



Innovations 2011 / 2012



- CCT - All current sensors for direct and alternating currents
- KBR - New, compact split-core current transformer
- CTB - Plug-in current transformer with screwless terminals, UL certification
- ASRD - Three single-phase current transformers, set within a compact design
- ASK - Plug-in current transformers
- ASK - Plug-in current transformers with partly resin hardened measuring system
- ASG - Measuring and protection CT in one housing, resin hardened polyurethan
- SWMU - Measuring transducer for alternating current



MBS AG



ZERTIFIKAT • CERTIFICATE • CERTIFICADO • CERTIFICAT • 証明書 • 認定書

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH
certifies that



MBS AG

Eisbachstraße 51, D-74429 Sulzbach-Laufen

has established and applies
a Quality Management System for

Development, production and sales of measuring transducers,
mercury meters, bus bar insulators/holders, Low voltage current
transformers series 0.5-split core cur
certification of electrical measuring in
the Official Testing Laboratory for

An audit was performed, Re
Proof has been furnished th
according

ISO 9001::

are fulfilled. The certificate is
Certificate Registration No.

M. Hey

Marsch, 2010-01

TÜV SÜD Management Service GmbH • Zertifizierungsstelle • Nieder



Management Service

Certificate of Compliance

Certificate Number: 20100426-E336996
Report Reference: E336996, 2010 April 23
Issue Date: 2010 April 26



**Underwriters
Laboratories**

Page 1 of 1

Issued to: **MBS AG**

Eisbachstr. 51
Sulzbach-Laufen, 74429
Germany

This is to certify that
representative samples of

INSTRUMENT TRANSFORMERS
Series CTB

Have been investigated by Underwriters Laboratories in accordance with
the Standard(s) indicated on this Certificate.

Standard(s) for Safety: **IEEE C57.13-1993**
CSA CAN3-C13-M83

Information: See UL On-line Certification Directory at WWW.UL.COM for additional information.

ducts bearing the UL Recognized Component Mark for the U.S. and Canada should be considered as being covered by UL's
Follow-Up Service and meeting the appropriate U.S. and Canadian requirements.



ion and catalog number, model number or other product
to UL Directory. As a supplementary means of
recognized Component Mark **UL** may be used in
n specified in the UL Directory preceding the recognition
is consists of the UL Recognized Mark for Canada **UL**
is specified under "Marking" for the particular

ponent Mark on the product

to (UL) or any authorized licensee of UL.
representative

СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р
ГОСТАНДАРТ РОССИИ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ РОСС DE.ME65.E
Срок действия с 30.01.2010

ОРГАН ПО СЕРТИФИКАЦИИ РОСС.RU.0001
Орган по сертификации средств измерений "Со
(ОС "Совет")
119361, Москва, ул. Озерная, 46 тел.: (095) 437-29-22

ПРОДУКЦИЯ
Трансформаторы тока ASK, ASKD, EASK, EASKD,
EASK-2U, ASK-3U, EASK-2U, EASK-3U
серийный выпуск

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ НОРМАТИВНЫХ
ГОСТ 7746-2001 И 6.3.4, разд. 7

ИЗГОТОВИТЕЛЬ
MBS Sulzbach Messwandler GmbH, Германия
Eisbachstr. 51, D-74429 Sulzbach-Laufen, Germany

СЕРТИФИКАТ ВЫДАН
MBS Sulzbach Messwandler GmbH, Германия
Eisbachstr. 51, D-74429 Sulzbach-Laufen, Germany
Тел.: +49(0) 79 76 / 98 51-0, факс: +49(0) 79 76 / 98 51-90
НА ОСНОВАНИИ

Протокол № 467 от 07.09.05 ИЛС ФГУП "ВНИИМС" России

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin



Innerstaatliche Bauartzulassung
Type-approval certificate under German law

Zulassungsinhaber: MBS AG
Issued to: Eisbachstraße 51
74429 Sulzbach-Laufen
Rechtsbezug: § 13 des Gesetzes über das Mess- und Eichwesen (Eichgesetz)
In accordance with: vom 23. März 1992 (BGBl. I S. 711), zuletzt geändert am
03.07.2008 (BGBl. I S. 1185)
Bauart: Einzelstromwandler EAS 176.3
In respect of:

Zulassungszeichen: **20.21**
Approval mark: **09.01**

Gültig bis: unbefristet
Valid until:
Anzahl der Seiten: 7
Number of pages:
Geschäftszeichen: PTB-2-3-4C
Reference No.:
Ort, Ausstellungsdatum: Braunschweig
Date of issue:

Zertifizierer: Dr. Martin Kahmann
Geprüft: Im Auftrag
By order:
Siegel
Seal

Merkmale zur Bauart sowie ggf. inhaltliche Beschränkung
innerstaatlicher Bauartzulassung ist, Hinweise und als
Characteristics of the instrument type approved, rests
in the Annex which forms an integral part of the type
see first page of the Annex.

Type Approval Certificate

This is to certify that the undemoted product(s) has/have been tested in accordance with
the relevant requirements of the GL Type Approval System.

Certificate No. 12 246 - 98 HH
Company: MBS AG
Eisbachstraße 51
74429 Sulzbach-Laufen, GERMANY

Product Description: Low Voltage Current Transformer
Plug in Type
Type: ASR 20.3, 201.3, 21.x, 22.3, ASK 21.3, 31.x, 41.x, 51.x, 61.x, 81.4, 101.4,
103.3, 105.6, 123.3, 205.3, 215.3, 313.3, 412.4, 421.4, 541.4, 581.4
Environmental Category: C
Technical Data / Range of Application: Highest voltage for equipment: 720 V AC
Rated frequency: 50 / 60 Hz
Primary current I_{pn} : 30 A up to 4000 A
Secondary current I_{sn} : 5 A or 1 A
Rated short-time current I_{sh} : 60 x I_{pn}
Accuracy class: 0.5 or 1
Primary conductor: 20 x 10 mm up to 100 x 10 mm,
2 x 20 x 10 mm up to 3 x 100 x 10 mm
or 17.5 mm up to 100 mm round conductor
---x: transformers in different front-to-back sizes

Test Standard: Guidelines for the Performance of Type Approvals, Chapter 2, Edition 2003
EC 185:1987 + A1:1990, DIN VDE 0414 Part 1:1984-01
Documents: Test report: IPH Berlin, Typenprüfberichte Nr. 469.279.9 A02 and Nr. 469.593.5.323
RMS-Prüfbericht Nr. 3-4398 and Nr. 3-4608
Catalog MBS 1998

Remarks: None

Valid until: 2013-10-16

Page: 1 of 1
File No.: LJ06
Hamburg, 2008-10-17

Germanischer Lloyd

This certificate is issued on the basis of "Guidelines for the Performance of Type Approval Part 1, Procedure".

Type Approval Symbol **GL**

H. Tobben
Thomas Reimer

INSTITUT „FRIEDRICH FÜR ELEKTRISCHE HOCHLEISTUNGSTECHNIK“ GMBH
Independent, accredited testing station - Member laboratory of STL and LÖWAG

TYPE TEST REPORT

NO. 1469.2090227.0100

MBS AG
Sulzbach Messwandler
Eisbachstraße 51
74429 Sulzbach-Laufen
GERMANY

MBS AG
Sulzbach Messwandler

Low-voltage current transformer (round primary-type current transformer)

WSK 40

09/52641 and 09/52642

TEST OBJECT	SERIAL NO.	RATED CHARACTERISTICS GIVEN BY THE CLIENT
Rated primary current	30 A	1 and 5 A
Rated secondary current	10 VA	1155
Accuracy class	0.72 kV	3 kV
Highest voltage for equipment (U_n)	3 kV	Rated lightning impulse withstand voltage
Rated power-frequency withstand voltage	2.25 kA	Rated short-time thermal current (I_{th}) 1 s
Rated lightning impulse withstand voltage	50 Hz	Class of insulating material
Rated short-time thermal current (I_{th}) 1 s		
Rated dynamic current (I_{dyn})		

EC 60044-1: 2003-02

Short-time current tests

Temperature-rise test

Determination of errors

Routine tests (selective tests)

5 to 13 March 2009

The ratings of the test object related to the scope of test have been provided.

The type tests have been PASSED.

Ronald Borchert
RONALD BORCHERT
Senior Engineer
Berlin, 05 May 2009

Dachmann-Hauschild
DACHMANN-HAUSCHILD
Test engineer (in charge)



Independent test laboratory, accredited by Deutsche Akkreditationsgesellschaft (DAG) and in the field of its application
and calibration power, current and power supply units, AC, DC, and low-voltage, medium-voltage equipment and
related (A) for electric power measurement and control. (B) for electric power measurement and control. (C) for electric power measurement and control. (D) for electric power measurement and control. (E) for electric power measurement and control. (F) for electric power measurement and control. (G) for electric power measurement and control. (H) for electric power measurement and control. (I) for electric power measurement and control. (J) for electric power measurement and control. (K) for electric power measurement and control. (L) for electric power measurement and control. (M) for electric power measurement and control. (N) for electric power measurement and control. (O) for electric power measurement and control. (P) for electric power measurement and control. (Q) for electric power measurement and control. (R) for electric power measurement and control. (S) for electric power measurement and control. (T) for electric power measurement and control. 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(WX) for electric power measurement and control. (WY) for electric power measurement and control. (WZ) for electric power measurement and control. (XA) for electric power measurement and control. (XB) for electric power measurement and control. (XC) for electric power measurement and control. (XD) for electric power measurement and control. (XE) for electric power measurement and control. (XF) for electric power measurement and control. (XG) for electric power measurement and control. (XH) for electric power measurement and control. (XI) for electric power measurement and control. (XJ) for electric power measurement and control. (XK) for electric power measurement and control. (XL) for electric power measurement and control. (XM) for electric power measurement and control. (

MBS – Product Range



MBS – Wir machen Energie messbar

MBS – We Make Energy Measurable



Auf dem Energieübertragungsweg zwischen Kraftwerk und Verbraucher ist an einer Vielzahl von Messstellen die korrekte Erfassung der Stromstärken notwendig. Dies erfolgt mit Hilfe von Stromwandlern. MBS produziert ein umfangreiches Sortiment an Niederspannungs-Stromwandlern für Mess- und Schutzzwecke.

In the energy transfer from power station to consumer, it is essential to ensure the correct collection of amperages at a multiplicity of measuring points. This is done by means of current transformers. MBS produces an extensive assortment of low-voltage current transformers for measuring and protection purposes.

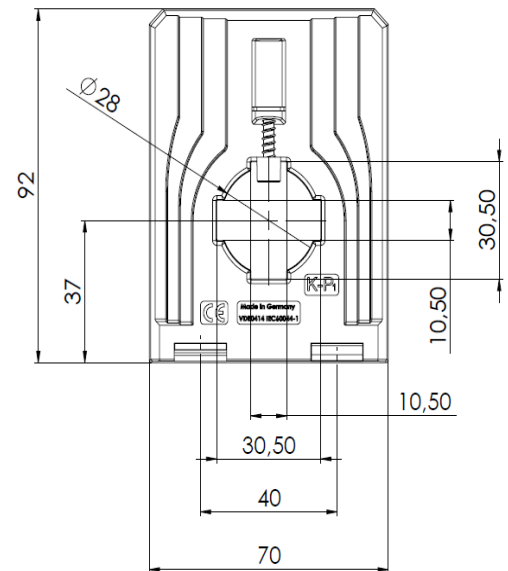
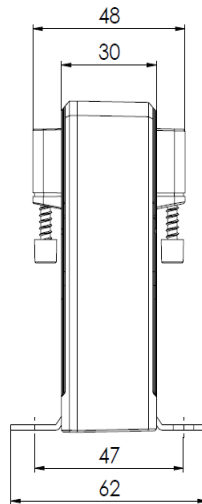
MBS AG

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CCT 31.3 RMS (Compensation current transformer, MBS All current sensors)

- For network analysis, monitoring,
- and measuring of non-sinusoidal and distorted networks
- and as a current sensor for the direct input wiring of SPS input cards



Additional accessories: Snap-on mounting (Art.-no. 53011)

Dimensions:	Applicable technical standards:	Electric connections:
Bus bar: 30x10 mm	DIN EN 50178, 1997	U _H + 0 (Ground) I _A
Round conductor: 28 mm	DIN EN 61010-1, 2002	Spring clamp terminal
Transformer width: 70 mm	VDE 0160	Connection cross sections: 0.08...2.5 mm ²
Transformer height: 92 mm		
Transformer depth: 48 mm		

Technical data:

Measuring range:	0...300 A DC / 0...300 A I _{eff} AC, depends on varieties! (Nominal current ranges adjusted to standard values according to IEC)
Frequency range:	DC, or 20 Hz ... 6 kHz AC, Crest-factor ≤ 4
Current output:	4...20 mA DC
Max. burden resistance at current output:	R _B ≤ 500 Ω (U _H = 24 V DC)
Accuracy:	1.0 %
Max. operating voltage U _m :	0,72 kV, U _{eff}
Isolation test voltage:	6 kV, U _{eff} , 50 Hz, 1 min.
Auxiliary voltage:	24 V ± 15 % DC, unregulated
Thermal nominal continuous rated current I _{cth} :	1.2 x I _N
Step response time (90 % I _{PN} , di/dt = 100 A / μs):	≤ 200 ms (typ. 150 ms)
Signal rise speed di/dt:	< 100 A / μs
Isolation class / Protection class	E / IP 20
Max. temperature of the primary conductor:	100° C
Operating temperature:	-25° C < T _U < +60° C
Storage temperature:	-40° C < T _L < +90° C

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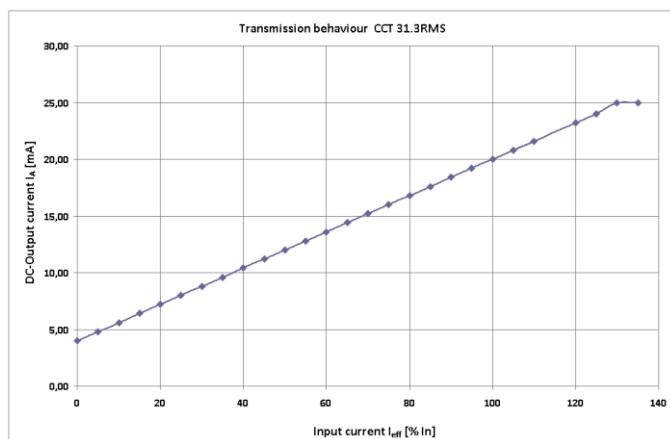
Functions of the CCT 31.3 RMS:

- The surrounded magnet field of the circulated conductor is captured by the measuring core, which encloses the conductor.
The induced current in the measuring core, which is proportional to the magnetic flow, is captured by a semi-conductor element.
A control electronic integrated in the device converts the signal of the semi-conductor into a true effective value of the measuring variable proportional DC output current signal. The calculation of the true effective value is realized by means of a micro processor integrated in the device.
- By the inductive, contactless capture of the measured variable, a galvanically isolated output signal is made available.
- The electric connection of the secondary circuit of the current transformer is realized with a 4-pole spring clamp terminal. This clamp is suitable for the connection of flexible conductors up to 2.5 mm².
- For the supply of the electronic control a DC auxiliary voltage of 24 V DC is necessary.

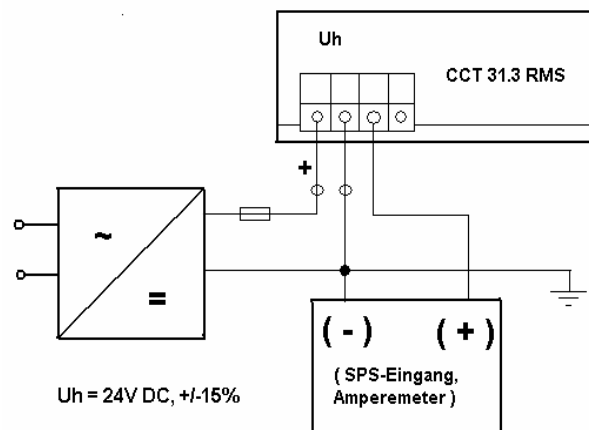
Advantages and benefits of the CCT 31.3 RMS:

- Measuring of direct current as well as alternating current with only one current transformer possible.
- Exact calculation of the true effective value of approx. every temporal process of the measured current through a integrated micro processor.
- Large working frequency range from 0 Hz (DC) or 20 Hz...6 kHz (AC).
- High electric safety by galvanic isolated capture of the measured variable.
- Simple and safety electronic connection by means of spring clamp terminal.
- Direct mounting on bus bars through integrated fixation screws possible.
- Mounting on 35mm DIN-rail by means of optionally deliverable snap-on mountings possible.
- High climatic and mechanic persistence by complete hardening of the electronic components.

Transmission behaviour of the CCT 31.3 RMS:



Wiring Diagram of the CCT 31.3 RMS:



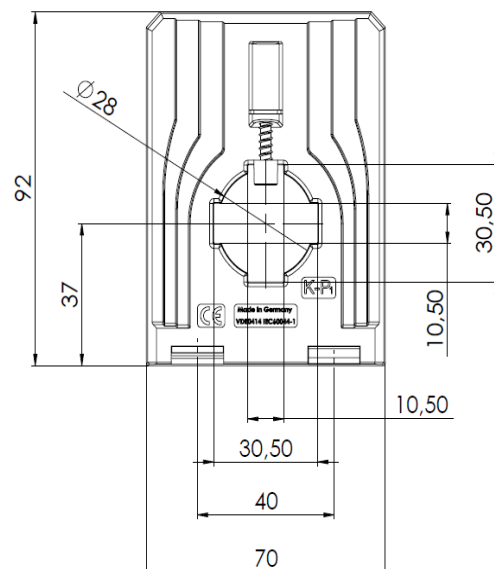
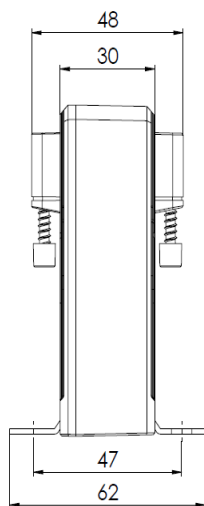
Order list:

Type	Primary current I_{eff} [A]	Art.-no.	Current output
CCT 31.3 RMS	50	1103-10001	4...20mA DC
	100	1103-10003	
	150	1103-10005	
	200	1103-10006	
	250	1103-10007	
	300	1103-10008	

CCT 31.3 I (Compensation current transformer, MBS All current sensors)

Current transformers for the measurement of direct and alternating currents

- For network analysis, monitoring,
- and measuring of non-sinusoidal and distorted networks



Additional accessories: Snap-on mounting (Art.-no. 53011)

Dimensions:

Bus bar: 30x10 mm
Round conductor: 28 mm
Transformer width: 70 mm
Transformer height: 92 mm
Transformer depth: 48 mm

Applicable technical standards:

DIN EN 50178, 1997
DIN EN 61010-1, 2002
VDE 0160

Electric connections:

$U_H +$ $U_H -$ 0 (Ground) I_A
Spring clamp terminal
Connection cross sections: 0.08...2.5 mm²

Technical data:

Measuring range:	0...300 A DC / 0...300 A I_{eff} AC, depends on varieties! (Nominal current ranges adjusted to standard values according to IEC)
Frequency range:	0...100 kHz
Current output at AC-input signal:	AC: 0...± 14.14 mA I_{eff} , (± 20 mA I_{peak})
Current output at DC-input signal:	DC: 0...± 20 mA
Max. burden resistance at current output:	$R_B \leq 200 \Omega$ ($U_H = 24$ V DC)
Accuracy:	± 0,5 %
Max. operating voltage U_m :	0,72 kV, U_{eff}
Isolation test voltage:	6 kV, U_{eff} , 50 Hz, 1 min.
Auxiliary voltage:	± 12...15 V DC, unregulated
Thermal nominal continuous rated current I_{cth} :	1.2 x I_N
Step response time (90 % I_{PN} , $di/dt = 100$ A / μs):	≤ 1 ms (typ. 150 μs)
Signal rise speed di/dt :	< 100 A / μs
Isolation class:	E
Protection class:	IP 20
Max. temperature of the primary conductor:	100° C
Operating temperature:	-25° C < T_U < +60° C
Storage temperature:	-40° C < T_L < +90° C

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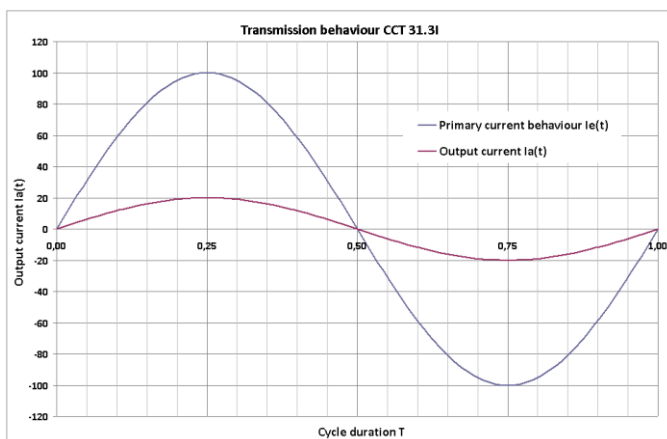
Functions of the CCT 31.3 I:

- The surrounded magnet field of the circulated conductor is captured by the measuring core, which encloses the conductor.
The induced current in the measuring core, which is proportional to the magnetic flow, is captured by a semi-conductor element.
A control electronic integrated in the device converts the signal of the semi-conductor into a output current signal, which is directly proportional to the temporal process of the measuring variable.
- Because of the inductive, contactless capture of the measured variable, a galvanically isolated output signal is provided.
- The electric connection of the secondary circuit of the current transformer is realized with a 4-pole spring clamp terminal. This clamp is suitable for the connection of flexible conductors up to 2.5 mm².
- For the supply of the electronic control a DC auxiliary voltage of ± 12 V is necessary.

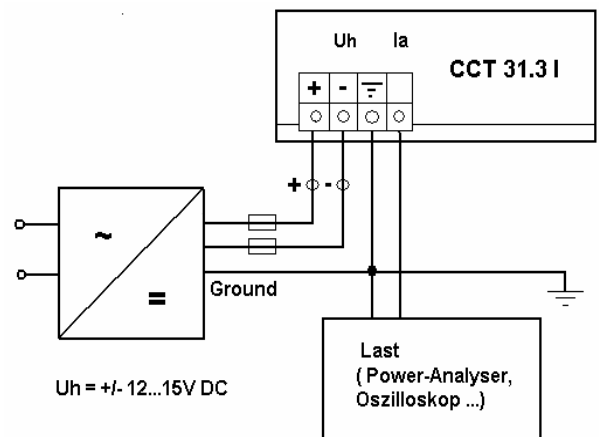
Advantages and benefits of the CCT 31.3 I:

- Measuring of direct current as well as alternating current with only one current transformer possible.
- Optional temporal process of the measured current are shown proportional.
- Large working frequency range from 0 Hz (DC)...100 kHz (AC).
- High electric safety by galvanic isolated capture of the measured variable.
- Simple and safety electronic connection by means of spring clamp terminal.
- Direct mounting on bus bars through integrated fixation screws possible.
- Mounting on 35mm DIN-rail by means of optionally deliverable snap-on mountings possible.
- High climatic and mechanic persistence by complete hardening of the electronic components.

Transmission behaviour of the CCT 31.3 I:



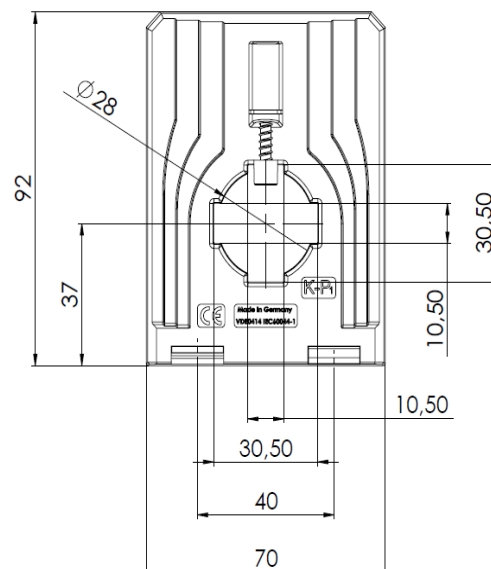
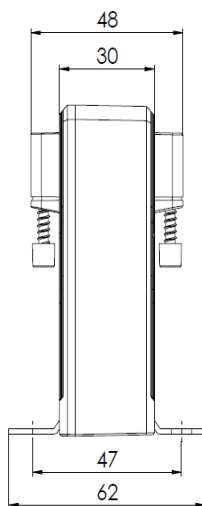
Wiring Diagram of the CCT 31.3 I:



Order list:

Type	Primary current I_{eff} [A]	Art.-no.	Current output
CCT 31.3 I	50	1101-10001	0...+/-20mA
	100	1101-10003	
	150	1101-10005	
	200	1101-10006	
	250	1101-10007	
	300	1101-10008	

- For network analysis, monitoring,
- and measuring of non-sinusoidal and distorted networks



$U_H +$ $U_H -$ 0 (Ground) I_A
 Spring clamp terminal
 Connection cross sections: 0.08...2.5 mm²

$$-40^{\circ} \text{ C} < T_L < +90^{\circ} \text{ C}$$

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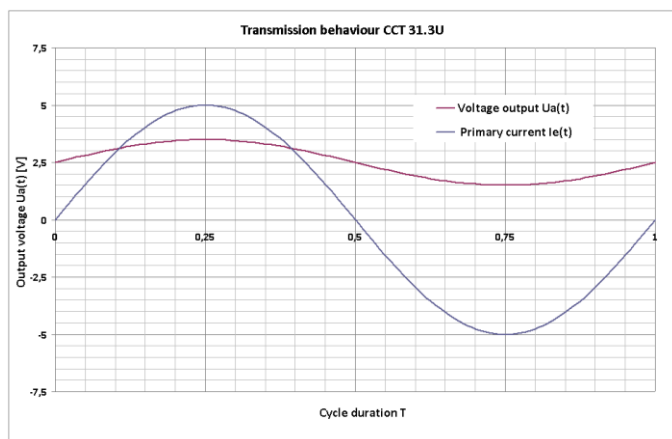
Functions of the CCT 31.3 U:

- The surrounded magnet field of the circulated conductor is captured by the measuring core, which encloses the conductor.
The induced current in the measuring core, which is proportional to the magnetic flow, is captured by a semi-conductor element.
A control electronic integrated in the device converts the signal of the semi-conductor into a output current signal, which is directly proportional to the temporal process of the measuring variable.
- Because of the inductive, contactless capture of the measured variable, a galvanically isolated output signal is provided.
- The electric connection of the secondary circuit of the current transformer is realized with a 4-pole spring clamp terminal. This clamp is suitable for the connection of flexible conductors up to 2.5 mm².
- For the supply of the electronic control a DC auxiliary voltage of ± 12 V is necessary.

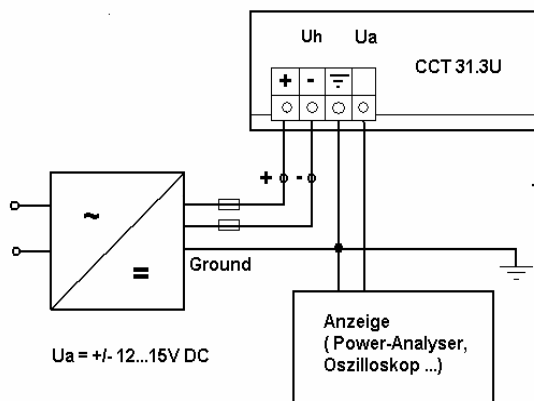
Advantages and benefits of the CCT 31.3 U:

- Measuring of direct current as well as alternating current with only one current transformer possible.
- Optional temporal process of the measured current are shown proportional.
- Large working frequency range from 0 Hz (DC) ... 100 kHz (AC).
- High electric safety by galvanic isolated capture of the measured variable.
- Simple and safety electronic connection by means of spring clamp terminal.
- Direct mounting on bus bars through integrated fixation screws possible.
- Mounting on 35mm DIN-rail by means of optionally deliverable snap-on mountings possible.
- High climatic and mechanic persistence by complete hardening of the electronic components.

Transmission behaviour of the CCT 31.3 U:



Wiring Diagram of the CCT 31.3 U:

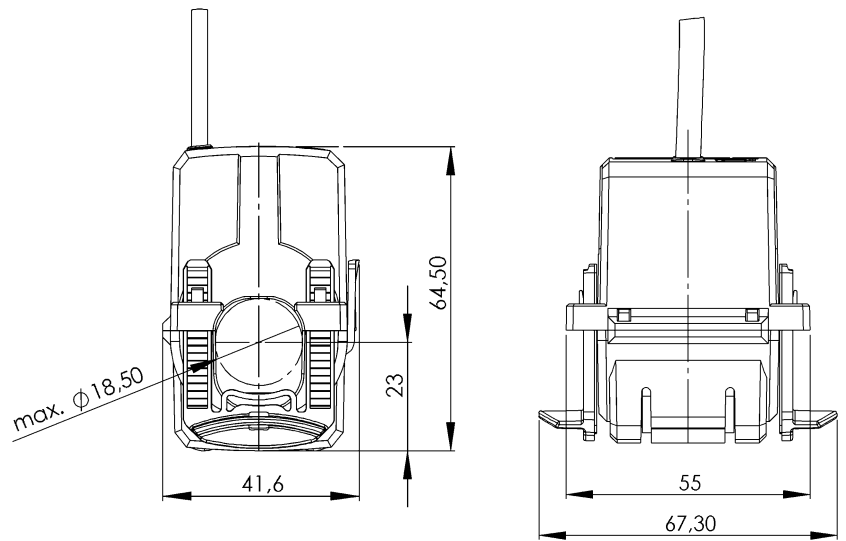


Order list:

Type	Primary current I_{eff} [A]	Art.-no.	Voltage output
CCT 31.3 U	50	1102-10001	Ua= 2,5 +/-1 V
	100	1102-10003	
	150	1102-10005	
	200	1102-10006	
	250	1102-10007	
	300	1102-10008	

KBR 18

Split-core current transformer



Dimensions:

Round conductor: 18 mm
Transformer width: 41.6 mm
Transformer height: 64.5 mm
Transformer depth incl. fixing clasps: 67.3 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 Sek.
Maximum operating voltage U_m : 0.72 kV
Isolation test voltage: 3 kV, U_{eff} , 50 Hz, 1 min.
Rated frequency: 50 Hz
Isolation class: E
Applicable technical standards: DIN EN 60044/1
VDE 0414 Teil 1

Further information about our new split-core current transformer KBR 18:

- Split-core current transformers are mainly used for an easy fitment into an already existing installation, without separating the primary conductor.
- The compact split-core current transformer KBR 18 is especially developed for an easy handling and especially for an installation in areas, which are difficult to access.
- Due to the „click“-system and the fixing-clasps even a one-hand mounting is possible.
- The delivery follows with 2.5 m connection cable 2x0.75 mm² (color coded). Other lengths of the connection cables are possible on request.
- For the use as a current sensor the KBR 18 is optionally deliverable with a voltage output of 0 – 333 mV.
- Operating temperature: $-5^{\circ}\text{C} < T < +50^{\circ}\text{C}$
- Storage temperature: $-25^{\circ}\text{C} < T < +70^{\circ}\text{C}$

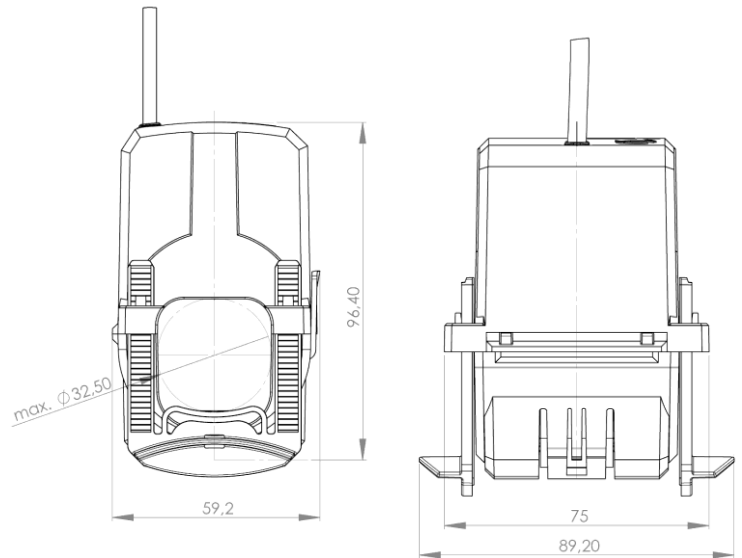


Order list

Output		1 A AC		0...333 mV AC	
Primary current [A]	Burden [VA]	Accuracy class		Primary current [A]	Accuracy class
		3FS5	1FS5		3
		Art.-no.	Art.-no.		Art.-no.
50	1	18-0001		50	18-1001
75	1	18-0006		75	18-1006
100	1,25	18-0011		100	18-1011
125	1,5	18-0016		125	18-1016
150	2	18-0021		150	18-1021
200	3	18-0026		200	181026
	1		18-0027		
250	4	18-0031		250	18-1031
	1,5		18-0032		

KBR 32

Split-core current transformer



Dimensions:

Round conductor: 32.5 mm
Transformer width: 59.2 mm
Transformer height: 96.4 mm
Transformer depth incl. fixing clasps: 89.2 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 Sek.
Maximum operating voltage U_m : 0.72 kV
Isolation test voltage: 3 kV, U_{eff} , 50 Hz, 1 min.
Rated frequency: 50 Hz
Isolation class: E
Applicable technical standards: DIN EN 60044/1
VDE 0414 Teil 1

Further information about our new split-core current transformer KBR 32:

- Split-core current transformers are mainly used for an easy fitment into an already existing installation, without separating the primary conductor.
- The compact split-core current transformer KBR 32 is especially developed for an easy handling and especially for an installation in areas, which are difficult to access.
- Due to the „click“-system and the fixing-clasps even a one-hand mounting is possible.
- The delivery follows with 2.5 m connection cable 2x0.75 mm² (color coded). Other lengths of the connection cables are possible on request.
- For the use as a current sensor the KBR 32 is optionally deliverable with a voltage output of 0 – 333 mV.
- Operating temperature: $-5^{\circ}\text{C} < T < +50^{\circ}\text{C}$
- Storage temperature: $-25^{\circ}\text{C} < T < +70^{\circ}\text{C}$

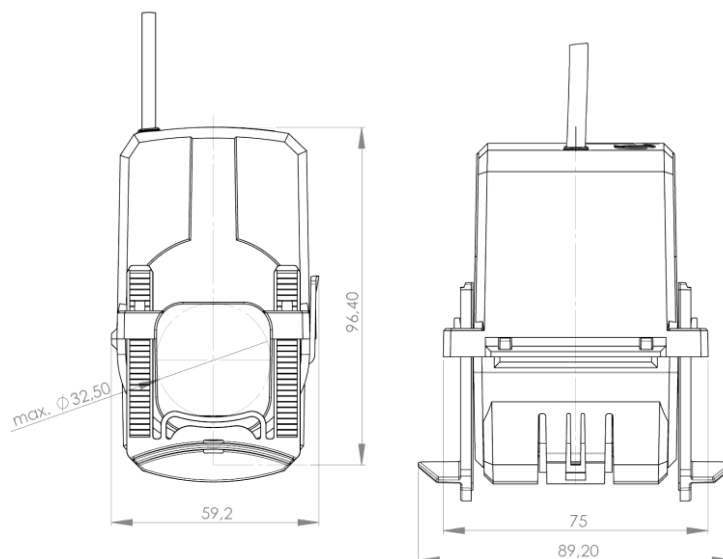


Order list:

Output		1 A AC		0...333 mV AC	
Primary current [A]	Burden [VA]	Accuracy class		Primary current [A]	Accuracy class
		3FS5	1FS5		3
		Art.-no.	Art.-no.		Art.-no.
100	2,5	32-0011		100	32-1011
125	3	32-0016		125	32-1016
150	3	32-0021		150	32-1021
200	5	32-0026		200	32-1026
250	5	32-0031		250	32-1031
300				300	32-1034
	5		32-0035		
400				400	32-1036
	5		32-0037		
500				500	32-1038
	5		32-0039		
600				600	32-1040
	5		32-0041		

KBR 44

Split-core current transformer



Dimensions:

Round conductor: 44 mm
Transformer width: 72.2 mm
Transformer height: 120.6 mm
Transformer depth incl. fixing clasps: 98.1 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 Sek.
Maximum operating voltage U_m : 0.72 kV
Isolation test voltage: 3 kV, U_{eff} , 50 Hz, 1 min.
Rated frequency: 50 Hz
Isolation class: E
Applicable technical standards: DIN EN 60044/1
VDE 0414 Teil 1

Further information about our new split-core current transformer KBR 32:

- Split-core current transformers are mainly used for an easy fitment into an already existing installation, without separating the primary conductor.
- The compact split-core current transformer KBR 32 is especially developed for an easy handling and especially for an installation in areas, which are difficult to access.
- Due to the „click“-system and the fixing-clasps even a one-hand mounting is possible.
- The delivery follows with 2.5 m connection cable $2 \times 0.75 \text{ mm}^2$ (color coded). Other lengths of the connection cables are possible on request.
- For the use as a current sensor the KBR 32 is optionally deliverable with a voltage output of 0 – 333 mV.
- Operating temperature: $-5^\circ\text{C} < T < +50^\circ\text{C}$
- Storage temperature: $-25^\circ\text{C} < T < +70^\circ\text{C}$

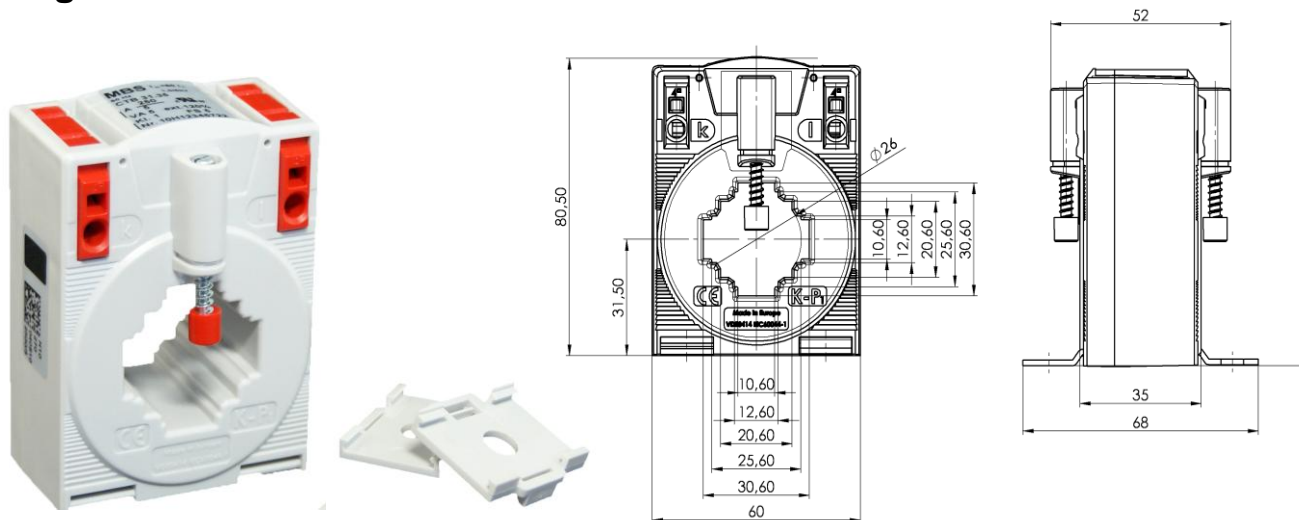


Order list:

Output		1 A AC	0...333 mV AC	
Primary current [A]	Burden [VA]	Accuracy class	Primary current [A]	Accuracy class
		1FS5		3
		Best.-Nr.		Best.-Nr.
250	2,5	44-0001	250	44-1001
300	2,5	44-0006	300	44-1006
400	5	44-0011	400	44-1011
500	5	44-0016	500	44-1016
600	5	44-0021	600	44-1021
750	5	44-0026	750	44-1026
800	5	44-0031	800	44-1031
1000	5	44-0036	1000	44-1036

CTB 31.35

Plug-in current transformer



Dimensions:

Primary conductor 1: 30 x 10 mm
 Primary conductor 2: 25 x 12 mm
 Primary conductor 3: 20 x 20 mm
 Round conductor: 26 mm
 Transformer width: 60 mm
 Transformer height: 80.5 mm
 Total depth: 52 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
 Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 sec.
 Maximum operating voltage U_m : 1.0 kV
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 60044/1
 VDE 0414 Teil 1

Snap-on mounting (Art.-no. 55015)

Further information:

- World's first CT with screwless connection technology for the secondary caps – „Cage Clamp®“
- **UL certification.** Certificate No.: 20100426-E336996
- Innovative time-saving connectivity of both solid and flexible conductors not exceeding 4 mm² on top or in front and with or without ferrules.
- Vibration and shock resistant
- A maintenance free unit, gas tight connection
- High current carrying capacity
- High mechanical holding forces
- Low voltage CT for maximum operating voltage to 1.0 kV. Use in 690 V networks possible
- For use where the primary nominal current ranges from 50 A to 750 A
- Accuracy classes 3 and 1
- Capable of being constantly overloaded to 120 % of the primary rated current
- A limiting factor is incorporated if the current exceeds the allowable rate. See the rating plate on the CT for details
- Operating temperature in the range -5°C to 50°C
- Storage temperature in the range -25°C to 70°C
- Unbreakable plastic housing of grey polycarbonate. Self-extinguishing, UL94-V0 and flame resistant
- Packaging unit: 1 pc.
- Customs tariff number: 85043129

MBS AG

Eisbachstraße 51 · 74429 Sulzbach–Laufen
 Germany

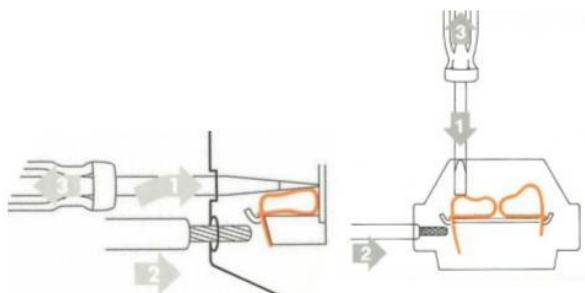
Telefon: +49 7976 9851-0 · Telefax: +49 7976 9851-90
 E-Mail: info@mbs-ag.com · Web: www.mbs-ag.com

CTB 31.35

Plug-in current transformer

Screwless connection technology

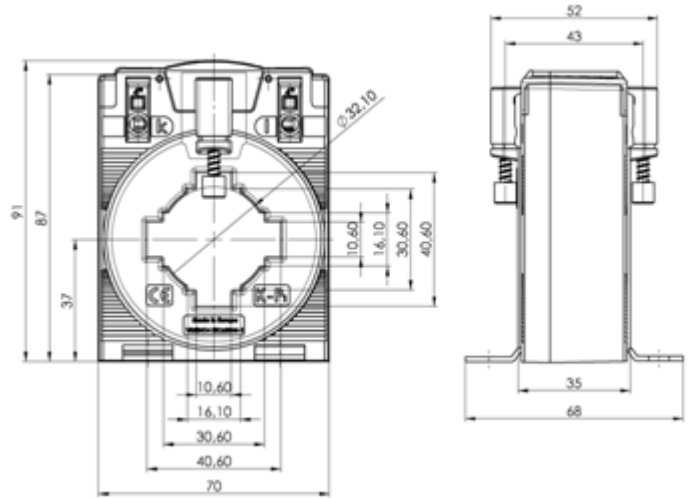
„Cage Clamp®“ (In front or on top)



Secondary current		5A			1A		
Primary current [A]	Burden [VA]	Accuracy class			Accuracy class		
		3	1	0,5	3	1	0,5
		Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.
75	1,25	50-0050			50-0070		
80	1,25	50-0051			50-0071		
100	2,5	50-0052			50-0072		
125	2,5		50-0053			50-0073	
150	2,5		50-0054			50-0074	
200	1,5			50-2050			50-2070
	5		50-0055			50-0075	
250	2,5			50-2051			50-2071
	5		50-0056			50-0076	
300	2,5			50-2052		50-0077	50-2072
	5		50-0057			50-0078	50-2073
400	5		50-0058	50-2053		50-0079	50-2074
500	5		50-0059	50-2054		50-0080	50-2075
	10		50-0060			50-0081	50-2076
600	5		50-0061	50-2055		50-0082	50-2077
	10		50-0062	50-2056		50-0083	50-2078
750	5		50-0063	50-2057		50-0084	
	10		50-0064	50-2058		50-0085	50-2079
800	5		50-0065	50-2059		50-0086	50-2080
	10		50-0066	50-2060		50-0087	50-2081
1000	5		50-0067	50-2061		50-0088	50-2082
	10		50-0068	50-2062			

CTB 41.35

Plug-in current transformer



Dimensions:

Primary conductor 1: 40 x 10 mm
 Primary conductor 2: 30 x 15 mm
 Round conductor: 32 mm
 Transformer width: 70 mm
 Transformer height: 91 mm
 Total depth: 52 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
 Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 sec.
 Maximum operating voltage U_m : 1.0 kV
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 60044/1
 VDE 0414 Teil 1

Snap-on mounting: (Art.-no. 55015)

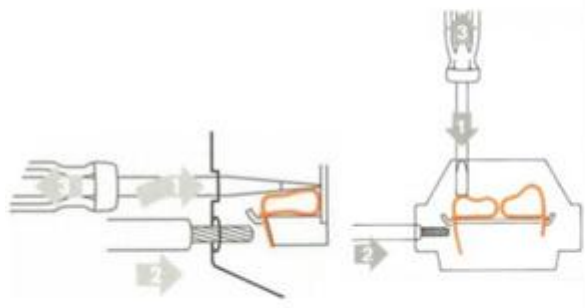
Further information:

- World's first CT with screwless connection technology for the secondary caps – „Cage Clamp®“
- **UL certification.** Certificate No.: 20100426-E336996
- Innovative time-saving connectivity of both solid and flexible conductors not exceeding 4 mm² on top or in front and with or without ferrules.
- Vibration and shock resistant
- A maintenance free unit, gas tight connection
- High current carrying capacity
- High mechanical holding forces
- Low voltage CT for maximum operating voltage to 1.0 kV. Use in 690 V networks possible
- For use where the primary nominal current ranges from 75 A to 1000 A
- Accuracy classes 3 and 1
- Capable of being constantly overloaded to 120 % of the primary rated current
- A limiting factor is incorporated if the current exceeds the allowable rate. See the rating plate on the CT for details
- Operating temperature in the range -5°C to 50°C
- Storage temperature in the range -25°C to 70°C
- Unbreakable plastic housing of grey polycarbonate. Self-extinguishing, UL94-V0 and flame resistant
- Packaging unit: 1 pc.
- Customs tariff number: 85043129

CTB 41.35

Plug-in current transformer

Screwless connection technology
„Cage Clamp®“ (In front or on top)

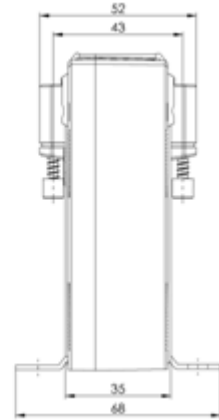
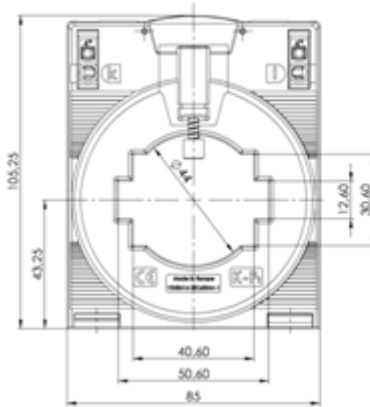


Order List

Secondary current		5A			1A		
Primary current [A]	Burden [VA]	Accuracy class			Accuracy class		
		3	1	0,5	3	1	0,5
		Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.
75	1,25	50-0050			50-0070		
80	1,25	50-0051			50-0071		
100	2,5	50-0052			50-0072		
125	2,5		50-0053			50-0073	
150	2,5		50-0054			50-0074	
200	1,5			50-2050			50-2070
	5		50-0055			50-0075	
250	2,5			50-2051			50-2071
	5		50-0056			50-0076	
300	2,5			50-2052		50-0077	50-2072
	5		50-0057			50-0078	50-2073
400	5		50-0058	50-2053		50-0079	50-2074
500	5		50-0059	50-2054		50-0080	50-2075
	10		50-0060			50-0081	50-2076
600	5		50-0061	50-2055		50-0082	50-2077
	10		50-0062	50-2056		50-0083	50-2078
750	5		50-0063	50-2057		50-0084	
	10		50-0064	50-2058		50-0085	50-2079
800	5		50-0065	50-2059		50-0086	50-2080
	10		50-0066	50-2060		50-0087	50-2081
1000	5		50-0067	50-2061		50-0088	50-2082
	10		50-0068	50-2062			

CTB 51.35

Plug-in current transformer



Dimensions:

Primary conductor 1: 50 x 12 mm
Primary conductor 2: 40 x 30 mm
Round conductor: 44 mm
Transformer width: 85 mm
Transformer height: 105.25 mm
Total depth: 52 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 sec.
Maximum operating voltage U_m : 1.0 kV
Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
Rated frequency: 50 Hz
Isolation class: E
Applicable technical standards: DIN EN 60044/1
VDE 0414 Teil 11

Further information:

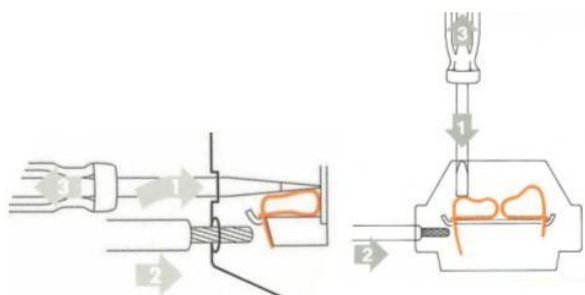
- World's first CT with screwless connection technology for the secondary caps – „Cage Clamp®“
- **UL certification.** Certificate No.: 20100426-E336996
- Innovative time-saving connectivity of both solid and flexible conductors not exceeding 4 mm² on top or in front and with or without ferrules.
- Vibration and shock resistant
- A maintenance free unit, gas tight connection
- High current carrying capacity
- High mechanical holding forces
- Low voltage CT for maximum operating voltage to 1.0 kV. Use in 690 V networks possible
- For use where the primary nominal current ranges from 100 A to 1250 A
- Accuracy class 1
- Capable of being constantly overloaded to 120 % of the primary rated current
- A limiting factor is incorporated if the current exceeds the allowable rate. See the rating plate on the CT for details
- Operating temperature in the range -5°C to 50°C
- Storage temperature in the range -25°C to 70°C
- Unbreakable plastic housing of grey polycarbonate. Self-extinguishing, UL94-V0 and flame resistant
- Packaging unit: 1 pc.
- Customs tariff number: 85043129

CTB 51.35

Plug-in current transformer

Screwless connection technology

„Cage Clamp®“ (In front or on top)

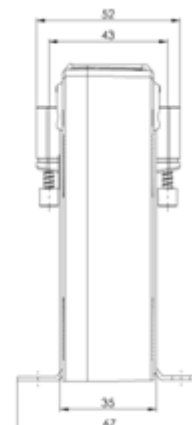
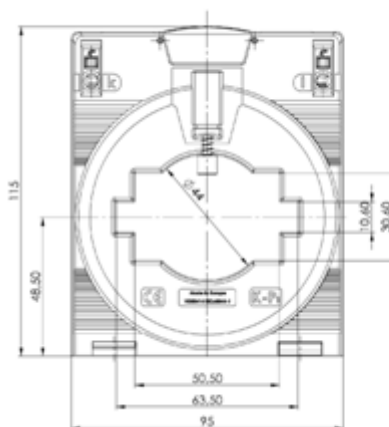


Order list

Secondary current		5A		1A	
Primary current [A]	Burden [VA]	Accuracy class		Accuracy class	
		1	0,5	1	0,5
		Art.-no.	Art.-no.	Art.-no.	Art.-no.
100	1,25	50-0100		50-0120	
125	2,5	50-0101		50-0121	
150	2,5	50-0102		50-0122	
200	1,5		50-2100		50-2120
	5	50-0103		50-0123	
250	2,5		50-2101		50-2121
	5	50-0104		50-0124	
300	2,5		50-2102		50-2122
	5	50-0105		50-0125	
400	5	50-0106	50-2103	50-0126	50-2123
	10	50-0107		50-0127	
500	5	50-0108	50-2104	50-0128	50-2124
	10	50-0109	50-2105	50-0129	50-2125
600	5	50-0110	50-2106	50-0130	50-2126
	10	50-0111	50-2107	50-0131	50-2127
750	5	50-0112	50-2108	50-0132	50-2128
	10	50-0113	50-2109	50-0133	50-2129
800	5	50-0114	50-2110	50-0134	50-2130
	10	50-0115	50-2111	50-0135	50-2131
1000	5	50-0116	50-2112	50-0136	50-2132
	10	50-0117	50-2113	50-0137	50-2133
1200	5	50-0291	50-2114	50-0293	50-2134
	10	50-0292	50-2115	50-0294	50-2135
1250	5	50-0118	50-2116	50-0138	50-2136
	10	50-0119	50-2117	50-0139	50-2137

CTB 61.35

Plug-in current transformer



Dimensions:

Primary conductor 1: 63 x 10 mm
 Primary conductor 2: 50 x 30 mm
 Round conductor: 44 mm
 Transformer width: 95 mm
 Transformer height: 115 mm
 Total depth: 52 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
 Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 sec.
 Maximum operating voltage U_m : 1.0 kV
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 60044/1
 VDE 0414 Teil 1

Further information:

- World's first CT with screwless connection technology for the secondary caps – „Cage Clamp®“
- UL certification. **Certificate No.: 20100426-E336996**
- Innovative time-saving connectivity of both solid and flexible conductors not exceeding 4 mm² on top or in front and with or without ferrules.
- Vibration and shock resistant
- A maintenance free unit, gas tight connection
- High current carrying capacity
- High mechanical holding forces
- Low voltage CT for maximum operating voltage to 1.0 kV. Use in 690 V networks possible
- For use where the primary nominal current ranges from 200 A to 1600 A
- Accuracy class 1
- Capable of being constantly overloaded to 120 % of the primary rated current
- A limiting factor is incorporated if the current exceeds the allowable rate. See the rating plate on the CT for details
- Operating temperature in the range -5°C to 50°C
- Storage temperature in the range -25°C to 70°C
- Unbreakable plastic housing of grey polycarbonate. Self-extinguishing, UL94-V0 and flame resistant
- Packaging unit: 1 pc.
- Customs tariff number: 85043129

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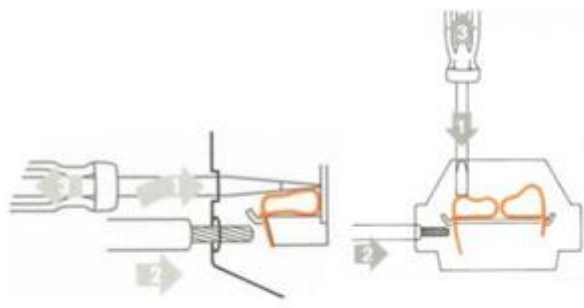
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 E-Mail: info@mbs-ag.com · Web: www.mbs-ag.com

CTB 61.35

Plug-in current transformer

Screwless connection technology
„Cage Clamp®“ (In front or on top)

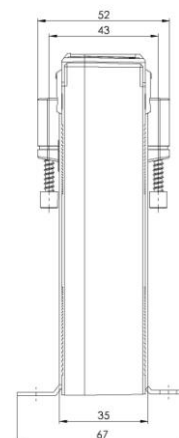
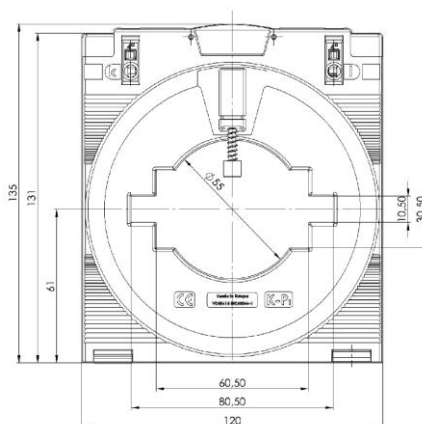


Order list

Secondary current		5A		1A	
Primary current [A]	Burden [VA]	Accuracy class		Accuracy class	
		1	0,5	1	0,5
		Art.-no.	Art.-no.	Art.-no.	Art.-no.
200	2,5	50-0150	50-2150	50-0170	50-2170
250	2,5		50-2151		50-2171
	5	50-0151		50-0171	
300	5	50-0152	50-2152	50-0172	50-2172
400	5	50-0153	50-2153	50-0173	50-2173
500	5	50-0154	50-2154	50-0174	50-2174
600	5	50-0155	50-2155	50-0175	50-2175
750	5	50-0156	50-2156	50-0176	50-2176
	10	50-0157	50-2157	50-0177	50-2177
800	5	50-0158	50-2158	50-0178	50-2178
	10	50-0159	50-2159	50-0179	50-2179
1000	5	50-0160	50-2160	50-0180	50-2180
	10	50-0161	50-2161	50-0181	50-2181
1200	5	50-0287	50-2162	50-0289	50-2182
	10	50-0288	50-2163	50-0290	50-2183
1250	5	50-0162	50-2164	50-0182	50-2184
	10	50-0163	50-2165	50-0183	50-2185
1500	5	50-0164	50-2166	50-0184	50-2186
	10	50-0165	50-2167	50-0185	50-2187
1600	5	50-0166	50-2168	50-0186	50-2188
	10	50-0167	50-2169	50-0187	50-2189

CTB 81.35

Plug-in current transformer



Dimensions:

Primary conductor 1: 80 x 10 mm
 Primary conductor 2: 60 x 30 mm
 Round conductor: 55 mm
 Transformer width: 120 mm
 Transformer height: 135 mm
 Total depth: 52 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
 Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 sec.
 Maximum operating voltage U_m : 1.0 kV
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 60044/1
 VDE 0414 Teil 1

Further information:

- World's first CT with screwless connection technology for the secondary caps – „Cage Clamp®“
- **UL certification.** Certificate No.: 20100426-E336996
- Innovative time-saving connectivity of both solid and flexible conductors not exceeding 4 mm² on top or in front and with or without ferrules.
- Vibration and shock resistant
- A maintenance free unit, gas tight connection
- High current carrying capacity
- High mechanical holding forces
- Low voltage CT for maximum operating voltage to 1.0 kV. Use in 690 V networks possible
- For use where the primary nominal current ranges from 400 A to 2000 A
- Accuracy class 1
- Capable of being constantly overloaded to 120 % of the primary rated current
- A limiting factor is incorporated if the current exceeds the allowable rate. See the rating plate on the CT for details
- Operating temperature in the range -5°C to 50°C
- Storage temperature in the range -25°C to 70°C
- Unbreakable plastic housing of grey polycarbonate. Self-extinguishing, UL94-V0 and flame resistant
- Packaging unit: 1 pc.
- Customs tariff number: 85043129

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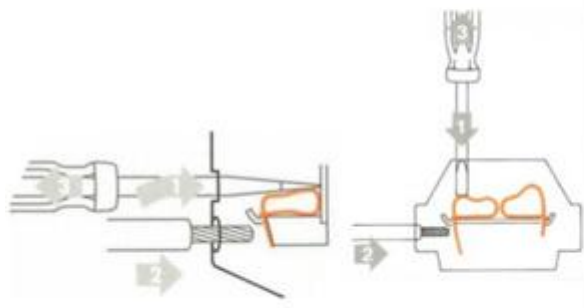
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 E-Mail: info@mbs-ag.com · Web: www.mbs-ag.com

CTB 81.35

Plug-in current transformer

Screwless connection technology
„Cage Clamp®“ (In front or on top)

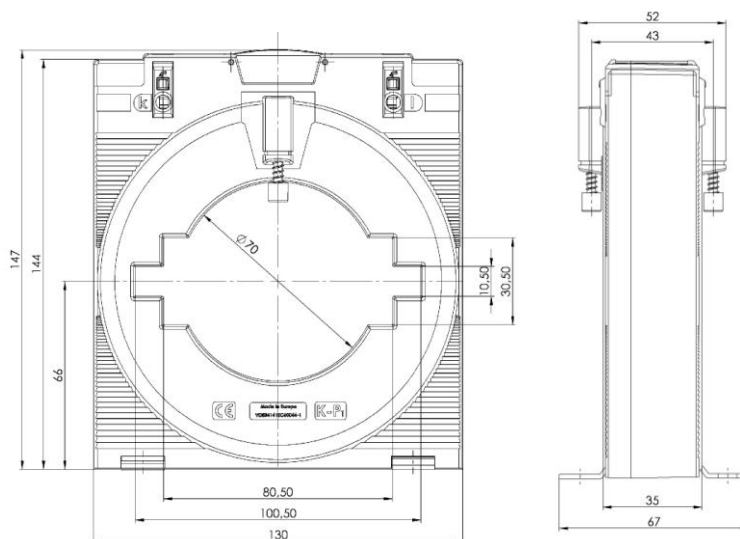


Order list

Secondary current		5A		1A	
Primary current [A]	Burden [VA]	Accuracy class		Accuracy class	
		1	0,5	1	0,5
		Art.-no.	Art.-no.	Art.-no.	Art.-no.
400	2,5		50-2190		50-2210
	5	50-0190		50-0210	
500	2,5		50-2191		
	5	50-0191		50-0211	50-2211
600	5	50-0192	50-2192	50-0212	50-2212
750	5	50-0193	50-2193	50-0213	50-2213
	10	50-0194	50-2194	50-0214	50-2214
800	5	50-0195	50-2195	50-0215	50-2215
	10	50-0196	50-2196	50-0216	50-2216
1000	5	50-0197	50-2197	50-0217	50-2217
	10	50-0198	50-2198	50-0218	50-2218
1200	5	50-0283	50-2199	50-0285	50-2219
	10	50-0284	50-2200	50-0286	50-2220
1250	5	50-0199	50-2201	50-0219	50-2221
	10	50-0200	50-2202	50-0220	50-2222
1500	5	50-0201	50-2203	50-0221	50-2223
	10	50-0202	50-2204	50-0222	50-2224
1600	5	50-0203	50-2205	50-0223	50-2225
	10	50-0204	50-2206	50-0224	50-2226
2000	10	50-0205	50-2207	50-0225	50-2227
	15	50-0206	50-2208	50-0226	50-2228

CTB 101.35

Plug-in current transformer



Dimensions:

Primary conductor 1: 100 x 10 mm
 Primary conductor 2: 80 x 30 mm
 Round conductor: 70 mm
 Transformer width: 130 mm
 Transformer height: 147 mm
 Total depth: 52 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
 Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 sec.
 Maximum operating voltage U_m : 1.0 kV
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 60044/1
 VDE 0414 Teil 1

Further information:

- World's first CT with screwless connection technology for the secondary caps – „Cage Clamp®“
- **UL certification.** Certificate No.: 20100426-E336996
- Innovative time-saving connectivity of both solid and flexible conductors not exceeding 4 mm² on top or in front and with or without ferrules.
- Vibration and shock resistant
- A maintenance free unit, gas tight connection
- High current carrying capacity
- High mechanical holding forces
- Low voltage CT for maximum operating voltage to 1.0 kV. Use in 690 V networks possible
- For use where the primary nominal current ranges from 400 A to 2500 A
- Accuracy class 1
- Capable of being constantly overloaded to 120 % of the primary rated current
- A limiting factor is incorporated if the current exceeds the allowable rate. See the rating plate on the CT for details
- Operating temperature in the range -5°C to 50°C
- Storage temperature in the range -25°C to 70°C
- Unbreakable plastic housing of grey polycarbonate. Self-extinguishing, UL94-V0 and flame resistant
- Packaging unit: 1 pc.
- Customs tariff number: 85043129

MBS AG

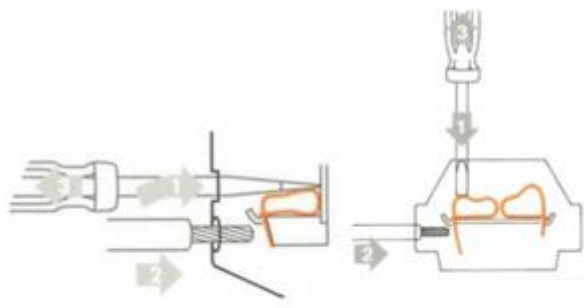
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CTB 101.35

Plug-in current transformer

Screwless connection technology
„Cage Clamp®“ (In front or on top)

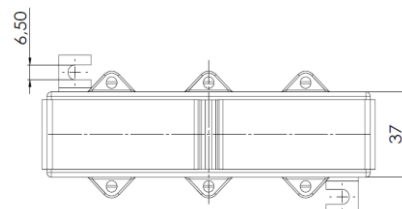
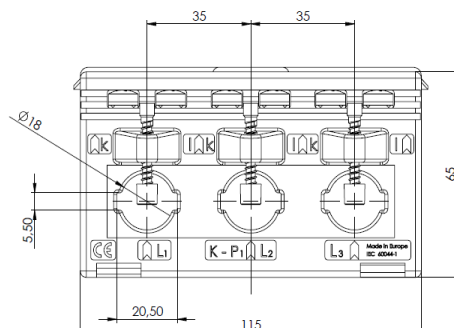


Order list

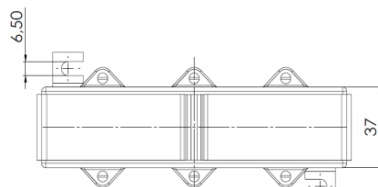
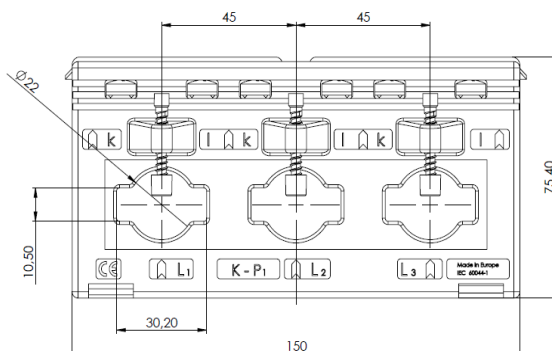
Secondary current		5A		1A	
Primary current [A]	Burden [VA]	Accuracy class		Accuracy class	
		1	0,5	1	0,5
		Art.-no.	Art.-no.	Art.-no.	Art.-no.
400	2,5		50-2230		50-2260
	5	50-0230		50-0260	
500	5	50-0231	50-2231	50-0261	50-2261
600	5		50-2232		50-2262
	10	50-0232		50-0262	
750	5	50-0233	50-2233	50-0263	50-2263
	10	50-0234	50-2234	50-0264	50-2264
800	5	50-0235	50-2235	50-0265	50-2265
	10	50-0236	50-2236	50-0266	50-2266
1000	5	50-0237	50-2237	50-0267	50-2267
	10	50-0238	50-2238	50-0268	50-2268
1200	5	50-0279	50-2239	50-0281	50-2269
	10	50-0280	50-2240	50-0282	50-2270
1250	5	50-0239	50-2241	50-0269	50-2271
	10	50-0240	50-2242	50-0270	50-2272
1500	5	50-0241	50-2243	50-0271	50-2273
	10	50-0242	50-2244	50-0272	50-2274
1600	5	50-0243	50-2245	50-0273	50-2275
	10	50-0244	50-2246	50-0274	50-2276
2000	10	50-0245	50-2247	50-0275	50-2277
	15	50-0246	50-2248	50-0276	50-2278
2500	10	50-0247	50-2249	50-0277	50-2279
	15	50-0248	50-2250	50-0278	50-2280

Three single-phase current transformers

ASRD 205.37



ASRD 310.37



General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.0 \times I_N$

Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 sec.

Maximum operating voltage U_m : 0.72 kV

Isolation test voltage: 3 kV, U_{eff} , 50 Hz, 1 Min.

Rated frequency: 50 Hz

Isolation class: E

Applicable technical standards: DIN EN 60044/1
VDE 0414 Teil 1

Further information:

- Three single-phase current transformer set for switch closer installation in the field of power switches
- Low space requirements due to compact design
- Designed for primary use in conjunction with electronic measuring and display devices
- Over current rated limiting factor: See rating plate
- Operating temperature: $-5^{\circ}\text{C} < T < +40^{\circ}\text{C}$
- Storage temperature: $-25^{\circ}\text{C} < T < +70^{\circ}\text{C}$
- Unbreakable plastic housing of black polycarbonate, self-extinguishing, flame resistant
- Nickel-plated secondary terminals with plus-minus nickel-plated screw M5x10 mm
- Integrated secondary locking caps

Order list ASRD 205.37

Secondary current		5A	1A
Primary current [A]	Burden [VA]	Accuracy class	Accuracy class
		1	1
		Art.-no.	Art.-no.
100	1	D205-010	D205-020
150	1.25	D205-011	D205-021
200	1.5	D205-012	D205-022
250	2.5	D205-013	D205-023

Order list ASRD 310.37

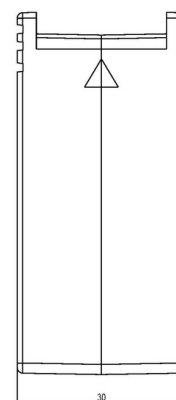
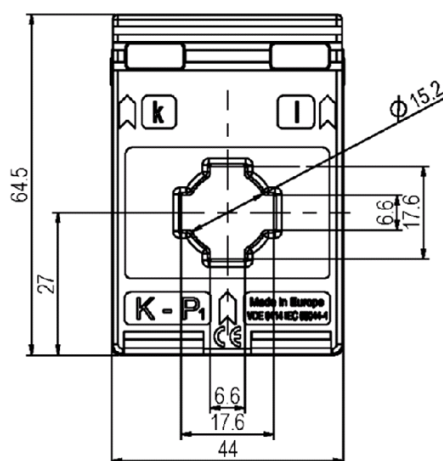
Secondary current		5A	1A
Primary current [A]	Burden [VA]	Accuracy class	Accuracy class
		1	1
		Art.-no.	Art.-no.
250	2.5	D310-010	D310-020
300	3.75	D310-011	D310-021
400	5	D310-012	D310-022
500	5	D310-013	D310-023
600	5	D310-014	D310-024

Application example:



(E)AS 176.3

Plug-in current transformer suitable for **SlimLine^{XR}** size XR1



Dimensions:

Primary conductor 1: 17x6 mm
 Round conductor: 15.2 mm
 Transformer width: 44 mm
 Transformer height: 64.5 mm
 Total depth: 30 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
 Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 sec.
 Maximum operating voltage U_m : 0.72 kV
 Isolation test voltage: 3 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 60044/1
 VDE 0414 Teil 1

Further information:

- Plug-in current transformer for direct installation in low voltage switch bar in size 1 by ABB and Siemens
- Current transformers for tariff applications have been approved by the Physikalisch Technische Bundesanstalt (PTB) Braunschweig (an authorized German testing laboratory)
- Available for primary nominal currents from 75 A up to 250 A
- Accuracy classes: 3, 1 and 0.5
- Constantly overloaded with 120% of the primary rated current
- Over current rated limiting factor: See rating plate
- Operating temperature: $-5^{\circ}\text{C} < T < +40^{\circ}\text{C}$
- Storage temperature: $-25^{\circ}\text{C} < T < +70^{\circ}\text{C}$
- Unbreakable plastic housing of black polycarbonate, self-extinguishing, flame resistant
- Nickel-plated secondary terminals with plus-minus nickel-plated screw M5x10 mm
- Integrated secondary locking caps
- Packaging unit: 1 pc.
- Customs tariff number: 85043129



Order list

AS 176.3 – Plug-in current transformer for industrial applications

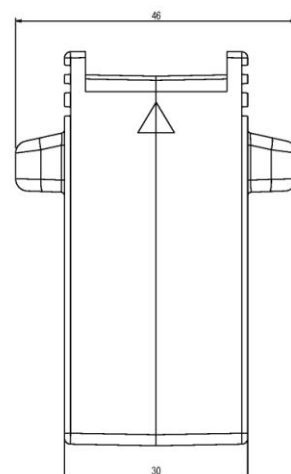
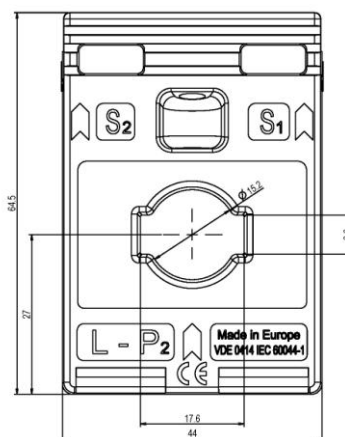
Secondary current		5A			1A		
Primary current	Burden VA	Accuracy class			Accuracy class		
		3	1	0.5	3	1	0.5
		Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.
75	1.5	1030007001			1030207001		
100	2		1030006001			1030206001	
125	2		1030006002			1030206002	
150	1.5			1030005001			1030205001
150	2.5		1030006003			1030206003	
160	2.5		1030006004			1030206004	
200	2.5		1030006005	1030005002		1030206005	1030205002
250	2.5		1030006007	1030005003			1030205003
250	3.75		1030006006			1030206006	

EAS 176.3 – Plug-in current transformer for tariff applications

150	1.5			1030505001			1030705001
200	2.5			1030505002			1030705002
250	2.5			1030505003			1030705003

(E)ASK 176.3

Plug-in current transformer



Dimensions:

Primary conductor 1: 17x6 mm
 Round conductor: 15.2 mm
 Transformer width: 44 mm
 Transformer height: 64.5 mm
 Total depth: 46 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
 Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 sec.
 Maximum operating voltage U_m : 0.72 kV
 Isolation test voltage: 3 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 60044/1
 VDE 0414 Teil 1

Further information:

- Available for primary nominal currents from 75 A up to 250 A
- Accuracy classes: 3, 1 and 0.5
- Constantly overloaded with 120% of the primary rated current
- Over current rated limiting factor: See rating plate
- Operating temperature: $-5^{\circ}\text{C} < T < +40^{\circ}\text{C}$
- Storage temperature: $-25^{\circ}\text{C} < T < +70^{\circ}\text{C}$
- Unbreakable plastic housing of black polycarbonate, self-extinguishing, flame resistant
- Nickel-plated secondary terminals with plus-minus nickel-plated screw M5x10 mm
- Integrated secondary locking caps
- Packaging unit: 1 pc.
- Customs tariff number: 85043129



Order list

ASK 176.3 – Plug-in current transformer for industrial applications

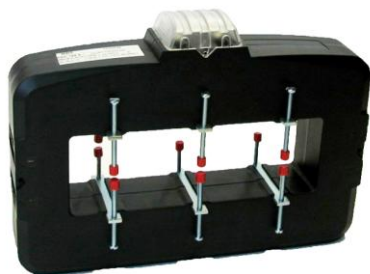
Secondary current		5A			1A		
Primary current	Burden VA	Accuracy class			Accuracy class		
		3	1	0.5	3	1	0.5
		Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.
75	1.5	1020007001			1020207001		
100	2		1020006001			1020206001	
125	2		1020006002			1020206002	
150	1.5			1020005001			1020205001
150	2.5		1020006003			1020206003	
160	2.5		1020006004			1020206004	
200	2.5		1020006005	1020005002		1020206005	1020205002
250	2.5			1020005003			1020205003
250	3.75		1020006006			1020206006	

EASK 176.3 - Plug-in current transformer for tariff applications

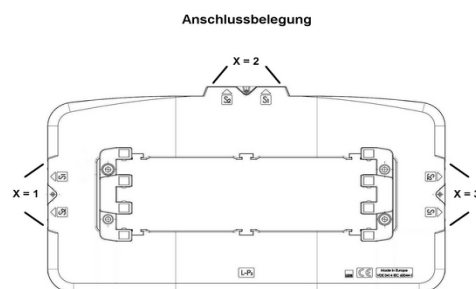
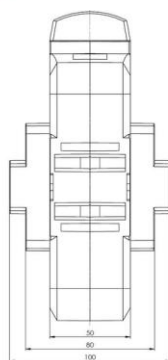
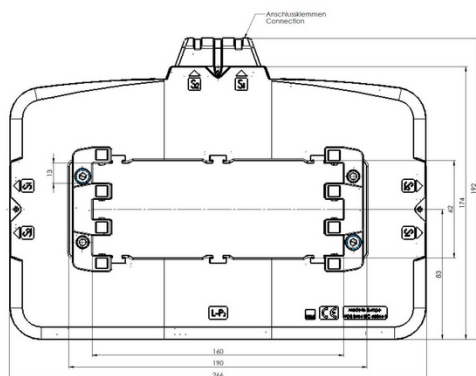
150	1.5			1020505001			1020705001
200	2.5			1020505002			1020705002
250	2.5			1020505003			1020705003

ASK 165.5

Plug-in current transformer with partly resin hardened measuring system



Additional accessories: clamping claw (for flexible mounting of different bus bar dimensions) – art. No. 59090



Dimensions:

Primary conductor 1: 3x 160x10 mm
 Primary conductor 2: 190x60 mm
 Transformer width: 266 mm
 Transformer height: 192 mm
 Total depth: 50 (100) mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
 Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 sec.
 Maximum operating voltage U_m : 0.72 kV (with clamping claw 1.2 kV)
 Isolation test voltage: 3 kV (with clamping claw 6 kV),
 U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 Hz
 Isolation class: F
 Applicable technical standards: DIN EN 60044/1
 VDE 0414 Teil 1

Further information:

- A newly developed variable mounting system (clamping claw) allows a flexible mounting of different bus bar dimensions (clamping claw is available as additional accessory)
- Direct, secure fixation of the current transformer on the bus-bar
- Time saving connection in view of 3 variables positions of the secondary terminal connections (please state when ordering).
- Primary current: 1000 A ... 4000 A
- Secondary current: 5 A or 1 A (optional 2 A)
- Accuracy classes: 1, 0.5 and 0.2 (protection classes upon request)
- Current transformers to accommodate up to 1.2 kV operation voltage (only in connection with the special mounting system - clamping claw)
- Over current rated limiting factor: See rating plate

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- Operating temperature: $-5^{\circ}\text{C} < T < +50^{\circ}\text{C}$
- Storage temperature: $-25^{\circ}\text{C} < T < +70^{\circ}\text{C}$
- Unbreakable plastic housing of black polycarbonate, self-extinguishing, UL94-V0, flame resistant
- Nickel-plated secondary terminals with plus-minus nickel-plated screw M5x10 mm
- Integrated secondary locking caps
- Packaging unit: 1 pc.
- Customs tariff number: 85043129

Order list

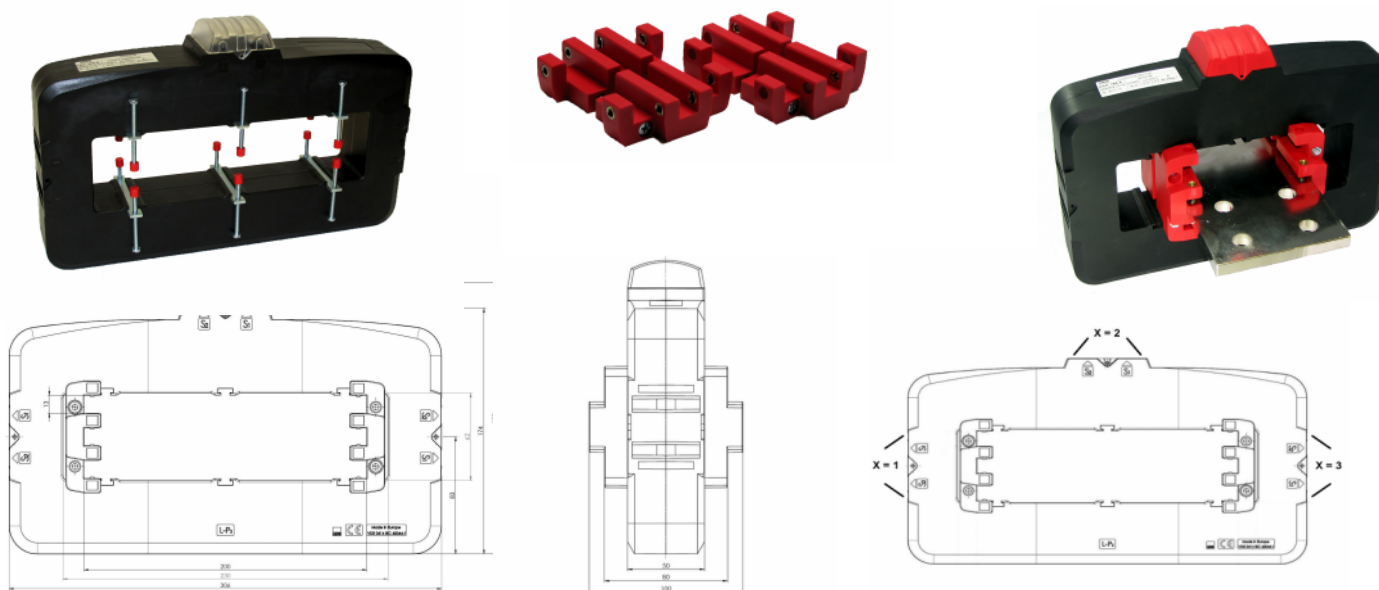
ASK 165.5 - Plug-in current transformer

Secondary current		5A			1A		
Primary current [A]	Burden [VA]	Accuracy class			Accuracy class		
		1	0,5	0,2	1	0,5	0,2
		Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.
1000	5	1650006021-x	1650005001-x	1650003001-x	1650206021-x	1650205001-x	1650203001-x
	10	1650006022-x	1650005002-x	---	1650206022-x	1650205002-x	---
	15	1650006001-x	---	---	1650206001-x	---	---
1200	5	1650006023-x	1650005003-x	1650003003-x	1650206023-x	1650205004-x	1650203003-x
	10	1650006024-x	1650005004-x	1650003004-x	1650206024-x	1650205005-x	1650203004-x
	15	1650006002-x	1650005022-x	---	1650206002-x	1650205024-x	---
1250	5	1650006025-x	1650005023-x	1650003005-x	1650206025-x	1650205025-x	1650203005-x
	10	1650006026-x	1650005030-x	1650003006-x	1650206026-x	1650205006-x	1650203006-x
	15	1650006003-x	1650005024-x	---	1650206003-x	1650205026-x	---
1500	10	1650006027-x	1650005005-x	1650003007-x	1650206027-x	1650205007-x	1650203007-x
	15	1650006028-x	1650005006-x	---	1650206028-x	1650205008-x	---
	30	1650006004-x	1650005025-x	---	1650206004-x	1650205027-x	---
1600	10	1650006029-x	1650005007-x	1650003008-x	1650206029-x	1650205009-x	1650203008-x
	15	1650006030-x	1650005008-x	---	1650206030-x	1650205010-x	---
	30	1650006005-x	1650005026-x	---	1650206005-x	1650205028-x	---
2000	10	1650006031-x	1650005009-x	1650003009-x	1650206031-x	1650205011-x	1650203009-x
	15	1650006032-x	1650005010-x	1650003020-x	1650206032-x	1650205012-x	1650203020-x
	30	1650006006-x	1650005011-x	---	1650206006-x	1650205013-x	---
	45	1650006007-x	---	---	1650206007-x	---	---
2500	15	1650006033-x	1650005027-x	1650003010-x	1650206033-x	1650205029-x	1650203010-x
	30	1650006034-x	1650005012-x	---	1650206034-x	1650205014-x	---
	60	1650006008-x	---	---	1650206008-x	---	---
3000	15	1650006035-x	1650005028-x	1650003012-x	1650206035-x	1650205030-x	1650203011-x
	30	1650006020-x	1650005013-x	1650003013-x	1650206036-x	1650205015-x	1650203012-x
	60	1650006009-x	---	---	1650206009-x	---	---
4000	30	1650006036-x	1650005015-x	1650003015-x	1650206037-x	1650205017-x	1650203014-x
	40	1650006037-x	---	---	1650206038-x	---	---
	60	1650006011-x	---	---	1650206011-x	---	---

ASK 205.5

Plug-in current transformer with partly resin hardened measuring system

Additional accessories: clamping claw
(for flexible mounting of different bus bar dimensions) – art. No. 59090



Dimensions:

Primary conductor 1: 3x 200x10 mm
Primary conductor 2: 230x60 mm
Transformer width: 306 mm
Transformer height: 192 mm
Total depth: 50 (100) mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$
Thermal nominal short-time current I_{th} : $60 \times I_N$, 1 sec.
Maximum operating voltage U_m : 0.72 kV (with clamping claw 1.2 kV)
Isolation test voltage: 3 kV (with clamping claw 6 kV),
 U_{eff} , 50 Hz, 1 Min.
Rated frequency: 50 Hz
Isolation class: F
Applicable technical standards: DIN EN 60044/1
VDE 0414 Teil 1

Further information:

- A newly developed variable mounting system (clamping claw) allows a flexible mounting of different bus bar dimensions (clamping claw is available as additional accessory)
- Direct, secure fixation of the current transformer on the bus-bar
- Time saving connection in view of 3 variables positions of the secondary terminal connections (please state when ordering).
- Primary current: 1200 A ... 4000 A
- Secondary current: 5 A or 1 A (optional 2 A)
- Accuracy classes: 1, 0.5 and 0.2 (protection classes upon request)
- Current transformers to accommodate up to 1.2 kV operation voltage (only in connection with the special mounting system - clamping claw)
- Over current rated limiting factor: See rating plate
- Operating temperature: $-5^{\circ}\text{C} < T < +50^{\circ}\text{C}$

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- Storage temperature: $-25^{\circ}\text{C} < T < +70^{\circ}\text{C}$
- Unbreakable plastic housing of black polycarbonate, self-extinguishing, UL94-V0, flame resistant
- Nickel-plated secondary terminals with plus-minus nickel-plated screw M5x10 mm
- Integrated secondary locking caps
- Packaging unit: 1 pc.
- Customs tariff number: 85043129

Order list - ASK 205.5 - Plug-in current transformer

Secondary current		5A			1A		
Primary current [A]	Burden [VA]	Accuracy class			Accuracy class		
		1	0,5	0,2	1	0,5	0,2
		Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.
1200	5	2050006023-x	2050005023-x	2050003001-x	2050206023-x	2050205023-x	2050203001-x
	10	2050006024-x	2050005001-x	2050003002-x	2050206024-x	2050205001-x	---
	15	2050006001-x	2050005024-x	---	2050206001-x	2050205024-x	---
1250	5	2050006025-x	2050005025-x	2050003003-x	2050206025-x	2050205025-x	2050203003-x
	10	2050006026-x	2050005002-x	2050003004-x	2050206026-x	2050205002-x	2050203004-x
	15	2050006002-x	2050005026-x	---	2050206002-x	2050205026-x	---
1500	5	2050006027-x	2050005027-x	2050003005-x	2050206027-x	2050205027-x	2050203005-x
	10	2050006028-x	2050005003-x	2050003006-x	2050206028-x	2050205003-x	2050203006-x
	15	2050006003-x	2050005004-x	2050003007-x	2050206003-x	2050205004-x	2050203007-x
	30	2050006004-x	---	---	2050206004-x	---	---
1600	5	2050006029-x	2050005028-x	2050003008-x	---	---	---
	10	2050006030-x	2050005029-x	2050003009-x	2050206029-x	2050205028-x	2050203009-x
	15	2050006005-x	2050005005-x	2050003010-x	2050206005-x	2050205005-x	2050203010-x
	30	2050006006-x	---	---	2050206006-x	---	---
2000	10	2050006031-x	2050005030-x	2050003011-x	2050206030-x	2050205029-x	2050203011-x
	15	2050006032-x	2050005006-x	2050003012-x	2050206031-x	2050205006-x	2050203012-x
	30	2050006007-x	2050005007-x	---	2050206007-x	2050205007-x	---
2500	10	2050006033-x	2050005031-x	2050003013-x	2050206032-x	2050205030-x	2050203013-x
	15	2050006034-x	2050005008-x	2050003014-x	2050206033-x	2050205008-x	2050203014-x
	30	2050006035-x	2050005009-x	---	2050206034-x	2050205009-x	---
3000	10	2050006036-x	2050005032-x	2050003015-x	2050206035-x	2050205031-x	2050203015-x
	15	2050006037-x	2050005010-x	2050003016-x	2050206036-x	2050205010-x	2050203016-x
	30	2050006038-x	2050005011-x	2050003017-x	2050206037-x	2050205011-x	2050203017-x
	45	2050006009-x	---	---	2050206009-x	---	---
4000	15	2050006039-x	2050005033-x	2050003019-x	2050206038-x	2050205032-x	2050203019-x
	30	2050006010-x	2050005012-x	2050003020-x	2050206010-x	2050205012-x	2050203020-x
	60	2050006011-x	---	---	2050206011-x	---	---
5000	15	2050006040-x	2050005034-x	2050003021-x	2050206039-x	2050205033-x	2050203021-x
	30	2050006013-x	2050005014-x	2050003022-x	2050206013-x	2050205014-x	2050203022-x
	60	2050006014-x	---	---	2050206014-x	---	---

ASG 106

Tube current transformer for panel boards with hardened Polyurethan resin
Current and protection transformer in one housing, up to three measuring systems

Features / Benefits



- Tube current transformer with 1...3 measuring systems integrated in one housing
- Rated voltage 1,2 / 6 / - kV
- Primary current range 50A ... 1250A
- Secondary currents: 5 A or 1 A, other values upon request
- Rated burden 2,5VA ... 30VA
- Accuracy classes: 0,2; 0,2s; 0,5; 0,5s; 1; 3
- Protection classes: 5P /10P/ PX
- Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$, other values upon request
- Combination from current and protection transformer in one housing
- Measuring system with hardened Polyurethan resin
- Reliable results under extreme mechanical and climatic conditions
- 4 different housing depths enable the implementation of variable customer requirements
- Reduction of the external wiring effort by fixed arranged, flexible connecting cables

Dimensions:

Primary opening diameter: 106 mm

Transformer width: 190 mm

Total depth: 50, 100, 170, 214 mm

General technical specifications:

Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$, other values upon request

Thermal nominal short-time current I_{th} : 25 kA, 3 sec., other values upon request

Maximum operating voltage U_m : 1.2 kV

Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 min.

Rated frequency: 50 Hz, other values upon request

Isolation class: F

Applicable technical standards: DIN EN 60044/1

VDE 0414 Teil 1

Further information:

- Housing depth [x] dependent on the number and type of the chosen measuring system
- Measuring systems with hardened Polyurethan resin
- Reliable results under extreme mechanical and climatic conditions due to the full resin hardening
- Resin material with high fire safety (UL94-V0)
- Siemens AG type tests
- Applications: SF6-isolated medium voltage switchgears, wind turbines, facilities for power generation on ships, power distribution systems etc
- Measuring cores with PTB-Test approval available

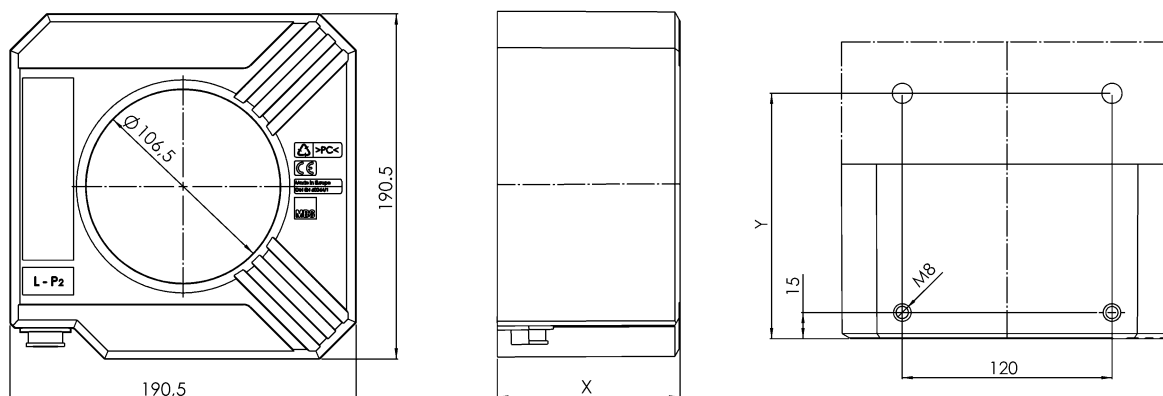
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- Secondary connections: Flexible copper wire, standard length 3.6 m, 4 mm², other lengths and profiles upon request
- Solidly installed flexible terminal connections, additional textile braided sleeving for the protection of the isolation of the connection cable
- Influence of cable length is taken into account in the interpretation of the measurement systems
- Constantly overloaded with 120 % of the primary rated current
- Over current rated limiting factor: See rating plate
- Operating temperature: $-5^{\circ}\text{C} < T < +40^{\circ}\text{C}$
- Storage temperature: $-25^{\circ}\text{C} < T < +70^{\circ}\text{C}$
- Housing material: ABS, self-extinguishing, UL94-V0,
- 1-phase low voltage current transformer
- Full resin hardening and a new fixation system allow the application with higher mechanical load (application close to generator)
- High climate resistance and electric safety is achieved by high-quality materials
- Reduction of external wiring by means of flexible selectable length of secondary connection cables
- Packaging unit: 1 pc.
- Customs tariff number: 85043129

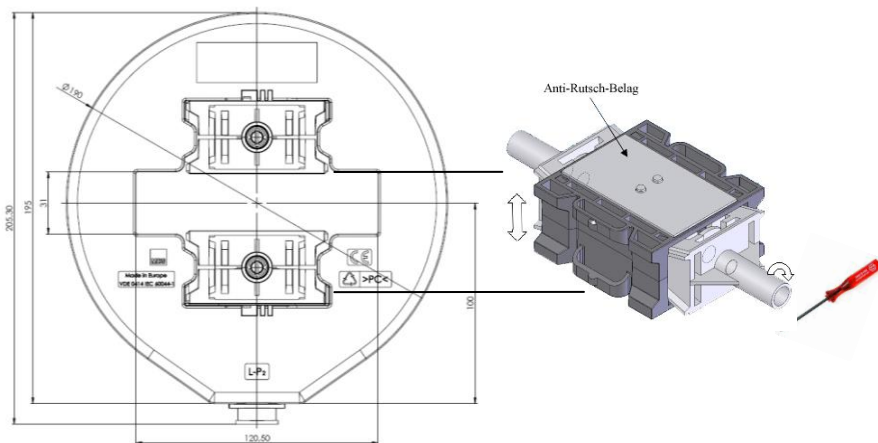
Measurements:



Housing depth [x]	50 mm	100 mm	170 mm	214 mm
Measurement y (optional!)	-	85 mm	155 mm	199 mm

ASG 123

Plug-in transformer for panel boards with hardened Polyurethan resin
Current and protection transformer in one housing, up to three measuring systems



Dimensions:

Primary conductor 1: 2x 120x10 mm
 Primary conductor 2: 120x30 mm
 Transformer depths: 50, 100, 125 mm

General technical specifications:

Thermal nominal continuous rated current I_{ctn} : $1.2 \times I_N$
 Thermal nominal short-time current I_{th} : 25 kA, 3 sec.,
 other values upon request

Maximum operation voltage U_m : 1.2 kV
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 min.
 Rated frequency: 50 Hz, other values upon request
 Isolation class: F
 Applicable technical standards: DIN EN 60044/1
 VDE 0414 Teil 1

Further information::

- Tube current transformer with 1...3 measuring systems integrated in one housing
- Depth dependent on the number and type of the chosen measuring system
- It is possible to integrate into one housing a combination of measuring transformers and protection transformers
- Measuring systems with hardened Polyurethan resin
- Reliable results under extreme mechanical and climatic conditions
- Resin material with high fire safety (UL94-V0)
- Simple fixation on the bus-bar by means of two clamp modules included in delivery
- Vibration stability of the current transformer was confirmed by an external independent laboratory
- Applications: SF6-isolated medium voltage switchgears, wind turbines, facilities for power generation on ships, power distribution systems etc

- Primary current range 500 A ... 4000 A
- Secondary currents: 5 A or 1 A, other values upon request
- Accuracy classes: 1; 0.5; 0.5s; 0.2 und 0.2s
- Protection classes: 5P10, 10P10, 5P20, 10P20, PX
- Secondary connections: Flexible copper wire, standard length 1.5 m, 4 mm², other lengths and profiles upon request
- Solidly installed flexible terminal connections, additional textile braided sleeving for the protection of the isolation of the connection cable
- Influence of cable length is taken into account in the interpretation of the measurement systems
- Constantly overloaded with 120% of the primary rated current
- Over current rated limiting factor: See rating plate
- Operating temperature: -5°C < T < +40°C
- Storage temperature: -25°C < T < +70°C
- Housing material: ABS, self-extinguishing, UL94-V0,
- 1-phase low voltage current transformer
- Full resin hardening and a new fixation system allow the application with higher mechanical load (application close to generator)
- High climate resistance and electric safety is achieved by high-quality materials
- Reduction of external wiring by means of flexible selectable length of secondary connection cables
- Packaging unit: 1 pc.
- Customs tariff number: 85043129

Application example::



SWMU

Measuring transducer for alternating current



**with or without auxiliary voltage supply
with integrated current transformer housing unit
for 35 mm DIN rail**

Features/benefits

- measuring input: Sinus-shaped AC current (1 A ... 750 A),
- arithmetical mean value measurement, effective value calibrated
- measuring output: Unipolar output signal
- measuring principle: Rectifier process
- with integrated current transformer
- minimal wiring

Application

Measuring transducers for the transformation of sinus-shaped AC current. For an output signal a load-independent DC current / and an imprinted DC voltage signal is available, which stands proportionally to the measurement value of the input volume.

These signals can be used for display, recording, monitoring and/or control function.

The measuring transducer fulfills the requirements and regulations with regard to the electromagnetic compatibility (EMV) and security (IEC 1010 and EN 61010). This measuring transducer has been designed, produced, and tested in accordance with ISO 9001.

Technical data SWMU 31.51/52 SWMU 32.51/52

measuring input		auxiliary power	
nominal frequency	f_N 50/60 Hz	AC power supply	230 V \pm 10% (50...60 Hz)
rated input current I_N		DC	24 V \pm 15%
SWMU 31.52	1...10 A	power input	\leq 1.5 W (2.5 VA)
SWMU 31.51	15...750 A	accuracy	
consumption	\leq 1 VA (2.5 VA without auxiliary voltage)	reference value	output end value
overload capacity	1.5 \cdot I_N , constant 8 \cdot I_N , 40 sec.	accuracy class	class 0.5
measuring output		warming-up time	\leq 5 min.
load-independent DC current	0...20 mA or 4...20 mA*	protection	
max. burden resistance	\leq 500 Ω	electrocution	IP 40, housing
max. burden voltage	\leq 15V	protection	(test wire, EN 60529) IP 20, connection terminals (test digit, EN 60529)
current limit		contamination class	2
under overload	\leq 34 mA	test voltages	4 kV, active circuits against housing (DIN 57411) 4 kV, auxiliary voltage against measuring output (230 V AC-version) 500 V, auxiliary voltage against measuring output (24 V DC-version)
imprinted DC voltage	0...10 V or 2...10 V*		
burden resistance	\geq 10 k Ω		
max. burden voltage			
under overload	\leq 18 V		
voltage limit	\leq 18 V		
residual ripple			
of the output current	\leq 1% p.p.		
response time	\leq 500 ms		
operating temperature range	-5° C \leq δ \leq +40° C		

*Live-Zero only with auxiliary voltage

Please note: Mounting base for direct fitting without use of 35mm DIN rail included in the deliveries

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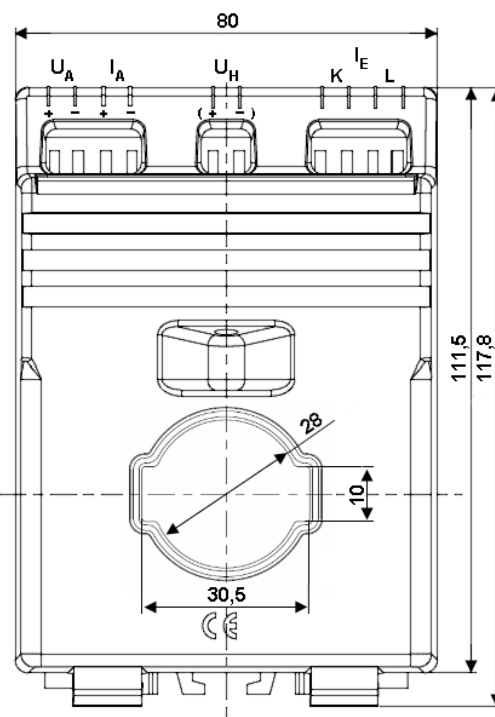
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1. Auxiliary voltage 230 V AC

Type SWMU	Primary current [A]	Measuring output			
		0...20mA and 0...10V	4...20mA and 0...10V	0...20mA and 2...10V	4...20mA and 2...10V
31.52	1	31-1006	31-2006	31-3006	31-4006
	5	31-1007	31-2007	31-3007	31-4007
	10	31-1008	31-2008	31-3008	31-4008
31.51	15	31-1009	31-2009	31-3009	31-4009
	20	31-1010	31-2010	31-3010	31-4010
	25	31-1011	31-2011	31-3011	31-4011
	30	31-1012	31-2012	31-3012	31-4012
	40	31-1013	31-2013	31-3013	31-4013
	50	31-1014	31-2014	31-3014	31-4014
	60	31-1015	31-2015	31-3015	31-4015
	75	31-1016	31-2016	31-3016	31-4016
	100	31-1017	31-2017	31-3017	31-4017
	150	31-1018	31-2018	31-3018	31-4018
	200	31-1019	31-2019	31-3019	31-4019
	250	31-1020	31-2020	31-3020	31-4020
	300	31-1021	31-2021	31-3021	31-4021
	400	31-1022	31-2022	31-3022	31-4022
	500	31-1023	31-2023	31-3023	31-4023
	600	31-1024	31-2024	31-3024	31-4024
	750	31-1025	31-2025	31-3025	31-4025

measuring frequency 50/60 Hz
weight: 350 g



2. Auxiliary voltage 24 V DC

Type SWMU	Primary current [A]	Measuring output			
		0...20mA and 0...10V	4...20mA and 0...10V	0...20mA and 2...10V	4...20mA and 2...10V
31.52	1	31-5006	31-6006	31-7006	31-8006
	5	31-5007	31-6007	31-7007	31-8007
	10	31-5008	31-6008	31-7008	31-8008
31.51	15	31-5009	31-6009	31-7009	31-8009
	20	31-5010	31-6010	31-7010	31-8010
	25	31-5011	31-6011	31-7011	31-8011
	30	31-5012	31-6012	31-7012	31-8012
	40	31-5013	31-6013	31-7013	31-8013
	50	31-5014	31-6014	31-7014	31-8014
	60	31-5015	31-6015	31-7015	31-8015
	75	31-5016	31-6016	31-7016	31-8016
	100	31-5017	31-6017	31-7017	31-8017
	150	31-5018	31-6018	31-7018	31-8018
	200	31-5019	31-6019	31-7019	31-8019
	250	31-5020	31-6020	31-7020	31-8020
	300	31-5021	31-6021	31-7021	31-8021
	400	31-5022	31-6022	31-7022	31-8022
	500	31-5023	31-6023	31-7023	31-8023
	600	31-5024	31-6024	31-7024	31-8024
	750	31-5025	31-6025	31-7025	31-8025

measuring frequency 50/60 Hz
weight: 250 g

3. Without auxiliary voltage supply

Type SWMU	Primary current [A]	Measuring output
		0...20mA and 0...10V
32.52	1	31-9006
	5	31-9007
	10	31-9008
32.51	40	31-9013
	50	31-9014
	60	31-9015
	75	31-9016
	100	31-9017
	150	31-9018
	200	31-9019
	250	31-9020
	300	31-9021
	400	31-9022
	500	31-9023
	600	31-9024
	750	31-9025

power requirements $P_E \geq 2,5 \text{ VA}$!
measuring frequency 50/60 Hz
weight 600g
operating range 15 ... 120 % I_N

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