FABRIKA MERNIH TRANSFORMATORA ZAJEČAR

CURRENT TRANSFORMERS
12-38 kV

1969 ZAJEČAR FMT

1956 MINEL FEPO

2024.

TÜV NORD

CERTIFICATE

Management system as per
ISO 9001 : 2015

The Certification Body TÜV NORD CERT GmbH hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1:2015, that the organization

Fabrika mernih transformatora Zaječar
Stražilovska 57
19000 Zaječar
Republic of Serbia

operates a management system in accordance with the requirements of ISO 9001 : 2015 and will be assessed for conformity within the 3 year term of validity of the certificate.

Scope

Design, production and sale of voltage transformers, measuring transformers, current and voltage sensors, insulators of epoxy resins, earthing resistors and reactor

Certificate Registration No. 44 100 22430235
Audit Report No. 10022818

End of validity of previous certificate: 2022-12-12
Valid from 2023-01-13
Valid until 2025-12-12
Initial certification 2016

Certification Body
at TÜV NORD CERT GmbH

Essen, 2023-01-13

TÜV NORD CERT GmbH Am TÜV 1 45307 Essen www.tuev-nord-cert.com

IAF DAkkS Deutsche Akkreditierungsstelle D-ZM-12007-01-00

TÜV NORD

CERTIFICATE

Management system as per
ISO 14001 : 2015

The Certification Body TÜV NORD CERT GmbH hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1:2015, that the organization

Fabrika mernih transformatora Zaječar
Stražilovska 57
19000 Zaječar
Republic of Serbia

operates a management system in accordance with the requirements of ISO 14001 : 2015 and will be assessed for conformity within the 3 year term of validity of the certificate.

Scope

Design, production and sale of voltage transformers, measuring transformers, current and voltage sensors, insulators of epoxy resins, earthing resistors and reactor

Certificate Registration No. 44 104 22430235
Audit Report No. 10422345

Valid from 2023-01-13
Valid until 2026-01-12
Initial certification 2016

Certification Body
at TÜV NORD CERT GmbH

Essen, 2023-01-13

TÜV NORD CERT GmbH Am TÜV 1 45307 Essen www.tuev-nord-cert.com

IAF DAkkS Deutsche Akkreditierungsstelle D-ZM-12007-01-00

TÜV NORD

CERTIFICATE

Management system as per
ISO 45001 : 2018

The Certification Body TÜV NORD CERT GmbH hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1:2015, that the organization

Fabrika mernih transformatora Zaječar
Stražilovska 57
19000 Zaječar
Republic of Serbia

operates a management system in accordance with the requirements of ISO 45001 : 2018 and will be assessed for conformity within the 3 year term of validity of the certificate.

Scope

Design, production and sale of voltage transformers, measuring transformers, current and voltage sensors, insulators of epoxy resins, earthing resistors and reactor

Certificate Registration No. 44 126 22430235
Audit Report No. 12622189

End of validity of previous certificate: 2022-12-09
Valid from 2023-01-13
Valid until 2025-12-09
Initial certification 2016

Certification Body
at TÜV NORD CERT GmbH

Essen, 2023-01-13

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IAF DAkkS Deutsche Akkreditierungsstelle D-ZM-12007-01-00

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INTRODUCTION

DESCRIPTION

Basic insulation in these transformers is epoxy resin. Magnetic core consists of quality, cold rolled, oriented magnetic steel sheet. Secondary terminals have been covered with transparent plastic cover which can be sealed. Transformers can be done with 1, 2, 3 or more magnetic cores and as much separated secondary windings.
Primary winding can consist of two sections, so the transformer can be primary switchable. Marking 2x100 A means that transformer can be used for rated primary currents 100 A and 200 A.

APPLIANCE

These transformers can be used for separating of measuring and protecting devices from high voltage and for transformation of measuring currents to the value that is convenient for measuring and protective devices. They are appropriate for mounting in power substations with rated voltages up to 36 kV. Supplying of ammeters, current circuits of electricity meters, protective and other devices can be accomplished with these transformers. They can work continuously with 20% burden overload and still maintain appointed accuracy class.

MOUNTING

Transformer can be mounted in all kinds of positions. He is attached to the background using bearing plate with adequate fastening screws.
All connections on the primary and secondary side must be clean and well tightened, so they will not be overheated. One of the secondary winding connections should be grounded (it is usually connection k i.e. s1). Whole burden of the connected measuring or protective devices together with cable losses must not exceed his rated value for more than 20 % because in that case accuracy class will not be satisfactory. If whole burden of the connected measuring or protecting devices together with cable losses is significantly less than his rated value, additional resistance should be added in secondary circuit. If some secondary winding is not charged its terminals must be short-circuited.
Primary switchable transformers have connection scheme. Bridging is done simply by moving connected plates on the high voltage terminals, when transformer is not connected to a voltage.
Transformers can also be secondary switchable by connecting to certain secondary connections according to the connection scheme, also in "no voltage" state.
During mounting, take care that primary and secondary terminals don't change their places. Current input on the primary winding is marked with K or P1 and output is marked with L or P2. Current input on the secondary winding is marked with k or S1 and output is marked with l or S2.
If exterior dynamic forces of the primary connections are great (greater than 3,75 kN) than supporting-type insulators should be mounted near the current transformer.
Transformers must be grounded in the marked place.

HANDLING AND MAINTAINING

For these types of transformers regular maintaining is not necessary. It is enough, from time to time, to check if all connection are clean and well tightened and to clean the transformer if it is dirty. Take care that transformer must not work with open secondary circuit, because in that case high voltage appears on secondary side and insulation could be damaged. If some accident happens in the substation, transformers should be tested again after the accident.

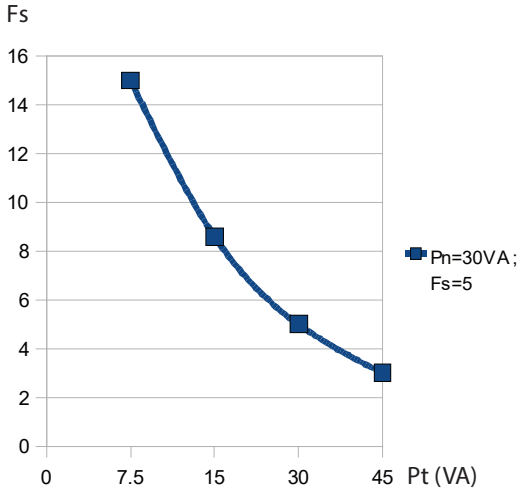
BURDEN INFLUENCE TO THE INSTRUMENT SECURITY FACTOR AND ACCURACY LIMIT FACTOR FOR CURRENT TRANSFORMERS

Standard values for the instrument security factor and accuracy limit factor which has been given by the manufacturer refer to the rated power of the current transformer's core.
If current transformer is not charged with the rated burden his instrument security factor (or accuracy limit factor) will change by the following formula:

$$F_{st} = F_s \frac{P_n + P_i}{P_t + P_i}$$

F_s – nstrument security factor with rated burden (P_n)
F_{st} – instrument security factor with operating burden (P_t)
P_n – rated power of the core
P_t – power of the core with operating burden and rated current
P_i – core's own consumption (0,05 P_n to 0,2 P_n)

This formula is not relevant for so-called "linear" cores.
Graphic displays dependence between instrument security factor and connected burden on the core whose power is 30 VA and instrument security factor is FS5. If connected burden is less than the core power instrument security factor is greater, that is why the enhanced secondary current will pass through the measuring instrument and may damage it. Regarding accuracy limit factor, the same principle is applied.



PROPER SELECTION OF THE INSTRUMENT TRANSFORMERS

For three-system measurement we need 3 current transformers and 3 voltage transformers, which have rated network voltage level, on which the measurement is performed. It is important for the transformation ratio to be as accurate as possible in order to make the measurement as accurate as possible.

Primary current of the current transformers is the line current whose value depends of the rated power of the power transformer rounded to the nearest higher standard value. Since the power transformer itself is not always loaded with the rated power, it is necessary to determine the rated primary current of current transformers as realistically as possible, which is calculated according to the formula:

$$I(A) = \frac{Sn(kVA)}{\sqrt{3}\ Un(kV)}$$

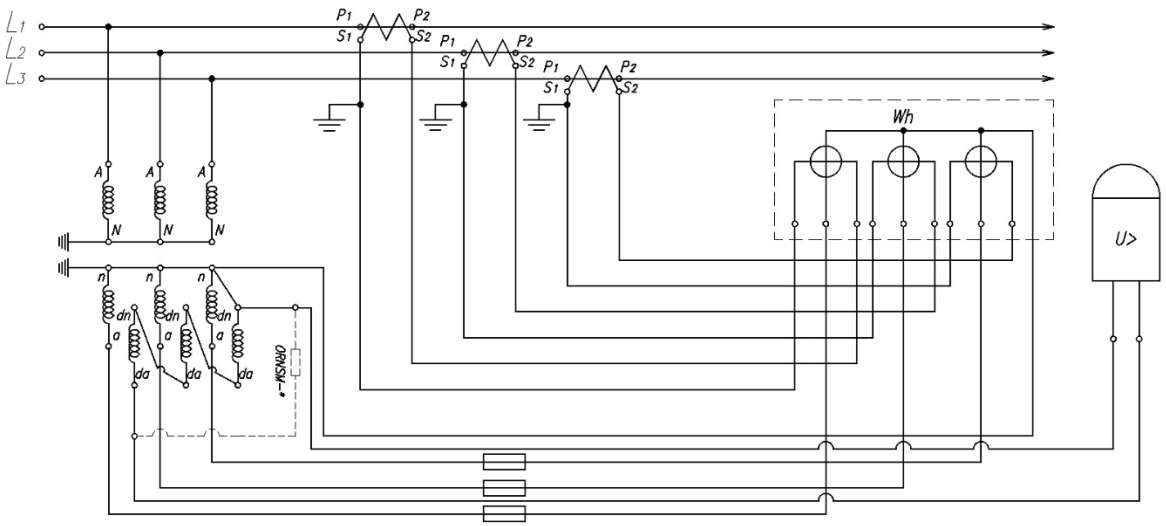
Rated values of the primary currents I1n are 5 - 7,5 - 10 - 12,5 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 A or their integer decimal multiples. Secondary current of the instrument current transformers can be 5A or 1A.

The rated power of each secondary winding of the current transformer should include the consumption of all measuring or protective devices connected to the secondary connections of that secondary winding plus the Joule power losses in the lines themselves as given in the table below:

Consumer	Power consumption of the system (W/m)
Cu conductor 1m 2,5mm^2 at 5A	0.18
Cu conductor 1m 4mm^2 at 5A	0.11
Cu conductor 1m 1,5mm^2 at 1A	0.012
Cu conductor 1m 2,5mm^2 at 1A	0.007
Cu conductor 1m 4mm^2 at 1A	0.0044

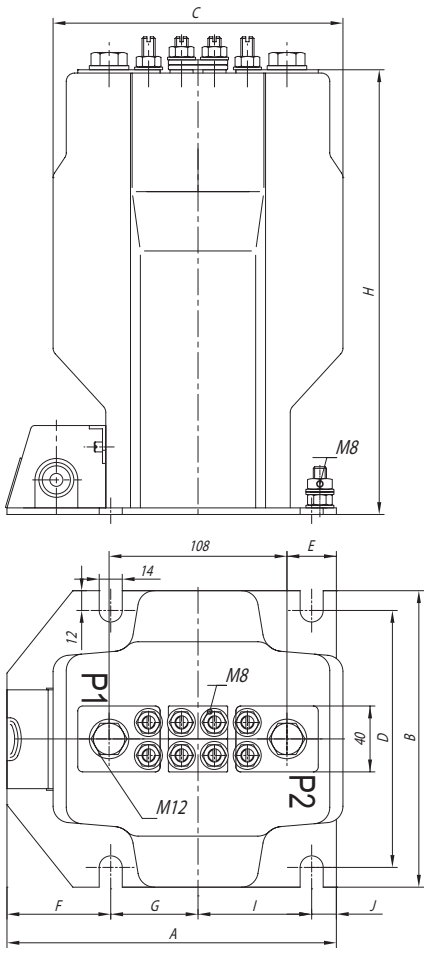
Standard rated power of the secondary windings of the current transformers is 2.5, 5, 10, 15 or 30VA. Connection scheme for three-system measurement has been given below.

Note: Due to prevention of the ferroresonance phenomenon, when 3 single-pole voltage transformers are used in networks with an isolated neutral point, it is necessary to put additional resistance in their open triangle tertiary circuit.



STEM-N 1211, 2411, 3811

STEM-N 2411



SINGLE CORE CURRENT TRANSFORMERS FOR INDOOR MOUNTING TYPE **STEM-N***

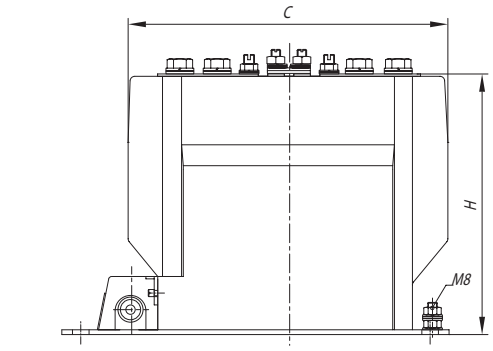
Type of transformer	Dimension (mm)										Mass (kg)
	A	B	C	D	E	F	G	H	I	J	
STEM-N 1211	216	158	162	134	27	72	63	220	66	15	~11
STEM-N 2411	200	180	176	156	30	63	53	270	69	15	~15
STEM-N 3811	215	184	198	160	45	54	62	390	82	17	~18

TECHNICAL DATA	STEM-N 1211 (STEM-N 1210)	STEM-N 2411 (STEM-N 2410)	STEM-N 3811 (STEM-N 3810)
Rated primary voltage (kV)	10	20	35
Highest voltage for equipment (eff.) (kV)	12	24	38
Rated power-frequency withstand voltage, 1 min. (kV)	28	50	70
Rated impulse withstand voltage 1.2/50 μs (kV)	75	125	170
Rated frequency (Hz)	50/60		
Rated primary current (A)	5 to 600 or 2x5 to 2x600		
Rated secondary current (A)	5 (or 1)		
Rated accuracy class	0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P		
Rated thermal current 1 sec.	$I_{th} = (100\text{-}500)I_n$		
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th}$		
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$		
Number of cores	1		
Rated core power (VA)	5; 7,5; 10; 15; 30		
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30		
Temperature class of insulation	E/B		
Possibility of sealing	On primary and on secondary side		
Type of basic insulation	Epoxy resin		
Valid standards	IEC 61869-1; IEC 61869-2		

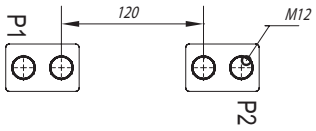
NOTE:

Denotation: STEM-N 1211, STEM-N 2411, STEM-N 3811 – transformer with one core, primarily switchable; STEM-N 1210, STEM-N 2410, STEM-N 3810 – transformer with one core, primarily non-switchable;
We have serial production of these transformers for thermal current 100In but we can produce them with larger thermal currents (to 500In or even more), depending on the transformation ratio, accuracy class and power of the core.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) when ordering. Primarily terminals cover can be delivered on special request.
We keep the right for a change.

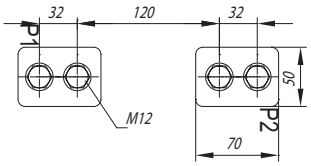
STEM-N 12*, 24*, 38*



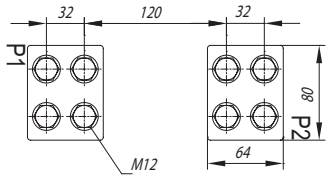
Primary connection
for In≤1250A

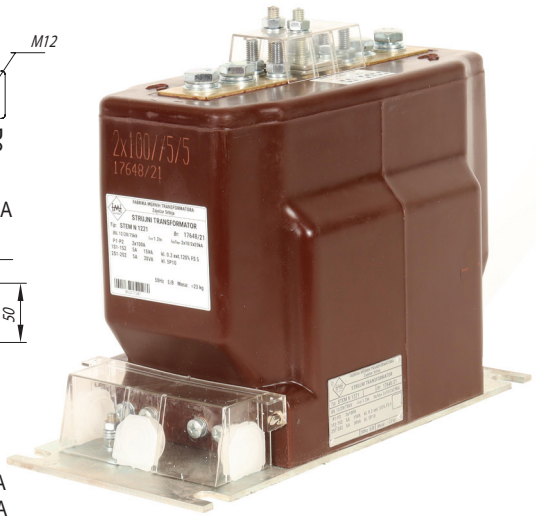


Primary connection
STEM-N for 12kV for 800A≤In≤1600A



Primary connection
STEM-N for 12kV for 1600 < In ≤ 3000A
STEM-N 24-38kV for 1500 ≤ In ≤ 3000A





STEM-N 1221

CURRENT TRANSFORMERS FOR INDOOR MOUNTING TYPE **STEM-N*** WITH SEVERAL CORES

Type of transformer	Dimension (mm)										Mass (kg)
	A	B	C	D	E	F	G	H	I	J	
STEM-N 12*	327	158	270	134	75	16	176	220	119	16	~23
STEM-N 24*	339	178	294	154	87,5	17	175	265	130	17	~27
STEM-N 38*	305	184	300	162	91	21,5	133	390	133	17,5	~36
STEM-N 38*sa	305	184	300	162	91	21,5	133	360	133	17,5	~33

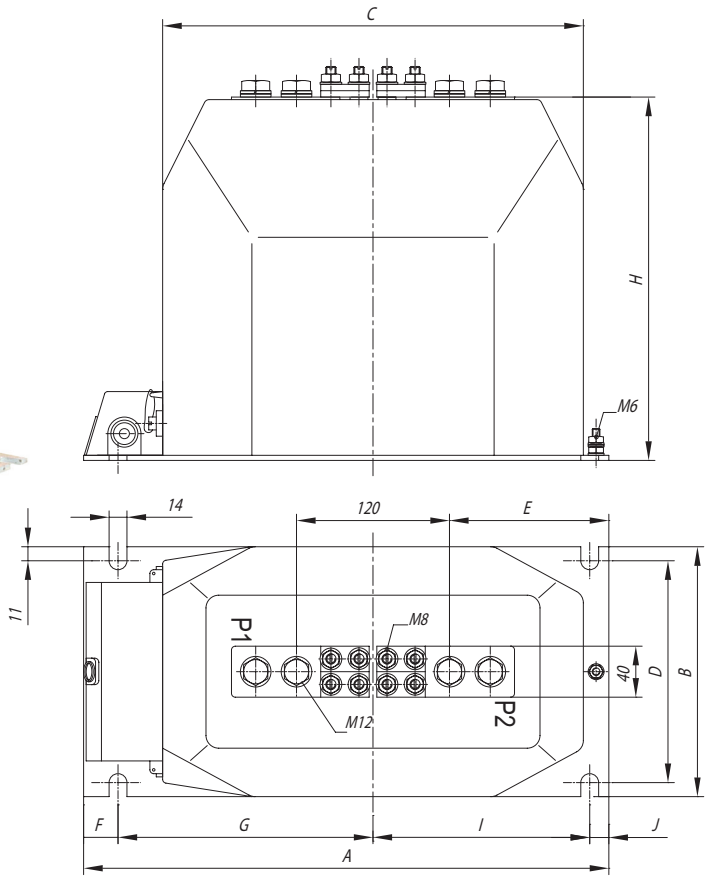
TECHNICAL DATA	STEM-N 12*	STEM-N 24*	STEM-N 38*(sa)
Rated primary voltage (kV)	10	20	35
Highest voltage for equipment (eff.) (kV)	12	24	38
Rated power-frequency withstand voltage, 1 min. (kV)	28	50	70
Rated impulse withstand voltage 1.2/50 μs (kV)	75	125	170
Rated frequency (Hz)	50/60		
Rated primary current (A)	5 to 3000 or 2x5 to 2x600		
Rated secondary current (A)	5 (or 1)		
Rated accuracy class	0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P		
Rated thermal current 1 sec.	I_{th} = (100-1000)I_n		
Rated dynamic current	I_{dyn} = 2,5 I_{th}		
Rated continuous thermal current	I_{cth} = 1,2 I_n		
Number of cores	1-4		
Rated core power (VA)	5; 7,5; 10; 15; 30		
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30		
Temperature class of insulation	E/B		
Possibility of sealing	On primary and on secondary side		
Type of basic insulation	Epoxy resin		
Valid standards	IEC 61869-1; IEC 61869-2		

NOTE:

Denotation: STEM-N 1221 (STEM-N 1231), STEM-N 2421 (STEM-N 2431), STEM-N 3821 (STEM-N 3831) – transformer with two (three) cores, primarily switchable;
STEM-N 1220 (STEM-N 1230), STEM-N 2420 (STEM-N 2430), STEM-N 3820 (STEM-N 3830) – transformer with two (three) cores, primarily non-switchable.
Change of transformation ratio can be done also on the secondary side and in that case denotation 'sp' is added at the end of denotation:
STEM-N 1220sp - transformer with two cores secondarily switchable.
STEM-N 3821sa - transformer which has the same characteristics as STEM-N 3821 just with lower height for 30 mm (its height is 360 mm and transformer STEM-N 3821 has the height 390 mm), it can be mounted in the power substation cells which have smaller space for putting the instrument transformers.
We have serial production of these transformers for thermal current 100In with 2 cores, measuring core 15 VA cl.0,5FS5, protective core 30 VA cl.5P10, but we can produce them with larger thermal currents (to 500In or even more), and with 1, 2, 3 or 4 cores depending on the transformation ratio, accuracy class and power of the core.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) when ordering. Primarily terminals cover can be delivered on special request. We keep the right for a change.

STEM-NS 24*(12*), 38*, 38*L

STEM-NS 2430



CURRENT TRANSFORMERS FOR INDOOR MOUNTING TYPE **STEM-NS** * WITH SEVERAL CORES

Type of transformer	Dimension (mm)										Mass (kg)
	A	B	C	D	E	F	G	H	I	J	
STEM-NS 24(12)*	412	196	330	174	125	27	200	285	175	15	~42
STEM-NS 38*	412	196	330	174	125	27	200	390	175	15	~48
STEM-NS 38L*	385	220	350	190	115	27	160	390	160	15	~58

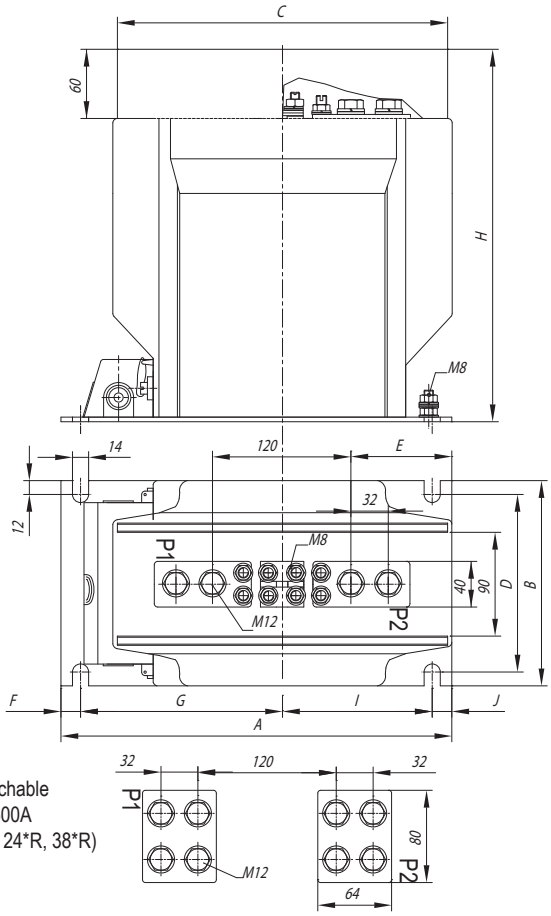
TECHNICAL DATA	STEM-NS 24*(STEM-NS 12*)	STEM-NS 38*(L)
Rated primary voltage (kV)	20(10)	35
Highest voltage for equipment (eff.) (kV)	24(12)	38
Rated power-frequency withstand voltage, 1 min. (kV)	50(28)	70
Rated impulse withstand voltage 1.2/50 μs (kV)	125(75)	170
Rated frequency (Hz)	50/60	
Rated primary current (A)	5 to 3000 or 2x5 to 2x1250	
Rated secondary current (A)	5 (or 1)	
Rated accuracy class	0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P	
Rated thermal current 1 sec.	I_{th} = (100-1000)I_n	
Rated dynamic current	I_{dyn} = 2,5 I_{th}	
Rated continuous thermal current	I_{cth} = 1,2 I_n	
Number of cores	1-4	
Rated core power (VA)	5; 7,5; 10; 15; 30	
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30	
Temperature class of insulation	E/B	
Possibility of sealing	On primary and on secondary side	
Type of basic insulation	Epoxy resin	
Valid standards	IEC 61869-1; IEC 61869-2	

NOTE:

Denotation: STEM-NS 1221 (STEM-NS 1231), STEM-NS 2421 (STEM-NS 2431), STEM-NS 3821 (STEM-NS 3831) – transformer with two (three) cores, primarily switchable;
STEM-NS 1220 (STEM-NS 1230), STEM-NS 2420 (STEM-NS 2430), STEM-NS 3820 (STEM-NS 3830) – transformer with two (three) cores, primarily non-switchable.
Change of transformation ratio can be done also on the secondary side and in that case denotation 'sp' is added at the end of denotation:
STEM-NS 3820Lsp - transformer with two cores secondarily switchable.
We have serial production of these transformers with thermal current larger than 100In (to 500In or even more), and with 1, 2, 3 or 4 cores depending on the transformation ratio, accuracy class and power of the core.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) when ordering. Primarily terminals cover can be delivered on special request.
We keep the right for a change.

STEM-N 24*R, 38*R

STEM N 24*R



Primarily non-switchable
for 1600 ≤ In ≤ 2500A
(valid for STEM-N 24*R, 38*R)

CURRENT TRANSFORMERS FOR INDOOR MOUNTING TYPE **STEM-N 24*R**, **STEM-N 38*R** WITH SEVERAL CORES

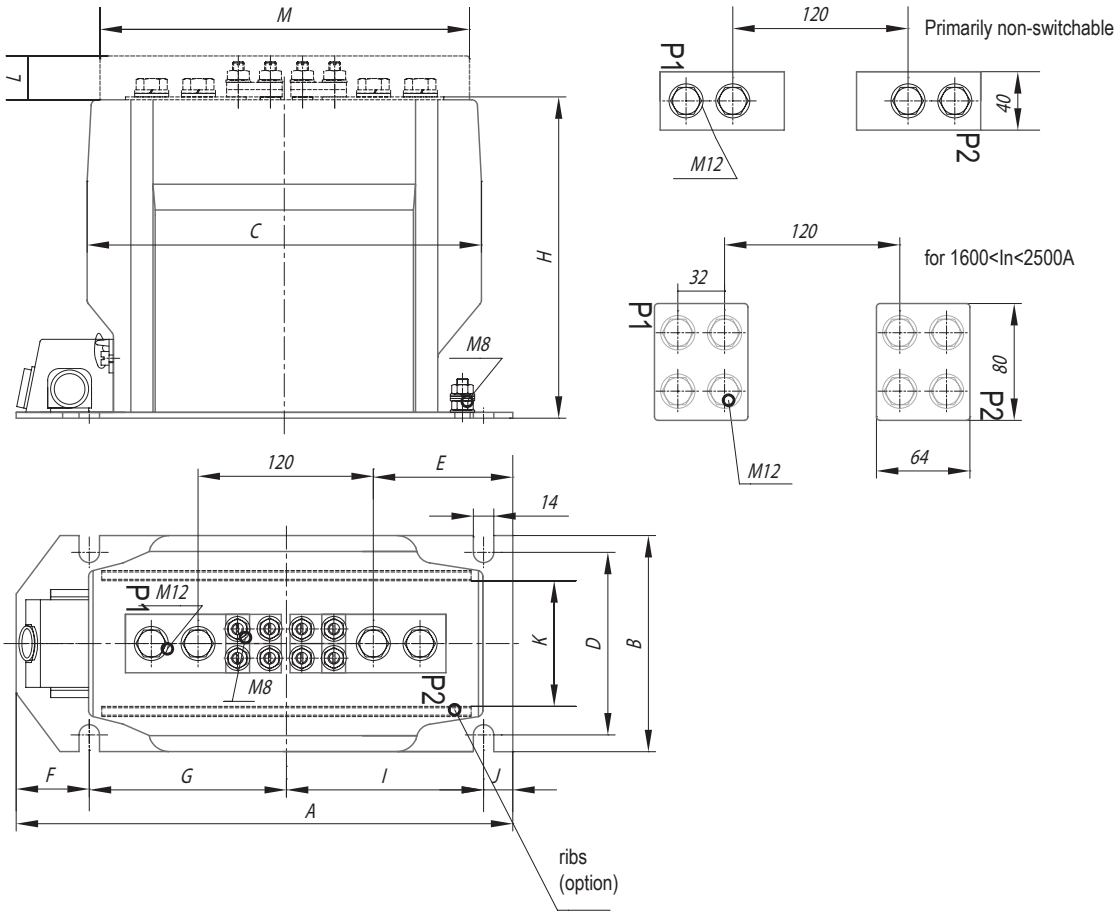
Type of transformer	Dimension (mm)										Mass (kg)
	A	B	C	D	E	F	G	H	I	J	
STEM-N 24*R	339	178	286	154	87	17	175	323	130	17	~29
STEM-N 38*R	305	184	292	162	90,5	21,5	133	448	133	17,5	~37

TECHNICAL DATA	STEM-N 24*R	STEM N-38*R
Rated primary voltage (kV)	20	35
Highest voltage for equipment (eff.) (kV)	24	38
Rated power-frequency withstand voltage, 1 min. (kV)	50	70
Rated impulse withstand voltage 1.2/50 μs (kV)	125	170
Rated frequency (Hz)	50/60	
Rated primary current (A)	5 to 3000 or 2x5 to 2x600	
Rated secondary current (A)	5 (or 1)	
Rated accuracy class	0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P	
Rated thermal current 1 sec.	$I_{th} = (100\text{-}1000)I_n$	
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th}$	
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$	
Number of cores	1-4	
Rated core power (VA)	5; 7,5; 10; 15; 30	
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30	
Temperature class of insulation	E/B	
Possibility of sealing	On primary and on secondary side	
Type of basic insulation	Epoxy resin	
Valid standards	IEC 61869-1; IEC 61869-2	

NOTE:

Denotation: STEM-N 2421R (STEM-N 2431R), STEM-N 3821R (STEM-N 3831R) – transformer with two (three) cores, primarily switchable;
STEM-N 2420R (STEM-N 2430R), STEM-N 3820R (STEM-N 3830R) – transformer with two (three) cores, primarily non-switchable.
Change of transformation ratio can be done also on the secondary side and in that case denotation 'sp' is added at the end of denotation:
STEM-N 3820Rsp - transformer with two cores secondarily switchable.
These transformers have been adjusted to small power substation cells because they have increased creeping distances because they have ribs made of epoxy resin near primary terminals.
We have serial production of these transformers for thermal current 100In with 2 cores, measuring core 15 VA cl.0,5FS5, protective core 30 VA cl.5P10, but we can produce them with larger thermal currents (to 500In or even more), and with 1, 2, 3 or 4 cores depending on the transformation ratio, accuracy class and power of the core.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) when ordering.
Primarily terminals cover can be delivered on special request.
We keep the right for a change.

STEM-N 12*d(R), 24*d(R)



CURRENT TRANSFORMERS FOR INDOOR MOUNTING TYPE **STEM-N*d(R)** WITH SEVERAL CORES

Type of transformer	Dimension (mm)													Mass (kg)
	A	B	C	D	E	F	G	H	I	J	K	L	M	
STEM-N 12*d(R)	320	148	270	125	96	50	133	220	135	20	86	30	253	~19
STEM-N 24*d(R)	343	178	310	150	101	43	140	280	140	20	90	60	280	~33

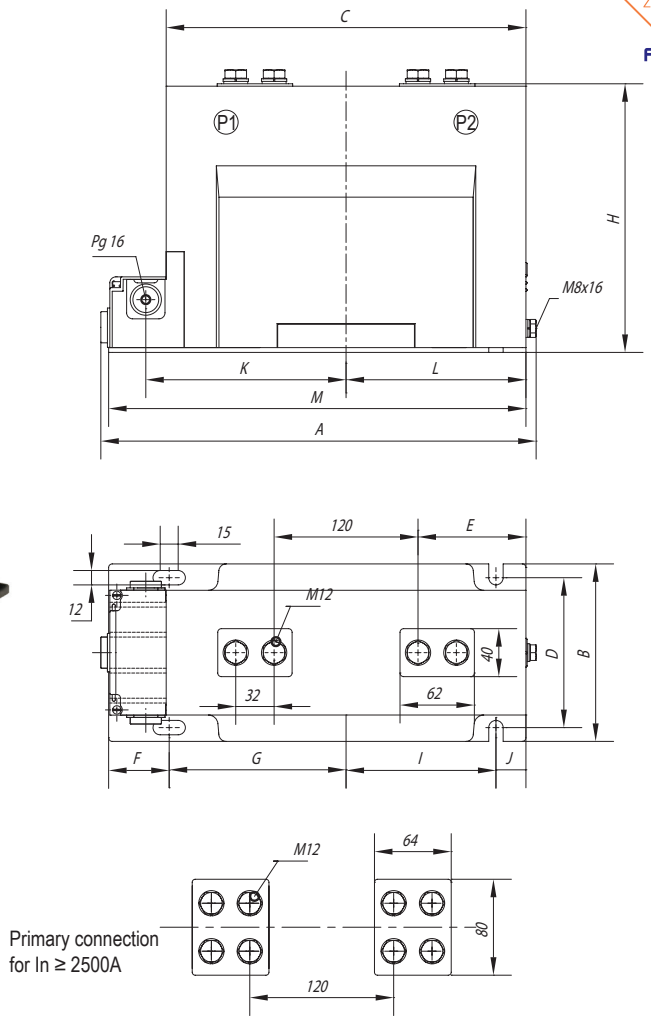
TECHNICAL DATA	STEM-N 12*d(R)	STEM -N 24*d(R)
Rated primary voltage (kV)	10	20
Highest voltage for equipment (eff.) (kV)	12	24
Rated power-frequency withstand voltage, 1 min. (kV)	28	50
Rated impulse withstand voltage 1.2/50 μs (kV)	75	125
Rated frequency (Hz)	50/60	
Rated primary current (A)	5 to 3000 or 2x5 to 2x600	
Rated secondary current (A)	5 (or 1)	
Rated accuracy class	0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P	
Rated thermal current 1 sec.	$I_{th} = (100\text{-}1000)I_n$	
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th}$	
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$	
Number of cores	1-4	
Rated core power (VA)	5; 7,5; 10; 15; 30	
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30	
Temperature class of insulation	E/B	
Possibility of sealing	On primary and on secondary side	
Type of basic insulation	Epoxy resin	
Valid standards	IEC 61869-1; IEC 61869-2; DIN 42600-8	

NOTE:

These models for 12 and 24 kV have been designed according to standard DIN 42600-8. Also, on the customer's request they can have ribs and in that case denotation would have "dR" at the end.
Example of the denotation: STEM-N 1221dR – transformer with two cores and ribs, primarily switchable.
STEM-N 2420d – transformer with two cores, primarily non-switchable.
Change of transformation ratio can be done also on the secondary side and in that case denotation "sp" is added at the end of denotation:
STEM-N 1220dsp – transformer with two cores secondarily switchable.
We have serial production of these transformers for thermal current 100In with 2 cores, measuring core 15 VA cl.0,5FS5, protective core 30 VA cl.5P10, but we can produce them with larger thermal currents (to 500In or even more), and with 1, 2, 3 or 4 cores depending on the transformation ratio, accuracy class and power of the core.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) for each core when ordering. Primary terminals cover can be delivered on a special request.
We keep the right for a chnge.

STEM 12*d, 24*d

STEM 1220d



CURRENT TRANSFORMERS FOR INDOOR MOUNTING TYPE **STEM 12*d, 24*d** WITH SEVERAL CORES

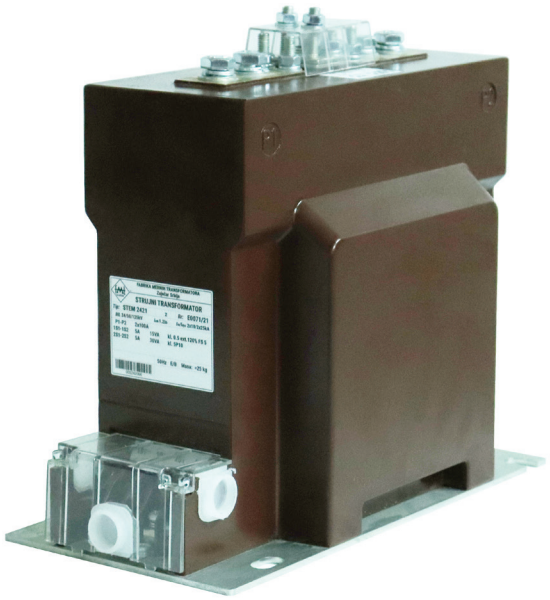
Type of transformer	Dimension (mm)													Mass (kg)
	A	B	C	D	E	F	G	H	I	J	K	L	M	
STEM 12*d	363	148	300	125	90	505	1475	224	155	25	167	150	348	~23
STEM 24*d	388	178	320	150	105	73	135	283	140	25	177	165	373	~33

TECHNICAL DATA	STEM 12*d	STEM 24*d
Rated primary voltage (kV)	10	20
Highest voltage for equipment (eff.) (kV)	12	24
Rated power-frequency withstand voltage, 1 min. (kV)	28	50
Rated impulse withstand voltage 1.2/50 μs (kV)	75	125
Rated frequency (Hz)	50/60	
Rated primary current (A)	5 to 3000 or 2x5 to 2x600	
Rated secondary current (A)	5 (or 1)	
Rated accuracy class	0,2; 0,5; 0,5S; 0,2S; 1; 3; 5P; 10P	
Rated thermal current 1 sec.	I_{th} = (100-1000)I_n	
Rated dynamic current	I_{dyn} = 2,5 I_{th}	
Rated continuous thermal current	I_{cth} = 1,2 I_n	
Number of cores	2 (1, 3 or 4)	
Rated core power (VA)	5; 7,5; 10; 15; 30	
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30	
Temperature class of insulation	E/B	
Possibility of sealing	On primary and on secondary side	
Type of basic insulation	Epoxy resin	
Valid standards	IEC 61869-1; IEC 61869-2; DIN 42600	

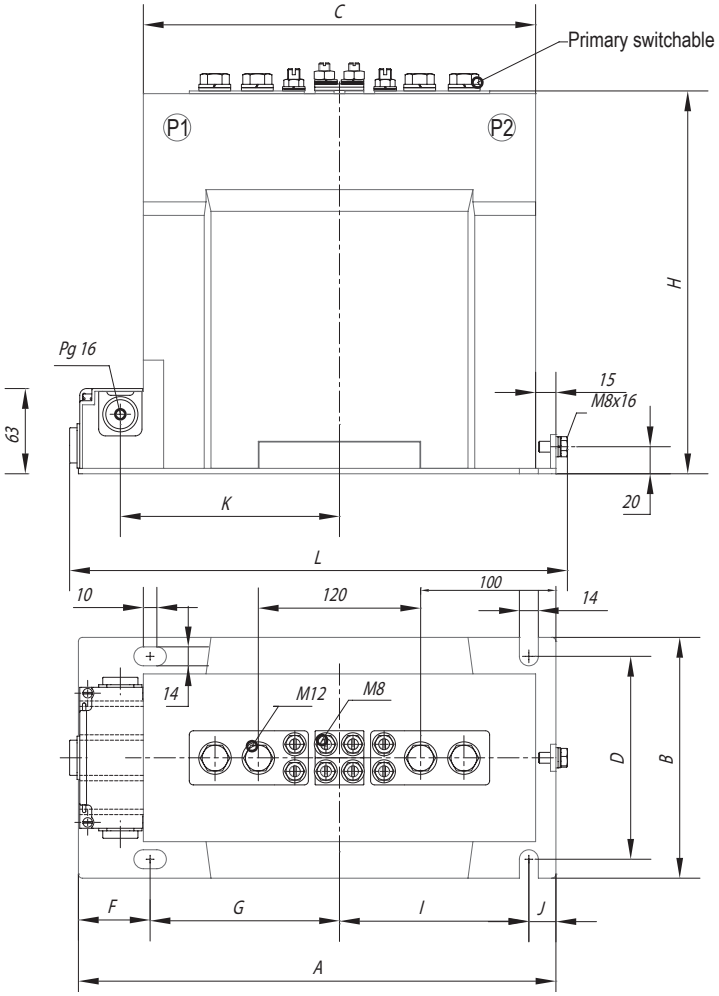
NOTE:

These models for 12 and 24 kV have design according to DIN standard, they are primarily non-switchable.
Example of the denotation: STEM 1220d – transformer 12kV with two cores.
STEM 2430d – transformer 24kV with three cores.
Change of transformation ratio can be done on the secondary side and in that case denotation 'sp' is added at the end of denotation:
STEM 1220dsp - transformer with two cores secondarily switchable.
We have serial production of these transformers for thermal current 100In with 2 cores, measuring core 15 VA cl.0,5FS5, protective core 30 VA cl.5P10, but we can produce them with larger thermal currents (to 500In or even more), and with 1, 3 or 4 cores depending on the transformation ratio, accuracy class and power of the core.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) when ordering. Primarily terminals cover can be delivered on special request.
We keep the right for a change.

STEM 12*z, 24*z



STEM 2421z



CURRENT TRANSFORMERS FOR INDOOR MOUNTING TYPE **STEM N *z** WITH SEVERAL CORES

Type of transformer	Dimension (mm)												Mass (kg)
	A	B	C	D	E	F	G	H	I	J	K	L	
STEM 12*z	333	148	270	125	90	48	135	222	135	15	152	348	~18
STEM 24*z	353	178	290	150	100	53	140	283	140	20	162	368	~27

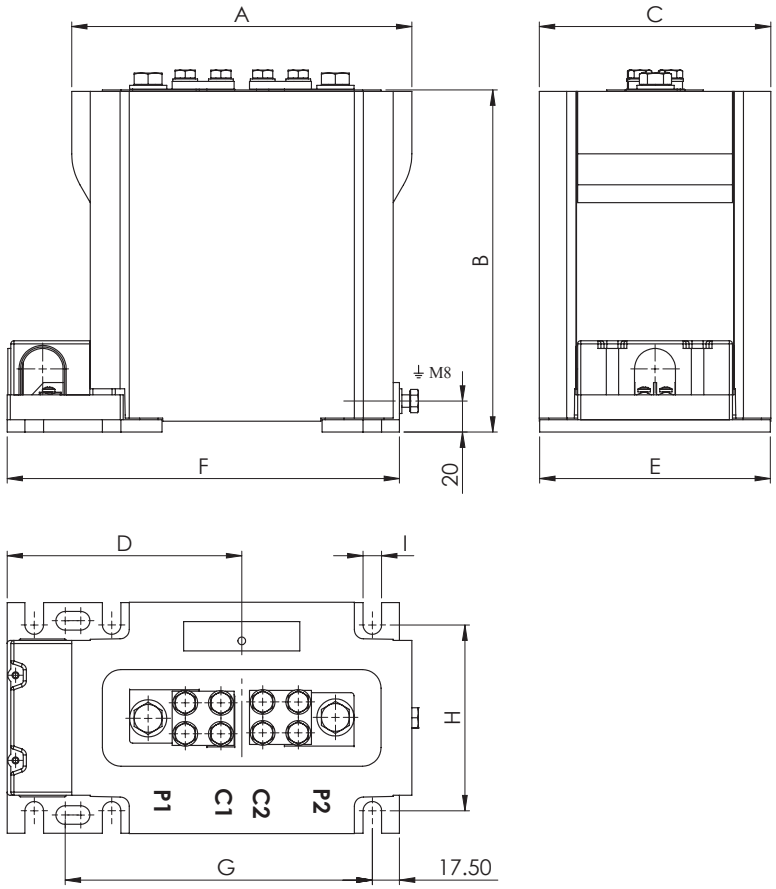
TECHNICAL DATA	STEM 12*z	STEM 24*z
Rated primary voltage (kV)	10	20
Highest voltage for equipment (eff.) (kV)	12	24
Rated power-frequency withstand voltage, 1 min. (kV)	28	50
Rated impulse withstand voltage 1.2/50 μs (kV)	75	125
Rated frequency (Hz)	50/60	
Rated primary current (A)	5 to 3000 or 2x5 to 2x600	
Rated secondary current (A)	5 (or 1)	
Rated accuracy class	0,2; 0,5; 0,5S; 0,2S; 1; 3; 5P; 10P	
Rated thermal current 1 sec.	$I_{th} = (100\text{-}1000)I_n$	
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th}$	
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$	
Number of cores	2 (1, 3 or 4)	
Rated core power (VA)	5; 7,5; 10; 15; 30	
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30	
Temperature class of insulation	E/B	
Possibility of sealing	On primary and on secondary side	
Type of basic insulation	Epoxy resin	
Valid standards	IEC 61869-1; IEC 61869-2	

NOTE:

Denotation: STEM 1221z (STEM 1231z), STEM 2421z (STEM 2431z) – transformer with two (three) cores, primarily switchable;
STEM 1220z (STEM 1230z), STEM 2420z (STEM 2430z) – transformer with two (three) cores, primarily non-switchable.
Change of transformation ratio can be done also on the secondary side and in that case denotation "sp" is added at the end of denotation:
STEM 1220zsp - transformer with two cores secondarily switchable.
We have serial production of these transformers for thermal current 100In with 2 cores, measuring core 15 VA cl.0,5FS5, protective core 30 VA cl.5P10, but we can produce them with larger thermal currents (to 500In or even more), and with 1, 2, 3 or 4 cores depending on the transformation ratio, accuracy class and power of the core.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) for each core when ordering. Primary terminals cover can be delivered on a special request.
We keep the right for a change.

AS 12/150*

AS 12/150-b1



CURRENT TRANSFORMERS FOR INDOOR MOUNTING, SUPPORTING TYPE **AS 12/150***

Type of transformer	Dimension (mm)									Mass (kg)
	A	B	C	D	E	F	G	H	I	
AS 12/150-b0	191	220	149	133	149	225	170	120	12	~16
AS 12/150-b1	219	220	149	152	149	253	198	120	12	~19
AS 12/150-b2	299	220	149	183	149	334	280	120	12	~22
AS 12/150-b3	299	220	149	183	149	334	280	120	12	~25
AS 12/150-b4	419	220	149	302	149	445	400	120	12	~28

TECHNICAL DATA	AS12/150-b0	AS12/150-b1	AS12/150-b2	AS12/150-b3	AS12/150-b4
Rated primary voltage (kV)	10				
Highest voltage for equipment (eff.) (kV)	12				
Rated power-frequency withstand voltage, 1 min. (kV)	28 (42)				
Rated impulse withstand voltage 1.2/50 μs (kV)	75				
Rated secondary power-frequency withstand voltage 50 Hz, 1 min. (kV)	3				
Rated frequency (Hz)	50/60				
Rated primary current (A)	5 to 2500 or 2x5 to 2x600				
Rated secondary current (A)	5 (or 1)				
Rated accuracy class	0,1; 0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P				
Rated thermal current, 1 sec.	$I_{th} = (100\text{-}500)I_n$				
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th}$; max. 120 kA				
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$				
Number of cores	1 to 6				
Rated core power (VA)	1,25 do 45				
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30				
Temperature class of insulation	E				
Type of basic insulation	Epoxy resin				
Valid standards	IEC 61869-1; IEC 61869-2 (ГОСТ 7746)				

NOTE:

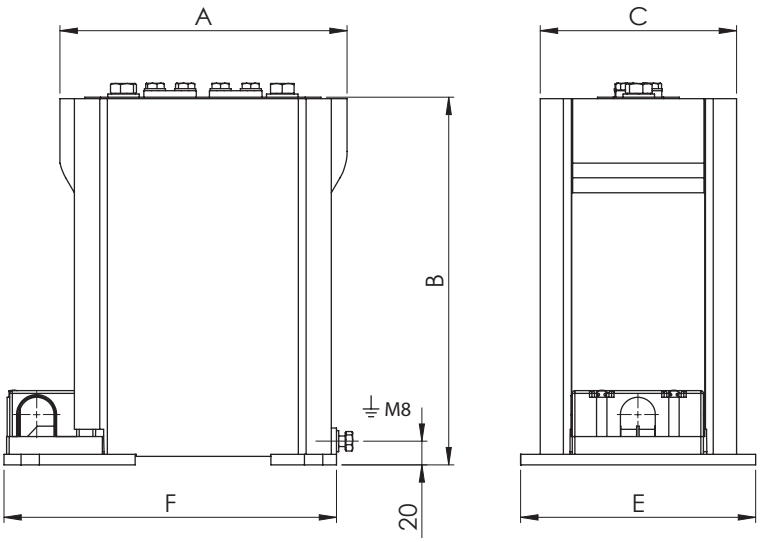
Our factory produces these transformers for thermal current 100In but we can produce them for greater thermal currents (500In or even greater) depending on the current transformation ratio, accuracy class and rated power.

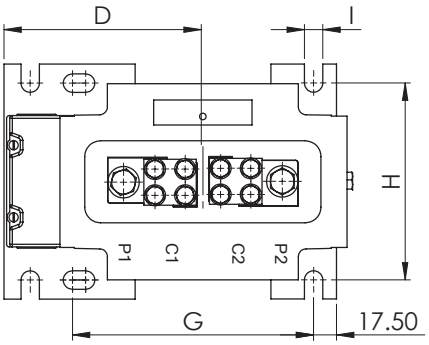
Please state transformation ratio, accuracy class, security factor (accuracy limit factor) and rated power when ordering. Transformers can be done with barriers upon request.

We keep the right for a change.

AS 24/180*

AS 24/180-b3





CURRENT TRANSFORMERS FOR INDOOR MOUNTING, SUPPORTING TYPE **AS 24/180***

Type of transformer	Dimension (mm)									Mass (kg)
	A	B	C	D	E	F	G	H	I	
AS 24/180-b1	191	280	149	133	179	225	160	150	14	~18
AS 24/180-d1	191	280	179	133	179	225	160	150	14	~22
AS 24/180-b2	219	280	149	152	179	253	185	150	14	~26
AS 24/180-b3	299	280	149	183	179	334	265	150	14	~30
AS 24/180-b4	316	280	149	195	179	350	280	150	14	~34
AS 24/180-d4	316	280	179	195	179	350	280	150	14	~38

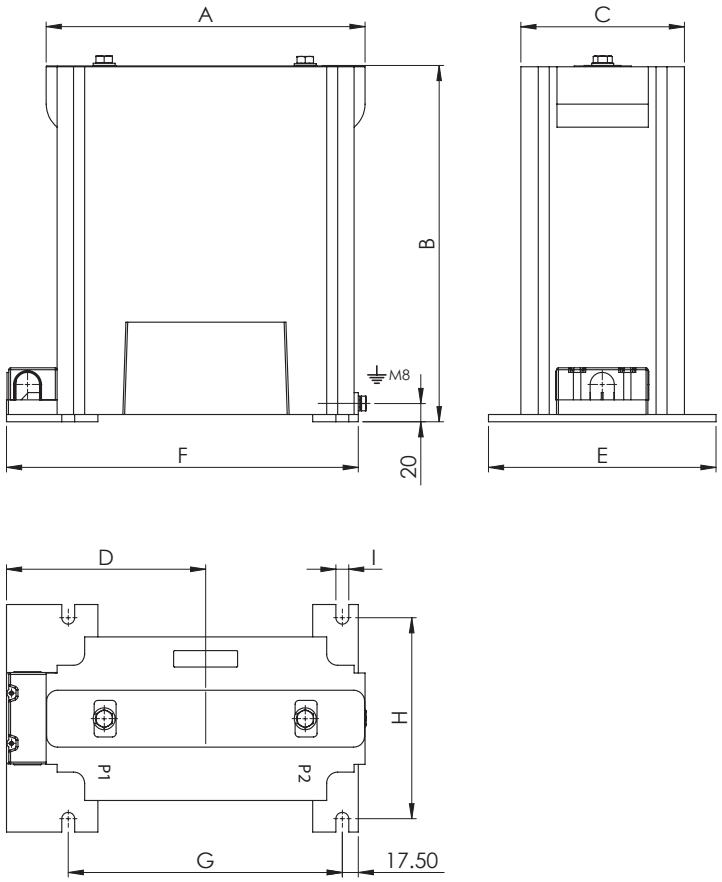
NOTE:

Our factory produces these transformers for thermal current 100In but we can produce them for greater thermal currents (500In or even greater) depending on the current transformation ratio, accuracy class and rated power.
Please state transformation ratio, accuracy class, security factor (accuracy limit factor) and rated power when ordering.
Transformers can be done with barriers upon request.
We keep the right for a change.

TECHNICAL DATA	AS24/180-b1	AS24/180-d1	AS24/180-b2	AS24/180-b3	AS24/180-b4	AS24/180-d4
Rated primary voltage (kV)	20					
Highest voltage for equipment (eff.) (kV)	24					
Rated power-frequency withstand voltage, 1 min. (kV)	50 (65)					
Rated impulse withstand voltage 1.2/50 μs (kV)	125					
Rated secondary power-frequency withstand voltage 50 Hz, 1 min. (kV)	3					
Rated frequency (Hz)	50/60					
Rated primary current (A)	5 do 2000 ili 2x5 do 2x600					
Rated secondary current (A)	5 (or 1)					
Rated accuracy class	0,1; 0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P					
Rated thermal current, 1 sec.	$I_{th} = (100\text{-}500)I_n$					
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th;}$ max. 120 kA					
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$					
Number of co_{res}	1 to 6					
Rated core power (VA)	1,25 to 45					
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30					
Temperature class of insulation	E					
Type of basic insulation	Epoxy resin					
Valid standards	IEC 61869-1; IEC 61869-2 (ГОСТ 7746)					

AN 36/250*

AN 36/250-d2



CURRENT TRANSFORMERS FOR INDOOR MOUNTING, SUPPORTING TYPE **AN 36/250***

Type of transformer	Dimension (mm)									Mass (kg)
	A	B	C	D	E	F	G	H	I	
AN 36/250-d1	191	390	179	133	249	225	140	225	14	~32
AN 36/250-d2	349	390	179	215	249	385	300	225	14	~38
AN 36/250-f2	349	390	224	215	249	385	300	225	14	~44

TECHNICAL DATA	AN36/250-d1	AN36/250-d2	AN36/250-f2
Rated primary voltage (kV)	35		
Highest voltage for equipment (eff.) (kV)	36 (42)		
Rated power-frequency withstand voltage, 1 min. (kV)	70 (95)		
Rated impulse withstand voltage 1.2/50 μs (kV)	170 (190)		
Rated secondary power-frequency withstand voltage 50 Hz, 1 min. (kV)	3		
Rated frequency (Hz)	50/60		
Rated primary current (A)	5 to 1250 or 2x5 to 2x600		
Rated secondary current (A)	5 (or 1)		
Rated accuracy class	0,1; 0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P		
Rated thermal current, 1 sec.	$I_{th} = (100\text{-}500)I_n$		
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th;}$ max. 120 kA		
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$		
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30		
Number of cores	1 to 6		
Rated core power (VA)	1,25 to 45		
Temperature class of insulation	E		
Type of basic insulation	Epoxy resin		
Valid standards	IEC 61869-1; IEC 61869-2 (ГОСТ 7746)		

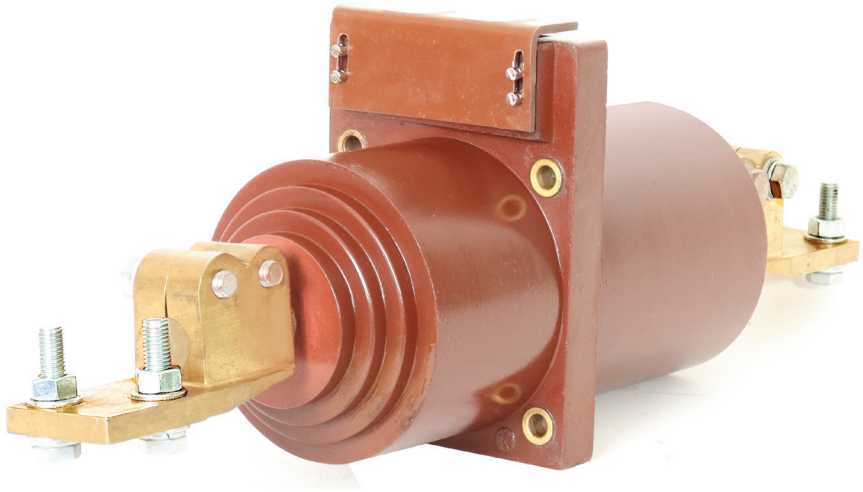
NOTE:

Our factory produces these transformers for thermal current 100In but we can produce them for greater thermal currents (500In or even greater) depending on the current transformation ratio, accuracy class and rated power.

Please state transformation ratio, accuracy class, security factor (accuracy limit factor) and rated power when ordering. Transformers can be done with barriers upon request.

We keep the right for a change.

STPN 12*, 24*, 38*

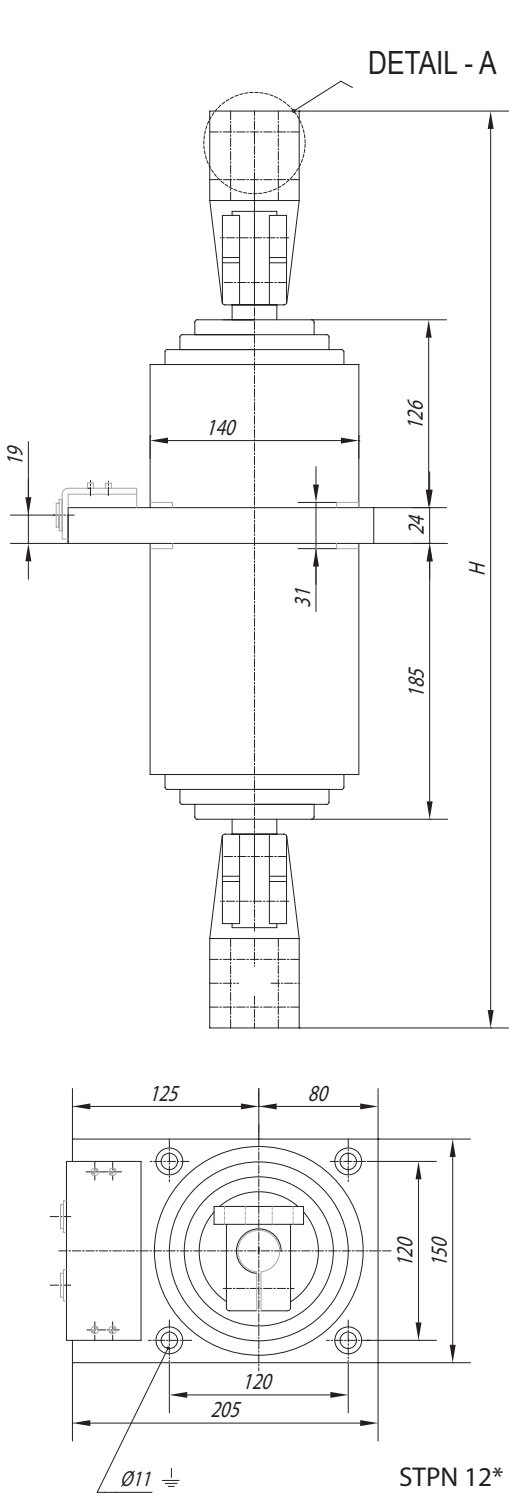


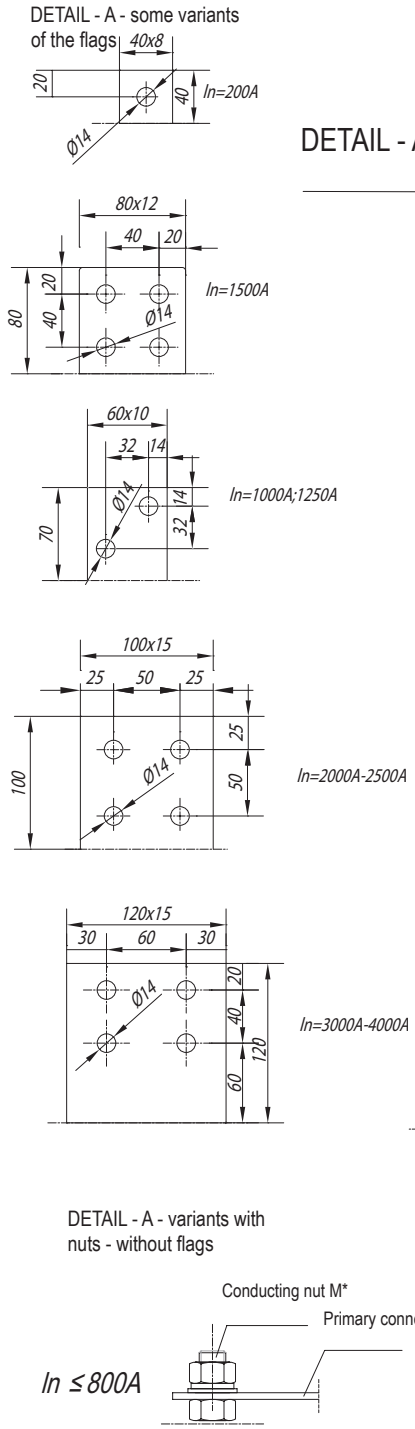
STPN 1220

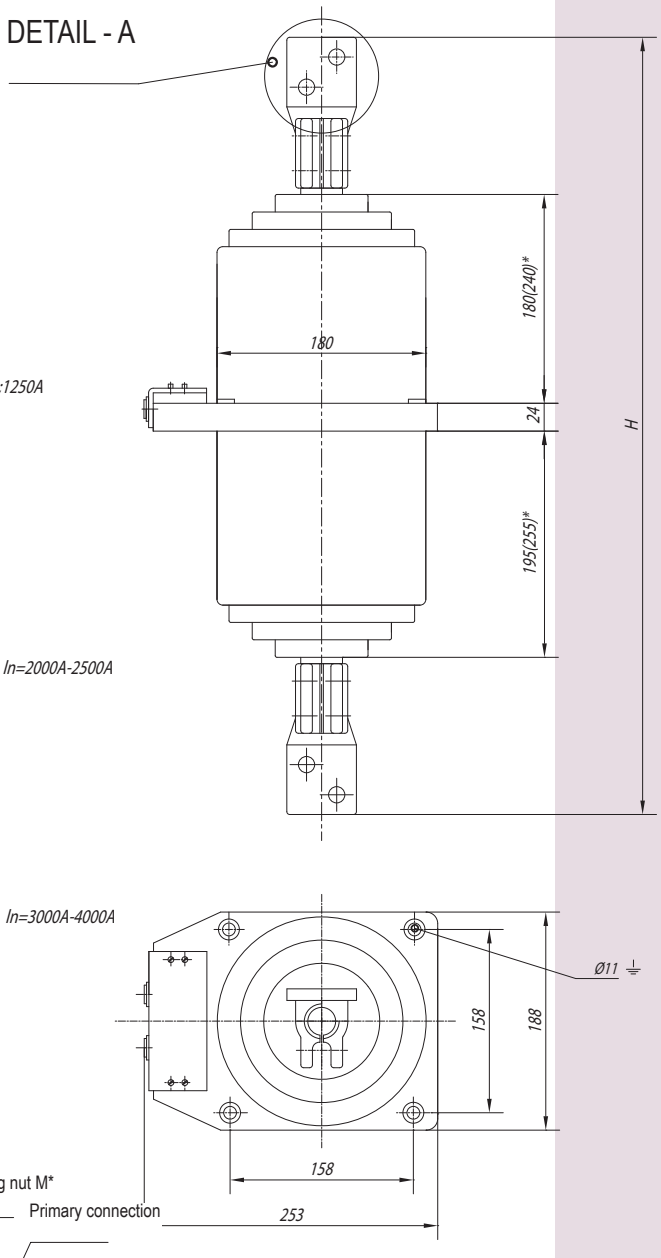
BUSHING TYPE CURRENT TRANSFORMERS FOR INDOOR MOUNTING TYPE **STPN 12*, 24*, 38***

TECHNICAL DATA	STPN-12*	STPN-24*	STPN-38*
Rated primary voltage (kV)	10	20	35
Highest voltage for equipment (eff.) (kV)	12	24	38
Rated power-frequency withstand voltage, 1 min. (kV)	28	50	70
Rated impulse withstand voltage 1.2/50 μs (kV)	75	125	170
Rated frequency (Hz)	50/60		
Rated primary current (A)	50 to 4000		
Rated secondary current (A)	5 (or 1)		
Rated accuracy class	0,2; 0,5; 1; 3; 5P; 10P		
Rated thermal current 1 sec.	$I_{th} = (100\text{-}500)I_n$		
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th}$		
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$		
Number of cores	1; 2; 3 or 4		
Rated core power (VA)	10; 15; 30		
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30		
Temperature class of insulation	E/B		
Type of basic insulation	Epoxy resin		
Mass (kg)	~24	~38	~48
Valid standards	IEC 61869-1; IEC 61869-2		

NOTE:
The examples of the denotation ''*'':
STPN 1210 – transformer with single core
STPN 2420 – transformer with two cores
STPN 3820 - transformer with two cores.
This type of transformer is primarily non-switchable
We have serial production of these transformers for short-time thermal current Ith=100In; with measuring core 15 VA; cl.0.5FS5 and protective core 30VA, 5P10.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) for each core when ordering.
We keep the right for a change.



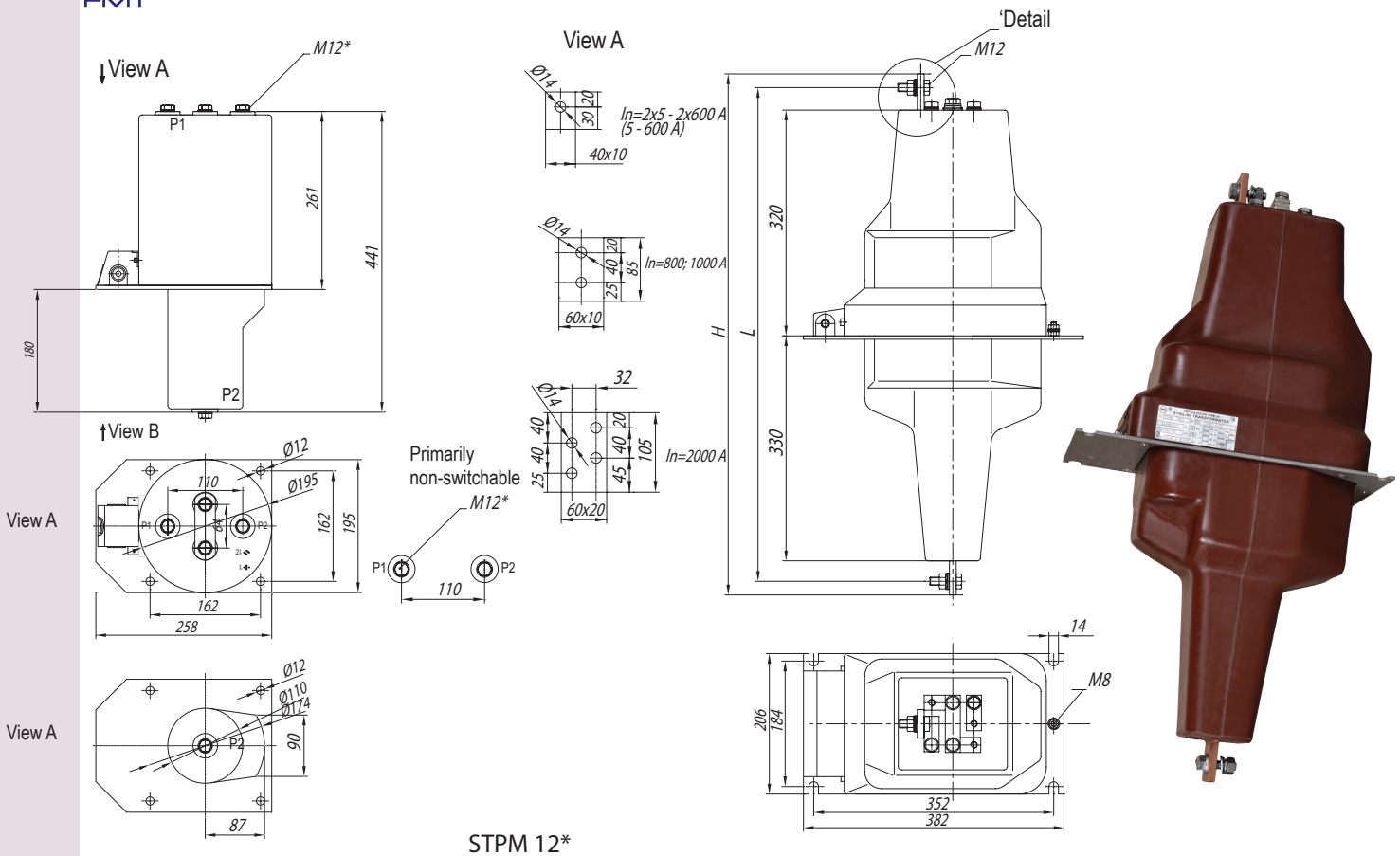




I_1 (A)	Thread of the flag	Primary conductor Cu (mm)	Lenght of the primary conductor (mm)			Total lenght together with the flags H (mm)		
			12kV	24kV	38kV	12kV	24kV	38kV
200-300	M16	Ø16	400	465	585	490	545	665
400-500	M20	Ø20	460	525	645	600	665	785
600-800	M24	Ø24	460	525	645	600	665	785
1000-1250	M30	Ø30	460	525	645	600	665	785
1500	M36	Ø36	480	545	665	660	725	845
2000	M40	Ø40	500	565	685	726	791	911
2500	M42	Ø42	500	565	685	726	791	911
3000-4000	M48	Ø48	500	565	685	760	825	945

Length of the primary conductor as well as the dimension H depends of the dimension of the flag, i.e. value of the primary current. For primary currents up to 800 A it is possible to establish the connection with appropriate nuts without the flags.

STPM 12*, 38*



*For In ≥300A - M16

STPM 12*

STPM 38*

CURRENT TRANSFORMERS FOR INDOOR MOUNTING BUSHING TYPE **STPM 12*, 38***

TECHNICAL DATA	STPM-12*	STPM-38*
Rated primary voltage (kV)	10	35
Highest voltage for equipment (eff.) (kV)	12	38
Rated power-frequency withstand voltage, 1 min. (kV)	28	70
Rated impulse withstand voltage 1.2/50 μs (kV)	75	170
Rated frequency (Hz)	50/60	
Rated primary current (A)	5 to 600 or 2x5 to 2x300	
Rated secondary current (A)	5 (or 1)	
Rated accuracy class	0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P	
Rated thermal current 1 sec.	I_{th} = (100-500)I_n	
Rated dynamic current	I_{dyn} = 2,5 I_{th}	
Rated continuous thermal current	I_{cth} = 1,2 I_n	
Number of cores	1	1, 2, 3 or 4
Rated core power (VA)	5; 7,5; 10; 15; 30	
Security factor / Accuracy limit factor	5; 10 / 5; 10; 15; 20; 30	
Temperature class of insulation	E/B	
Possibility of sealing	On secondary side	
Type of basic insulation	Epoxy resin	
Mass (kg)	~23	~46
Valid standards	IEC 61869-1; IEC 61869-2	

Dimension of the transformer STPM 38:*

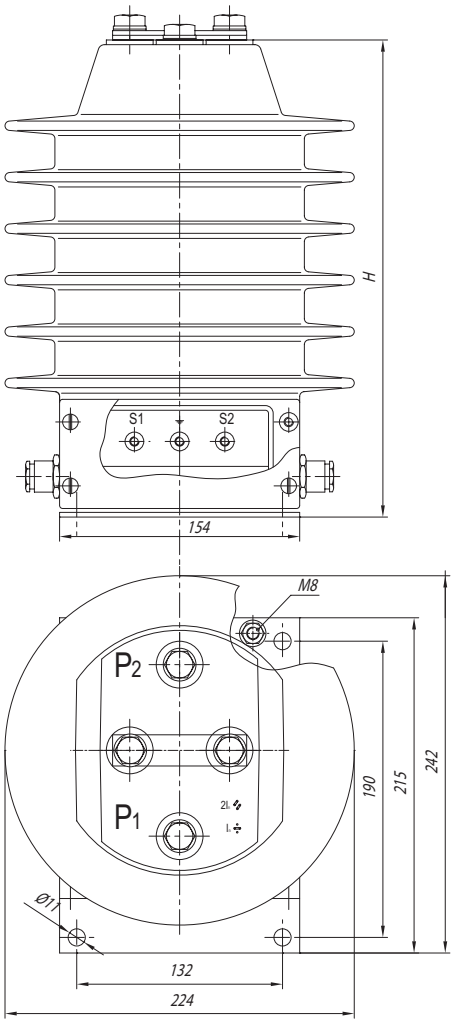
I1 (A)	Dimension (mm)	
	H	L
2x5 – 2x600 5 – 600	756	716
800 – 1000	830	790
2000-3000	870	830

NOTE:

*Denotation: STPM-1211, STPM-3821, STPM-3831 – transformer with single core, two cores or three cores, primarily switchable;
STPM-1210, STPM-3810, STPM-3820, STPM-3830 – transformer with single core, two cores or three cores, primarily non-switchable;
We have serial production of these transformers for short-time thermal current Ith=100In.. STPM 12* can have single core standard measuring core 15 VA; cl.0.5FS5. STPM 38* is usually with two cores, measuring core 15 VA, cl.0.5FS5 and protective core 30VA, 5P10 but we can produce them for larger values of short-time thermal current (up to 500 In) and with 1, 3 or 4 cores depending on the transformation ratio, rated power and accuracy class.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) for each core when ordering.
We keep the right for a change.

ATMS 2411(1211), 3811

ATMS 2411



CURRENT TRANSFORMERS FOR OUTDOOR MOUNTING TYPE **ATMS 2411(1211), 3811** WITH SINGLE CORE

Type of transformer	Dimension (mm)		Mass (kg)
	H	Broj rebara	
ATMS-2411(1211)	306	6	~15
ATMS-3811	405	9	~19

TECHNICAL DATA	ATMS-1211 (ATMS-1210) ATMS-2411 (ATMS-2410)	ATMS-3811 (ATMS-3810)
Rated primary voltage (kV)	20(10)	35
Highest voltage for equipment (eff.) (kV)	24(12)	38
Rated power-frequency withstand voltage, 1 min. (kV)	50(28)	70
Rated impulse withstand voltage 1.2/50 μs (kV)	125(75)	170
Creeping distance (mm)	570	860
Type of mounting	Outdoor	
Rated frequency (Hz)	50/60	
Rated primary current (A)	5 to 500 or 2x5 to 2x75	
Rated secondary current (A)	5 (or 1)	
Rated accuracy class	0,5	
Rated thermal current 1 sec.	$I_{th} = (100\text{-}500)I_n$	
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th}$	
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$	
Number of cores	1	
Rated core power (VA)	5; 7,5; 10	
Security factor / Accuracy limit factor	5; 10/5; 10; 15; 20; 30	
Temperature class of insulation	E/B	
Type of basic insulation	Cycloaliphatic resin	
Valid standards	IEC 61869-1; IEC 61869-2	

NOTE:

Denotation: ATMS-1211, ATMS-2411, ATMS-3811 – transformer with single core, primarily switchable;
ATMS-1210, ATMS-2410, ATMS-3810 – transformer with single core, primarily non-switchable.
We have serial production of these transformers with 10VA, cl.0.5, for thermal current Ith=100In and we put them in assemblies for power energy meters on pillar power substations for voltage levels 10 kV and 20 kV type SMST-*.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) for each core when ordering.
We keep the right for a change.

ATM 2411(1211), 2411h, 3811;

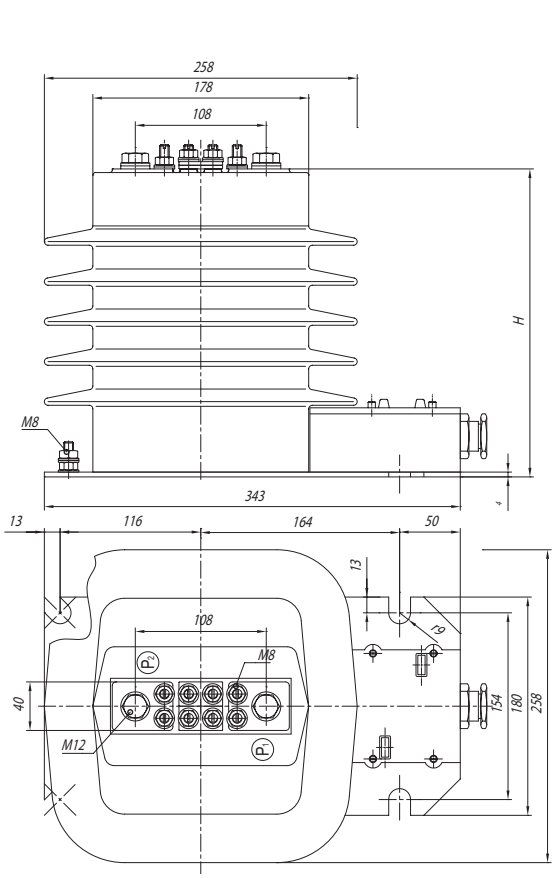
ATM 3811

CURRENT TRANSFORMERS FOR OUTDOOR MOUNTING TYPE **ATM 2411(1211), 2411h, 3811** WITH SINGLE CORE

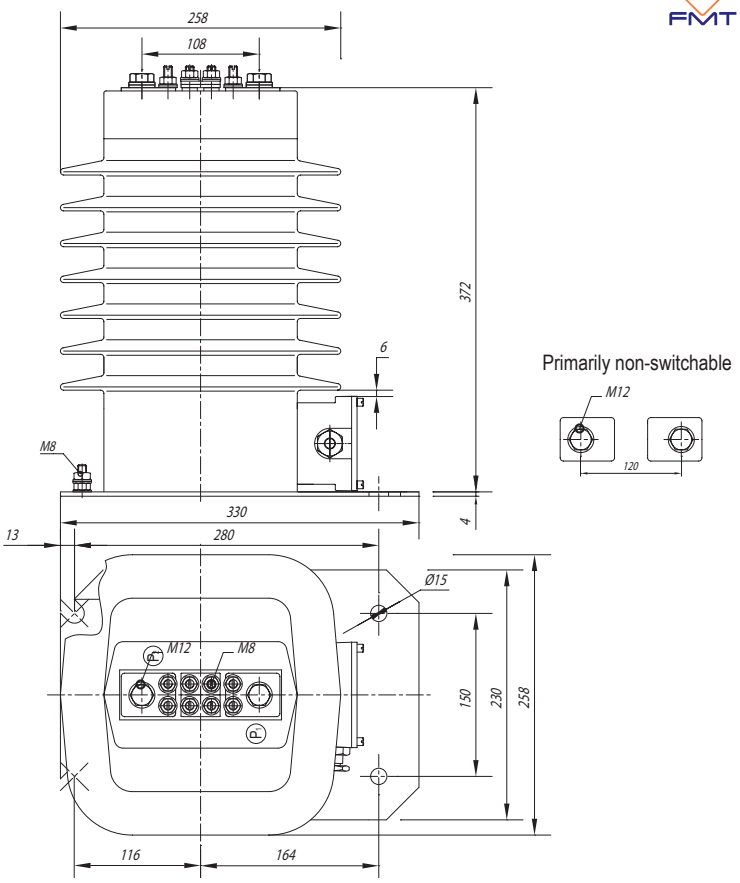
Type of transformer	Dimension (mm)		Mass (kg)
	H	Number of ribs	
ATM-2411 (ATM-1211)	254	5	~23
ATM-2411h	372	7	~29
ATM-3811	376	8	~29

NOTE:

Denotation: ATM-2411 (ATM-1211), ATM-3811 – transformer with single core, primarily switchable
ATM-2410 (ATM-1210), ATM-3810 – transformer with single core, primarily non-switchable;
ATM-2410(1210)sp, ATM-3810sp – transformer with single core, secondarily switchable.
We have serial production of these transformers for thermal current 100In, but we can produce them with larger thermal currents (to 500In or even more), depending on the transformation ratio, accuracy class and power of the core. Switching to another current transformation ratio can be done on primary or on secondary side, sealing of the terminals cover can be done on the secondary side.
Model ATM 2411h, is assumed for more demanding environmental conditions and it has creeping distance ≥31mm/kV.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) for each core when ordering. Primary terminals cover can be delivered on a special request.
We keep the right for a change.



ATM 2411 (3811*)



ATM 2411h

TECHNICAL DATA	ATM-2411(ATM-1211) ATM-2410(ATM-1210)	ATM-2411h (ATM-2410h)	ATM-3811 (ATM-3810)
Rated primary voltage (kV)	20(10)	20	35
Highest voltage for equipment (eff.) (kV)	24(12)	24	38
Rated power-frequency withstand voltage, 1 min. (kV)	50(28)	50	70
Rated impulse withstand voltage 1.2/50 μs (kV)	125(75)	125	170
Creeping distance (mm)	490	750	840
Type of mounting	Outdoor		
Rated frequency (Hz)	50/60		
Rated primary current (A)	5 to 1200 or 2x5 to 2x600		
Rated secondary current (A)	5 (or 1)		
Rated accuracy class	0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P		
Rated thermal current 1 sec.	$I_{th} = (100\text{-}500)I_n$		
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th}$		
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$		
Number of cores	1		
Rated core power (VA)	5; 7,5; 10; 15; 30		
Security factor / Accuracy limit factor	5; 10/5; 10; 15; 20; 30		
Temperature class of insulation	E/B		
Type of basic insulation	Cycloaliphatic resin		
Valid standards	IEC 61869-1; IEC 61869-2		

ATM 24*(12*), 38*, 38*h

ATM 24*

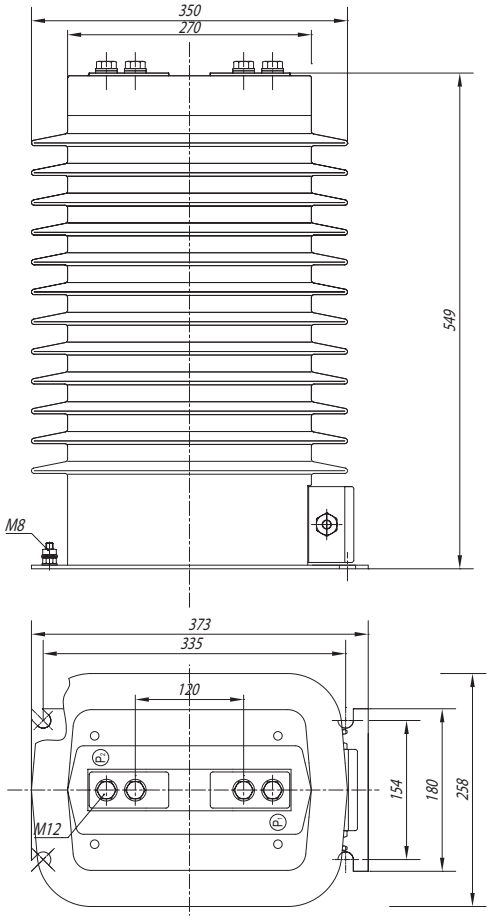
CURRENT TRANSFORMERS FOR OUTDOOR MOUNTING TYPE **ATM 24*(12*), 38*, 38*h** WITH SEVERAL CORES

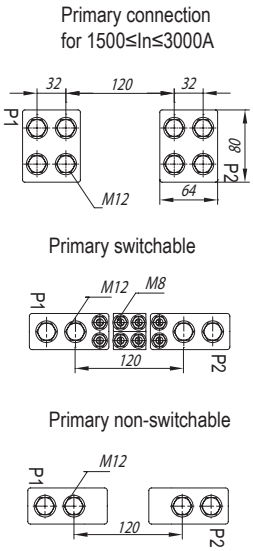
Type of transformer	Dimension (mm)		Mass (kg)
	H	Number of ribs	
ATM-24*(12*)	254	5	~36
ATM-38*	376	8	~44
ATM-38*h	549	12	~54

NOTE:

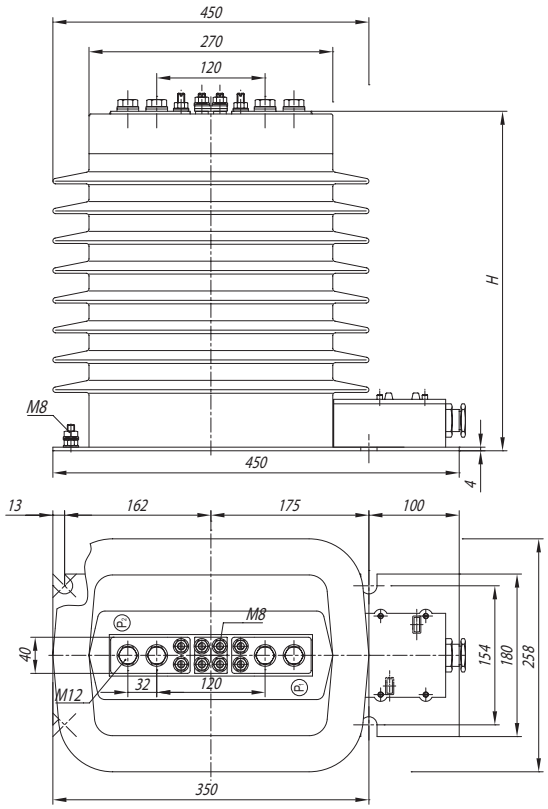
Denotation: ATM-1221, ATM-2421, ATM-3821 – transformer with two cores, primarily switchable;
ATM-1220, ATM-2420, ATM-3820 – transformer with two cores, primarily non-switchable.

We have serial production of these transformers for thermal current 100In, but we can produce them with larger thermal currents (to 500In or even more), depending on the transformation ratio, accuracy class and power of the core. Switching to another current transformation ratio can be done on primary or on secondary side, sealing of the terminals cover can be done on the secondary side.
Model ATM 3821h, is assumed for more demanding environmental conditions (BIL 40.5/95/200 kV) and it has creeping distance ≥31mm/kV.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) for each core when ordering.
We keep the right for a change.





ATM 38*h

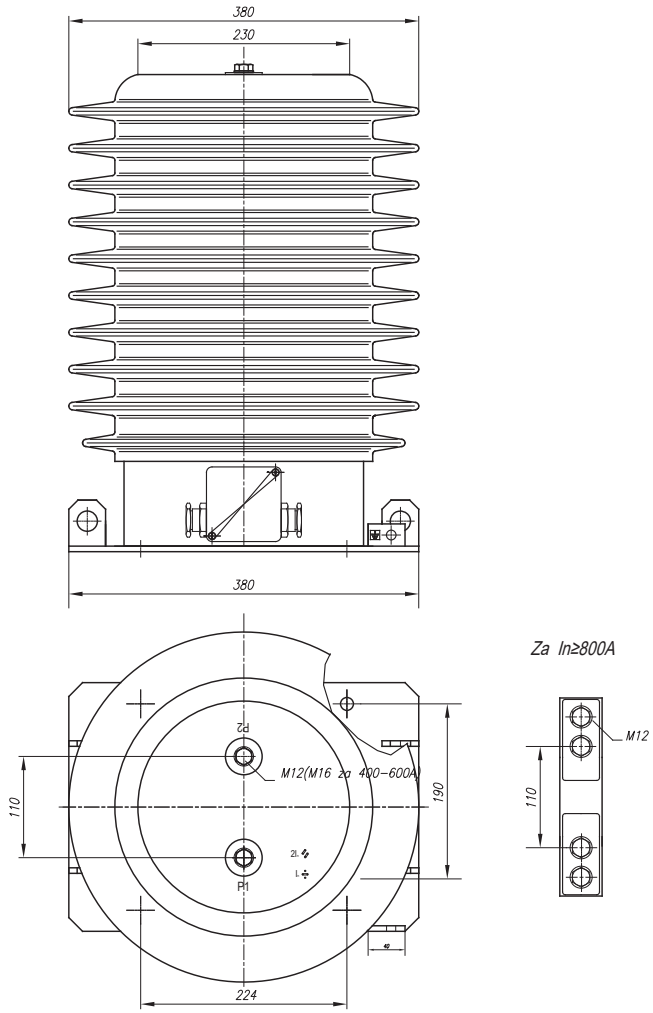


ATM 38*(24*)

TECHNICAL DATA	ATM-24*(12*)	ATM-38*	ATM-38*h
Rated primary voltage (kV)	20(10)	35	35
Highest voltage for equipment (eff.) (kV)	24(12)	38	38 (40,5)
Rated power-frequency withstand voltage, 1 min. (kV)	50(28)	70	70 (95)
Rated impulse withstand voltage 1.2/50 μs (kV)	125(75)	170	170 (200)
Creeping distance (mm)	490	840	1296
Type of mounting	Outdoor		
Rated frequency (Hz)	50/60		
Rated primary current (A)	5 to 1200 or 2x5 to 2x600		
Rated secondary current (A)	5 (or 1)		
Rated accuracy class	0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P		
Rated thermal current 1 sec.	$I_{th} = (100\text{-}1000)I_n$		
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th}$		
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$		
Number of cores	1-4		
Rated core power (VA)	5; 7,5; 10; 15; 30		
Security factor / Accuracy limit factor	5; 10/5; 10; 15; 20; 30		
Temperature class of insulation	E/B		
Type of basic insulation	Cycloaliphatic resin		
Valid standards	IEC 61869-1; IEC 61869-2		

STSM 38*, 38*L, 38*b

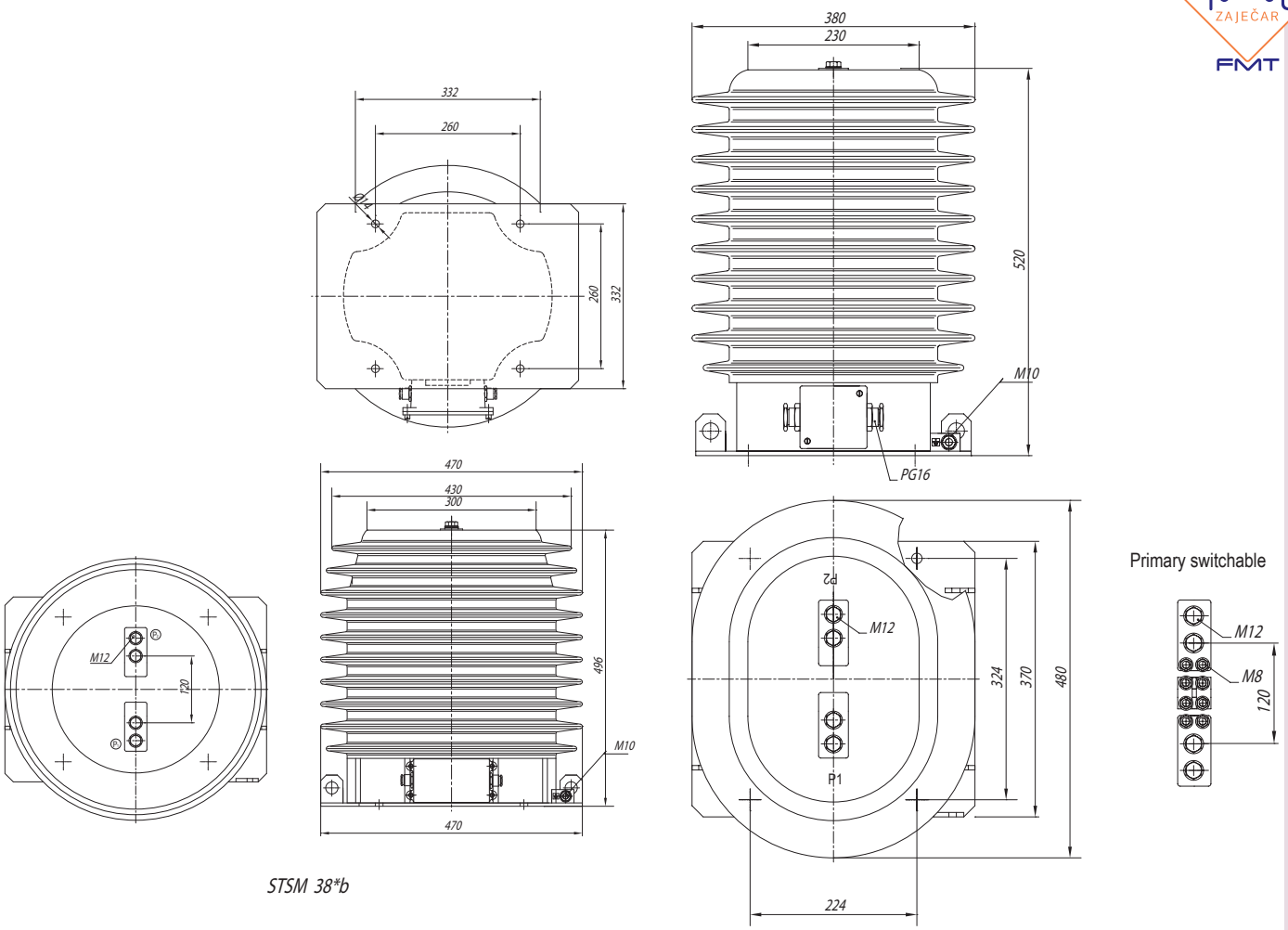
STSM 38*



CURRENT TRANSFORMERS FOR OUTDOOR MOUNTING TYPE **STSM 38*, 38*L, 38*b**

NOTE:

Example of the denotation: STSM 3821L – transformer sub-type STSM 38L, with two cores, primarily switchable;
STSM 3820 – transformer sub-type STSM-38 with two cores, primarily non-switchable;
STSM 3830b – transformer sub-type STSM-38b with three cores primarily non-switchable.
We have serial production of these transformers for short-time thermal current 100In, but we can produce them with larger thermal currents (to 500In or even more), depending on the transformation ratio, accuracy class and power of the cores. Switching to another current transformation ratio can be done on primary or on secondary side, sealing of the terminals cover can be done on the secondary side.
These models are assumed for more demanding environmental conditions (BIL 40.5/95/200 kV) because they have creeping distance ≥31mm/kV.
Please state transformation ratio, rated power, accuracy class, instrument security factor (accuracy limit factor) for each core when ordering.
We keep the right for a change.



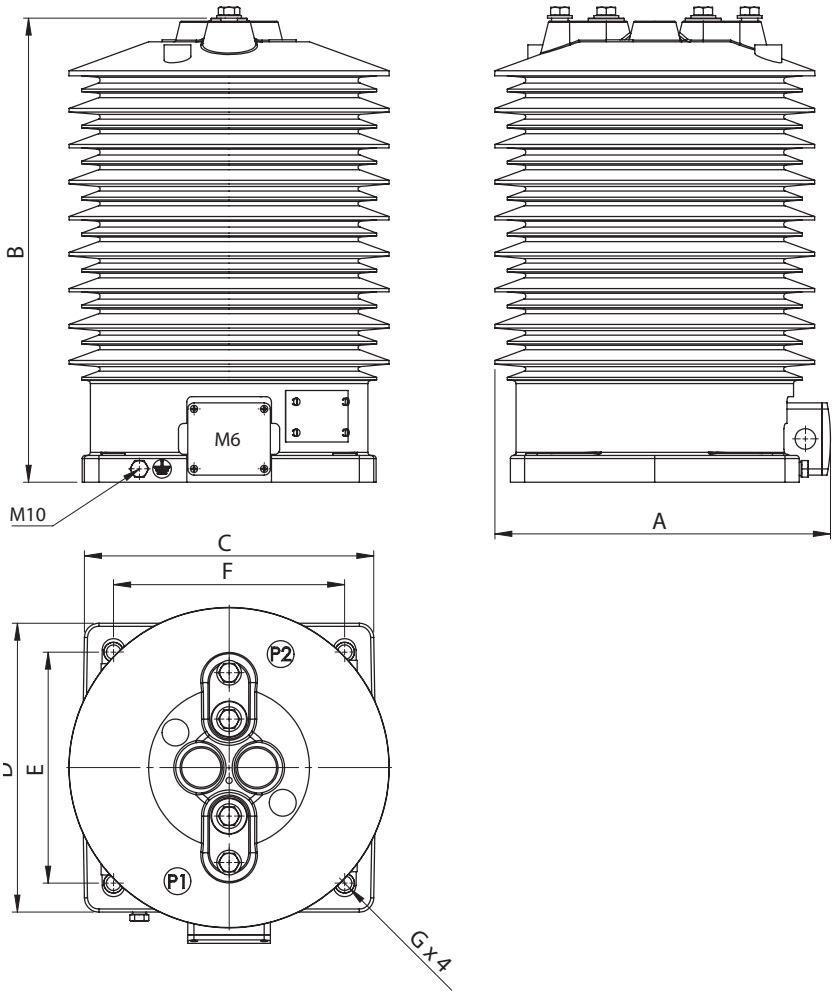
STSM 38*b

STSM 38*L

TECHNICAL DATA	STSM 38*	STSM 38*L	STSM 38*b
Rated primary voltage (kV)	35		
Highest voltage for equipment (eff.) (kV)	38 (40,5)		
Rated power-frequency withstand voltage, 1 min. (kV)	70 (95)		
Rated impulse withstand voltage 1.2/50 μs (kV)	170 (200)		
Creeping distance (mm)	1327	1327	1296
Mass (kg)	~78	~126	~146
Type of mounting	Outdoor		
Rated frequency (Hz)	50/60		
Rated primary current (A)	5 to 3000* or 2x5 to 2x600		
Rated secondary current (A)	5 (or 1)		
Rated accuracy class	0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P		
Rated thermal current 1 sec.	$I_{th} = (100\text{-}500)I_n$		
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th}$		
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$		
Number of cores	1-4		
Rated core power (VA)	5; 7,5; 10; 15; 30; 45*; 60*		
Security factor / Accuracy limit factor	5; 10/5; 10; 15; 20; 30		
Temperature class of insulation	E/B		
Type of basic insulation	Cycloaliphatic resin		
Valid standards	IEC 61869-1; IEC 61869-2		

STSM*

STSM 38



CURRENT TRANSFORMERS FOR INDOOR MOUNTING, SUPPORTING TYPE **STSM 12-42 kV**

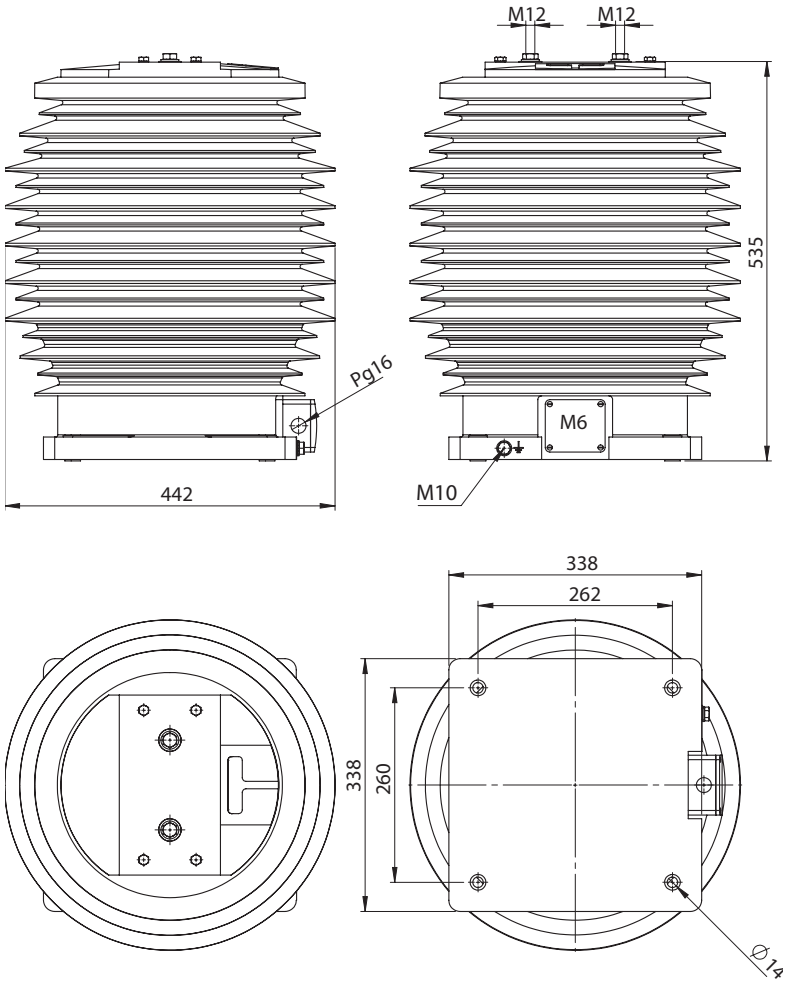
Type of transformer	Dimension (mm)							Mass (kg)
	A	B	C	D	E	F	G	
STSM-12	315	372	280	276	224	224	Ø14	~30
STSM-24	315	452	280	276	224	224	Ø14	~48
STSM-38	315	520	280	276	224	224	Ø14	~65

NOTE:

Our factory produces these transformers for thermal current 100In but we can produce them for greater thermal currents (500In or even greater) depending on the current transformation ratio, accuracy class and rated power.
Please state transformation ratio, accuracy class, security factor (accuracy limit factor) and rated power when ordering.
We keep the right for a change.

TECHNICAL DATA	STSM-12	STSM-24	STSM-38
Rated primary voltage (kV)	10	20	35
Highest voltage for equipment (eff.) (kV)	12	24	36 (42)
Rated power-frequency withstand voltage, 1 min. (kV)	28 (42)	50 (65)	70 (95)
Rated impulse withstand voltage 1.2/50 μs (kV)	75	125	170 (190)
Rated secondary power-frequency withstand voltage 50 Hz, 1 min. (kV)	3		
Rated frequency (Hz)	50/60		
Rated primary current (A)	5 to 1200 or 2x5 to 2x600		
Rated secondary current (A)	5 (or 1)		
Rated accuracy class	0.1; 0.2; 0.5; 0.2S; 0.5S; 1; 3; 5P; 10P		
Rated thermal current, 1 sec.	I_{th} = (100-500)I_n		
Rated dynamic current	I_{dyn} = 2.5 $I_{th;}$ max. 120 kA (I_{dyn} = 2.5 $I_{th;}$ max. 120 kA)		
Rated continuous thermal current	I_{cth} = 1.2 I_n		
Number of cores	1 to 4		
Security factor / Accuracy limit factor	5; 10/5; 10; 15; 20; 30		
Rated core power (VA)	1.25 to 45		
Temperature class of insulation	F		
Type of basic insulation	Cycloaliphatic resin		
Valid standards	IEC 61869-1; IEC 61869-2 (ГОСТ 7746)		

STSM-38 III



STRUJNI TRANSFORMATORI ZA SPOLJNU MONTAŽU POTPORNOG TIPA **STSM 38 III**

TECHNICAL DATA	STSM-38 III
Rated primary voltage (kV)	35
Highest voltage for equipment (eff.) (kV)	36 (42)
Rated power-frequency withstand voltage, 1 min. (kV)	70 (95)
Rated impulse withstand voltage 1.2/50 μs (kV)	170 (190)
Rated secondary power-frequency withstand voltage 50 Hz, 1 min. (kV)	3
Rated frequency (Hz)	50/60
Rated primary current (A)	5 to 1200 or 2x5 to 2x600
Rated secondary current (A)	5 (or 1)
Rated accuracy class	0,1; 0,2; 0,5; 0,2S; 0,5S; 1; 3; 5P; 10P
Rated thermal current, 1 sec.	$I_{th} = (100\text{-}500)I_n$
Rated dynamic current	$I_{dyn} = 2{,}5\ I_{th;}$ max. 120 kA ($I_{dyn} = 2{,}53\ I_{th;}$ max. 120 kA)
Rated continuous thermal current	$I_{cth} = 1{,}2\ I_n$
Number of cores	1 to 4
Rated core power (VA)	1,25 to 45
Security factor / Accuracy limit factor	5; 10/5; 10; 15; 20; 30
Mass (kg)	~90
Temperature class of insulation	F
Type of basic insulation	Cycloaliphatic resin
Valid standards	IEC 61869-1; IEC 61869-2 (ГОСТ 7746)

NOTE:

Our factory produces these transformers for thermal current 100In but we can produce them for greater thermal currents (500In or even greater) depending on the current transformation ratio, accuracy class and rated power. Please state transformation ratio, accuracy class, security factor (accuracy limit factor) and rated power when ordering.
We keep the right for a change.

NOTES

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