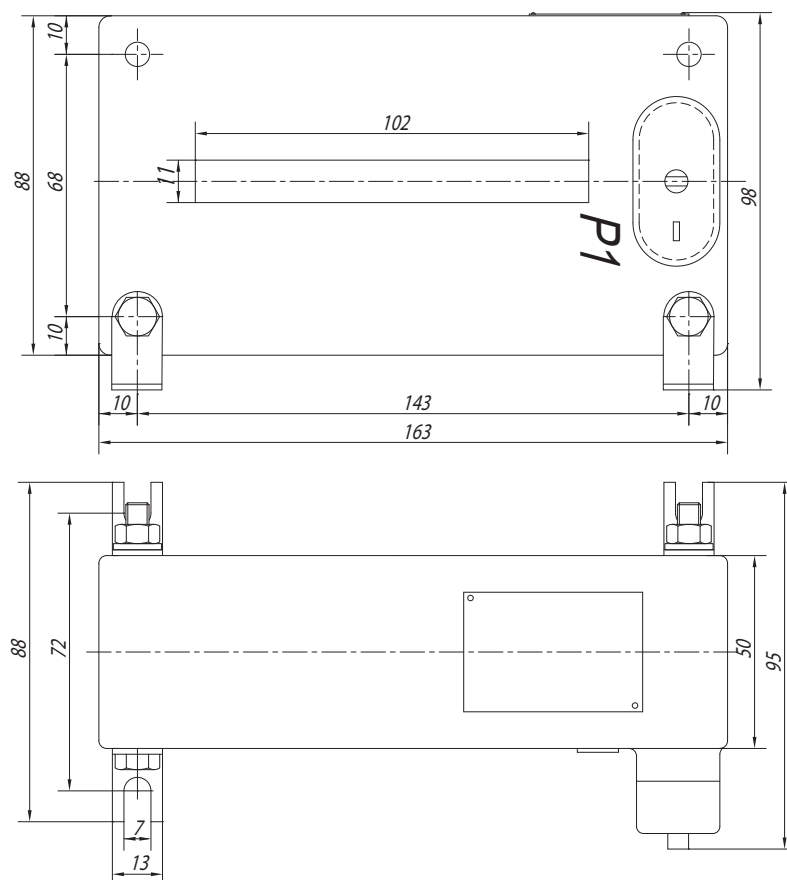
Model STEN 081-4.1 has the hole Ø102mm.

Model STEN 081-4.2 has the hole Ø120mm.

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

STEN 081-5



TECHNICAL CHARACTERISTICS FOR STEN 081-5

TECHNICAL DATA	STEN 081-5
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Epoxy resin
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~2,1

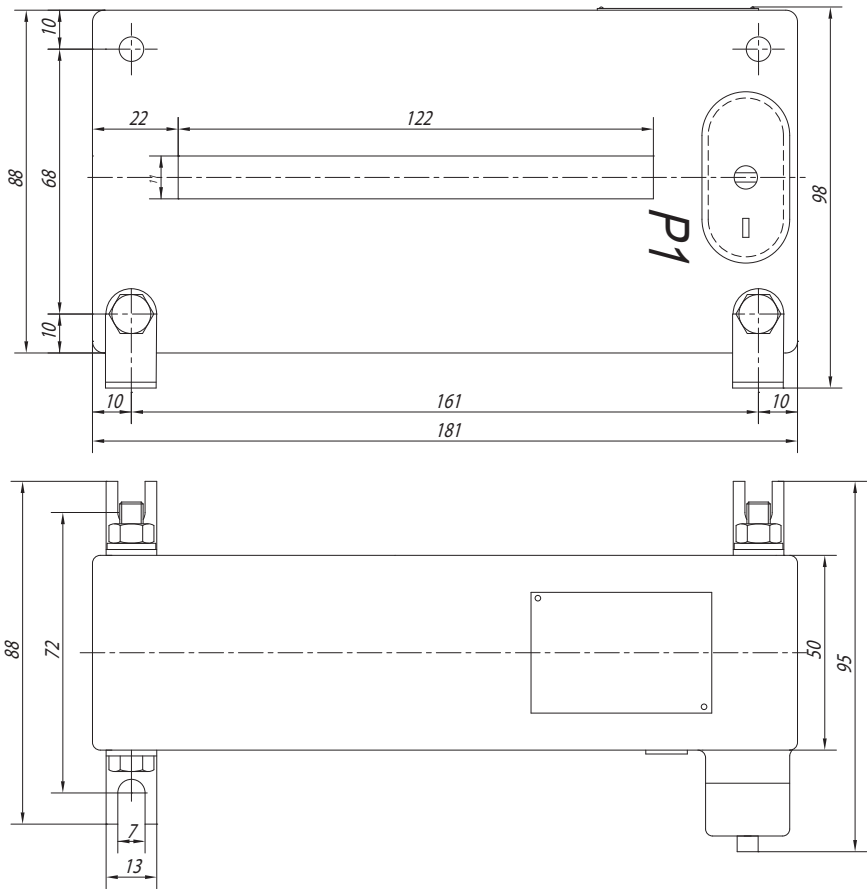
STEN 081-5				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
800	10	●	●	●
	15	●	●	●
1000; 1200; 1250; 1500; 1600; 2000	10	●	●	●
	15	●	●	●
	30	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.



STEN 081-6



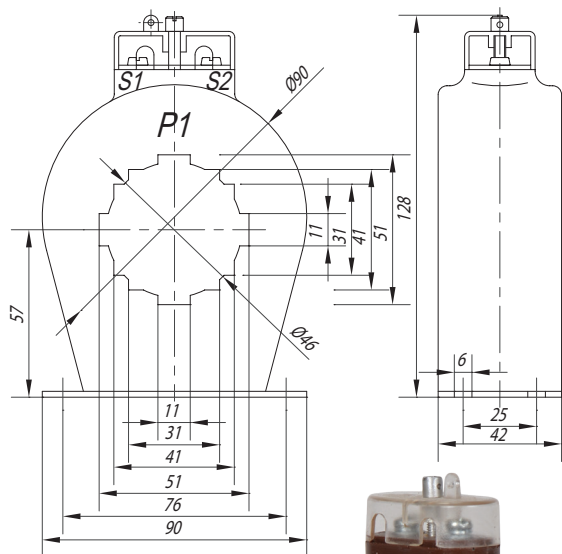
TECHNICAL CHARACTERISTICS FOR STEN 081-6

TECHNICAL DATA	STEN 081-6
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Epoxy resin
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Masa	~2,1

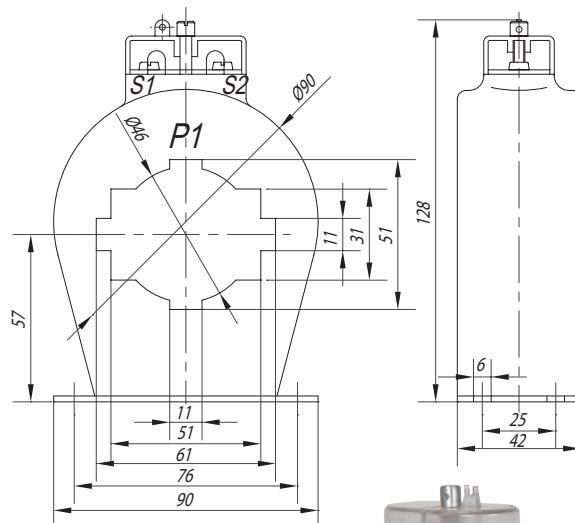
STEN 081-6				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
800	10	●	●	●
	15	●	●	●
1000; 1200; 1250; 1500; 1600; 2500	10	●	●	●
	15	●	●	●
	30	●	●	●

At the request of the customer features they can be different.
The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

STEN 081A, STEN 081B



STEN 081A



STEN 081B



TECHNICAL CHARACTERISTICS FOR STEN 081A, STEN 081B

TECHNICAL DATA	STEN 081A; STEN 081B
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	Indoor
Type of basic insulation	Epoxy resin
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Masa	~0,7

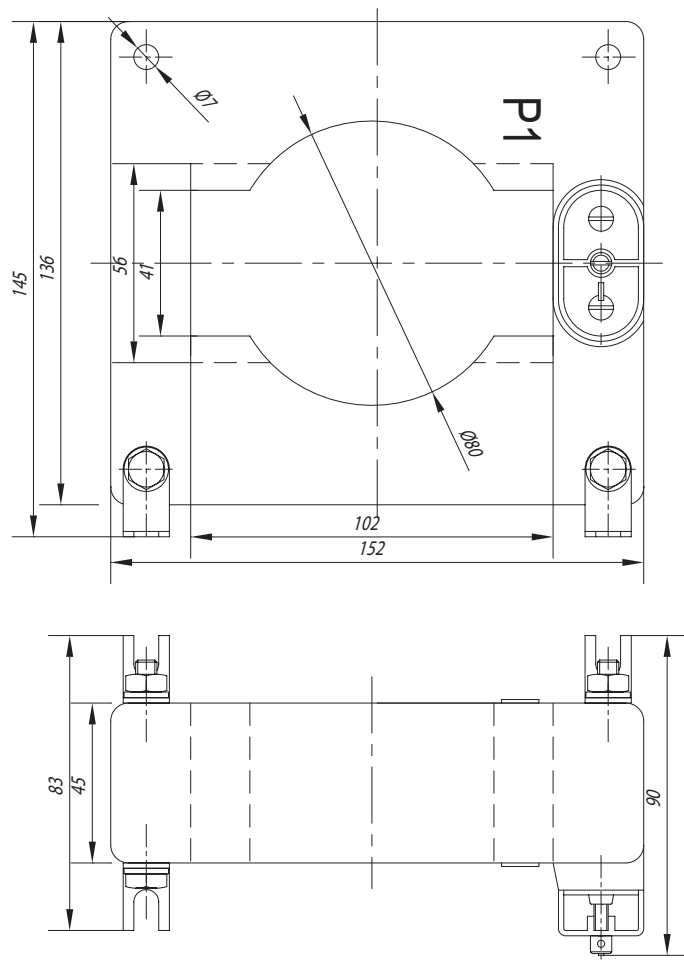
Primary current (A)	Power (VA)	STEN 081A			STEN 081B		
		Accuracy class			Accuracy class		
		0.5	1	3	0.5	1	3
		Secondary current 5A (or 1A)			Secondary current 5A (or 1A)		
250	2.5	●	●	●	●	●	●
	5	●	●	●	–	●	●
	10	–	●	●	–	–	–
300	2.5	●	●	●	●	●	●
	5	●	●	●	–	●	●
	10	–	●	●	–	–	–
400	2.5	●	●	●	●	●	●
	5	●	●	●	●	●	●
	10	●	●	●	–	●	●
500; 600	2,5	●	●	●	●	●	●
	5	●	●	●	●	●	●
	10	●	●	●	●	●	●
	15	●	●	●	–	–	–
750; 800; 1000	2,5; 5; 10; 15	●	●	●	●	●	●

At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.



STEN 081C



TECHNICAL CHARACTERISTICS FOR STEN 081C

TECHNICAL DATA	STEN 081C-1; STEN 081C-2
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Epoxy resin
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	~1,65

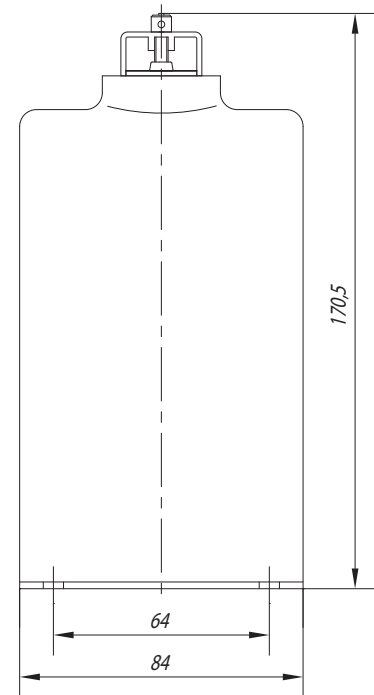
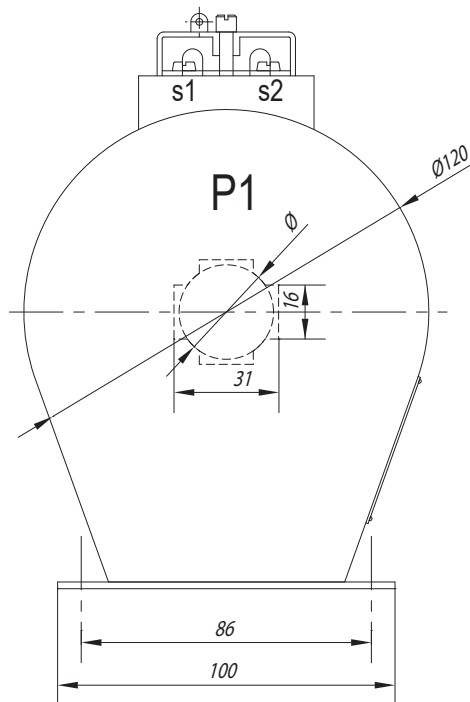
Primary current (A)	Power (VA)	STEN 081C-1			STEN 081C-2		
		Accuracy class					
		0.5	1	3	0.5	1	3
		Secondary current 5A (or 1A)					
800	5	●	●	●	●	●	●
	10	●	●	●	–	●	●
1000; 1200; 1250; 1500; 1600; 2000; 2500; 3000	5	●	●	●	●	●	●
	10	●	●	●	●	●	●
	15	●	●	●	●	●	●

Model STEN 081C-1 has the hole Ø80mm; 41x102.
Model STEN 081C-2 has the hole Ø80mm; 56x102mm.
At the request of the customer features they can be different.
The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

STEN 081D*



STEN 081-D-1



TECHNICAL CHARACTERISTICS FOR STEN 081D*

TECHNICAL DATA STEN 081D	STEN 081D-1	STEN 081D-2	STEN 081D-3	STEN 081D-4
Rated voltage (kV)	0,72			
Ispitni napon 50 Hz, 1 min (eff.) (kV)	3			
Rated frequency (Hz)	50/60			
Rated secondary current (A)	5 or 1			
Rated short-time thermal current	$I_{th}=80 I_n$			
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited			
Rated continuous thermal current	$I_{cth}=1,2 I_n$			
Temperature insulation class	E/B			
Mounting	Indoor			
Type of basic insulation	Epoxy resin			
Valid standards	IEC 61869-1, IEC 61869-2			
Mass (kg)	~4,8	~4,8	~4,1	~4,1

Model STEN 081D-1 has the hole Ø28mm, 31x16 mm.

Model STEN 081D-2 has the hole Ø32mm.

Model STEN 081D-3 has the hole Ø52mm.

Model STEN 081D-4 has the hole Ø60mm.

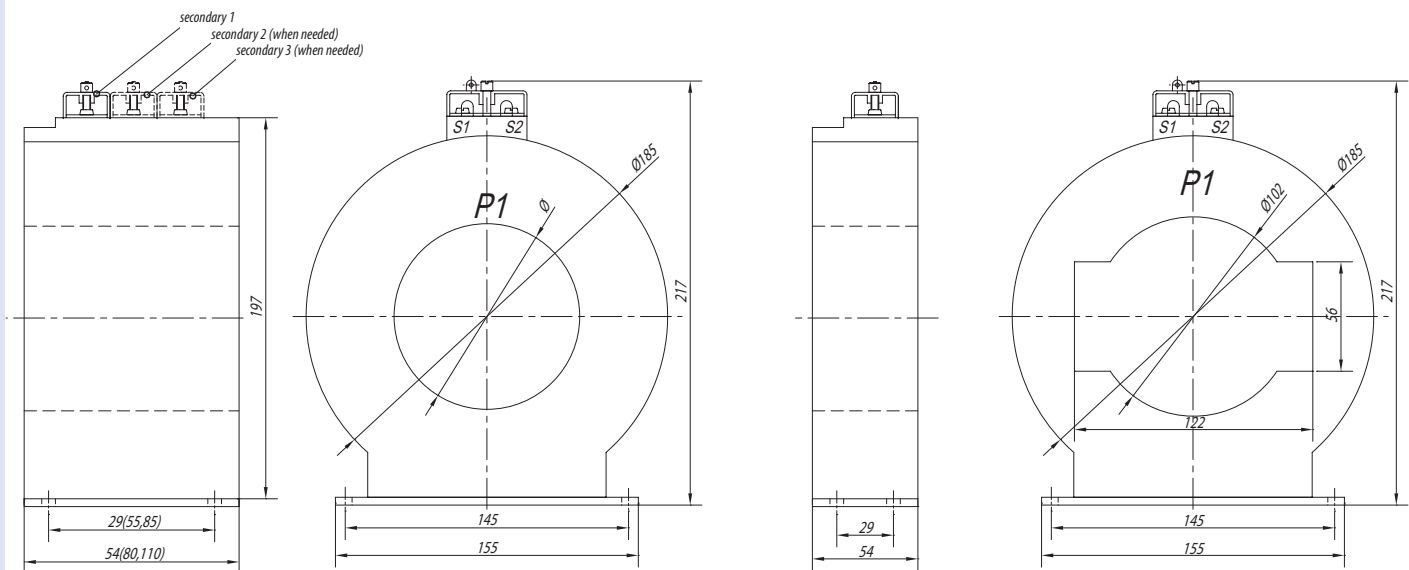
At the request of the customer features they can be different.

The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

Primary current (A)	Power (VA)	STEN 081D-1; STEN 081D-2				STEN 081D-3; STEN 081D-4			
		Accuracy class				Accuracy class			
		0.5	1	3	5P10	0.5	1	3	5P10
50	2.5	●	●	●	–	–	–	–	–
	5	–	–	●	–	–	–	–	–
75	2.5	●	●	●	●	–	●	●	–
	5	●	●	●	●	–	●	●	–
100	2.5	●	●	●	●	–	●	●	●
	5	●	●	●	●	–	●	●	–
	10	●	●	●	–	–	–	●	–
150	2.5	●	●	●	●	●	●	●	●
	5	●	●	●	●	●	●	●	–
	10	●	●	●	●	–	●	●	–
	15	–	●	●	–	–	–	●	–
200	2.5	●	●	●	●	●	●	●	●
	5	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●	–
	15	●	●	●	●	–	●	●	–
300; 400	2.5	●	●	●	●	●	●	●	●
	5	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●	–
	15	●	●	●	●	–	●	●	–
500; 500; 600; 750; 800; 1000	5	–	–	–	–	●	●	●	●
	10	–	–	–	–	●	●	●	–
	15	–	–	–	–	–	●	●	–



ST 081-1.1, ST 081-1.2, ST 081-1.3, ST 081-1.4, ST 081-1.5, ST 081-1.6, ST 081-1.7, ST 081-1.8



ST 081 - 1 core, ST 082 - 2 cores, ST 083 - 3 cores, 'sp' - secondary switchable, 'SM' - outdoor mounting

ST 081-1.8

LOW-VOLTAGE CURRENT TRANSFORMERS

ST 081-1.1, ST 081-1.2, ST 081-1.3, ST 081-1.4, ST 081-1.5, ST 081-1.6, ST 081-1.7, ST 081-1.8

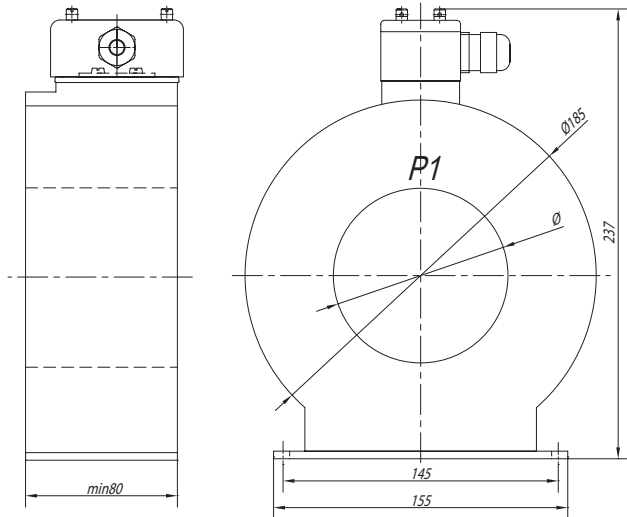
TECHNICAL DATA	ST 081-1.1, ST 081-1.2, ST 081-1.3, ST 081-1.4, ST 081-1.5, ST 081-1.6, ST 081-1.7, ST 081-1.8
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor/Outdoor
Type of basic insulation	Epoxy resin
Valid standards	IEC 61869-1, IEC 61869-2
Mass (kg)	2,5 - 16,5

These transformers have the following holes:

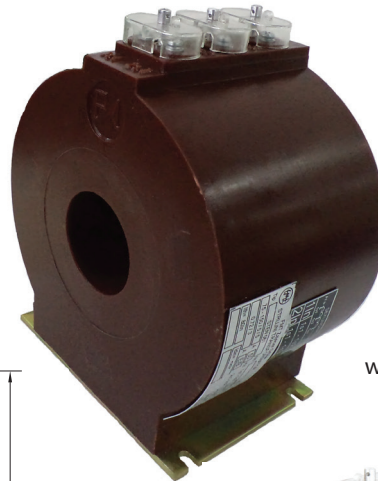
ST-081-1.1 has the hole Ø52mm;
 ST-081-1.2 has the hole Ø70mm;
 ST-081-1.3 has the hole Ø92mm;
 ST-081-1.4 has the hole Ø102mm;
 ST-081-1.5 has the hole Ø120mm;
 ST-081-1.6 has the hole Ø132mm;
 ST-081-1.7 has the hole Ø51mm and for the rail 60x10mm;
 ST-081-1.8 has the hole Ø102mm and for the rail 122x56mm.
 Our factory produces these transformers as protective current transformers for primary currents from 50 to 300A, but on the customer's request they can be made for different rated power and accuracy class and also they can be made as measuring current transformers. Also they can be made for different primary currents and with 1, 2 or 3 cores as well as secondary switchable (with designation "sp"), with 1 or 2 magnetic cores. In the table you can find rated power for different rated primary currents and for accuracy class 5(10) P10. The width of the casting piece can be 54mm, 80mm and 110mm, or maximal 120mm. The transformer's mass depends on the current transformation ratio, accuracy class and rated power and it can vary.

Also we can make these type of transformers for outdoor mounting with special secondary connectors cover made of aluminum and silicon alloy and with casing made of epoxy resin assumed for outdoor mounting. Then the type designation has the mark "SM" added at the end.

*Note: when the transformation ratio is low, depending on the rated power and requested inside diameter of the transformer, most often it can be made with accuracy class 10P10.



ST 081 SM


ST 081-1.1
with 3 secondary
windings

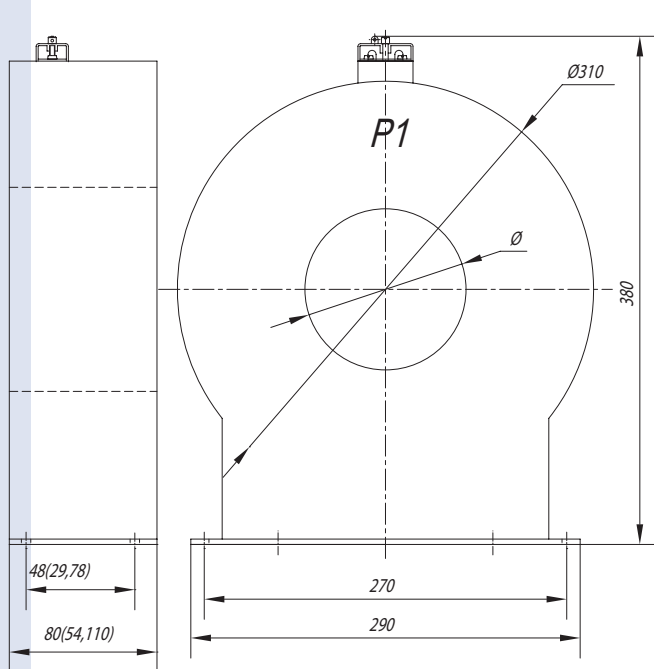

ST 081-1.3

ST 081-1.1, ST 081-1.2, ST 081-1.3, ST 081-1.4, ST 081-1.5, ST 081-1.6, ST 081-1.7, ST 081-1.8

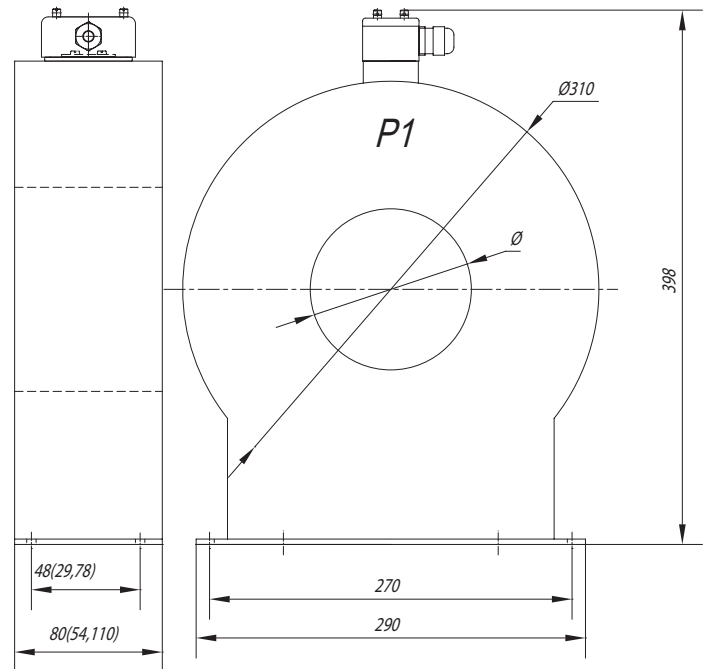
	Rated primary current (A)	Secondary current 5A (or 1A)							
		Accuracy class 5P10 (10P10)*							
		ST 081-1.1	ST 081-1.2	ST 081-1.3	ST 081-1.4	ST 081-1.5	ST 081-1.6	ST 081-1.7	ST 081-1.8
Rated power (VA)	50	2,5; 5	2,5; 5	2,5; 5	2,5; 5	2,5	–	2,5; 5	–
	75	2,5; 5; 10	2,5; 5; 10	2,5; 5	2,5; 5	2,5	2,5	2,5; 5; 10	2,5
	100	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10	2,5; 5; 10	2,5; 5	2,5	2,5; 5; 10; 15	2,5
	125	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10	2,5; 5; 10	2,5; 5	2,5; 5	2,5; 5; 10; 15	2,5; 5
	150	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5	2,5; 5	2,5; 5; 10; 15	2,5; 5
	200	2,5; 5; 10; 15; 30	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10	2,5; 5	2,5; 5; 10; 15	2,5; 5
	250	2,5; 5; 10; 15; 30	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10	2,5; 5; 10; 15	2,5; 5; 10
	300	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15	2,5; 5; 10	2,5; 5; 10; 15; 30	2,5; 5; 10



ST 081-2.1, ST 081-2.2, ST 081-2.3, ST 081-2.4, ST 081-2.5, ST 081-2.6, ST 081-2.7, ST 081-2.8



ST 081-2*



ST 081SM-2*

LOW-VOLTAGE CURRENT TRANSFORMERS

ST 081-2.1, ST 081-2.2, ST 081-2.3, ST 081-2.4, ST 081-2.5, ST 081-2.6, ST 081-2.7, ST 081-2.8

TECHNICAL DATA	ST 081-2.1, ST 081-2.2, ST 081-2.3, ST 081-2.4, ST 081-2.5, ST 081-2.6, ST 081-2.7, ST 081-2.8
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	Indoor/Outdoor
Type of basic insulation	Epoxy resin
Valid standards	IEC 61869-1, IEC 61869-2
Mass (kg)	4 - 60

These transformers have the following holes:

ST-081-2.1 has the hole Ø120 mm;
ST-081-2.2 has the hole Ø152 mm;
ST-081-2.3 has the hole Ø180 mm;
ST-081-2.4 has the hole Ø220 mm;
ST-081-2.5 has the hole Ø200 mm;
ST-081-2.6 has the hole Ø70 mm;
ST-081-2.7 has the hole Ø260 mm;
ST-081-2.8 has the hole Ø32 mm.

Our factory produces these transformers as protective current transformers for primary currents from 10 to 300A, but on the customer's request they can be made for different rated power and accuracy class and also they can be made as measuring current transformers. Also they can be made for different primary currents and with 1, 2 or 3 cores as well as secondary switchable (with designation "sp"), with 1 or 2 magnetic cores. In the table you can find rated power for different rated primary currents and for accuracy class 5(10)P10. The width of the casting piece can be 54mm, 80mm and 110mm, or maximal 120mm. The transformer's mass depends on the current transformation ratio, accuracy class and rated power and it can vary.

Also we can make these type of transformers for outdoor mounting with special secondary connectors cover made of aluminum and silicon alloy and with casing made of epoxy resin assumed for outdoor mounting. Then the type designation has the mark "SM" added at the end.

*Note: when the transformation ratio is low, depending on the rated power and requested inside diameter of the transformer, it can be made with accuracy class 10P10 standard.

**Note: these transformers we can make only for the secondary current 1A.



ST 081-2.2SM



ST 081-2.6

ST 081 - 1 core

ST 082 - 2 cores

ST 083 - 3 cores

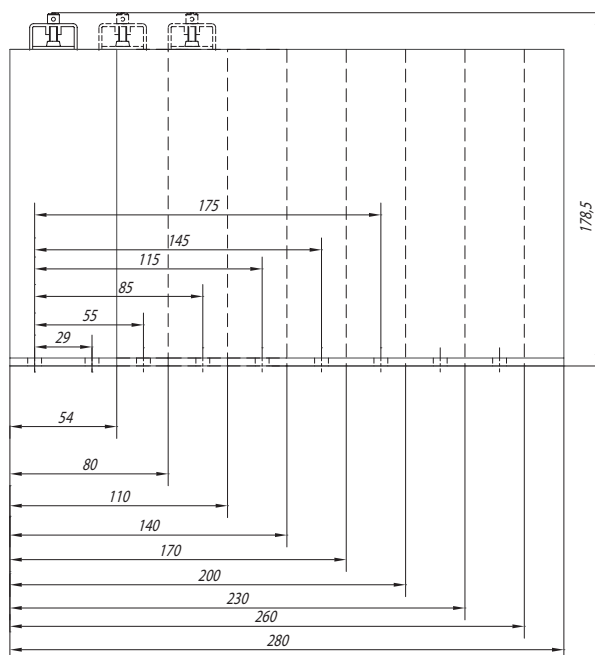
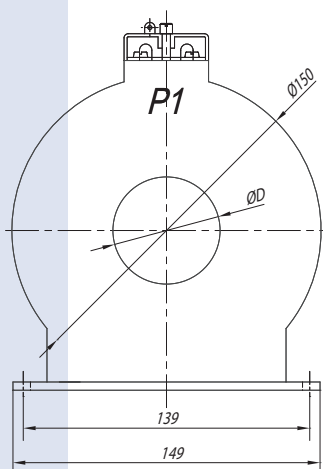
'sp' - secondary switchable

'SM' - outdoor mounting

ST 081-2.1, ST 081-2.2, ST 081-2.3, ST 081-2.4, ST 081-2.5, ST 081-2.6, ST 081-2.7, ST 081-2.8									
	Rated primary current (A)	Secondary current 5A (or 1A)**							
		Accuracy class 5P10(10P10)*							
		ST 081-2.1	ST 081-2.2	ST 081-2.3	ST 081-2.4	ST 081-2.5	ST 081-2.6	ST 081-2.7	ST-081-2.8
Rated power (VA)	10	2,5**	2,5**	-	-	-	2,5**	-	2,5**
	15	2,5**	2,5**	2,5**	-	-	2,5**	-	2,5**, 5**
	20	2,5; 5	2,5; 5	2,5	-	2,5**	2,5; 5**	-	2,5; 5; 10**
	30	2,5; 5	2,5; 5;	2,5; 5;	2,5	2,5	2,5; 5; 10**	-	2,5; 5; 10; 15**
	40	2,5; 5; 10	2,5; 5; 10	2,5; 5	2,5	2,5; 5	2,5; 5; 10	-	2,5; 5; 10; 15
	50	2,5; 5; 10; 15	2,5; 5; 10	2,5; 5	2,5; 5	2,5; 5	2,5; 5; 10; 15	-	2,5; 5; 10; 15
	75	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10	2,5; 5	2,5; 5; 10	2,5; 5; 10; 15	2,5	2,5; 5; 10; 15; 30
	100	2,5; 5; 10; 15; 30	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10	2,5; 5; 10	2,5; 5; 10; 15; 30	2,5; 5	2,5; 5; 10; 15; 30
	125	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15	2,5; 5; 10	2,5; 5; 10; 15	2,5; 5; 10; 15; 30	2,5; 5	2,5; 5; 10; 15; 30
	150	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10; 15; 30	2,5; 5	2,5; 5; 10; 15; 30
	200	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10; 15; 30	2,5; 5	2,5; 5; 10; 15; 30
	250	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10	2,5; 5; 10; 15; 30
	300	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10; 15; 30	2,5; 5; 10	2,5; 5; 10; 15; 30



ST 081-4.1, ST 081-4.2, ST 081-4.3



ST 081-4.1

LOW-VOLTAGE CURRENT TRANSFORMERS ST 081-4.1, ST-081-4.2, ST-081-4.3

TECHNICAL DATA	ST 081-4.1, ST 081-4.2, ST 081-4.3
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	Indoor/Outdoor
Type of basic insulation	Epoxy resin
Valid standards	IEC 61869-1, IEC 61869-2
Mass (kg)	3 - 15

The examples of the type designation:

ST-081-4.2 - with 1 core, hole Ø70mm;

ST-082-4.1 - with 2 cores, hole Ø52mm;

ST-081-4.3-SM sp - with 1 core, outdoor mounting, secondary switchable, hole Ø92mm.

These transformers we can make with the following holes:

ST-081-4.1 has the hole Ø52 mm;

ST-081-4.2 has the hole Ø70 mm;

ST-081-4.3 has the hole Ø92 mm.

	Rated primary current (A)	Secondary current 5A or 1A		
		Accuracy class 5P10		
		ST 081-4.1	ST 081-4.2	ST 081-4.3
Rated power (VA)	50	2,5; 5; 10	2,5; 5; 10	2,5; 5
	75	2,5; 5; 10	2,5; 5; 10	2,5; 5; 10
	100	2,5; 5; 10; 15	2,5; 5; 10; 15	2,5; 5; 10
	150	2,5; 5; 10; 15; 30	2,5; 5; 10; 15	2,5; 5; 10; 15
	200	2,5; 5; 10; 15; 30	2,5; 5; 10; 30	2,5; 5; 10; 15
	250	2,5; 5; 10; 15; 30	2,5; 5; 10; 30	2,5; 5; 10; 30
	300	2,5; 5; 10; 15; 30	2,5; 5; 10; 15	2,5; 5; 10; 15; 30

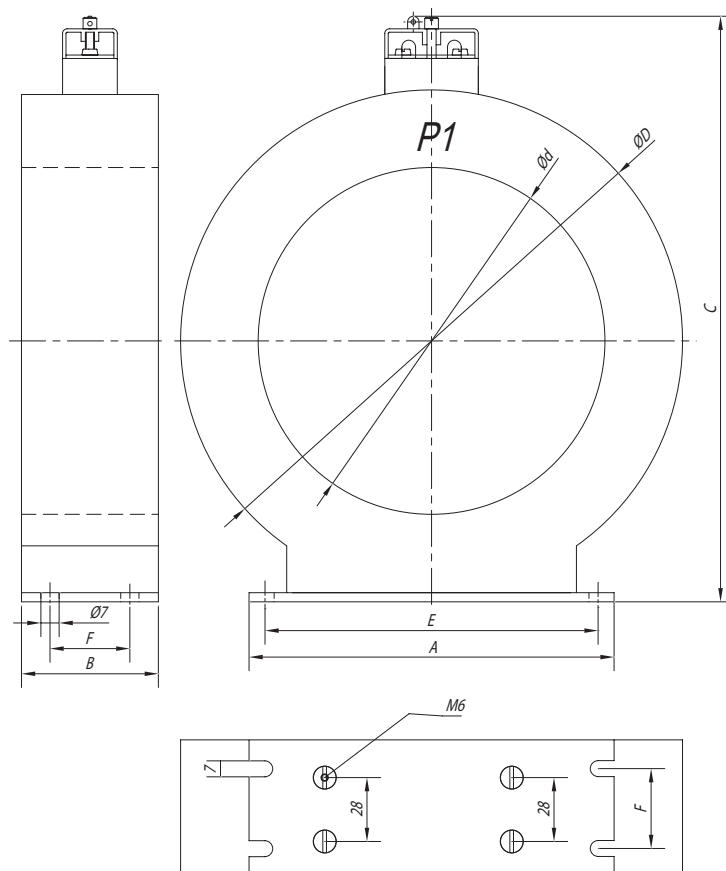
The width of the casting piece depending on the requested characteristics. Standard widths can be 54, 80, 110, 140, 170, 200, 230, 260 and 280mm.

Our factory produces these transformers as protective current transformers for indoor mounting, for primary currents from 50 to 300A. On the customer's request they can be made for different rated power and accuracy class and also they can be made as measuring current transformers. Also they can be made for different primary currents and with 1, 2 or 3 cores as well as secondary switchable (with designation "sp"), with 1 or 2 magnetic cores or for outdoor mounting (with designation "SM"). In the table there are data of rated power for different rated primary currents. The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

ST 081A, ST 081C



ST 081-C



CURRENT TRANSFORMERS ST 081A, ST 081C

Type of the transformer	Dimensions (mm)							Mass (kg)
	A	B	C	ØD	Ød	E	F	
ST 081A	175	47	246,5	186	132	161	28	~4
ST 081C	160	60	256,5	220	152	146	35	~6

TECHNICAL DATA	ST 081A	ST 081C
Nazivni napon (kV)	0,72	
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3	
Rated frequency (Hz)	50 / 60	
Accuracy class	10P	
Rated secondary current (A)	5 (or 1)	
Rated short-time thermal current	$I_{th} = 80 I_n$	
Rated dynamic current	$I_{dyn} = 2,5 I_{th}$ Practically unlimited	
Rated continuous thermal current	$I_{cth} = 1,2 I_n$	
Temperature insulation class	E/B	
Mounting	Indoor	
Type of basic insulation	Epoxy resin	
Valid standards	SRPS EN 61869-1, SRPS EN 61869-2	
Mass (kg)	~ 4	~ 6

Secondary current 5A or 1A									
Primary current (A)	Power (VA)	ST 081A				ST 081C			
		Accuracy class				Accuracy class			
		10P5	10P10	10P15	10P20	10P5	10P10	10P15	10P20
30	1,25	-	-	-	-	●	-	-	-
	40	1,25	-	-	-	●	●	-	-
50	1,25	●	-	-	-	●	●	-	-
	2,5	-	-	-	-	●	-	-	-
75	1,25	●	-	-	-	●	●	●	-
	2,5	●	-	-	-	●	-	-	-
	5	-	-	-	-	●	-	-	-
100	1,25	●	●	-	-	●	●	-	-
	2,5	●	-	-	-	●	-	-	-
	5	-	-	-	-	-	-	-	-
150	1,25	●	●	-	-	●	●	●	●
	2,5	●	-	-	-	●	●	●	-
	5	●	-	-	-	●	-	-	-
200; 250	1,25	●	●	●	-	●	●	●	●
	2,5	●	●	-	-	●	●	●	●
	5	●	-	-	-	●	●	-	-
300	1,25	●	●	●	●	●	●	●	●
	2,5	●	●	-	-	●	●	●	●
	5	●	-	-	-	●	●	●	-
	10	●	-	-	-	●	-	-	-
300	15	-	-	-	-	●	-	-	-

At the request of the customer features they can be different.

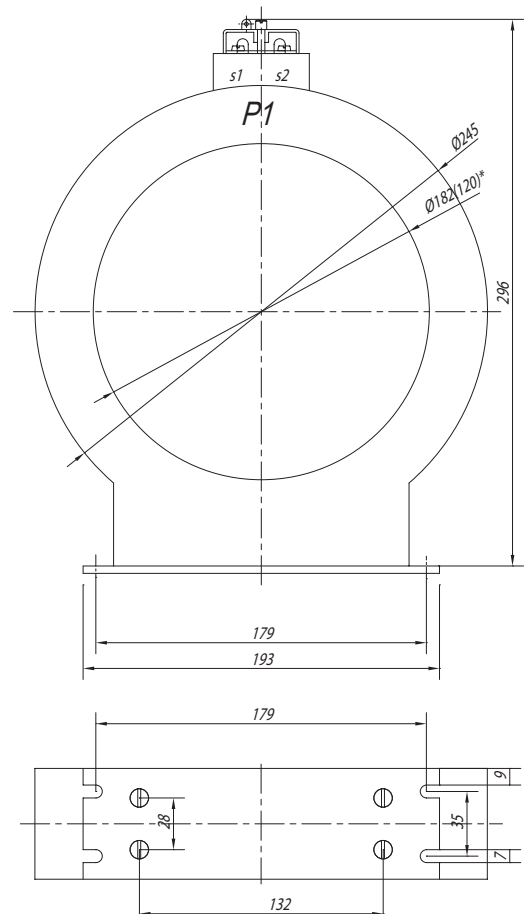
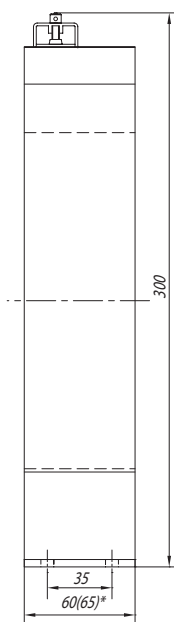
The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.



ST 081B, ST 081B-120



ST 081-B



*NOTE: Dimensions in the brackets refers to the ST 081B-120.

CURRENT TRANSFORMERS ST 081B, ST 081B-120

TECHNICAL DATA	ST 081B	ST 081B-120
Rated voltage (kV)	0,72	
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3	
Rated frequency (Hz)	50 / 60	
Accuracy class	10P	
Rated secondary current (A)	5 (or 1)	
Rated short-time thermal current	$I_{th} = 80 I_n$	
Rated dynamic current	$I_{dyn} = 2,5 I_{thr}$ Practically unlimited	
Rated continuous thermal current	$I_{cth} = 1,2 I_n$	
Temperature insulation class	E/B	
Mounting	Indoor/Outdoor	Indoor
Type of basic insulation	Epoxy resin	
Valid standards	IEC 61869-1, IEC 61869-2	
Mass (kg)	3-15	

These transformers have the following holes:

ST-081B has the hole Ø182mm;

ST-081B-120 has the hole Ø120mm;

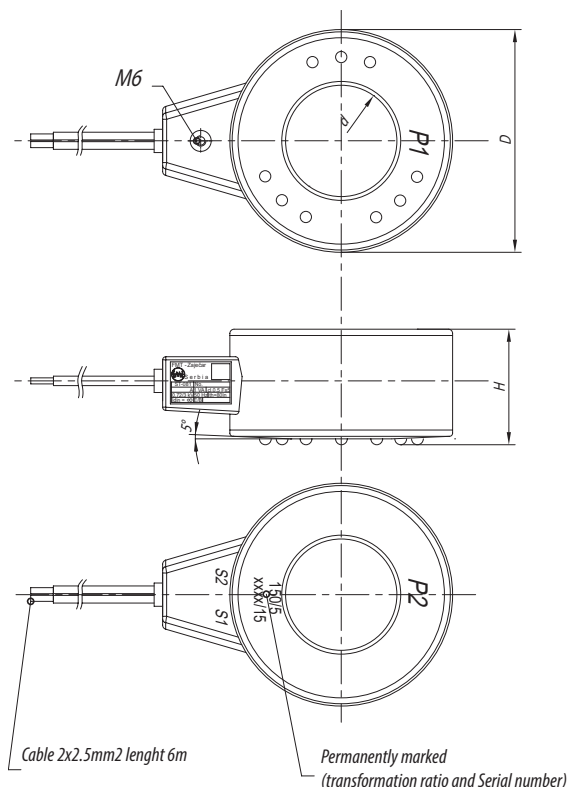
These transformers are primarily intended for protection for primary currents 50-300 A, but they can be made for measuring and for other primary currents, rated power and accuracy class.

ST-081B can be made with 1 or 2 cores as well as secondary switchable (with designation "sp") with 1 core. Also these transformers can be made for outdoor mounting with the secondary connectors cover made of aluminum-silicon alloy and with epoxy resin for outdoor mounting. Transformer ST-081B-120 has the inside diameter Ø120mm and it is intended for one core and indoor mounting. In the table there are data for rated power for different primary currents and for accuracy class 10P. Mass of the transformer depends of the current transformation ratio and rated power and can be different.

*Note: at lower transformation ratios these transformers can be made only with secondary current 1A.

Secondary current 5A (or 1A)					
Primary current (A)	Power (VA)	ST-081B		ST-081B-120	
		Accuracy class		Accuracy class	
		10P5	10P10	10P5	10P10
25; 30	1,25	●*	—	●*	—
	2,5	—	—	●*	—
40	1,25	●	—	●	—
	2,5	—	—	●	—
50	1,25	●	●	●	●
	2,5	●	—	●	●
	5	—	—	●	—
75	1,25-2,5	●	●	●	●
	5	—	—	●	●
100	1,25-2,5	●	●	●	●
	5	●	—	●	●
	10	—	—	●	—
150	1,25-2,5	●	●	●	●
	5	●	—	●	●
	10	—	—	●	●
	15	—	—	●	—
200	1,25-5	●	●	●	●
	10	●	—	●	●
	15	—	—	●	●
	30	—	—	●	—
250	1,25-5	●	●	●	●
	10	●	—	●	●
	15	—	—	●	●
	30	—	—	●	—
300	1,25-5	●	●	●	●
	10	●	—	●	●
	15	●	—	●	●
	30	—	—	●	—

ST 081SM/53, ST 081SM/73, ST 081SM/95



Type of the transformer	D(mm)	H(mm)	d(mm)	Primary current (A)
ST 081SM/53	106	55	53	75-400
ST 081SM/73	136	45	73	400-1500
ST 081SM/95	160	45	95	400-1500

LOW-VOLTAGE CURRENT TRANSFORMERS ST 081SM/53, ST 081SM/73, ST 081SM/95

TECHNICAL DATA	ST 081SM/53	ST 081SM/73	ST 081SM/95
Rated voltage (kV)	0,72		
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3		
Rated frequency (Hz)	50		
Rated secondary current (A)	5 or 1		
Rated short-time thermal current	$I_{th}=80 I_n$		
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited		
Rated continuous thermal current	$I_{cth}=1,2 I_n$		
Temperature insulation class	E/B		
Mounting	Outdoor		
Type of basic insulation	Epoxy resin		
Valid standards	IEC 61869-1, IEC 61869-2		
Mass (kg)	~1,45	~1,64	~2

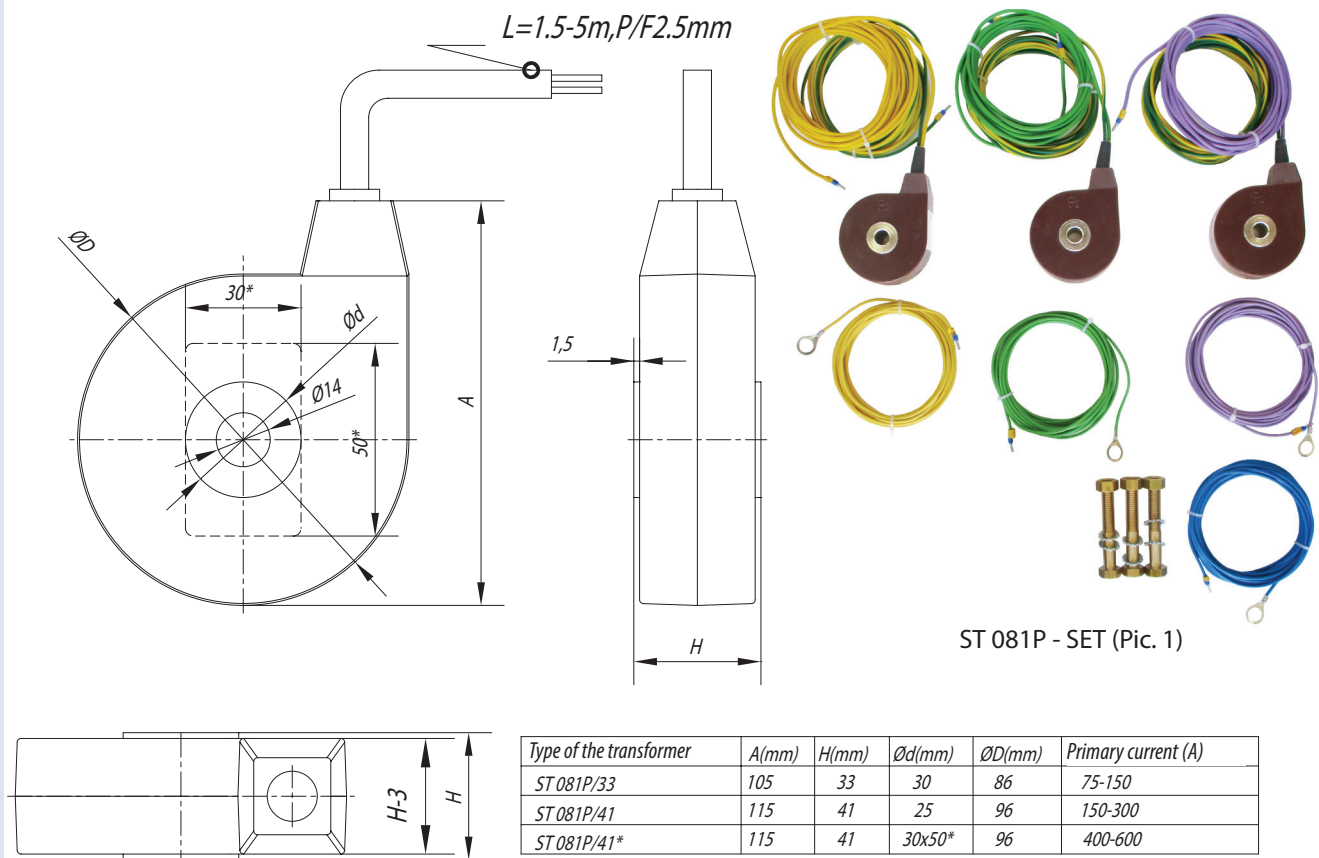
These transformers can be used for outdoor mounting. Rated accuracy class is defined for total rated power at the end of the current transformer's secondary terminal conductors. Secondary conductors are 2,5mm² for outdoor mounting and they are resistant to UV radiation and with length 6m. It is possible to make them with other rated power and accuracy class and different secondary conductors length upon customer's request.

ST 081SM/53				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
150	2.5	●	●	●
200; 250	2.5	●	●	●
	5	●	●	●
300; 400	2.5	●	●	●
	5	●	●	●
	10	●	●	●

ST 081SM/73, ST 081SM/95				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
400; 500; 600;	2.5	●	●	●
750; 800; 1000;	5	●	●	●
1200; 1250;	10	●	●	●
1500				



ST 081P/33, ST 081P/41, ST 081P/41*



ST 081P - SET (Pic. 1)

Type of the transformer	A(mm)	H(mm)	Ød(mm)	ØD(mm)	Primary current (A)
ST 081P/33	105	33	30	86	75-150
ST 081P/41	115	41	25	96	150-300
ST 081P/41*	115	41	30x50*	96	400-600

LOW-VOLTAGE CURRENT TRANSFORMERS FOR FUSE BUSBARS IN THE POWER SUBSTATIONS TYPE

ST 081P/33, ST 081P/41, ST 081P/41*

TECHNICAL DATA	ST 081P/33	ST 081P/41	ST 081P/41*
Rated voltage (kV)	0,72		
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3		
Rated frequency (Hz)	50/60		
Rated secondary current (A)	5 or 1		
Rated short-time thermal current	$I_{th}=80 I_n$		
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited		
Rated continuous thermal current	$I_{cth}=1,2 I_n$		
Temperature insulation class	E/B		
Mounting	indoor		
Type of basic insulation	Epoxy resin		
Valid standards	IEC 61869-1, IEC 61869-2		
Mass (kg)	~0,95	~1,46	~1,46

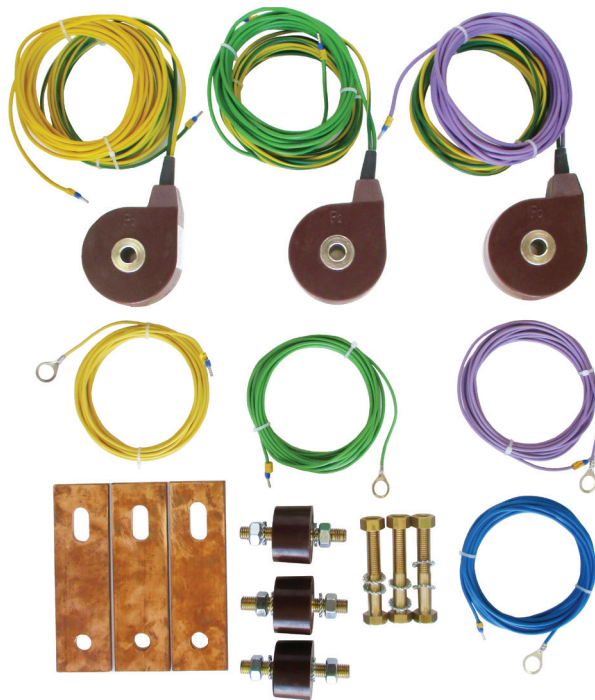
CURRENT TRANSFORMERS ST 081P/*

Current transformers ST 081P/* for fuse bars are assumed for direct mounting on the low-voltage busbars below fuse bars.

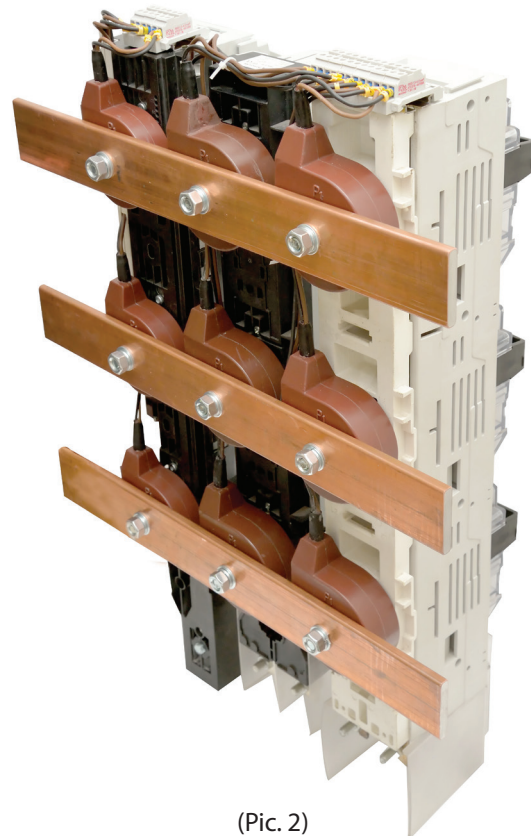
Technical characteristics of the transformers are in accordance with standards IEC 61869-1 and IEC 61869-2. Basically, there are 3 types regarding the dimensions and all their technical characteristics have been given in the appropriate table. In each table, there are data about transformation ratios, rated power and accuracy class. Rated accuracy class is defined for total rated power at the end of the secondary terminal cables of the current transformers. Secondary connectors are conductors P/F 2,5mm², length 5m, (upon request it can be shorter but only in the range 1,5-5m) and for that length the accuracy class is guaranteed.

In the measuring set per one outlet in the power substation there are 3 current transformers (Pic.2) with sealed secondary conductors 2.5 mm² as secondary terminals, specially marked and coloured as following:
For busbar "L1" connector "s1" - yellow, "s2" - yellow-green;
For busbar "L2" connector "s1" - green, "s2" - yellow-green;
For busbar "L3" connector "s1" - purple, "s2" - yellow-green.

The set also includes a brass screw with the corresponding screwing parts for attaching the transformer to the busbars, as well as 4 voltage connections in the form of 1.5 mm² conductors, also classified in yellow, green, purple and common zero as blue conductor.



ST 081P-SET 1 (Pic. 3)



(Pic. 2)

ST 081P/33				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
150	2.5	●	●	●
	3.75	–	●	●
200, 250, 300	2.5	●	●	●
	3.75	●	●	●

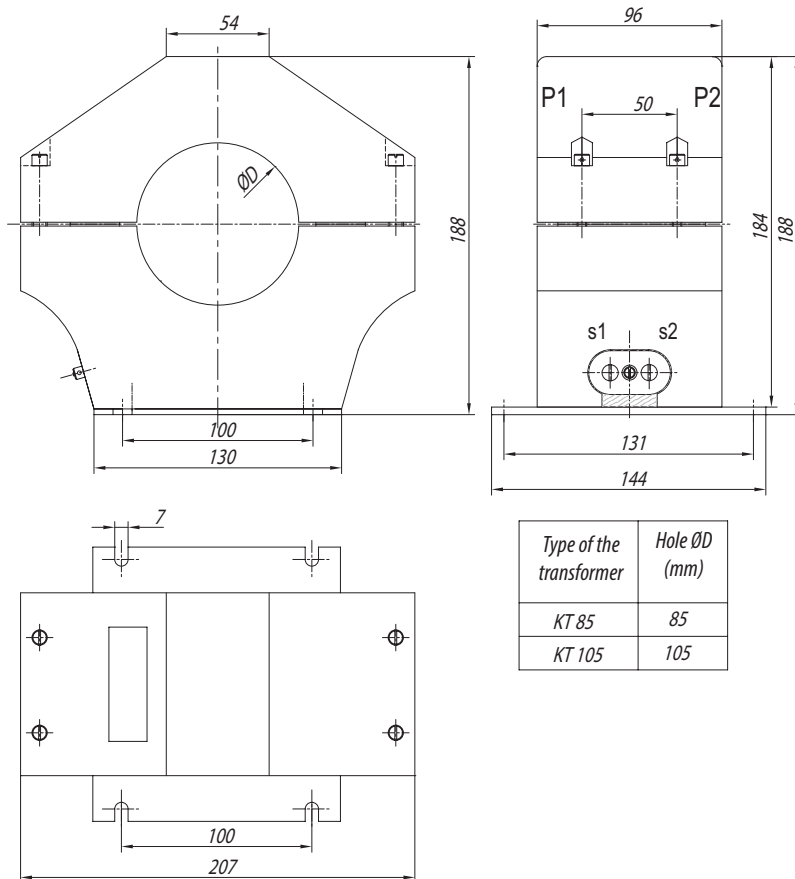
Beside this set which is necessary for connecting the measuring equipment on the one substation output, there is also variant SET 1 (Pic.3) which has, beside mentioned equipment, 3 spacer insulators and 3 output rails. SET 1 is intended for total measuring of the electrical energy on the 2 substation outputs, so below one fuse bar there are current transformers mounted and one end of the output copper rails and below second busbar there are space insulators and the other end of the output copper rail. Thus, the current from both fuse busbars runs through primary conductor of the current transformer. For that kind of measurement there is measurement set "SET1" with current transformers 400, 500 or 600 A primary current. Current transformers ST081P are intended exclusively for indoor mounting.

ST 081P/41				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
75	2.5	–	●	●
	3.75	–	–	●
100	2.5	●	●	●
	3.75	–	●	●
150	2.5	●	●	●
	3.75	●	●	●

ST 081P/41*				
Primary current (A)	Power (VA)	Secondary current 5A (or 1A)		
		Accuracy class		
		0.5	1	3
400, 500, 600	2.5	●	●	●
	3.75	●	●	●



KT 85, KT 105



KT 105

CABLE TRANSFORMERS KT*

USE:

Cable transformers KT can be used for connection of the earth-fault relay. They are mostly used for 3 phase cable lines but also they can be used for overhead lines if the input in the power substation is made with cable.

TECHNICAL DATA	KT-85, KT-105
Rated voltage (kV)	Determined by cable
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50 / 60
Accuracy class	10P
Rated secondary current (A)	5 (or 1)
Rated short-time thermal current	Limited by cable
Rated dynamic current	Practically unlimited
Rated continuous thermal current	$I_{cth} = 1,2 I_n$
Temperature insulation class	E/B
Mounting	Indoor
Type of basic insulation	Epoxy resin
Valid standards	SRPS EN 61869-1, SRPS EN 61869-2
Mass	~9 - 10

PRODUCTION:

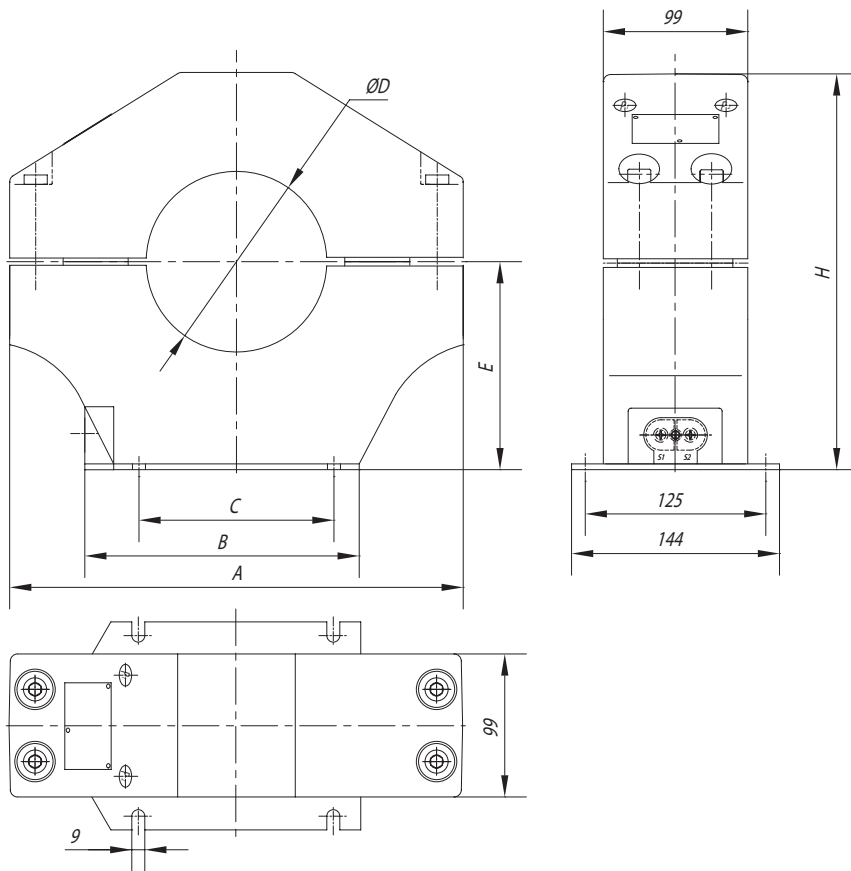
These transformers are made of two parts, so mounting on the cable is very easy. Cable transformers can be used for all voltage levels because primary insulation is the insulation of the used cable.

MOUNTING OF THE TRANSFORMER:

Contact surfaces of the magnetic core must be immaculately clean, and tightening screws for both halves must be equally and well tightened because even a small air gap can make great influence on the relay functioning. Please pay attention at the markings and polarity when connecting the transformer.

KT 85, KT 105									
Primary current (A)	Power (VA)	KT 85				KT 105			
		Secondary current 5A (or 1A)				Secondary current 5A (or 1A)			
		Accuracy class				Accuracy class			
		10P5	10P10	10P15	10P20	10P5	10P10	10P15	10P20
50	2.5	●	●	—	—	●	●	—	—
	5	●	—	—	—	●	—	—	—
60	2.5	●	●	●	—	●	●	—	—
	5	●	—	—	—	●	—	—	—
75	2.5	●	●	●	●	●	●	—	—
	5	●	●	—	—	●	—	—	—
	10	●	—	—	—	—	—	—	—
100	2,5	●	●	●	●	●	●	●	—
	5	●	●	—	—	●	●	—	—
	10	●	—	—	—	●	—	—	—
150	2,5	●	●	●	●	●	●	●	●
	5	●	●	●	●	●	●	—	—
	10	●	●	—	—	●	—	—	—
	15	●	—	—	—	●	—	—	—
200	2,5	●	●	●	●	●	●	●	●
	5	●	●	●	●	●	●	●	—
	10	●	●	—	—	●	●	—	—
	15	●	●	—	—	●	—	—	—
250	2,5	●	●	●	●	●	●	●	●
	5	●	●	●	●	●	●	●	●
	10	●	●	●	—	●	●	—	—
	15	●	●	—	—	●	—	—	—
300	2,5	●	●	●	●	●	●	●	●
	5	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	—	—
	15	●	●	—	—	●	●	—	—

KT 125, KT 185



KT 185

CABLE TRANSFORMERS KT*

Type of the transformer	Dimensions (mm)						Mass (kg)
	A	B	C	ØD	E	H	
KT 125	314	195	135	125	144	274±1	~23
KT 185	334	205	150	185	154	295±1	~19

TECHNICAL DATA	KT 125	KT 185
Rated voltage (kV)	Determined by cable	
Rated frequency (Hz)	50 / 60	
Accuracy class	10P	
Rated secondary current (A)	5 (or 1)	
Rated short-time thermal current	80 I _n	
Rated dynamic current	Practically unlimited	
Rated continuous thermal current	I _{ch} = 1,2 I _n	
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3	
Temperature insulation class	E/B	
Mounting	Indoor	
Type of basic insulation	Epoxy resin	
Valid standards	IEC 61869-1, IEC 61869-2	
Mass (kg)	~23	~19

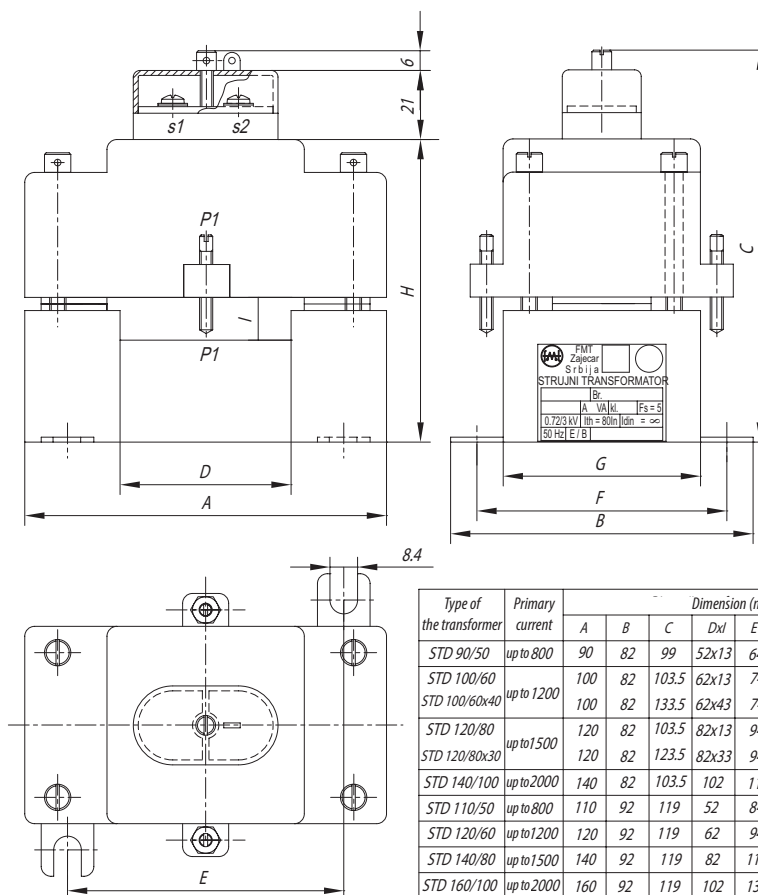
Primary current (A)	Power (VA)	KT 125						KT 185			
		Accuracy class						Accuracy class			
		I" (A)	10P5	10P10	10P15	10P20	I" (A)	10P5	10P10	10P15	10P20
20	2,5	1	●	—	—	—	—	—	—	—	—
	5	1	●	●	●	—	1	●	—	—	—
30	2,5	1	●	●	●	—	—	—	—	—	—
	5	1	●	●	●	—	—	—	—	—	—
50	2,5	1;5	●	●	●	●	1	●	●	—	—
	5	1;5	●	●	●	—	1	●	—	—	—
75	10	1;5	●	—	—	—	—	—	—	—	—
	2,5	1;5	●	●	●	●	1;5	●	●	●	—
100	5	1;5	●	●	●	—	1;5	●	●	—	—
	10	1;5	●	●	—	—	1;5	●	—	—	—
150	15	1;5	●	—	—	—	1;5	—	—	—	—
	2,5	1;5	●	●	●	●	1;5	●	●	●	●
200	5	1;5	●	●	●	—	1;5	●	●	—	—
	10	1;5	●	●	—	—	1;5	●	—	—	—
250	15	1;5	●	●	—	—	1;5	●	—	—	—
	2,5	1;5	●	●	●	●	1;5	●	●	●	●
300	5	1;5	●	●	●	—	1;5	●	●	—	—
	10	1;5	●	●	—	—	1;5	●	—	—	—
300	15	1;5	●	●	—	—	1;5	●	—	—	—
	2,5	1;5	●	●	●	●	1;5	●	●	●	●
300	5	1;5	●	●	●	—	1;5	●	●	—	—
	10	1;5	●	●	—	—	1;5	●	—	—	—
300	15	1;5	●	●	—	—	1;5	●	—	—	—
	2,5	1;5	●	●	●	●	1;5	●	●	●	●



STD */**



STD 140/100



Type of the transformer	Primary current	Dimension (mm)							
		A	B	C	DxI	E	F	G	H
STD 90/50	up to 800	90	82	99	52x13	64	66	50	72
STD 100/60	up to 1200	100	82	103.5	62x13	74	66	50	76.5
STD 100/60x40	up to 1200	100	82	133.5	62x43	74	66	50	106.5
STD 120/80	up to 1500	120	82	103.5	82x13	94	66	50	76.5
STD 120/80x30	up to 1500	120	82	123.5	82x33	94	66	50	96.5
STD 140/100	up to 2000	140	82	103.5	102	114	66	50	76.5
STD 110/50	up to 800	110	92	119	52	84	76	60	92
STD 120/60	up to 1200	120	92	119	62	94	76	60	92
STD 140/80	up to 1500	140	92	119	82	114	76	60	92
STD 160/100	up to 2000	160	92	119	102	134	76	60	92

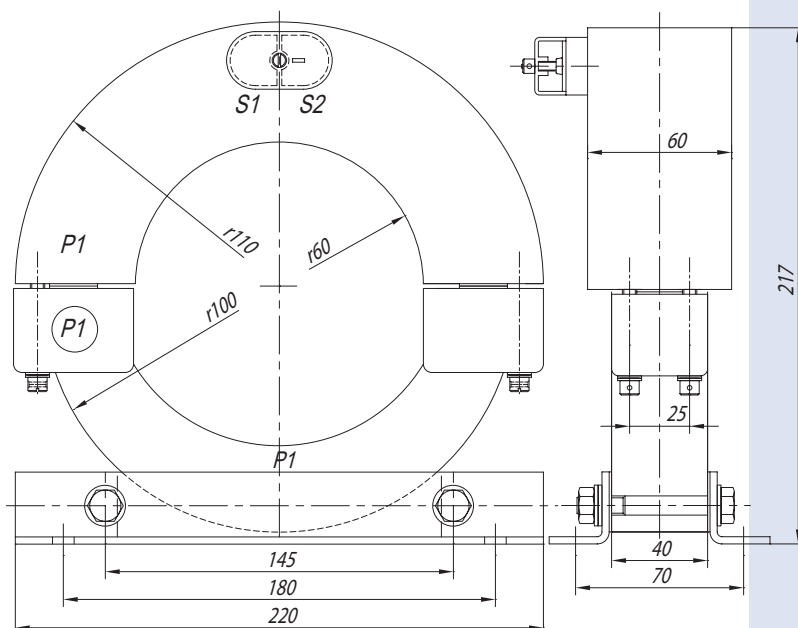
LOW-VOLTAGE CURRENT TRANSFORMERS STD */**

TECHNICAL DATA	STD */**
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50/60
Rated secondary current (A)	5 or 1
Rated short-time thermal current	$I_{th}=80 I_n$
Rated dynamic current	$I_{dyn}=2,5 I_{th}$ – Practically unlimited
Rated continuous thermal current	$I_{cth}=1,2 I_n$
Temperature insulation class	E/B
Mounting	indoor
Type of basic insulation	Epoxy resin
Valid standards	SRPS EN 61869-1; SRPS EN 61869-2
Mass (kg)	1-3

STD 110/50, STD 120/60, STD 140/80, STD 160/100				
Type of the transformer	Primary current (A)	Secondary current 5A (or 1A)		
		Accuracy class 0,5 (1, 3)		
		2,5 VA	5 VA	10 VA
STD-110/50 (for currents 300 – 800 A);	300	●	–	–
	400	●	●	–
	500	●	●	●
	600	●	●	●
STD-120/60 (for currents 300 – 1200 A);	750	●	●	●
	800	●	●	●
	1000	●	●	●
	1200	●	●	●
STD-140/80 (for currents 300 – 1500 A);	1250	●	●	●
	1500	●	●	●
	1600	●	●	●
	2000	●	●	●

These transformers can be made as measuring as well as protective in accuracy class 0.5, 1, 3, 5P, 10P for primary currents up to 300 A, but on the customer's request they can be made for other primary currents. In the table there are data for various primary currents and the values of the primary currents for which they can be made. Mass of the transformer is depending on the transformation ratio and power so it can be different.

STD 1



Transformer can be made with or without the accessories for mounting.

LOW-VOLTAGE CURRENT TRANSFORMERS STD 1

TECHNICAL DATA	STD 1
Rated voltage (kV)	0,72
Rated power-frequency withstand voltage 50 Hz, 1 min (kV)	3
Rated frequency (Hz)	50 / 60
Rated secondary current (A)	5 (or 1)
Rated short-time thermal current	$I_{th} = 80 I_n$
Rated dynamic current	$I_{dyn} = 2,5 I_{th}$, Practically unlimited
Rated continuous thermal current	$I_{cth} = 1,2 I_n$
Temperature insulation class	E/B
Mounting	Indoor
Type of basic insulation	Epoxy resin
Valid standards	IEC 61869-1; IEC 61869-2
Mass (kg)	~3

These transformers are intended for protection and measuring and they have split core design. Also, they can be made with different characteristics upon customer's request. The mass of the transformer depends on the transformation ratio, accuracy class and rated power and may vary.

Primary current (A)	Power (VA)	Secondary current 5A (or 1A)				
		Accuracy class				
		10P5	10P10	0,5	1	3
75; 100	1,25	●	●	–	–	–
	2,5	●	–	–	–	–
150; 200	2,5	●	●	–	–	–
	5	●	–	–	–	–
250; 300	2,5	●	●	–	–	●
	5	●	●	–	–	●
	10	●	–	–	–	●
400; 500	2,5	●	●	–	●	●
	5	●	●	–	●	●
	10	●	–	–	●	●
600; 750; 800	2,5	●	●	●	●	●
	5	●	●	●	●	●
	10	●	–	–	●	●
1000; 1200; 1250; 1500; 1600; 2000; 2500	2,5	●	●	●	●	●
	5	●	●	●	●	●
	10	●	●	●	●	●







NOTES

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