Low voltage products

Cable current transformers types: KOLMA, KOLA, KOKM, KORI, KOLT

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Transformers for residual current measurement types KOLMA, KOLA

KOLMA_ and KOLA_ cable current transformer are used to measure the sum of 3-phase currents in a 3-phase cable. Under normal operating conditions this sum is zero. In the event of an earth-fault it is equal to the earth-fault current and a corresponding current flows in the secondary winding.
These transformer types are used together with static earth-fault relays, and as well as measuring residual current, for example, they can be used to prewarn of, or locate an earth-fault. An busbar or cable serves as the primary conductor.

How to select the correct residual current transformers

The transformer for an earth-fault relay is selected according to dimension of the window and construction of the transformer.
For types KOLMA 06 A1, and KOLMA 06 D1, the number of turns used in the secondary winding is selected according to the relay setting value and the earth-fault current or the required current ratio. In addition correct functioning of the earth-fault protection relays for KOLMA 06 A1 and KOLMA 06 D1 is easy to test by means of the transformer test winding (terminals P1x - P2x). The test winding is rated for 6 A maximum continuous current.

Table 1. Selection of residual current transformers

Type	Window diameter [mm]	Construction	Weight [kg]
KOLMA 06 A1	90	Ring core, multi-tap secondary	7.0
KOLMA 06 A2	58	Ring core	2.9
KOLMA 06 B2	100	Ring core	5.4
KOLMA 06 D1	180	Ring core, multi-tap secondary	11.5
KOLMA 06 D2	180	Ring core	11.4
KOLA 06 B2	100	Split ring core	6.0
KOLA 06 D2	180	Split ring core	11.0

Table 2. Technical data

Rated voltage	0.72 kV (1)
Insulation test voltage 50 Hz 1 min	3 kV (IEC 60044-1)
Frequency	50 Hz (60 Hz)
Rated thermal current	1.2 x I_{pn}
Short-time withstand current I_{th} 1 s	60 x I_{pn} (2)
Peak withstnad current I_{dyn}	2.5 x I_{th}
Secondary terminals	for 6 mm^2 conductor
Operating temperature range	–25 ... +40°C
Conformity with standards	IEC 60044-1

(1) The insulation level of the primary conductor determines the maximum operating voltage.
(2) KOLA 06 B2 is type tested for 10 kA 3 s.

The primary winding of indoor type cable current transformers is either a cable or a busbar, which is insulated for the application voltage. The secondary winding and ring shaped iron core is cast in resin which has good electrical and mechanical properties.

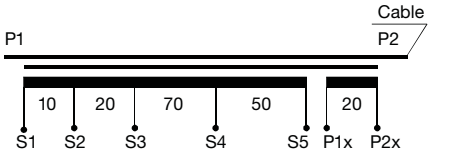
Installation

The KOLMA-type transformers must be installed before the cables and cable terminations are connected.
With the KOLA 06 B2 and KOLA 06 D2 types, the ring core can be opened and the transformer installed even though the cable is already connected. The two halves of the ring core are tightened together with four screws, which also guide the halves to the correct position. The secondary winding is distributed over both halves of the core. The two sections of the winding are joined together with two connecting pieces.
Cable current transformers are fastened either by means of the fixing base or by the nuts cast into the transformer frame. When

installing the transformer, the effect of the current on the metal armour or in the protective conductor must be eliminated.
In case the metal armour or the protective conductor is drawn through the transformer, the earthing conductor must be drawn back through the transformer for earthing. The earthing conductor between the cable termination box and the transformer must not be connected to conductive structures, and the metal cable termination box must be insulated from the supporting structures.
On a multi-ratio transformer the unconnected secondary winding terminals and test winding must not be short circuited.

Number of turns and terminal markings

KOLMA 06 A1
KOLMA 06 D1



KOLMA 06 A2
KOLMA 06 B2
KOLMA 06 D2
KOLA 06 B2
KOLA 06 D2

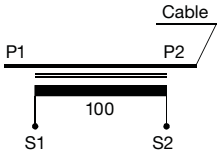
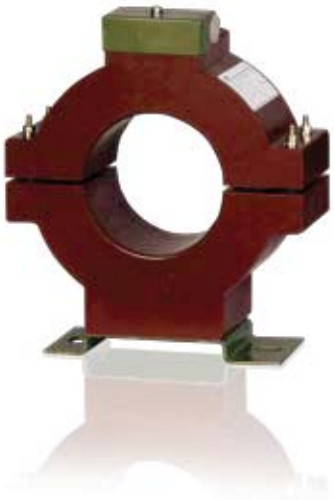


Table 3. Current ratios and rated burdens for accuracy class 10P10

Current ratio [A]	Secondary terminals	Burden/VA Type KOLMA 06 A1	KOLMA 06 D1
50/1	S4 - S5	1.0	0.5
70/1	S3 - S4	2.0	1.0
100/1	S1 - S4	2.5	2.0
150/1	S1 - S5	5.0	4.0
50/5	S1 - S2	1.0	0.5
100/5	S2 - S3	2.5	1.5
150/5	S1 - S3	4.0	3.0
250/5	S4 - S5	7.5	5.0
350/5	S3 - S4	10.0	7.5
500/5	S1 - S4	15	10
600/5	S3 - S5	20	15
750/5	S1 - S5	20	15



Openable residual current transformers, type (KOLA 06 B2) complete with fixing base KOLMA-ZK 1 and terminal cover KOK-ZAX 14.

Table 4. Standard technical parameters for KOLMA_ and KOLA_

Type	Primary current [A]	Secondary current [A]	Accuracy class [A]	Burden [VA]	Dimensions		
					inner [mm]	outer [mm]	height [mm]
KOLMA 06 A2	100	1	10P10	2	58	140	65
KOLMA 06 B2	100	1	10P10	2	100	196	65
KOLMA 06 D2	100	1	10P10	2	180	270	80
KOLA 06 B2	50	1	10P10	0.5	100	228	85
KOLA 06 B2	100	1	10P10	2	100	228	85
KOLA 06 B2	200	1	10P10	4	100	228	85
KOLA 06 B2	200	5	10P10	4	100	228	85
KOLA 06 B2	400	5	5P10	5	100	228	85
KOLA 06 B2	500	5	5P20	2.5	100	228	85
KOLA 06 B2	600	1	10P10	2	100	228	85
KOLA 06 B2	1,250	1	5P20	5	100	228	85
KOLA 06 B2	1,500	1	5P10	2.5	100	228	85
KOLA 06 B2	1,600	5	1	20	100	228	85
KOLA 06 D2	50	1	10P10	0.5	180	315	85
KOLA 06 D2	100	1	10P10	2	180	315	85
KOLA 06 D2	150	1	10P10	2	180	315	85
KOLA 06 D2	200	1	10P10	5	180	315	85
KOLA 06 D2	200	5	10P10	2	180	315	85
KOLA 06 D2	300	1	10P10	5	180	315	85
KOLA 06 D2	400	1	10P10	5	180	315	85
KOLA 06 D2	400	5	5P10	5	180	315	85
KOLA 06 D2	1,000	1	5P10	10	180	315	85
KOLA 06 D2	1,800	5	1	20	180	315	85
KOLA 06 J2	50	1	10P10	0.5	300 x 497	410 x 610	90
KOLA 06 J2	100	1	10P10	1	300 x 497	410 x 610	90
KOLA 06 J2	1,250	1	5P20	5	300 x 497	410 x 610	90
KOLA 06 J2	1,250	5	10P10	1	300 x 497	410 x 610	90

If other electrical parameters other than those given in the tables are required please contact our sales department.

Warranty

A two-year warranty period is granted from the date the transformer starts to operate. However, a maximum warranty period of three years is granted from the time of purchase. The warranty only covers manufacturing defects and does not include defects due to:

– Incorrect transport
– Incorrect storage
– A failure to follow instructions correctly during installation and operation
– Incorrect selection of the transformer for the electric power system

Ordering data

The order should contain the following data:

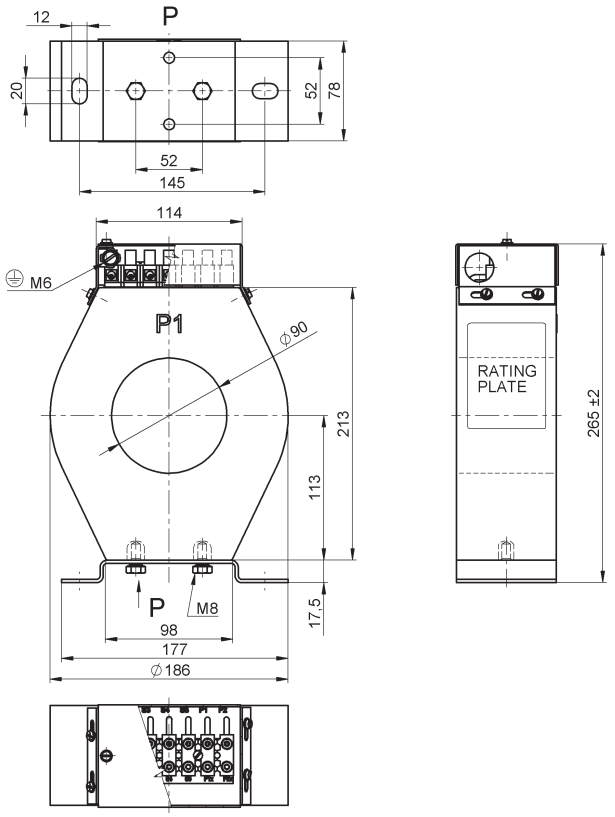
– Type of current transformer
– Rated primary current/rated secondary current [A/A]
– Rated burden and accuracy class for each winding [VA]
– Short-time thermal current I_{th}
– Standard
– Quantity

Order example

KOLA 06 B2; 100/1 A/A; 2 VA; 10P10; I_{th} = 60xI_{pn}/1s; IEC 60044-1; 12 Pcs.

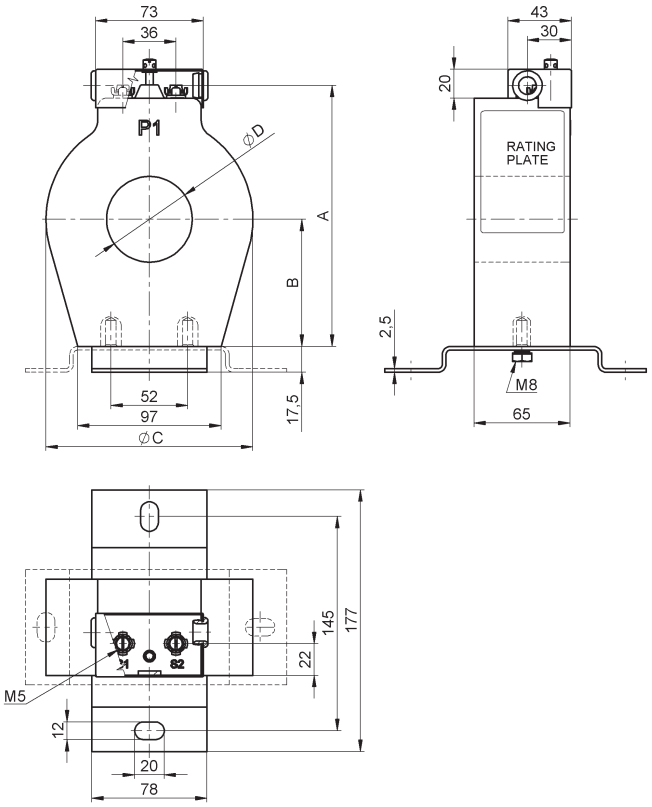
Overall dimensions

KOLMA 06 A1



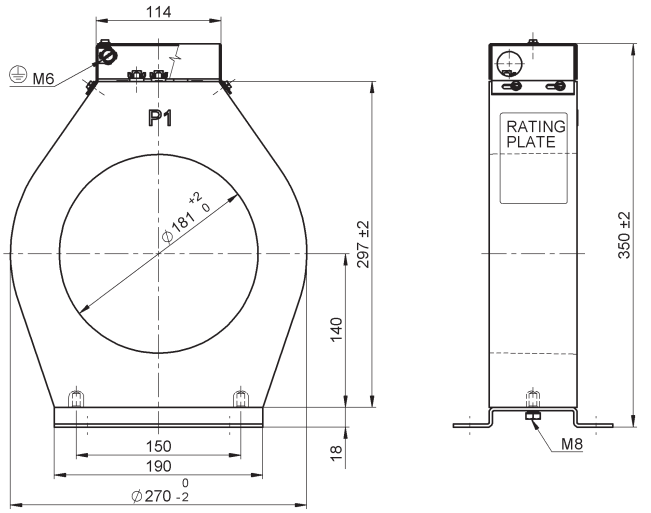
Weight: app. 7,5 kg

KOLMA 06 A2, B2

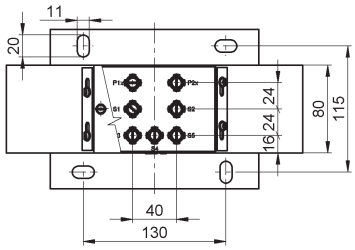


Type	Dimensions [mm]				Weight
	A	B	C	D	[kg]
KOLMA 06 A2	177	86	140	58	4,7
KOLMA 06 B2	229	112	195	100	8,5

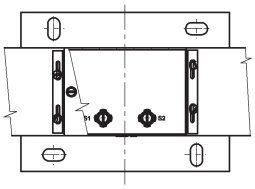
KOLMA 06 D1, D2



KOLMA 06 D1

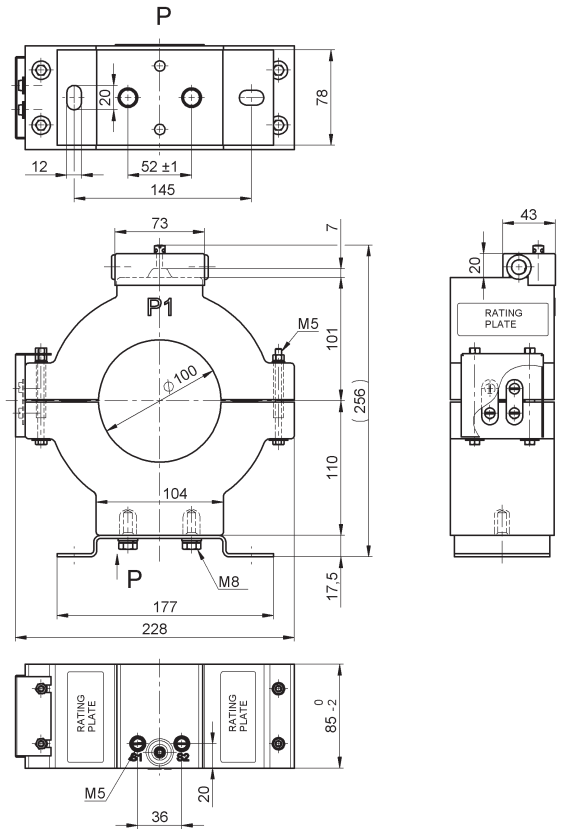


KOLMA 06 D2



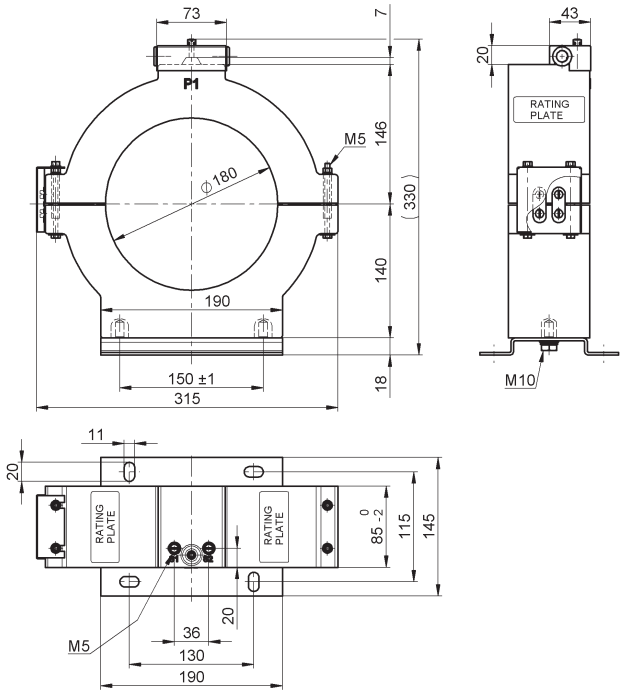
Weight: app. 13 kg

KOLA 06 B2



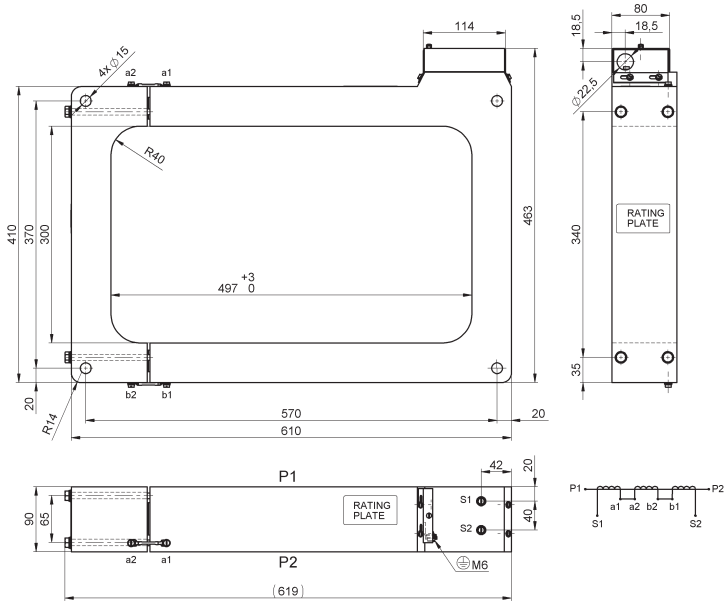
Weight: app. 8 kg

KOLA 06 D2



Weight: app. 12,5 kg

KOLA 06 J2



Weight: app. 32 kg

Indoor cable current transformers type KOKM

KOKM_ current transformers are suitable for measuring phase currents. A busbar or cable serves as the primary conductor. Series KOKM current transformers can also be used for measuring the phase current at voltages higher than 0.72 kV (for KOKM 06) or 1.2 kV (for KOKM 1), if the insulation of the primary conductor satisfies the requirements of the respective standards for the operating voltage. The secondary winding and ring shaped iron core are cast in resin which has good electrical and mechanical properties.

Table 6. Technical data

Transformer type			KOKM 06_	KOKM 1_
Rated voltage	U_m	[kV]	0.72 (1)	1.2 (1)
Power frequency test voltage	U_p (1 min)	[kV]	3	6
Lighting test voltage	U_{pp}	[kV]	-	-
Frequency	f_n	[Hz]	50 or 60	
Max. primary current	I_{pn}	[A]	50 ÷ 2,000	50 ÷ 10,000
Rated secondary current	I_{sn}	[A]	1 or 5	
Rated thermal current	I_{cont}	[A]	1.2 x I_{pn} (2)	
Short-time withstand current	I_{th} (1 s)	[kA]	60 x I_{pn} (Max. 100 kA)	
Peak withstand current	I_{dyn}	[kA]	2.5 x I_{th} (Max. 250 kA)	
Secondary terminals			for 6 mm^2 conductor	
Operating temperature range		[°C]	-25 ... +40	
Transport and storage		[°C]	-40 ... +55	
Electrical standards			IEC, VDE, ANSI, BS, AS, CAN	

(1) The insulation level of the primary conductor determines the maximum operating voltage.
(2) Max. I_{cont} for KOKM 06 I_{cont} = 2 400 A, for KOKM 1 I_{cont}= 10 000 A.

Table 7. Standard parameters for KOKM 1_

Type	Current		Accuracy class	Burden	Dimensions		
	primary [A]	secondary [A]		[VA]	inner [mm]	outer [mm]	height [mm]
KOKM 1 BC10	200	5	5P20	5	42	148	100
KOKM 1 DC8	100	1	10P10	2	60	148	80
KOKM 1 DF12	100	5	0.5	3	60	186	120
KOKM 1 DC6	150	1	5P20	1	60	148	60
KOKM 1 DC14	150	5	5P10	10	60	148	140
KOKM 1 DC12	300	5	5P10	15	60	148	120
KOKM 1 DC16	400	5	5P20	10	60	148	160
KOKM 1 DH10	5,000	5	1	10	60	200	100
KOKM 1 EC8	100	1	5P20	1	70	148	80
KOKM 1 EF16	100	1	0.5	1	70	186	160
KOKM 1 EC8	150	1	5P20	1	70	148	80
KOKM 1 EC6	200	1	5P20	1	70	148	60
KOKM 1 EC16	250	1	5P10	20	70	148	160
KOKM 1 EH16	250	1	5P20	20	70	200	160
KOKM 1 EC10	400	1	5P10	10	70	148	100
KOKM 1 EF14	400	1	5P20	20	70	186	140
KOKM 1 FC6	50	5	10P10	0.5	85	148	60
KOKM 1 FC16	300	5	5P10	10	85	148	160
KOKM 1 FC8	600	5	0.5	15	85	148	80
KOKM 1 FC12	600	5	0.5	50	85	148	120
KOKM 1 FC8	1,000	5	0.5	50	85	148	80
KOKM 1 GF6	50	5	10P10	0.5	90	186	60
KOKM 1 GF8	1,000	5	0.5	50	90	186	80
KOKM 1 GF6	1,500	5	0.5	50	90	186	60
KOKM 1 HF8	50	1	10P10	1	100	186	80
KOKM 1 HF8	50	5	10P10	1	100	186	80
KOKM 1 HH16	50	5	10P10	5	100	200	160
KOKM 1 HF12	100	1	10P20	2	100	186	120
KOKM 1 HK10	150	1	5P10	10	100	250	100
KOKM 1 HK10	200	1	5P10	10	100	250	100
KOKM 1 HK10	250	5	5P20	10	100	250	100
KOKM 1 HK10	300	5	5P20	10	100	250	100
KOKM 1 HK14	400	1	5P20	30	100	250	140
KOKM 1 HF6	400	5	10P10	5	100	186	60
KOKM 1 HF6	500	1	1	15	100	186	60
KOKM 1 HJ8	2,000	1	5P20	30	100	235	80
KOKM 1 KH8	50	1	10P10	1	120	200	80
KOKM 1 KH8	50	5	10P10	1	120	200	80
KOKM 1 KH18	200	5	5P20	5	120	200	180
KOKM 1 KH18	300	5	5P20	10	120	200	180
KOKM 1 KH10	1,000	1	5P10	20	120	200	100
KOKM 1 KH8	1,000	5	5P20	10	120	200	80
KOKM 1 KH8	1,500	5	0.5	50	120	200	80
KOKM 1 KH8	2,000	5	0.5	50	120	200	80
KOKM 1 KK10	2,500	5	5P20	10	120	250	100
KOKM 1 NK8	50	1	10P10	1	155	250	80
KOKM 1 NK12	50	1	10P10	2	155	250	120
KOKM 1 NK20	50	1	10P10	5	155	250	200
KOKM 1 NL14	50	1	10P10	5	155	270	140
KOKM 1 NL8	3,000	1	5P20	5	155	270	80
KOKM 1 RL12	50	1	10P10	2	180	270	120
KOKM 1 RL8	100	1	5P10	1	180	270	80
KOKM 1 RL12	100	1	5P10	5	180	270	120
KOKM 1 RL8	150	1	10P10	2	180	270	80
KOKM 1 RL20	300	5	5P20	10	180	270	200
KOKM 1 UT10	50	1	10P10	5	250	450	100
KOKM 1 UP16	100	5	10P10	5	250	340	160

The Parameters depend on the transfomer type (size); generally, the bigger the current transformer, the higher the technical parameters.
If other electrical parameters other than those given in the tables are required please contact our sales department.

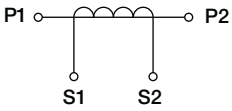
Ordering data

The order should contain the following data:
– Type of current transformer
– Rated primary current/rated secondary current [A/A]
– Rated burden and accuracy class for each winding [VA]
– Short-time thermal current I_{th}
– Dimension of the window [mm]
– Standard
– Quantity

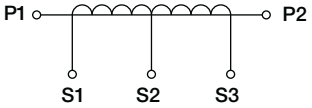
Order example

KOKM 1 FC 8; 600/5 A/A; 10 VA; 0.5; I_{th} = 60xI_{pn}/1s; IEC 60044-1; 9 Pcs.

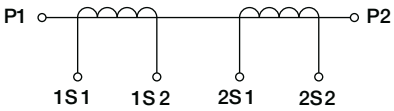
Terminal markings



one secondary winding example: 100/1 [A/A]



multi-tap secondary winding example: 50-100/1 [A/A]



two secondary windings example: 800/5/5 [A/A/A]

Warranty

A two-year warranty period is granted from the date the transformer starts to operate. However, a maximum warranty period of three years is granted from the time of purchase. The warranty only covers manufacturing defects and does not include defects due to:
– Incorrect transport
– Incorrect storage
– A failure to follow instructions correctly during installation and operation
– Incorrect selection of the transformer for the electric power system

KOKM 1 NK 10

Table 8. KOKM 1_

Outer diameter [mm]		Hole diameter [mm] A 33	B 42	D 60	E 70	F 85	G 90	H 100	K 120	N 155	R 180	S 200	U 250	W 350	X 400	Y 450	Z 500	Drawing	Casting height [mm]	Total height [mm]	Hole center height [mm]
C	148	60	60	60	60	60												KOKM 1_C_	183	249	112
		160	160	160	160	160															
F	186	60	60	60	60	60	60	60										KOKM 1_F_	213	279	131
		160	160	160	160	160	160	160													
H	200	80	80	80	80	80	80	80	80									KOKM 1_H_	235	301	138
		180	180	180	180	180	180	180	180												
J	235	80	80	80	80	80	80	80	80									KOKM 1_J_	265	331	158
		300	300	300	300	300	300	300	300												
K	250	80	80	80	80	80	80	80	80	80								KOKM 1_K_	275	341	158
		200	200	200	200	200	200	200	200	200											
L	270	80	80	80	80	80	80	80	80	80	80	80						KOKM 1_L_	297	363	158
		200	200	200	200	200	200	200	200	200	200	200									
M	280	80	80	80	80	80	80	80	80	80	80	80						KOKM 1_M_	297	363	158
		240	240	240	240	240	240	240	240	240	240	240									
P	340		80	80	80	80	80	80	80	80	80	80	80					KOKM 1_P_	379	445	204
			200	200	200	200	200	200	200	200	200	200	200								
T	450					80	80	80	80	80	80	80	80	80				KOKM 1_T_	465	513	225
						200	200	200	200	200	200	200	200	200							
W	590						80	80	80	80	80	80	80	80	80	80	80	KOKM 1_W_	605	653	300
							200	200	200	200	200	200	200	200	200	200	200				

Range of transformer width

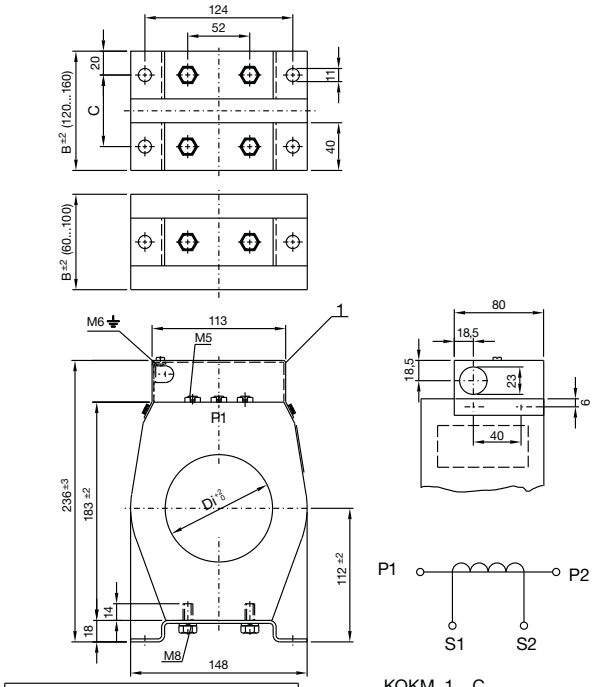
Example

KOKM 1 D C 10

- **10** → Transformers width
  10 = 100 mm (possibility – 6, 8, 10, 12, 14, 16, 18, 20, 22, 24,... 30)
- **C** → Outer diameter
  C = 148 mm
- **D** → Hole diameter
  D = 60 mm
- **1** → Rate voltage 1 = 1.2 kV
- **KOKM** → Type KOKM – indoor use
  (Type KOKU – outdoor use)

Overall dimensions

KOKM 1_C_

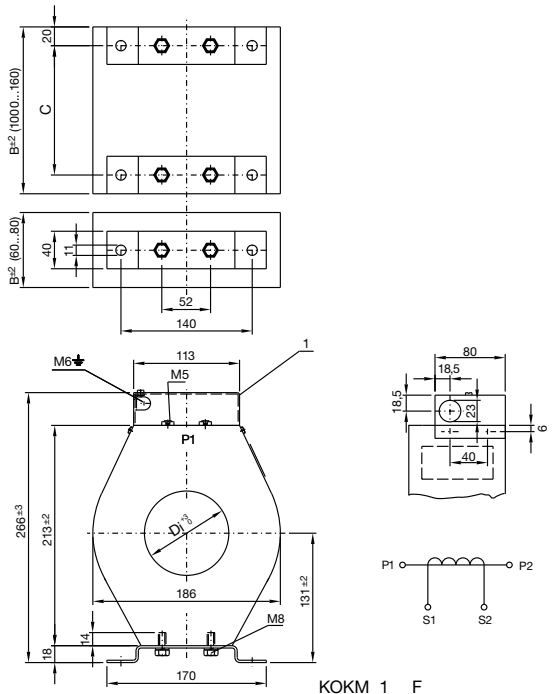


Di =	33 A	42 B	60 D	70 E	85 F
	6	8	10	12	14	16
B =	60	80	100	120	140	160
C =				80	100	120

KOKM 1 _ C __

Note:
KOKM 1_C6 without the cover

KOKM 1_F_

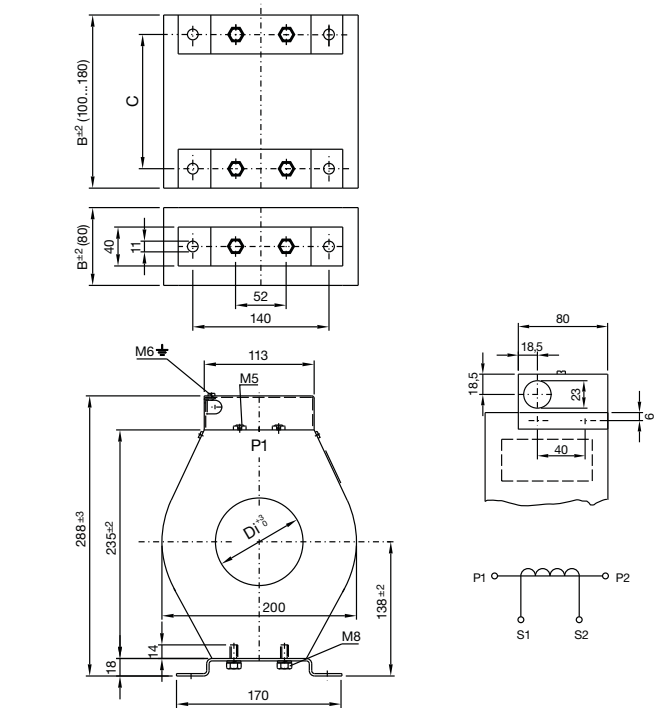


Di =	33 A	42 B	60 D	70 E	85 F	90 G	100 H
	6	8	10	12	14	16	
B =	60	80	100	120	140	160	
C =			60	80	100	120	

KOKM 1 _ F __

Note:
KOKM 1_F6 without the cover

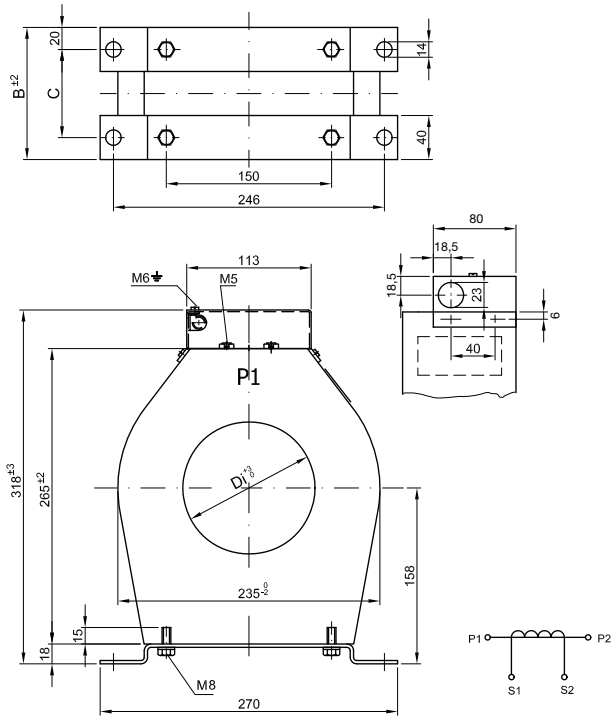
KOKM 1_H_



Di =	33 A	42 B	60 D	70 E	85 F	90 G	100 H	120 K
	8	10	12	14	16	18		
B =	80	100	120	140	160	180		
C =		60	80	100	120	140		

KOKM 1 _ H _

KOKM 1_J_

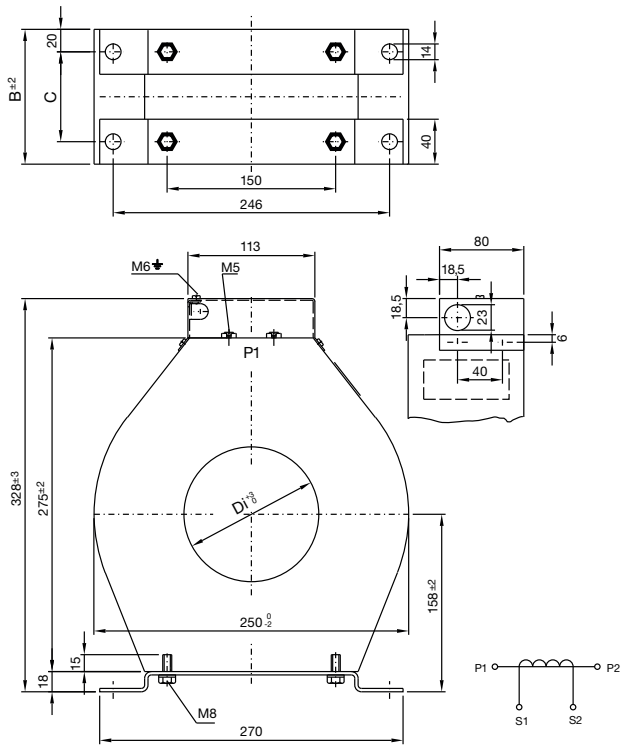


Di =	33 A	42 B	60 D	70 E	85 F	90 G	100 H	120 K	155 N
	8	10	12	14	16	18	20	22	24	26	28	30
B =	80	100	120	140	160	180	200	220	240	260	280	300
C =	40	60	80	100	120	140	160	180	200	220	240	260

KOKM 1 _ J _

Overall dimensions

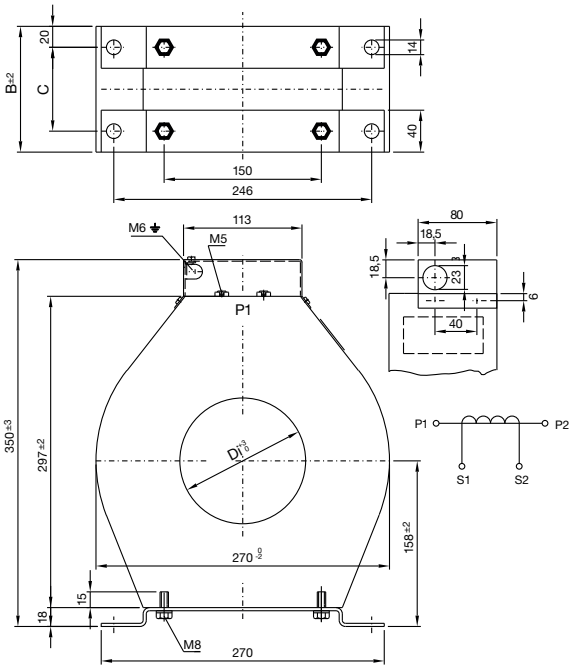
KOKM 1_K_



Di =	33 A	42 B	60 D	70 E	85 F	90 G	100 H	120 K	155 N
	8	10	12	14	16	18	20		
B =	80	100	120	140	160	180	200		
C =	40	60	80	100	120	140	160		

KOKM 1 _ K _

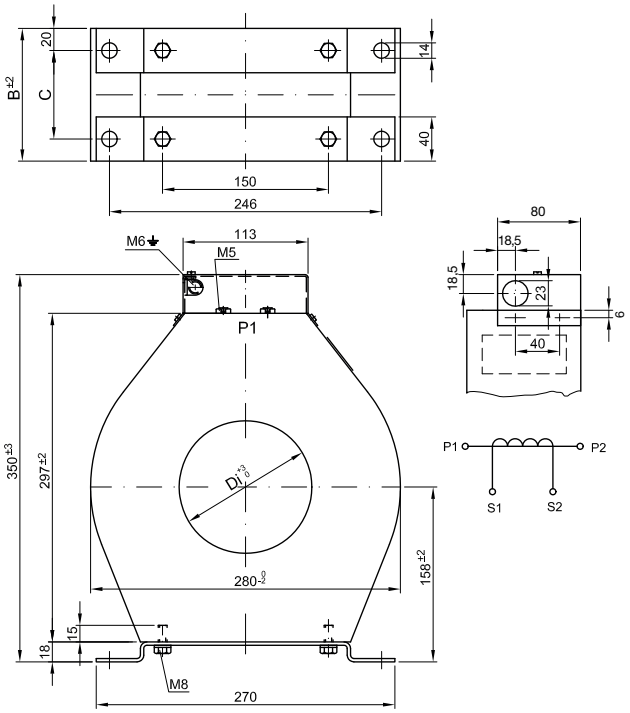
KOKM 1_L_



Di =	33 A	42 B	60 D	70 E	85 F	90 G	100 H	120 K	155 N	180 R	200 S
	8	10	12	14	16	18	20				
B =	80	100	120	140	160	180	200				
C =	40	60	80	100	120	140	160				

KOKM 1 _ L _

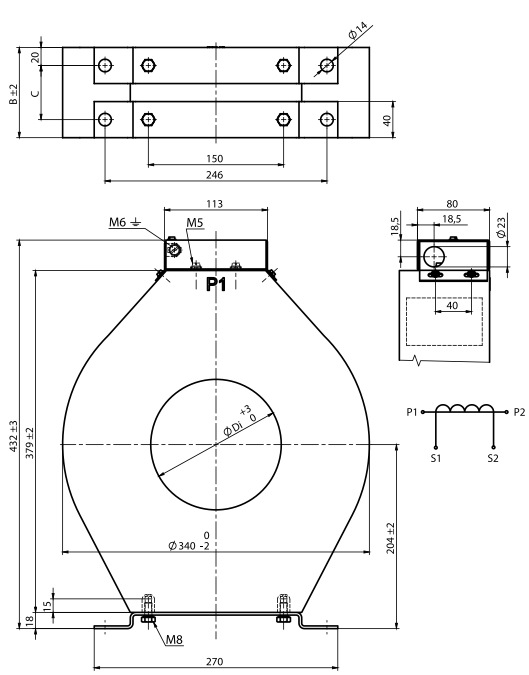
KOKM 1_M_



DI =	33 A	42 B	60 D	70 E	85 F	90 G	100 H	120 K	155 N	180 R	200 S
	8	10	12	14	16	18	20	22	24		
B =	80	100	120	140	160	180	200	220	240		
C =	40	60	80	100	120	140	160	180	200		

KOKM 1 _ M _

KOKM 1_P_

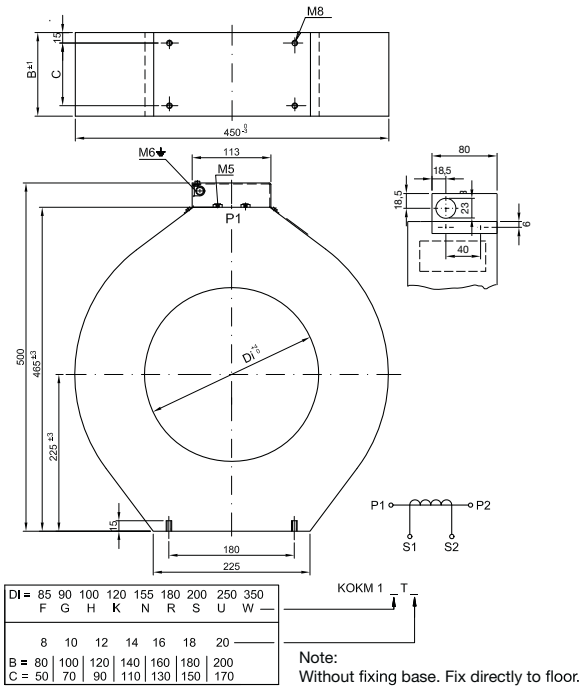


Di =	42 B	60 D	70 E	85 F	90 G	100 H	120 K	155 N	180 R	200 S	250 U
	8	10	12	14	16	18	20				
B =	80	100	120	140	160	180	200				
C =	40	60	80	100	120	140	160				

KOKM 1 _ P _

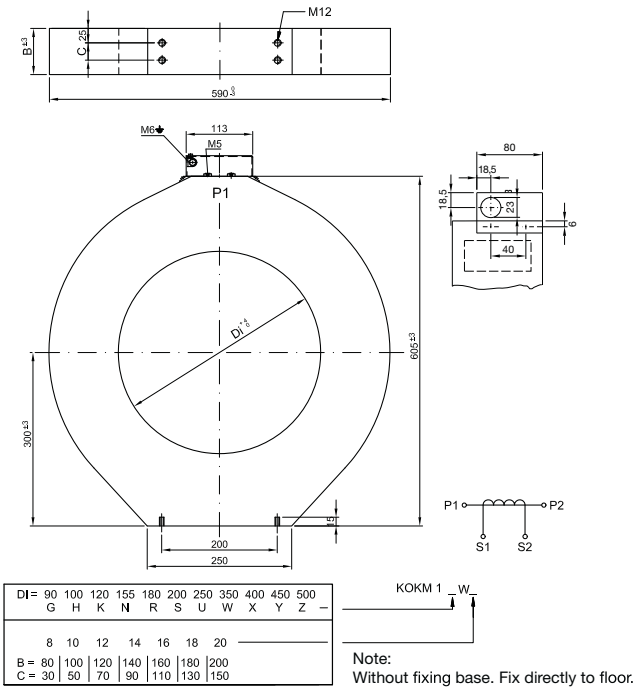
Overall dimensions

KOKM 1_T_



Note:
Without fixing base. Fix directly to floor.

KOKM 1_W_



Note:
Without fixing base. Fix directly to floor.

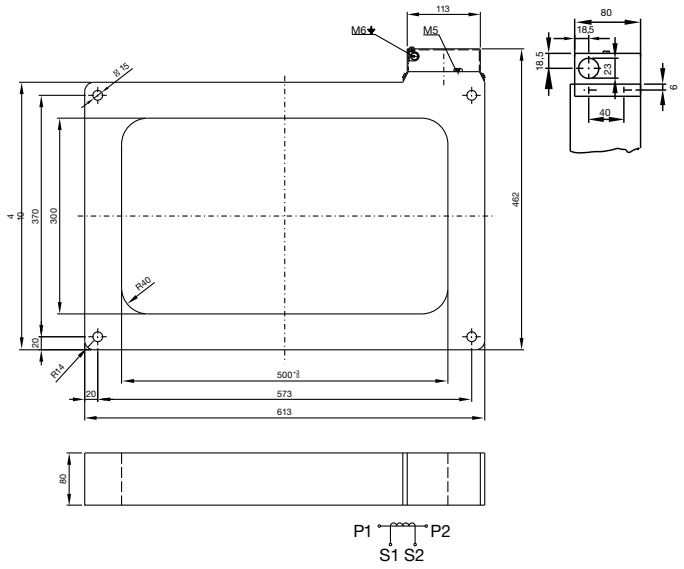
Table 9.
Standard parameters for KOKM 06 J_ (window type) f = 50 Hz

Type	Window [mm]	Primary current [A]	Secondary current [A]	Accuracy class	Burden [VA]
KOKM 06 J2	300x500	50	1	10P10	1
KOKM 06 J2	300x500	50	5	10P10	0.5
KOKM 06 J2	300x500	100	1	10P10	2
KOKM 06 J2	300x500	100	5	10P10	1
KOKM 06 J2	300x500	150	1	10P10	2
KOKM 06 J2	300x500	300	5	10P10	1
KOKM 06 J2	300x500	500	1	5P10	10
KOKM 06 J2	300x500	600	5	10P10	5
KOKM 06 J2	300x500	800	5	0.5	15
KOKM 06 J21	150x500	50	1	10P10	1
KOKM 06 J21	150x500	100	5	10P10	1
KOKM 06 J21	150x500	700	1	5P10	3
KOKM 06 J21	150x500	2,000	1	1	5
KOKM 06 J22	300x200	50	1	10P10	1
KOKM 06 J22	300x200	100	1	10P10	2
KOKM 06 J22	300x200	300	1	5P10	3
KOKM 06 J22	300x200	1,200	5	5P10	30
KOKM 06 J22	300x200	2,000	5	5P10	50
KOKM 06 J23	600x200	50	1	10P10	1
KOKM 06 J23	600x200	50	5	10P10	0.5
KOKM 06 J23	600x200	100	1	10P10	3
KOKM 06 J23	600x200	200	1	10P10	2
KOKM 06 J24	300x200	50	1	10P10	1
KOKM 06 J24	300x250	150	1	10P10	2
KOKM 06 J29	450x650	50	1	10P10	1
KOKM 06 J29	450x650	50	5	10P10	0.5
KOKM 06 J29	450x650	100	1	10P10	2
KOKM 06 J29	450x650	400	1	5P10	7.5

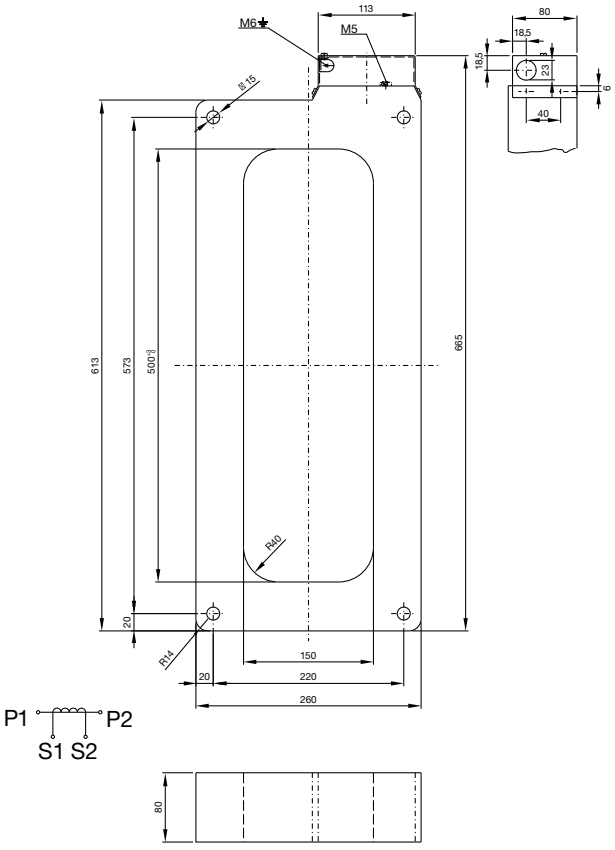
If other electrical parameters other than those given in the tables are required please contact our sales department.

Overall dimensions

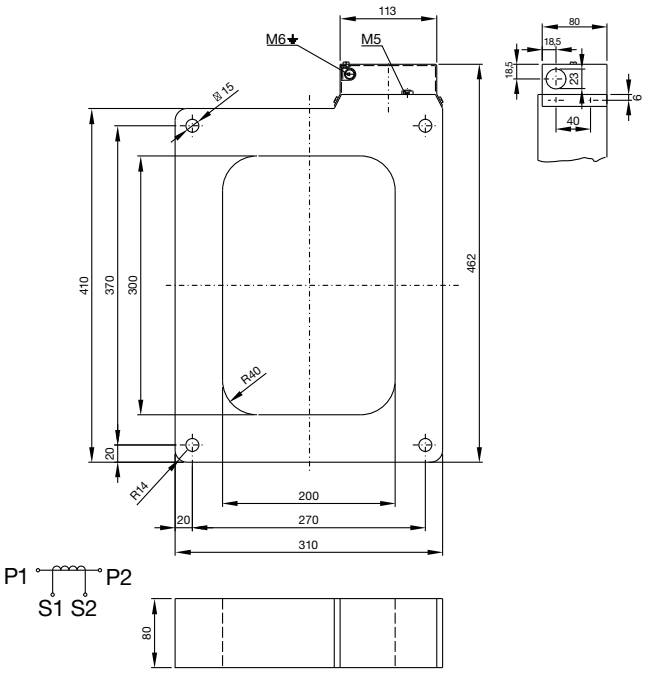
KOKM 06 J2



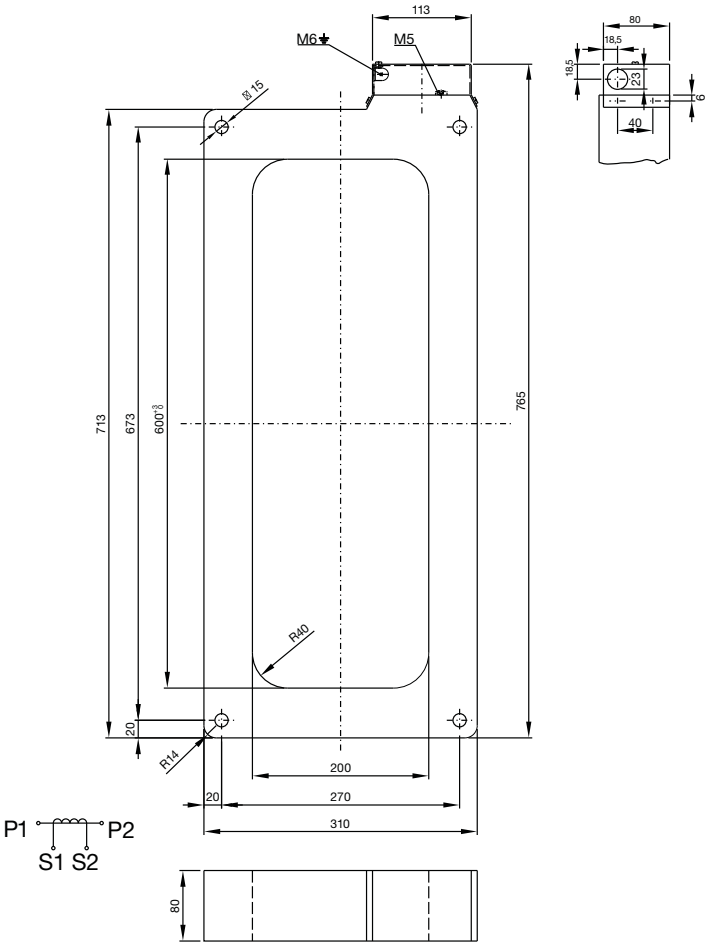
KOKM 06 J21



KOKM 06 J22

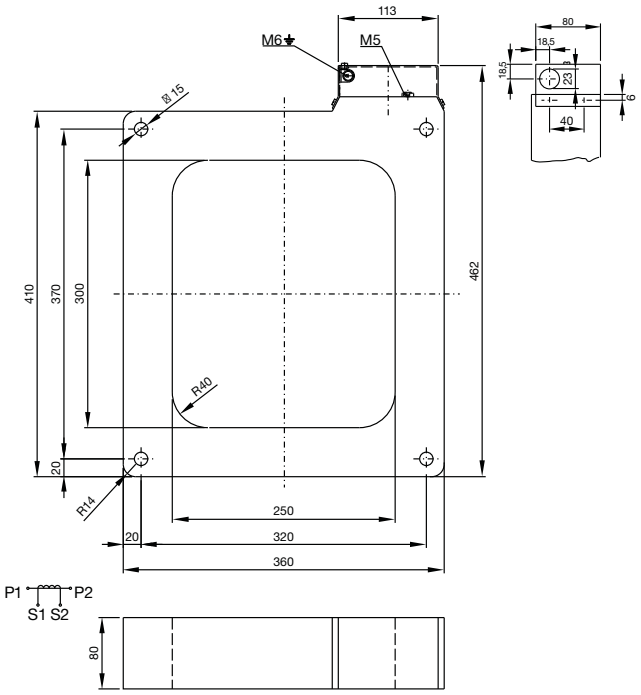


KOKM 06 J23

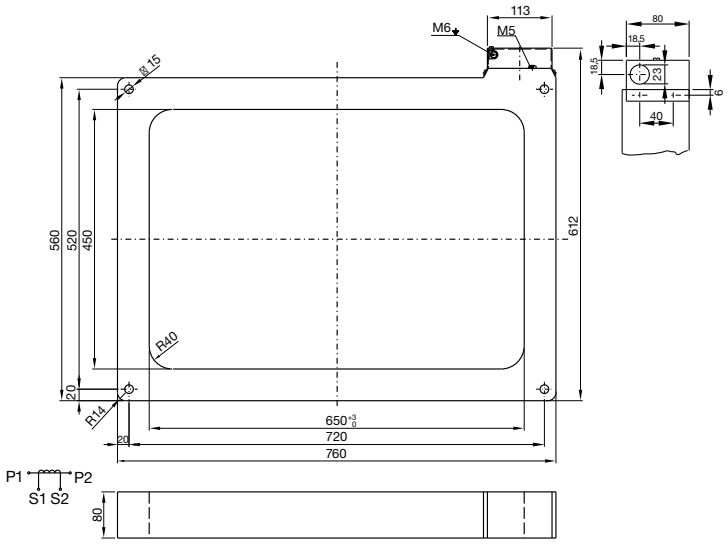


Overall dimensions

KOKM 06 J24



KOKM 06 J29



Indoor cable current transformers type KOKM (for GIS type ZX)

KOKM 1 LH_ is the indoor, cable, low-voltage current transformer in resin insulation. These transformer types are suitable for the measurement of phase currents. A busbar or low-voltage cable serves as the primary conductor. Current transformers from the KOKM series can also be used to measure phase currents at voltages higher than 1.2 kV if the insulation of the high-voltage primary conductor fulfils the requirements of the relevant standards related to the working voltage.

Ordering data

The order should contain following data:
– Type of current transformer
– Rated primary current/rated secondary current [A/A]
– Rated burden and accuracy class for each winding [VA]
– Short-time thermal current I_{th}
– Standard
– Quantity

Order example

KOKM 06 NN; 12 150/1 A/A, I_{th} = 60 x I_{pn}, 1 VA 10P10 – 3 Pcs.

Table 10. Technical data

Type	KOKM 1 LH_
Max. number of windings	1
Level of insulation	1/6/-
Highest permissible voltage of the current transformer U_r	1.2 kV
Rating test voltage of insulation (50 Hz, 1 min U_p)	6 kV
Rating frequency	50 Hz
Rating thermal current	1.2 x I_{pn}
Short-time withstand thermal current I_{th}, 1 s	60 x I_{pn}
Rating peak current I_{dyn}	2.5 x I_{th}
Working temperature range	-5 ... +40°C
Conformity with standards	IEC, ANSI, PN-EN, CAN

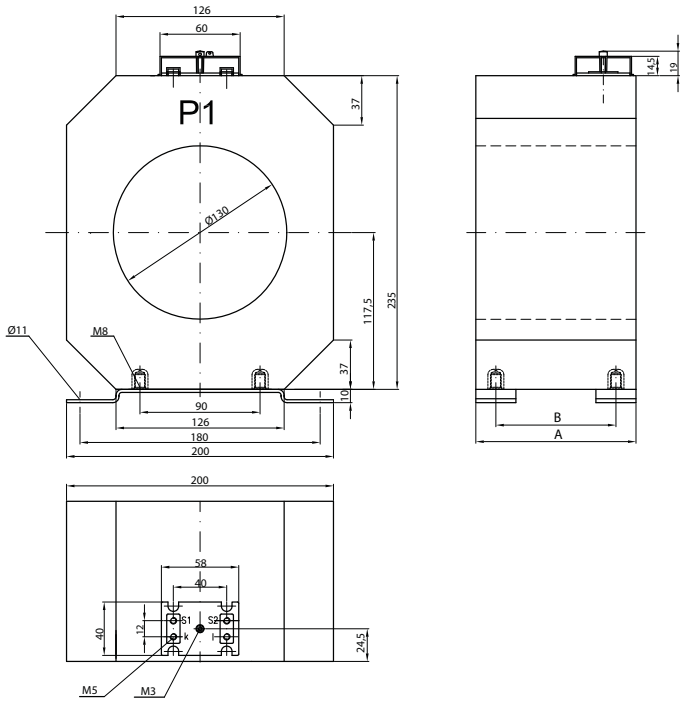
Table 11. Standard parameters for KOKM 1 LH_

Primary current I_{pn} [A]	Maximum permissible load [VA]											
	Secondary current I_{sn} = 1 [A]						Secondary current I_{sn} = 5 [A]					
	Measurement class FS		Protection class Fa				Measurement class Fs		Protection class Fa			
	0.5	1	10P10	10P20	5P10	5P20	0.5	1	10P10	10P20	5P10	5P20
50	–	–	2	1	0.5	0.5	–	–	1.5	1	0.5	0.5
60	–	–	2	1	0.5	0.5	–	–	2	1	1	0.5
70	–	–	2.5	1	1.5	1	–	–	2.5	1	1.5	1
75	–	–	2.5	1	1.5	1	–	–	2.5	1.5	2	1
100	–	1.5	3.5	1.5	3.5	1.5	–	1.5	3	1.5	3	1.5
110	–	3	4	1.5	4	1.5	–	2.5	3.5	1.5	3.5	1.5
120	–	3.5	4	1.5	4	1.5	–	3.5	3.5	1.5	3.5	1.5
140	–	6	5	1.5	5	2	–	7.5	4.5	2	4.5	2
150	–	8.5	5.5	2	5.5	2	–	8.5	5	2	5	2
200	4	20	7.5	2	7.5	3	2.5	11	7	2.5	7	2.5
240	9	30	8.5	3.5	8.5	3.5	9	29	8.5	3	8.5	3
250	10	32	9	3.5	9	3.5	10	33	9	3.5	9	3.5
300	17	50	11	4	11	4	19	50	10	4.5	10	4.5
350	29	60	12	4.5	12	4.5	29	60	12	5.5	12	5.5
400	60	90	12	3	12	3	39	60	14	6	14	6
500	60	90	15	4	15	4	50	90	18	8	18	8
600	60	90	18	5.5	18	5.5	60	90	21	8.5	21	8.5
630	60	90	19	5.5	19	5.5	60	90	21	8.5	21	8.5
800	90	90	20	5.5	20	5.5	90	90	26	9	26	9
1000	90	90	26	7	26	7	90	90	27	5.5	27	5.5
1200	90	90	31	8.5	31	8.5	90	90	30	6	30	6
1250	90	90	31	8	31	8	90	90	32	6.5	32	6.5

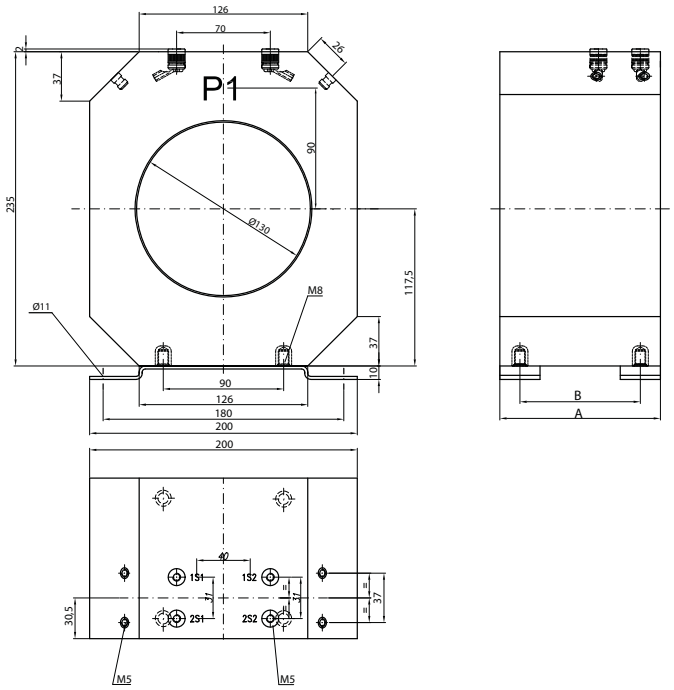
By special request current transformers with secondary current values different from those given in the table above (eg. 4.3 A), and current transformers for a frequency of 60 Hz can be supplied.

Overall dimensions

KOKM 1 LH_ version 01

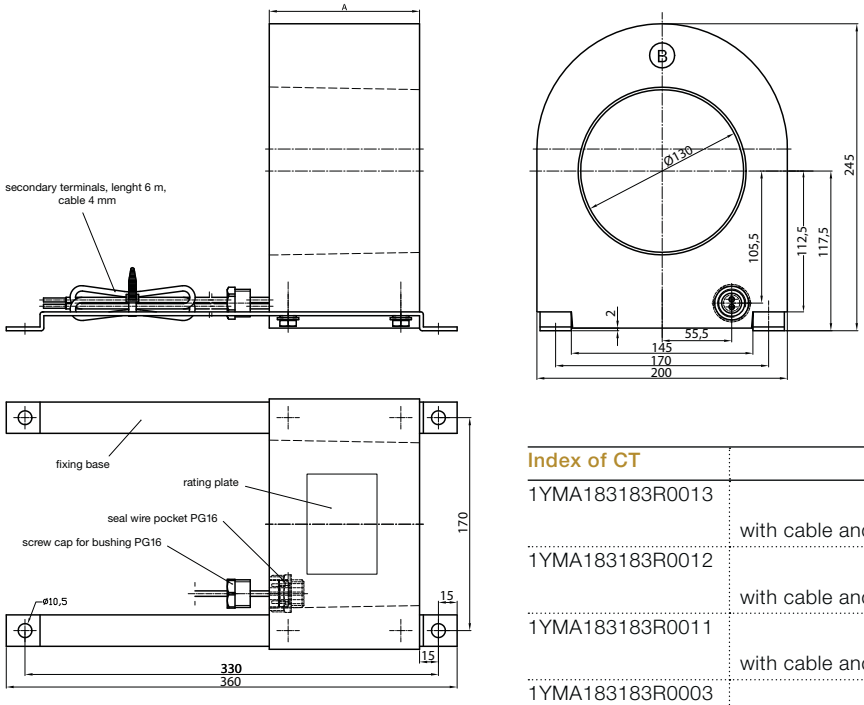


KOKM 1 LH_ version 02



Type	Dimensions [mm]	
	A	B
KOKM 1 LH 6	60	30
KOKM 1 LH 9	90	60
KOKM 1 LH 12	120	90

KOKM 1 LH_ version 03



Index of CT	Description	Code	A	B
1YMA183183R0013	CT KOKM 1 LH 12 with cable and P2 from cable side	KOKM 1 LH 12-v3-P2	120	P2
1YMA183183R0012	CT KOKM 1 LH 9 with cable and P2 from cable side	KOKM 1 LH 9-v3-P2	90	P2
1YMA183183R0011	CT KOKM 1 LH 6 with cable and P2 from cable side	KOKM 1 LH 6-v3-P2	60	P2
1YMA183183R0003	CT KOKM 1 LH 12 with cable and P1 from cable side	KOKM 1 LH 12-v3-P1	120	P1
1YMA183183R0002	CT KOKM 1 LH 9 with cable and P1 from cable side	KOKM 1 LH 9-v3-P1	90	P1
1YMA183183R0001	CT KOKM 1 LH 6 with cable and P1 from cable side	KOKM 1 LH 6-v3-P1	60	P1

KOKM 1 NJ_ is the indoor, cable, low-voltage current transformer in resin insulation. These transformer types are suitable for the measurement of phase currents in low-voltage switchgears.
A non-insulated busbar or low-voltage cable serves as the primary conductor. Current transformers from the KOKM series can also be used to measure phase currents at voltages higher than 1.2 kV if the insulation of the high-voltage primary conductor fulfils the requirements of the relevant standards related to the working voltage.

KOKM 1 NJ 8 version 01

Table 12. Technical data

Type	KOKM 1 NJ_
Max. number of windings	1
Highest permissible voltage of the current transformer U_r	1.2 kV
Rating test voltage of insulation (50 Hz, 1 min U_p)	6 kV
Rating frequency	50 Hz
Rating thermal current	1.2 x I_{pn}
Short-time withstand thermal current I_{th}, 1 s	60 x I_{pn}
Rating peak current I_{dyn}	2.5 x I_{th}
Working temperature range	-5 ... +40°C
Conformity with standards	IEC, ANSI, PN-EN, CAN

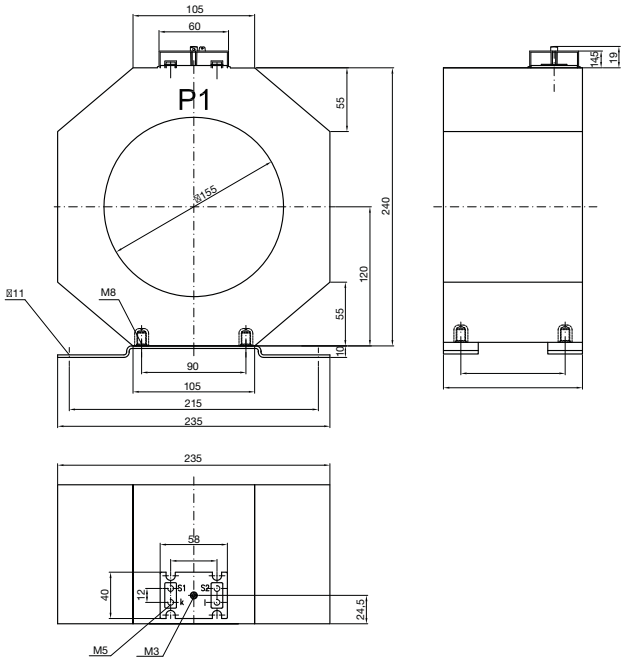
Table 13. Standard parameters for KOKM 1 NJ_

Primary current I_{pn} [A]	Maximum permissible load [VA]											
	Secondary current I_{sn} = 1 [A]						Secondary current I_{sn} = 5 [A]					
	Measurement class FS		Protection class Fa				Measurement class FS		Protection class Fa			
	0.5	1	10P10	10P20	5P10	5P20	0.5	1	10P10	10P20	5P10	5P20
50	–	–	2	1	0.5	0.5		–	2	0.5	0.5	0.5
60	–	–	2.5	1	0.5	1	–	–	2.5	1.5	0.5	0.5
70	–	–	3	1.5	1.5	1.5	–	–	3	1.5	1	1
75	–	–	3.5	1.5	2	1.5	–	–	3	1.5	1.5	1
100	–	0.5	4.5	2	4	2	–	0.5	4	1.5	4	1.5
110	–	2	5	2.5	4.5	2.5	–	1.5	4.5	2	4.5	2
120	–	3.5	5.5	2.5	5.5	2.5	–	3	5	2	5	2
140	–	5	6.5	3	6.5	3	–	4.5	6	2.5	6	2.5
150	–	6.5	7	3	7	3	–	5	6.5	3	6.5	3
200	1.5	8	8	3.5	8	3.5	1	9	9	4	9	4
240	4.5	13.5	9.5	4.5	9.5	4.5	4.5	14	10	5	10	5
250	5	15	10	4.5	10	4.5	5	15	11	5	11	5
300	9	23	12	5.5	12	5.5	11	26	13	6	13	6
350	18	35	14	6.5	14	6.5	18	32	15	7	15	7
400	29	50	16	7.5	16	7.5	20	40	18	8	18	8
500	35	80	20	9	20	9	30	60	20	10	20	10
600	50	90	24	11	24	11	45	90	25	12	25	12
630	50	90	25	11	25	11	50	90	26	12	26	12
800	60	90	31	14	31	14	90	90	30	13	30	13
1000	90	90	38	16	38	16	90	90	38	14	38	14
1200	90	90	42	18	42	18	60	90	40	13	40	13
1250	90	90	45	18	45	19	60	90	40	12	40	12

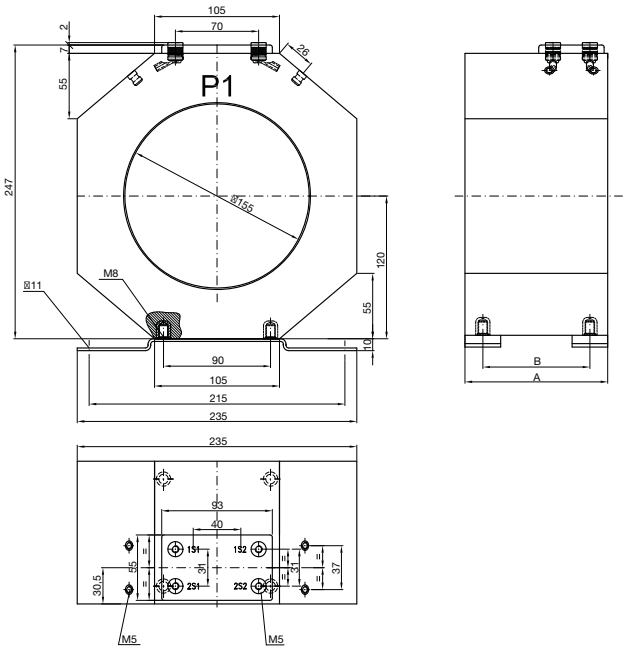
By special request current transformers with secondary current values different from those given in the table above (eg. 4.3 A), and current transformers for a frequency of 60 Hz can be supplied.

Overall dimensions

KOKM 1 NJ_ version 01

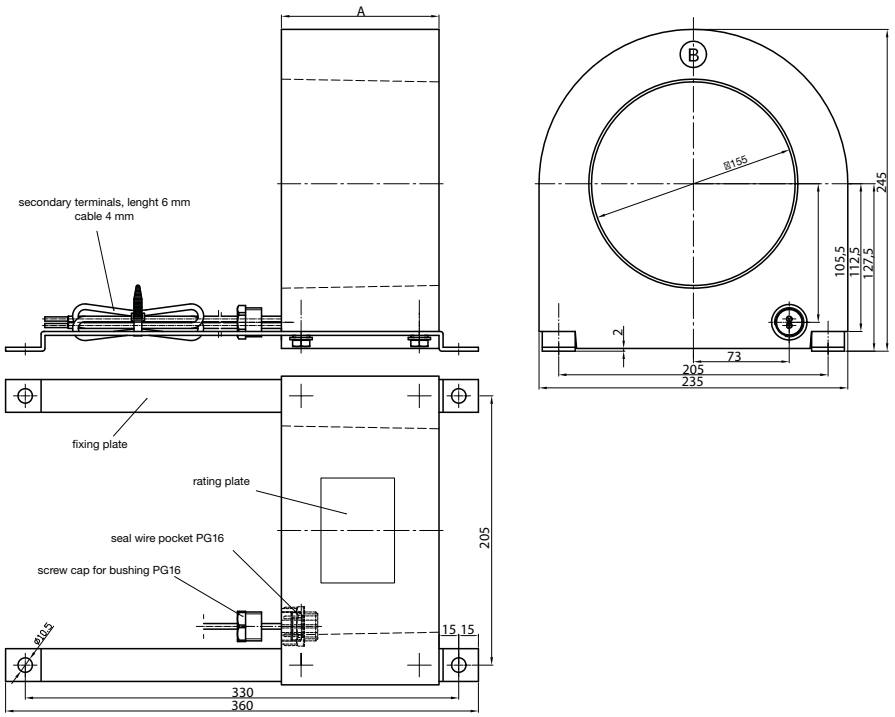


KOKM 1 NJ_ version 02



Type	Dimensions [mm]	
	A	B
KOKM 1 NJ 6	60	30
KOKM 1 NJ 9	90	60
KOKM 1 NJ 12	120	90

KOKM 1 NJ_ version 03



Index of CT	Description	Code	A	B
1YMA183182R0013	CT KOKM 1 NJ 12 with cable and P2 from cable side	KOKM 1 NJ 12-v3-P2	120	P2
1YMA183182R0012	CT KOKM 1 NJ 9 with cable and P2 from cable side	KOKM 1 NJ 9-v3-P2	90	P2
1YMA183182R0011	CT KOKM 1 NJ 6 with cable and P2 from cable side	KOKM 1 NJ 6-v3-P2	60	P2
1YMA183182R0003	CT KOKM 1 NJ 12 with cable and P1 from cable side	KOKM 1 NJ 12-v3-P1	120	P1
1YMA183182R0002	CT KOKM 1 NJ 9 with cable and P1 from cable side	KOKM 1 NJ 9-v3-P1	90	P1
1YMA183182R0001	CT KOKM 1 NJ 6 with cable and P1 from cable side	KOKM 1 NJ 6-v3-P1	60	P1

KOKM 1 EB_ and KOKM 1 ED_ are indoor, cable, low-voltage current transformers in resin insulation. These transformer types are suitable for the measurement of phase currents. A busbar or cable serves as the primary conductor. Current transformers from the KOKM series can also be used to measure phase currents at voltages higher than 1.2 kV if the insulation of the high-voltage primary conductor fulfils the requirements of the relevant standards related to the working voltage.

KOKM 1 EB version 03

Table 14. Technical data

Type	KOKM 1 EB_, KOKM 1 ED_
Max. number of windings	3
Level of insulation	1/6/-
Highest permissible voltage of the current transformer U_r	1.2 kV
Rating test voltage of insulation (50 Hz, 1 min U_p)	6 kV
Rating frequency	50 Hz, 60 Hz
Rating thermal current	1.2 x I_{pn}
Short-time withstand thermal current I_{th}, 1 s	60 x I_{pn}
Rating peak current I_{dyn}	2.5 x I_{th}
Working temperature range	-5 ... +40°C
Conformity with standards	IEC, ANSI, PN-EN, CAN

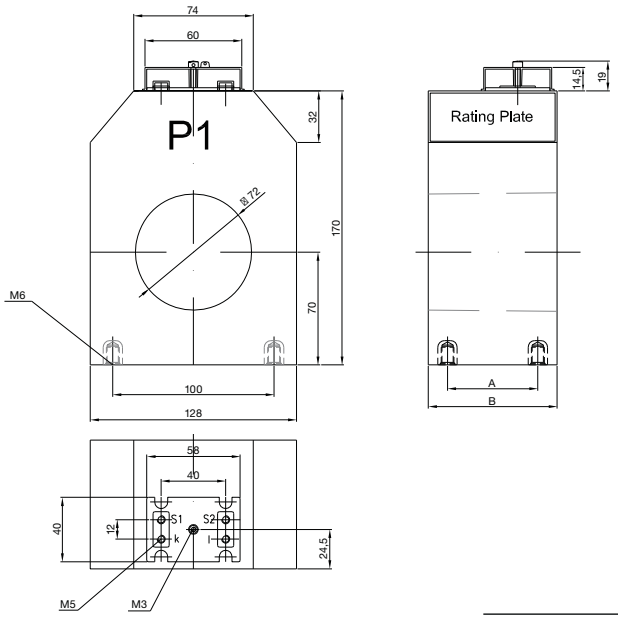
Table 15. Standard parameters for KOKM 1 EB_

Primary current I_{pn} [A]	Maximum permissible load [VA]									
	Secondary current I_{sn} = 1 [A]					Secondary current I_{sn} = 5 [A]				
	Measurement class FS		Protection class Fa			Measurement class Fs		Protection class Fa		
	0.5	1	10P10	5P10	5P20	0.5	1	10P10	5P10	5P20
50	–	–	0.5	0.5	0.5	–	–	0.5	–	–
60	–	–	0.5	0.5	0.5	–	–	0.5	0.5	–
70	–	0.5	1	1	0.5	–	0.5	0.5	0.5	–
75	–	1	1	1	0.5	–	1	1	1	–
100	–	2.5	1.5	1.5	0.5	–	1.5	1	1	–
110	0.5	4	1.5	1.5	0.5	–	2.5	1	1	–
120	1	4.5	1.5	1.5	0.5	0.5	3	1.5	1.5	–
140	1	4.5	1.5	1.5	0.5	1.5	7	2	2	0.5
150	1.5	6	2	2	0.5	1.5	7	2	2	0.5
200	5.5	8.5	2.5	2.5	0.5	2.5	12	2.5	2.5	1
240	5.5	20	2.5	2.5	0.5	8	25	3.5	3.5	1
250	4.5	25	3	3	0.5	11	28	3.5	3.5	1
300	12	40	3	3	0.5	15	40	4.5	4.5	1.5
350	9	27	5	5	1	22	45	5	5	1.5
400	22	40	4.5	4.5	1.5	30	60	6	6	2
500	35	50	6	6	2	45	60	6	6	1.5
600	60	60	6	6	1	60	60	5.5	5.5	–
630	60	60	5	5	0.5	60	60	6	6	–
800	60	60	5	5	–	60	60	7	7	–
1000	60	60	6	6	–	60	60	–	–	–

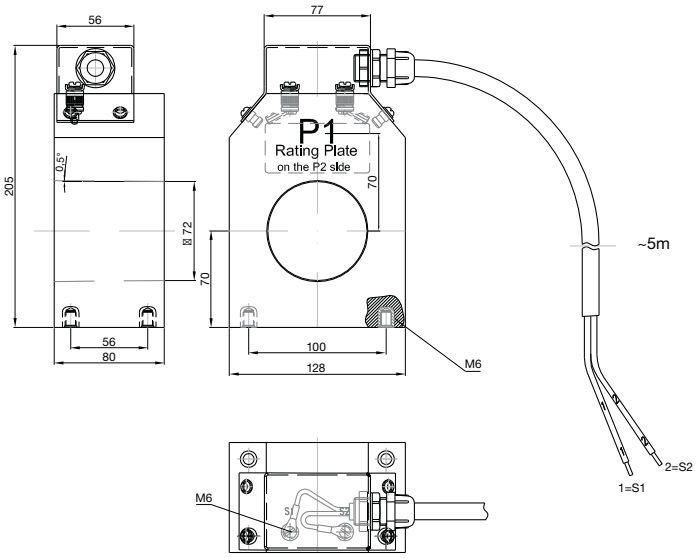
By special request current transformers with secondary current values different from those given in the table above (eg. 4.3 A), and current transformers for a frequency of 60 Hz can be supplied.

Overall dimensions

KOKM 1 EB_ version 01

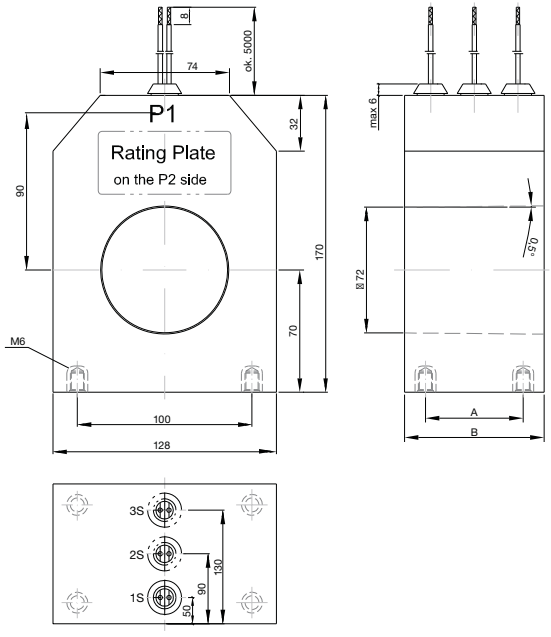


KOKM 1 EB_ version 02

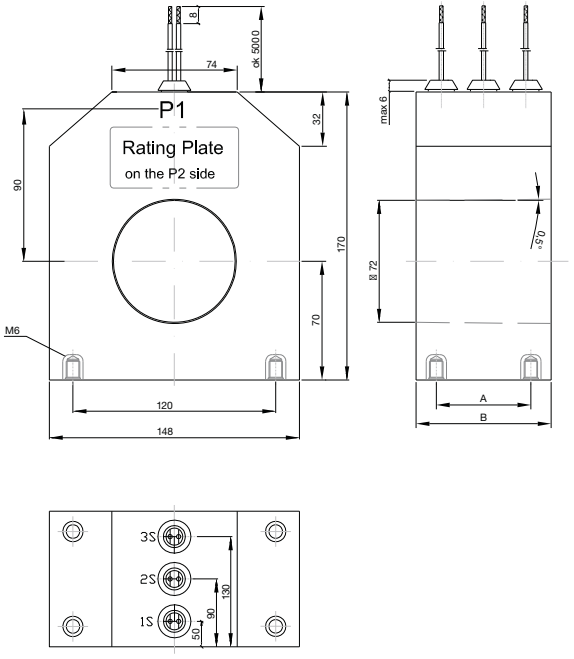


Type	Dimensions [mm]	
	A	B
KOKM 1 E ...8	56	80
KOKM 1 E ...10	76	100
KOKM 1 E ...12	96	120

KOKM 1 EB_ version 03



KOKM 1 ED_



Type	Dimensions [mm]	
	A	B
KOKM 1 E ...8	56	80
KOKM 1 E ...10	76	100
KOKM 1 E ...12	96	120
KOKM 1 E ...14	116	140
KOKM 1 E ...16	136	160
KOKM 1 E ...18	156	180

KOKM 06 NN_ is the indoor, cable, low-voltage current transformer in resin insulation. These transformer types are suitable for the measurement of phase currents. A non-insulated busbar or cable serves as the primary conductor. Current transformers from the KOKM series can also be used to measure phase currents at voltages higher than 0.72 kV if the insulation of the high-voltage primary conductor fulfils the requirements of the relevant standards related to the working voltage.

KOKM 06 NN 12

Table 16. Technical data

Type	KOKM 06 NN_
Max. number of windings	2
Level of insulation	0.6/3/-
Highest permissible voltage of the current transformer U_r	0.72 kV
Rating test voltage of insulation (50 Hz, 1 min U_p)	3 kV
Rating frequency	50 Hz
Rating thermal current	1.2 x I_{pn}
Short-time withstand thermal current I_{th}, 1 s	60 x I_{pn}
Rating peak current I_{dyn}	2.5 x I_{th}
Working temperature range	-5 ... +40°C
Conformity with standards	IEC, ANSI, PN-EN, CAN

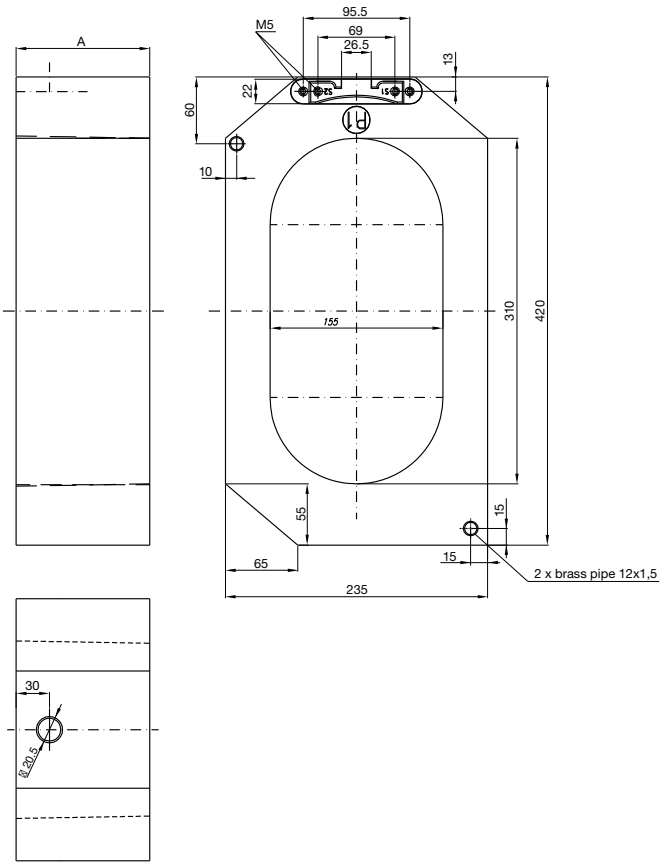
Table 17. Standard parameters for KOKM 06 NN_

Primary current I_{pn} [A]	Maximum permissible load [VA]											
	Secondary current I_{sn} = 1 [A]						Secondary current I_{sn} = 5 [A]					
	Measurement class FS		Protection class Fa				Measurement class Fs		Protection class Fa			
	0.5	1	10P10	10P20	5P10	5P20	0.5	1	10P10	10P20	5P10	5P20
50	–	–	3.5	1.5	–	–	–	–	3	1	–	–
60	–	–	4	2	–	–	–	–	3.5	1.5	–	–
70	–	–	5	2.5	–	–	–	–	4.5	1.5	–	–
75	–	–	5.5	2.5	–	–	–	–	5	2	–	–
100	–	–	7	3.5	7	1	–	–	6	2.5	6	1
110	–	–	7.5	4	7.5	1.5	–	–	7	3	7	1.5
120	–	–	8	4	8	4	–	–	7	2.5	7	2.5
140	–	–	10	5	10	5	–	–	9	3.5	9	3.5
150	–	–	10	5	10	5	–	–	9	4	9	4
200	–	8	14	7	14	7	–	9	13	5.5	13	5.5
240	–	15	17	8.5	17	8.5	–	16	15	6.5	15	6.5
250	–	19	18	9	18	9	–	19	16	7	16	7
300	–	31	21	10	21	10	–	31	20	8	20	8
350	0.5	50	25	12	25	12	–	50	22	10	22	10
400	15	60	28	13	28	13	15	55	25	11	25	11
500	35	90	34	16	34	16	35	60	31	14	31	14
600	60	90	41	17	41	17	60	90	38	15	38	15
630	60	90	42	18	42	18	60	90	39	16	39	16
800	90	90	52	23	52	23	90	90	49	21	49	21
1000	90	90	66	28	66	28	90	90	63	26	63	26
1200	90	90	80	34	80	34	90	90	77	32	77	32
1250	90	90	82	35	82	35	90	90	79	33	79	33
1500	90	90	90	40	90	40	90	90	90	40	90	40

By special request current transformers with secondary current values different from those given in the table above (eg. 4.3 A), and current transformers for a frequency of 60 Hz can be supplied.

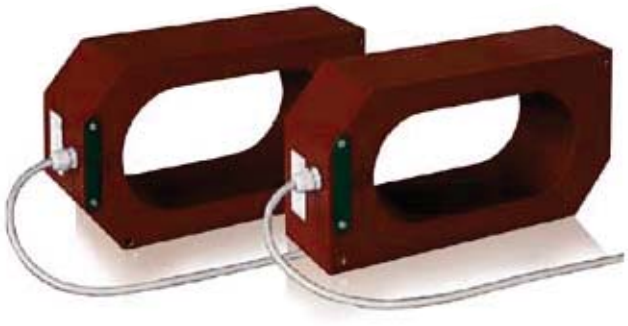
Overall dimensions

KOKM 06 NN_



Type	Dimensions [mm]
	A
KOKM 06 NN 6	60
KOKM 06 NN 9	90
KOKM 06 NN 12	120
KOKM 06 NN 14	140
KOKM 06 NN 16	160
KOKM 06 NN 18	180

KOKM 06 LM_ is the indoor, cable, low-voltage current transformer in resin insulation. These transformer types are suitable for the measurement of phase currents. A busbar or cable serve as the primary conductor. Current transformers from the KOKM series can also be used to measure phase currents at voltages higher than 0.72 kV if the insulation of the high-voltage primary conductor fulfils the requirements of the relevant standards related to the working voltage.



KOKM 06 NN_ versus KOKM 06 LM_

Table 18. Technical data

Type	KOKM 06 LM_
Max. number of windings	2
Level of insulation	0.6/3/-
Highest permissible voltage of the current transformer U_r	0.72 kV
Rating test voltage of insulation (50 Hz, 1 min U_p)	3 kV
Rating frequency	50 Hz
Rating thermal current	1.2 x I_{pn}
Short-time withstand thermal current I_{th}, 1 s	60 x I_{pn}
Rating peak current I_{dyn}	2.5 x I_{th}
Working temperature range	-5 ... +40°C
Conformity with standards	IEC, ANSI, PN-EN, CAN

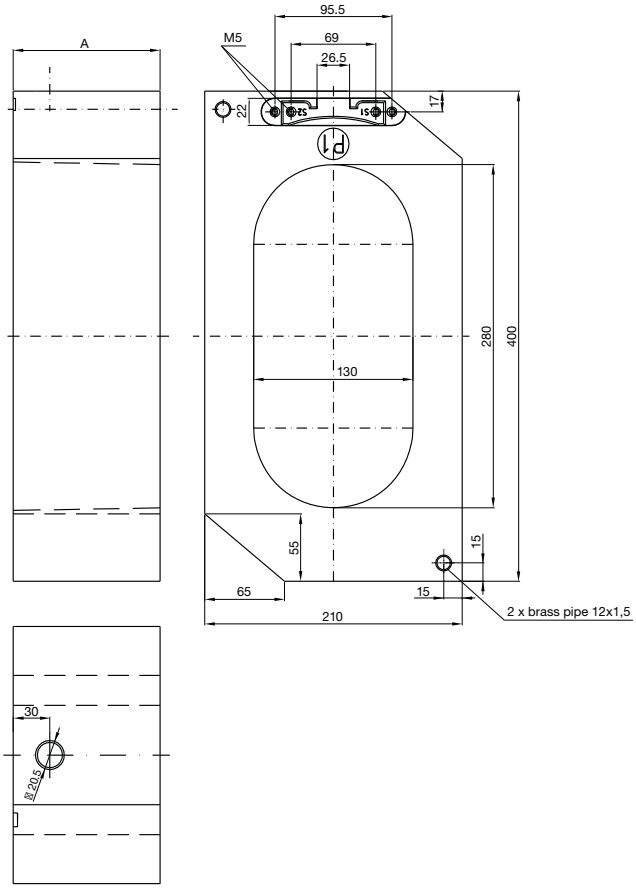
Table 19. Standards parameters for KOKM 06 LM_

Primary current I_{pn} [A]	Maximum permissible load [VA]											
	Secondary current I_{sn} = 1 [A]						Secondary current I_{sn} = 5 [A]					
	Measurement class FS		Protection class Fa				Measurement class Fs		Protection class Fa			
	0.5	1	10P10	10P20	5P10	5P20	0.5	1	10P10	10P20	5P10	5P20
50	–	–	3.5	1.5	–	–	–	–	3	1	–	–
60	–	–	3.5	1.5	–	–	–	–	3.5	1.5	–	–
70	–	–	5	2.5	–	–	–	–	4.5	1.5	–	–
75	–	–	5	2.5	5	–	–	–	5	2	–	–
100	–	–	7	3.5	5	1.5	–	–	6	2.5	6	1.5
110	–	–	8	4	8	3.5	–	–	7	3	7	2.5
120	–	–	8	4	8	4	–	–	7	3	7	3
140	–	–	10	5	10	5	–	–	9	3.5	9	3.5
150	–	–	11	5	11	5	–	–	9	4	9	4
200	–	11	13	7	13	7	–	11	13	5.5	13	5.5
240	–	20	16	8.5	16	8.5	–	20	15	6.5	15	6.5
250	–	23	18	9	18	9	–	23	16	7	16	7
300	–	35	21	10	21	10	–	35	20	8	20	8
350	12	55	25	12	25	12	12	55	22	10	22	10
400	20	60	28	13	28	13	20	60	25	11	25	11
500	40	90	34	16	34	16	40	90	31	14	31	14
600	60	90	41	17	47	17	60	90	38	15	38	15
630	60	90	42	18	42	18	60	90	39	16	39	16
800	90	90	52	23	52	23	90	90	49	21	49	21
1000	90	90	66	28	66	28	90	90	63	23	63	23
1200	90	90	80	34	80	34	90	90	77	32	77	32
1250	90	90	82	35	82	35	90	90	79	33	79	33
1500	90	90	90	40	90	40	90	90	90	40	90	40

By special request current transformers with secondary current values different from those given in the table above (eg. 4.3 A), and current transformers for a frequency of 60 Hz can be supplied.

Overall dimensions

KOKM 06 LM_



Type	Dimensions [mm]
	A
KOKM 06 LM 6	60
KOKM 06 LM 9	90
KOKM 06 LM 12	120
KOKM 06 LM 14	140
KOKM 06 LM 16	160
KOKM 06 LM 18	180

Indoor cable current transformers type KOKM (for RMU)

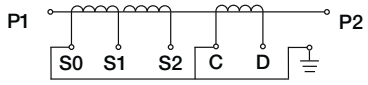
KOKM 072 BA 10, CA 10 – These indoor ring core current transformer types supply metering and protection devices at a maximum nominal voltage of 0.72 kV and nominal frequency of 50 or 60 Hz. The transformers can be mounted inside the switchgear. The nominal temperature recommended during the transport and storage of these transformers is in the range +5°C ... +40°C. Secondary circuits should be mounted using copper wires with a cross sectional area of at least 2.5 mm^2. Connecting schemes for current and energy measurements are shown on pages 30 and 31.

Table 20. Electrical parameters

Type	KOKM 072 BA 10	KOKM 072 CA 10	KOKM 072 CA 10	KOKM 072 CA 10	KOKM 072 CA 10	KOKM 072 CA 10
Number of windings for measuring	2 pcs. (terminals S0-S1-S2 137 turns (48+89))	2 pcs. (terminals S0-S1-S2) 1116 turns (391+725)	1 pcs. (terminals S1-S2 187 turns)	1 pcs. (terminals S1-S2 381 turns)	1 pcs. (terminals S1-S2 765 turns)	1 pcs. (terminals S1-S2 1535 turns)
Number of windings for the test	1 pcs. (terminals C-D 48 turns)	1 pcs. (terminals C-D 391 turns)	1 pcs. (terminals C-D 50 turns	1 pcs. (terminals C-D 100 turns)	1 pcs. (terminals C-D 200 turns)	1 pcs. (terminals C-D 400 turns)
Rated insulation level	0.72/3/-	0.72/3/-	0.72/3/-	0.72/3/-	0.72/3/-	0.72/3/-
Highest voltage for equipment U_m	0.72 kV	0.72 kV	0.72 kV	0.72 kV	0.72 kV	0.72 kV
Rated power-frequency withstand voltage (r.m.s.)	3 kV	3 kV	3 kV	3 kV	3 kV	3 kV
Rated frequency f_n	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Rated primary current I_{pn}	14.4 – 41.1 A	117.4 - 335 A	14.4 A	28.8 A	57.6 A	115.2 A
Rated secondary current I_{sn}	0.3 A	0.3 A	0.075 A	0.075 A	0.075 A	0.075 A
Test Winding	0.3 A	0.3 A	0.288 A	0.288 A	0.288 A	0.288 A
Accuracy class with relay type MPRB / WIC1	5P30	5P30	10P80	5P80	5P80	5P80
Rated burden			0.1 VA	0.1 VA	0.1 VA	0.1 VA
Rated continuous thermal current Icth	4 x I_{pn} (ext. 400%)	4 x I_{pn} (ext. 400%)	10 x I_{pn} (ext. 1000%)	10 x I_{pn} (ext. 1000%)	10 x I_{pn} (ext. 1000%)	10 x I_{pn} (ext. 1000%)
Rated short-time thermal current I_{th} 1 s	100 x I_{pn} A	100 x I_{pn} A	20 kA	20 kA	20 kA	20 kA
Rated dynamic current I_{dyn}	2.5 x I_{th} A	2.5 x I_{th} A	62.5 kA	62.5 kA	62.5 kA	62.5 kA
Insulation class	E	E	E	E	E	E
Protection	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
External dimensions DxdxLxH	100x42x100x124	100x50x100x124	100x50x100x124	100x50x100x124	100x50x100x124	100x50x100x124
Weight	3.3	2.8	2.27	1.9	1.4	1.7
Working temperature range	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
Conformity with standards	IEC 60044-1	IEC 60044-1	IEC 60044-1	IEC 60044-1	IEC 60044-1	IEC 60044-1

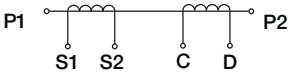
KOKM 072 BA 10 = MPTA 96-14-90

Terminals	Ratio	Class	Number of windings
S0 – S1	14.4/0.3 A	5P30	48
S0 – S2	41.1/0.3 A	5P30	137 (48+89)
C – D	0.3 A	test winding	48



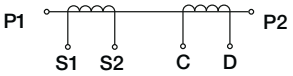
KOKM 072 CA 10 for REJ 603*

Terminals	Ratio	Burden	Class	Number of windings
S1 – S2	14.4/0.075 A	0.1 VA	10P80	187
C – D	0.288 A	test winding		50



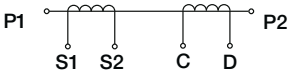
KOKM 072 CA 10 for REJ 603*

Terminals	Ratio	Burden	Class	Number of windings
S1 – S2	28.8/0.075 A	0.1 VA	5P80	381
C – D	0.288 A	test winding		100



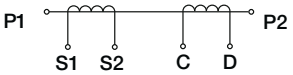
KOKM 072 CA 10 for REJ 603*

Terminals	Ratio	Burden	Class	Number of windings
S1 – S2	57.6/0.075 A	0.1 VA	5P80	765
C – D	0.288 A	test winding		200



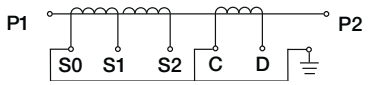
KOKM 072 CA 10 for REJ 603*

Terminals	Ratio	Burden	Class	Number of windings
S1 – S2	115.2/0.075 A	0.1 VA	5P80	1535
C – D	0.288 A	test winding		400



KOKM 072 CA 10 = MPTA 96-117-737

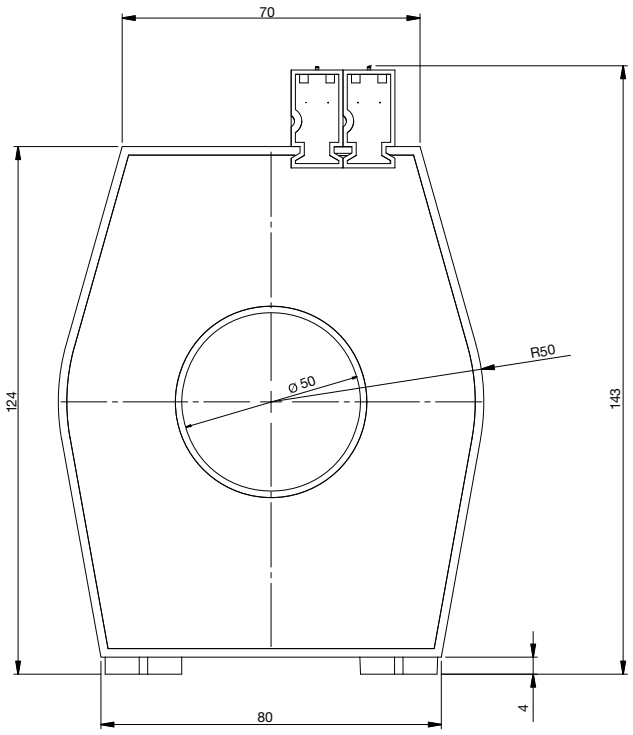
Terminals	Ratio	Class	Number of windings
S0 – S1	117.4/0.3 A	5P30	391
S0 – S2	335/0.3 A	5P30	1116 (391+725)
C – D	0.3 A	test winding	391

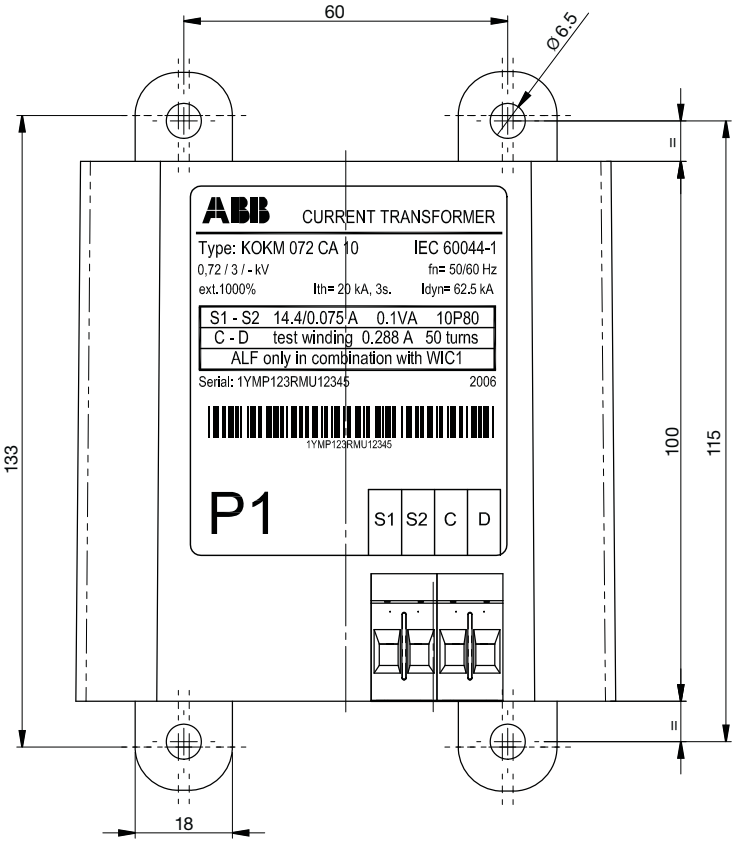


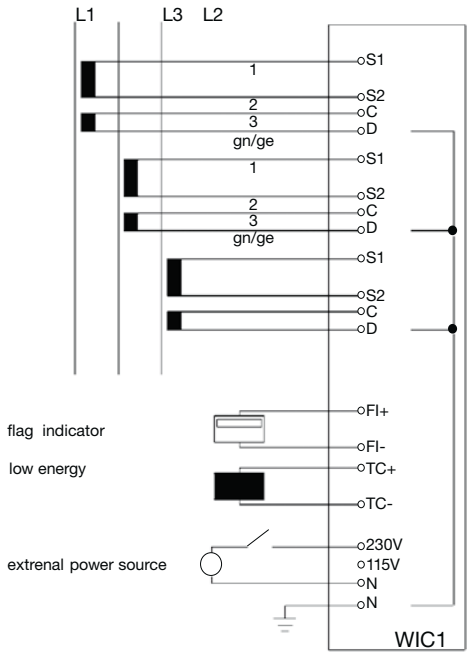
*or other non ABB relays e.g. WIC

Overall dimensions, connection diagram

CT outside dimensions for ratios of: 14.4/0.075 A, 28.8/0.075 A, 57.6/0.075 A, 115.2/0.075A

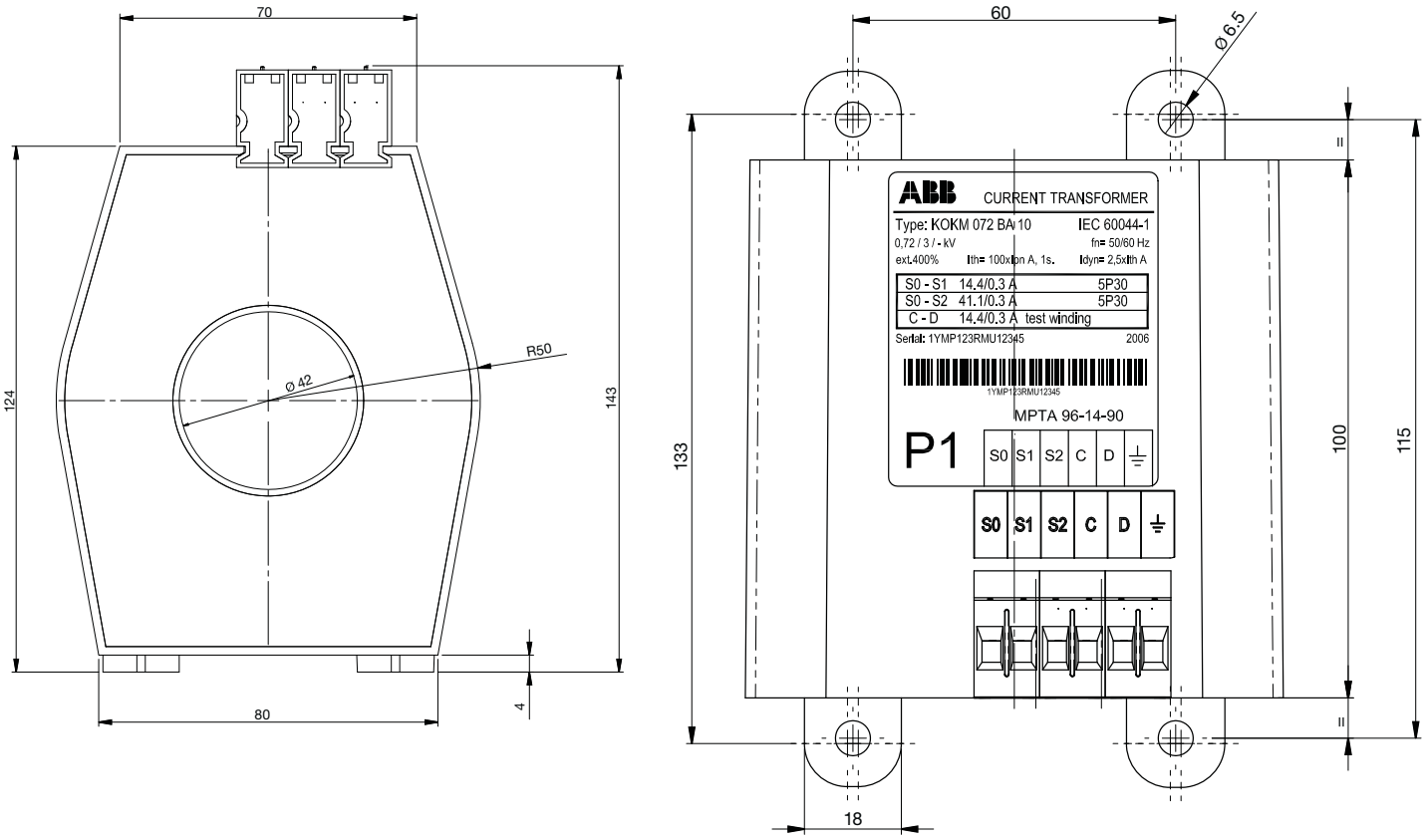


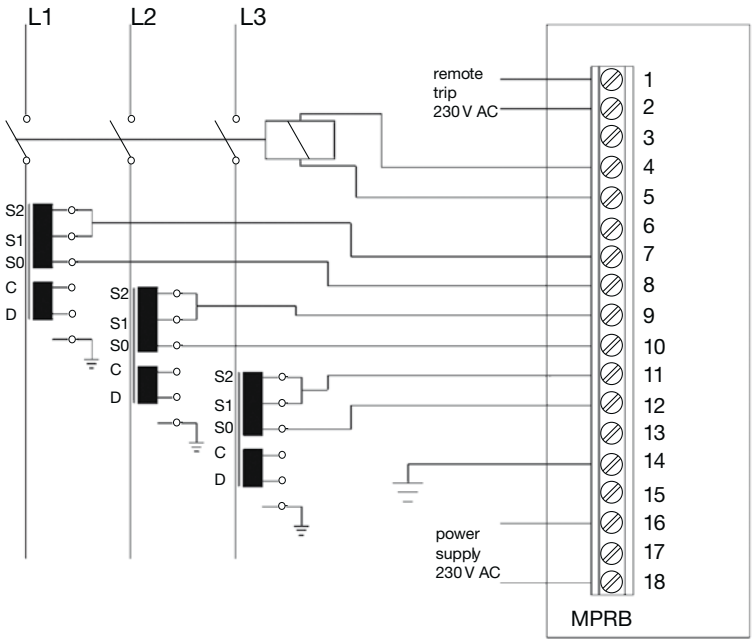


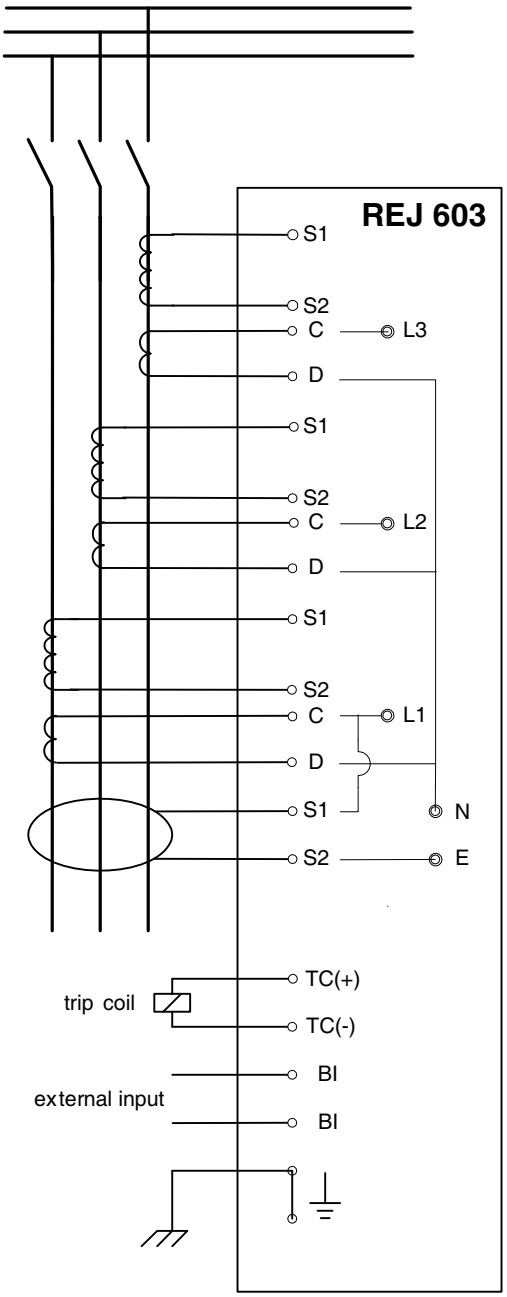


Overall dimensions, connection diagram

CT outside dimensions for ratios of: 14.4 – 41.1/0.3 A, 117.4 – 335/0.3 A







Product number	Type of CT	Primary current I_{pn} [A]	Secondary current I_{sn} [A]	
1YMA183190R0001	KOKM 072 CA 10	14.4 A	0.075 A	for REJ 603 - CT2
1YMA183190R0002	KOKM 072 CA 10	28.8 A	0.075 A	for REJ 603 - CT3
1YMA183190R0003	KOKM 072 CA 10	57.6 A	0.075 A	for REJ 603 - CT4
1YMA183190R0004	KOKM 072 CA 10	115.2 A	0.075 A	for REJ 603 - CT5
1YMA183190R0005	KOKM 072 CA 10	117.4 - 335 A	0.3 A	
1YMA183190R0006	KOKM 072 BA 10	14.4 - 41.1 A	0.3 A	

Order example

KOKM 072 CA 10 (1YMA183190R0003); 57.6/0.075 A/A; 0.1 VA; 5P80; I_{th}= 20 kA/1s; IEC 60044-1; 21 Pcs.

Indoor special current transformer type KORI 072 GH 8

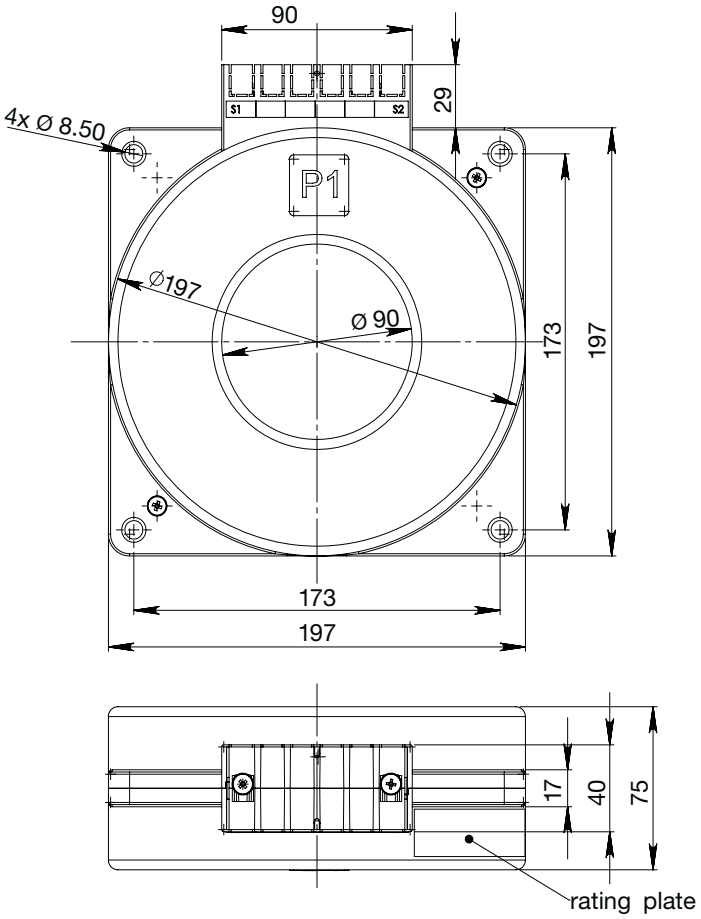
KORI 072 GH 8 – Low-voltage current instrument transformer, without a primary conductor that can be assembled on the switchgear bushing with its own insulation. Transformers of this type enable protection and are designed for use in indoor installations. KORI072 GH 8 transformers are generally designed with one transformer ratio. However, they can also have more ratios if the possibility to reconnect them to the secondary side exists. The transformer assembly procedure on the bushings of a UniGear 550 switchgear panel is specified exactly. All transformers meet the requirements of the relevant standard i.e. the IEC 60044-1.

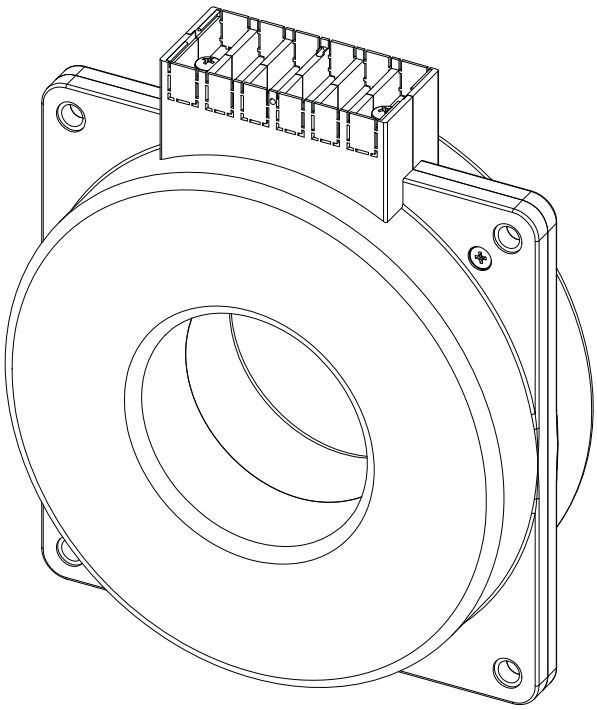
Table 21. Technical data

Type (low voltage current transformer for medium voltage application)			KORI
Highest voltage for equipment	U_m	[kV]	0.72
Power frequency test voltage	U_p (1 min)	[kV]	3
Rated insulation level		[kV]	0.72/3/–
Rating frequency	f_n	[Hz]	50
Rated primary current	I_{pn}	[A]	1600 up to 2500
Rated secondary current	I_{sn}	[A]	1 or 5
Rated short-time thermal current	I_{th} (3 s)	[kA]	50.0
Rating peak current	I_{dyn}	[kA]	125.0
Accuracy classes			5P20
Burden	Sn	[VA]	10, 15, 20, 25 or 30
Highest voltage of a system		[kV]	12 – 17.5 kV by using CT ROD
Flammability class			B
KORI 072 GH 8 current transformers are designed for ABB switchgear type Unigear 550.			

Other parameters have to be agreed with the manufacturer and will be considered on an individual basis.
Reconnectable variants are also possible, but need to be examined on an individual basis (according to the customer's requirements and the agreement with the manufacturer).

Overall dimensions





Current transformers
type KOLT (for oil-immersed transformers)

KOLT – this transformer type has no housing and primary winding. Under operating conditions, the bushing insulator, which is the main current transformer insulation, also serves as the primary winding. The secondary windings are evenly wound on the circumference of the toroidal core.
Secondary winding insulation is made of polyester tape (torlen). Current transformers weighing 100 kg or more consist of several parts to facilitate both transport and installation. Each individual part contains the following information: a serial number which coincides with the one stated on the rating plate, and markings for primary and secondary winding terminals.

Table 22. Technical data

Type			KOLT
Primary current range	I_{pn}	[A]	100 A - 15,000 A
Rated secondary current	I_{sn}	[A]	1A ÷ 5A
Insulation level		[kV]	0.72/3/-
Range of rated output	Sn	[VA]	1 VA -90 VA
Number of windings			1 - 4
Conformity with standards			IEC, PN-EN, SEV, VDE, ANSI, BS, CAN, CSA, GOST
Accuracy class acc. to IEC			0.2s; 0.5s; 0.2; 0.5; 1; 3; 5; 5P; 10P; PX
FS			5; 10
ALF			5; 10; 15; 20; 25; 30
Rated frequency	f	[Hz]	50, 60
Short-time withstand thermal current	I_{th} (1 s)	[A]	100 x I_{pn} max. 100 kA
Peak withstand current	I_{dyn}	[A]	2.5 x I_{th} max. 250 kA
Insulation class acc. to IEC			B
Min. inside diameter	Ø A	[mm]	min. 30 mm depending on parameters
Max. outside diameter	Ø B	[mm]	max. 900 mm depending on parameters
Height	h	[mm]	max. 900 mm depending on parameters
Length of leads	D	[mm]	1 m, other length at the client's request

Transformers with other dimensions and parameters are available upon request.

Versions available

– Single phase
– With one or several windings
– With one or several tappings
– Insulation – cotton tape + impregnating varnish
– Without housing
– Without primary winding

Aplication

KOLT type current transformers can be mounted inside power transformers. They will operate in oil, and under moderate and tropical climate conditions. These current transformers are designed to supply measurement and protection circuits of power systems operating under a rated frequency of 50 Hz.

Marking

Each current transformer is fitted with a rating plate in accordance with the IEC 60044-1 Standard. Values of rated voltage and the rated power frequency test voltage of the insulation (stated on the rating plate) refer to the insulation of the secondary windings. Primary and secondary terminals are directly marked on the current transformer.

Transport

During transportation, current transformers must be protected against humidity and heavy shocks. Current transformers weighing more than 50 kg and which are especially sensitive to shocks are transported on wooden pallets.

Installation

During installation of current transformers the following instructions should be observed:
– Secondary winding marked 1S1- 1S2 should be placed on the top
– Keep the same polarization for all parts of the current transformer (P1 – P2 – P1 – P2 markings)
– Avoid shocks

Compliance with standards

Current transformers meet the requirements of the following standards: IEC 60044-1.
At the client's request we manufacture current transformers that meet the requirements of SEV, VDE, ANSI, BS, CAN, CSA, GOST standards.

Warranty

A two-year warranty period is granted from the date the transformer starts to operate. However, a maximum warranty period of three years is granted from the time of purchase. The warranty only covers manufacturing defects and does not include defects due to:
– Incorrect transport
– Incorrect storage
– A failure to follow instructions correctly during installation and operation
– Incorrect selection of the transformer for the electric power system

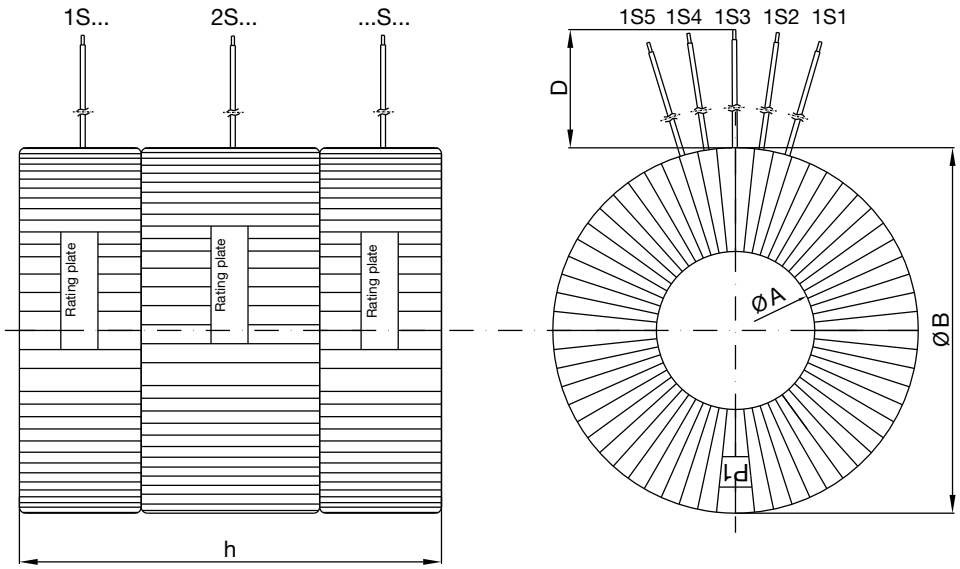
Ordering

The order must contain the following:
– Name and type of current transformer
– Rated primary current / rated secondary current I_{pn}/I_{sn} [A]
– Short-time thermal current, 1 s I_{th} [kA]
– Rated output power and accuracy class of each winding Sn [VA]
– Limit transformer dimensions (min. inside diameter, max. outside diameter, max. height)
– Length of leads
– Standard
– Quantity

Order example

Current transformer type KOLT
1200/5/1/1 A
I_{th} = 72 kA
I. 15 VA, class 0.5 FS10
II. 60 VA, class 5P15
III. 60 VA, class 5P20
min. inside diameter A = ø150 mm
max. outside diameter B = ø300 mm
max. height h = 200 mm
length of leads 1.5 m
standard IEC 60044-1
quantity – 9 Pcs.

Overall dimensions



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