

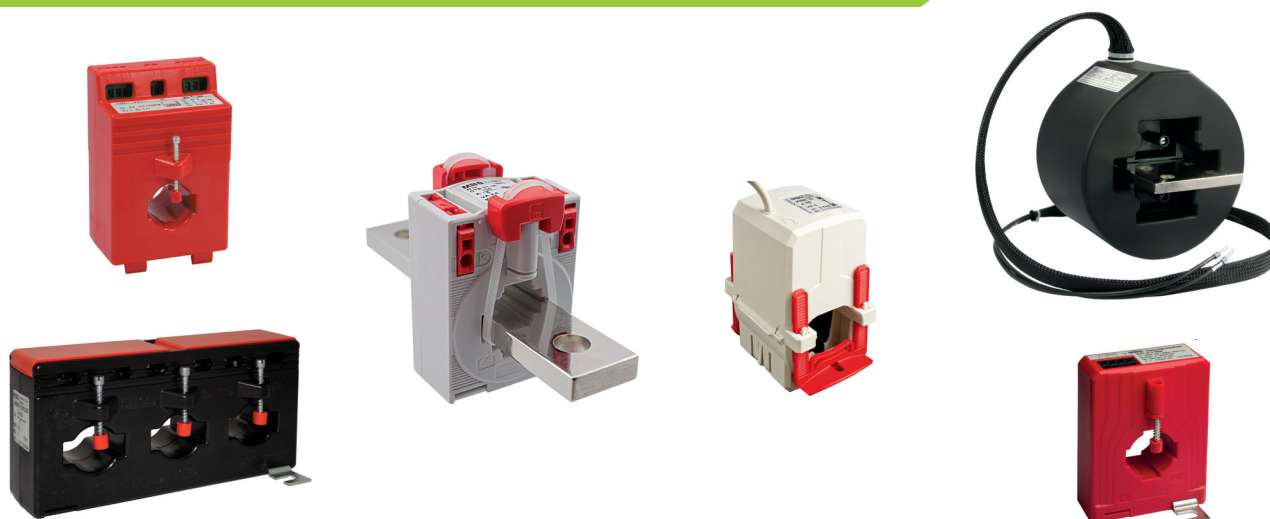


Innovations

We make energy measurable and take care of your future



www.mbs-ag.com



CERTIFICATE • CERTIFICADO • CERTIFICAT • 証明書

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 current
certification of electrical measuring instruments
the Official Testing Laboratory for

An audit was performed, Re
Proof has been furnished the
according to

ISO 9001:2008

are fulfilled. The certificate is v
Certificate Registration No.

M. Weg

Munich, 2010-04-26

TÜV SÜD Management Service GmbH • Zertifizierungsstelle • Bielefeld

Certificate of Compliance

Certificate Number: 201 00426-E395996
Report Reference: E395996, 2010 April 23
Issue Date: 2010 April 26

Issued to: **MBSAG**
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.

**Underwriters
Laboratories**

Page 1 of 1

СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р ГОСТАНДАРТ РОССИИ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ РОСС.ДЕ.МЕ6
Срок действия с 30.03.2010 по 30.03.2013

Орган по сертификации средств измерений "ОС "Сомет"
119361, Москва, ул. Озерная, 46 тел.: (095) 437-2900

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

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ НОРМАТИВ
ГОСТ 7746-2001 П. 6.3.4, разд. 7

ИЗГОТОВИТЕЛЬ
MBS Sulzbach Messwandler GmbH, Германия
Eisbachstr. 51, D-74429 Sulzbach-Laufen, Germany
Tel.: +49(0) 79 76 198 51-0, fax: +49(0) 79 76 198 51-99
НА ОСНОВАНИИ

Протокол № 467 от 07.09.05 ИЛС ФГУП "ВНИИМС" Про

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
Reference No.:

Ort, Ausstellungsdatum: Brauns
Date of issue:

Zertifizierer: Dr. Martin Kahmann
Confirms: Im Auftrag By order

Dr. Martin Kahmann

Merkmale zur Bauart sowie ggf. inhaltliche Besonderheiten des Bauartzeugnisses sind im Merkmalenfeld des Bauartzeugnisses angegeben. Diese sind in der Anlage, welche das Bauartzeugnis ausmacht, aufgeführt. Die Anlage ist Teil des Bauartzeugnisses.

certification and catalog number, model number or other product
name UL Directory. As a supplementary means of
Recognized Component Mark **TM** may be used in
non specified in the UL Directory preceding the recognitions
mark consists of the UL Recognized Mark for Canada **TM**
as specified under "Marking" for the particular

component Mark on the product

Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.
Incorporated in the U.S.A.

Type Approval Certificate

This is to certify that the undernoted 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, 83.x, 81.4, 101.4,
103.3, 105.6, 123.3, 205.3, 231.5, 318.3, 412.4, 421.4, 541.4, 561.4

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_{th}: 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

Details according to MBS catalog

Test Standard: Guidelines for the Performance of Type Approvals, Chapter 2, Edition 2003
IEC 185:1987 + A1:1990, DIN VDE 0414 Part 1:1994-01

Documents: Test report IPH Berlin, Typprüfbericht Nr. 469.279.8.402 and Nr. 469.593.5.323
IPHS-Prüfbericht Nr. 3-03986 and Nr. 2-46998
Catalog MBS 1998

Remarks: None

Valid until: 2013-10-16

Page: 1 of 1
File No.: I.J.05
Hamburg, 2008-10-17

Germanischer Lloyd

Heinz Tobasen
Thomas Reimer

Type Approval Symbol (GL)

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

TYPE TEST REPORT

NO. 1469.2090227.0100

MBS AG
Sulzbach Messwandler
Eisbachstraße 51
74429 Sulzbach-Laufen
GERMANY

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

WSK 40

09/52641 and 09/52642

TEST OBJECT	RATED CHARACTERISTICS GIVEN BY THE CLIENT
Rated primary current	30 A
Rated secondary current	1 and 5 A
Rated output	10 VA
Accuracy class	1155
Highest voltage for equipment (U _L)	0.72 kV
Rated power-frequency withstand voltage	3 kV
Rated lightning impulse withstand voltage	5 kV
Rated short-time thermal current (I _{th}) 1 s	900 A
Rated dynamic current (I _{dyn})	2.25 kA
Rated frequency	50 Hz
Class of insulating material	E

IEC 60044-1: 2003-02

Normative document

Short-time current tests
Temperature-rise test
Determination of errors
Routine tests (dielectric tests)

5 to 13 March 2009

The ratings of the test object related to the scope of test have been proved.
The type tests have been PASSED.

Ronald Borchert
RONALD BORCHERT
Senior Engineer
Berlin, 05 May 2009

Dagmar Hauschild
DAGMAR HAUSCHILD
Test engineer in charge

IPH LANDSBERGER ALLEE 37B D-12681 BERLIN TEL 030/54 96 02 00 FAX 030/54 96 02 22

IPH - P. 019/92

Contents

CCT All current sensor**From page 4**

CCT	Measuring transducer for direct and alternating currents	Page 4
-----	--	--------

Low voltage current transformers**From page 16**

KBR	New, compact split-core current transformer	Page 16
-----	---	---------



CTB	Plug-in current transformer with screwless terminals „Cage Clamp®“, UL-zertifiziert	Page 22
-----	--	---------



ASRD	Three single-phase current transformer set	Page 34
------	--	---------



AS, ASK	Plug-in current transformer	Page 36
---------	-----------------------------	---------



ASG	Measuring and protection current transformer in one housing, PU-hardened	Page 44
-----	---	---------

Measuring transducer**From page 48**

SWMU	Measuring transducer for alternating current with integrated CT	Page 48
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Our strategy

Realizing today, on what others think only tomorrow.

**MBS AG**

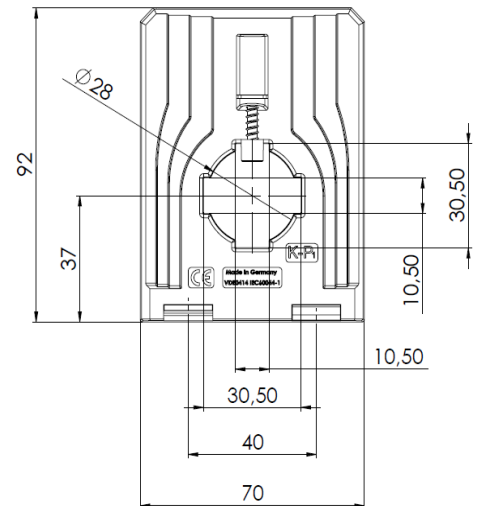
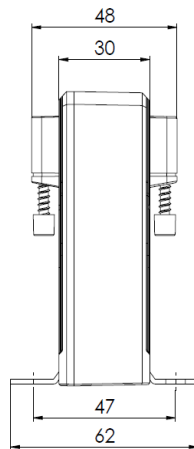
Eisbachstraße 51 · 74429 Sulzbach-Laufen
Germany

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

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

Current transformers for the measurement of direct and alternating currents

- For measuring of non-sinusoidal and distorted networks
- As a measuring transducer for the direct input wiring of SPS input cards



Additional accessories:

Snap-on mounting to clip onto
35 mm DIN rail (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 _{RMS} AC, depends on varieties! (Nominal current ranges adjusted to standard values according to IEC)
Frequency range:	DC, or AC 20 Hz ... 6 kHz, Crest-factor ≤ 4
Current output:	4...20 mA DC, RMS measurement
Max. burden resistance at current output:	R _B ≤ 500 Ω (U _H = 24 V DC)
Current limit under overload:	< 25 mA
Accuracy:	± 1,0 %
Max. operating voltage U _m :	0,72 kV, U _{eff}
Isolation test voltage:	6,4 kV, U _{eff} , 50 Hz, 5 sec., primary conductor against measuring output / housing
Auxiliary voltage:	24 V ± 15 % DC, < 70 mA, external protection via microfuse 250 mA / 250 V, fast!
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	E
Protection class	IP 20
Max. temperature of the primary conductor:	100° C
Operating temperature:	-25° C < T _U < +60° C, 0...95% rH, without condensation
Storage temperature:	-40° C < T _I < +90° C

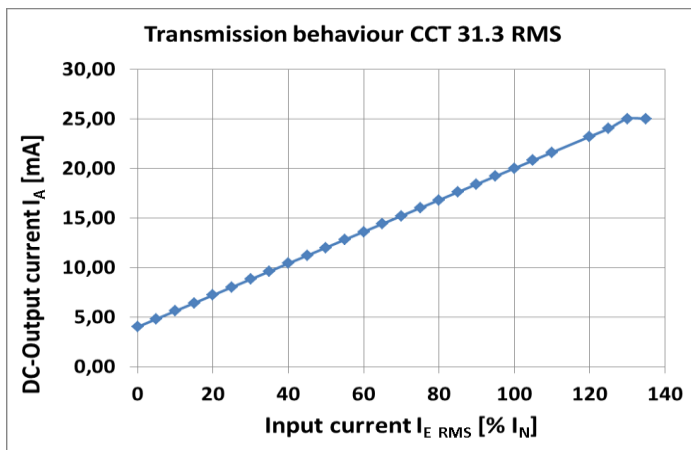
Functions of the CCT 31.3 RMS:

- Electricity is conducted over the magnetic field and is captured by the measuring core. The current induced in the measuring core is proportional to the magnetic flow and is captured by a semi-conductor element. An integrated electronic control unit converts the semi-control signal into a true effective value of the measuring size in proportion to the DC output current signal. The true effective value is calculated by the delta-sigma-method.
- A contactless inductive captured parameter creates a galvanically separated output signal.
- Electrical contact with the secondary circuit of the current transformer is achieved by means of a 4-pole spring-clamp. This clamp is suitable for connection to a flexible conductor up to 2.5 mm².
- A DC auxiliary voltage of 24 V is required to supply the electronic controls. The auxiliary voltage input must be secured by a HRC fuse size of 250 mA / 250 V/F.

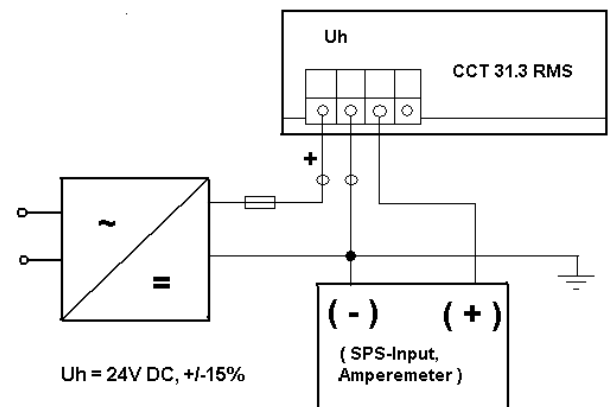
Advantages and benefits of the CCT 31.3 RMS:

- Measuring of direct current as well as alternating current with only one current transformer is possible.
- Exact calculation of the true effective value of any temporal process of the current which is to be measured.
- Large working frequency range from 0 Hz (DC) or 20 Hz...6 kHz (AC).
- High electric protection of the galvanically isolated capture of the measured variable.
- Low power-consumption (≤ 2.5 VA)
- Easy and safety electrical connection by means of spring clamp terminal.
- Direct mounting onto the bus bar by means of integrated fixing screws which are part of the unit.
- Mounting onto 35 mm DIN-rail by means of optional supply of snap-on mounting.
- High climatic and mechanical durability, PU-resin hardened enclosures of all electrical components.

Transfer ratio of the CCT 31.3 RMS:



Wiring Diagram of the CCT 31.3 RMS:



Order list:

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

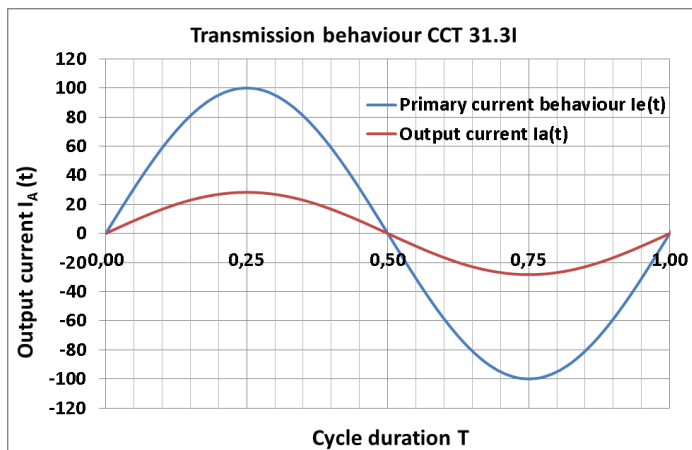
Functions of the CCT 31.3 I:

- Electricity is conducted over the magnetic field and is captured by the measuring core. The current induced in the measuring core is proportional to the magnetic flow and is captured by a semi-conductor element. An integrated electronic control unit converts the semi-control signal to a value of the measuring size in proportion to the DC output current signal.
- A contactless inductive captured parameter creates a galvanically separated output signal.
- Electrical contact with the secondary circuit of the current transformer is achieved by means of a 4-pole-spring-clamp. This clamp is suitable for connection to a flexible conductor up to 2.5 mm².
- A DC auxiliary voltage of ± 12 V is required to supply the electronic controls. The auxiliary voltage input must be secured by a HRC fuse size of 100 mA / 250 V microfuse.

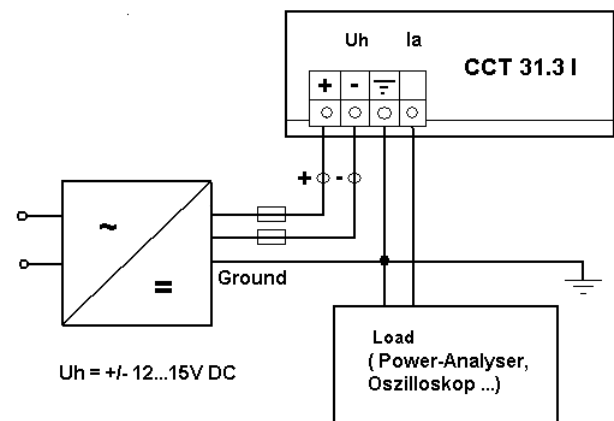
Advantages and benefits of the CCT 31.3 I:

- Measuring of direct current as well as alternating current with only one current transformer is possible.
- Large working frequency range from 0 Hz (DC)... 100 kHz (AC).
- High electric protection of the galvanically isolated capture of the measured variable.
- Low power-consumption (≤ 2.5 VA)
- Easy and safety electrical connection by means of spring clamp terminal.
- Direct mounting onto the bus bar by means of integrated fixing screws which are part of the unit.
- Mounting onto 35 mm DIN-rail by means of optional supply of snap-on mounting.
- High climatic and mechanical durability, PU-resin hardened enclosures of all electrical components.

Transfer ratio of the CCT 31.3 I:



Wiring Diagram of the CCT 31.3 I:

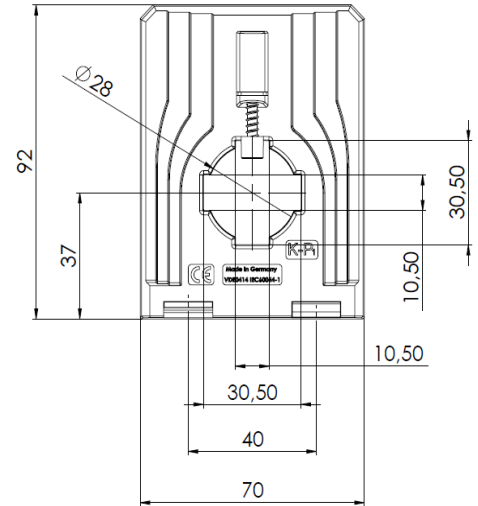
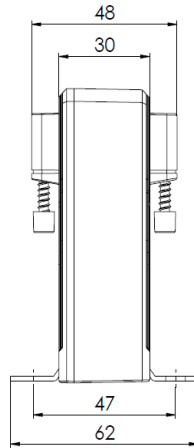


Order list:

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

CCT 31.3 U (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 to clip onto
35 mm DIN rail (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 / AC I_{eff} , depends on varieties! (Nominal current ranges adjusted to standard values according to IEC)
Frequency range:	0...100 kHz, any signal curves
Voltage output, AC Input:	2,5 ± 1 V, U_{eff} , AC; 2,5 ± 1,414 V (Peak-Peak)
Voltage output, DC Input:	2.5 ± 1 V, DC
Min. burden resistance at current output:	$R_B \geq 100 \text{ k}\Omega$
Current limit under overload:	< 5 V
Accuracy:	± 0,5 %
Max. operating voltage U_m :	0,72 kV, U_{eff}
Isolation test voltage:	6,4 kV, U_{eff} , 50 Hz, 5 sec., primary conductor against measuring output / housing
Auxiliary voltage:	± 12 V DC, ± 15% < 70 mA, external protection via microfuse 100 mA / 250 V, fast!
Energia response time (90 % I_{PN} , $di/dt = 100 \text{ A} / \mu\text{s}$):	≤ 1 μs (typ. 150 ns)
Signal rise velocity 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, 0...95% rH, without condensation
Storage temperature:	-40° C < T_L < +90° C

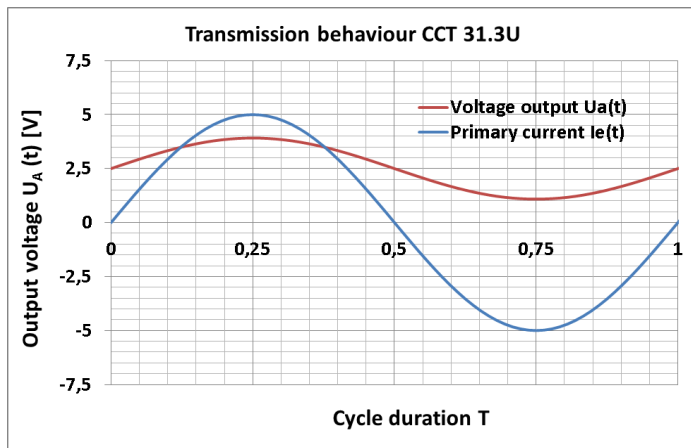
Functions of the CCT 31.3 U:

- Electricity is conducted over the magnetic field and is captured by the measuring core. The current induced in the measuring core is proportional to the magnetic flow and is captured by a semi-conductor element. An integrated electronic control unit converts the semi-control signal to a value of the measuring size in proportion to the DC output current signal.
- A contactless inductive captured parameter creates a galvanically separated output signal.
- Electrical contact with the secondary circuit of the current transformer is achieved by means of a 4-pole-spring-clamp. This clamp is suitable for connection to a flexible conductor up to 2.5 mm².
- A DC auxiliary voltage of ± 12 V is required to supply the electronic controls. The auxiliary voltage input must be secured by a HRC fuse size of 100 mA / 250 V microfuse.

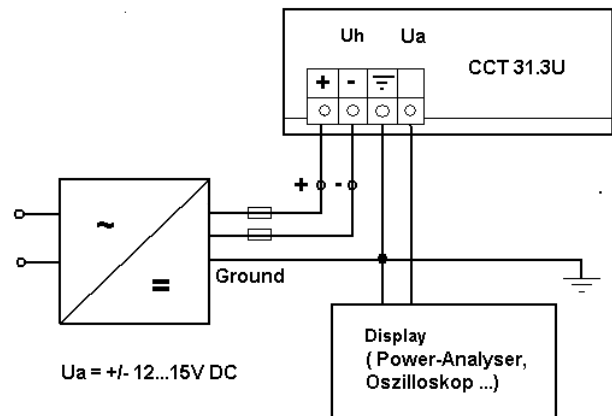
Advantages and benefits of the CCT 31.3 U:

- Measuring of direct current as well as alternating current with only one current transformer is possible.
- Large working frequency range from 0 Hz (DC)...100 kHz (AC).
- High electric protection of the galvanically isolated capture of the measured variable.
- Low power-consumption (≤ 2.5 VA)
- Easy and safety electrical connection by means of spring clamp terminal.
- Direct mounting onto the bus bar by means of integrated fixing screws which are part of the unit.
- Mounting onto 35 mm DIN-rail by means of optional supply of snap-on mounting.
- High climatic and mechanical durability, PU-resin hardened enclosures of all electrical components.

Transfer ratio of the CCT 31.3 U:



Wiring Diagram of the CCT 31.3 U:



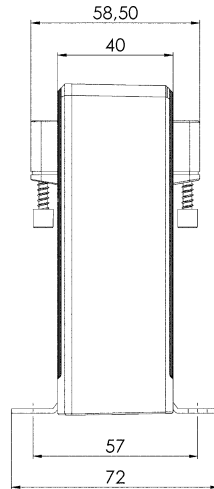
Order list:

Type	Primary current I_{eff} [A] DC / AC (I_{eff})	Art.-no.	Voltage output
CCT 31.3 U	50	1102-10001	DC: 2.5 ± 1 V AC: $2.5 \pm 1,414$ V (Peak-Peak)
	100	1102-10003	
	150	1102-10005	
	200	1102-10006	
	250	1102-10007	
	300	1102-10008	

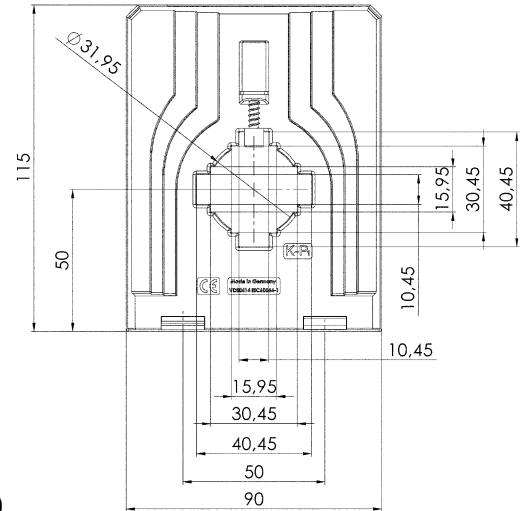
CCT 41.4 RMS (Compensation current transformer, MBS All current sensors)

Current transformers for the measurement of direct and alternating currents

- For measuring of non-sinusoidal and distorted networks
- As a measuring transducer for the direct input wiring of SPS input cards



Additional accessories:
Snap-on mounting to clip onto
35 mm DIN rail (Art.-no. 55012)



Dimensions:

Bus bar 1: 40x10 mm
Bus bar 2: 30x15 mm
Round conductor: 31,5 mm
Transformer width: 90 mm
Transformer height: 115 mm
Transformer depth: 58,5 mm

Applicable technical standards:

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

Electric connections:

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

Technical data:

Measuring range:	0...500 A DC / 0...500 A I_{RMS} AC, depends on varieties! (Nominal current ranges adjusted to standard values according to IEC)
Frequency range:	DC, or AC 20 Hz ... 6 kHz, Crest-factor ≤ 4
Current output:	4...20 mA DC, RMS measurement
Max. burden resistance at current output:	$R_B \leq 500 \Omega$ ($U_H = 24$ V DC)
Current limit under overload:	< 25 mA
Accuracy:	$\pm 1,0 \%$
Max. operating voltage U_m :	0,72 kV, U_{eff}
Isolation test voltage:	6,4 kV, U_{eff} , 50 Hz, 5 sec., primary conductor against measuring output / housing
Auxiliary voltage:	24 V $\pm 15 \%$ DC, < 70 mA, external protection via microfuse 250 mA / 250 V, fast!
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	E
Protection class	IP 20
Operating altitude	≤ 2000 m (DIN EN 61010-1)
Max. temperature of the primary conductor:	100° C
Operating temperature:	-25° C $< T_U < +60$ ° C, 0...95% rH, without condensation
Storage temperature:	-40° C $< T_L < +90$ ° C

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

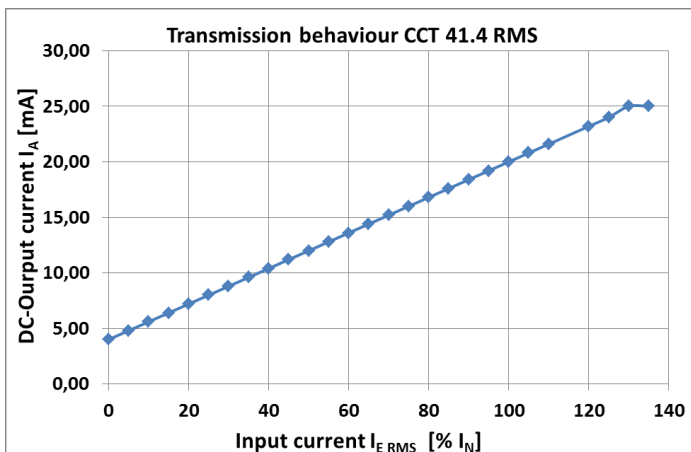
Functions of the CCT 41.4 RMS:

- Electricity is conducted over the magnetic field and is captured by the measuring core. The current induced in the measuring core is proportional to the magnetic flow and is captured by a semi-conductor element. An integrated electronic control unit converts the semi-control signal into a true effective value of the measuring size in proportion to the DC output current signal. The true effective value is calculated by the delta-sigma-method.
- A contactless inductive captured parameter creates a galvanically separated output signal.
- Electrical contact with the secondary circuit of the current transformer is achieved by means of a 4-pole spring-clamp. This clamp is suitable for connection to a flexible conductor up to 2.5 mm².
- A DC auxiliary voltage of 24 V is required to supply the electronic controls. The auxiliary voltage input must be secured by a HRC fuse size of 250 mA / 250 V/F.

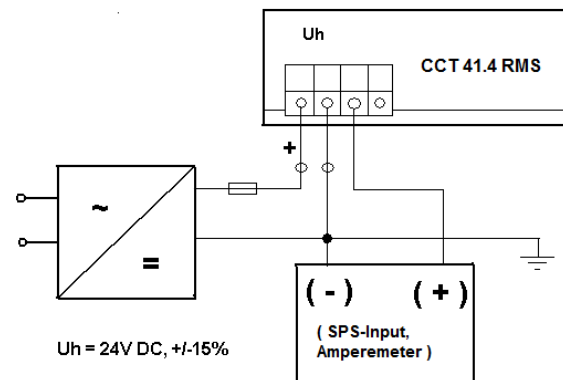
Advantages and benefits of the CCT 41.4 RMS:

- Measuring of direct current as well as alternating current with only one current transformer is possible.
- Exact calculation of the true effective value of any temporal process of the current which is to be measured.
- Large working frequency range from 0 Hz (DC) or 20 Hz...6 kHz (AC).
- High electric protection of the galvanically isolated capture of the measured variable.
- Low power-consumption (≤ 2.5 VA)
- Easy and safety electrical connection by means of spring clamp terminal.
- Direct mounting onto the bus bar by means of integrated fixing screws which are part of the unit.
- Mounting onto 35 mm DIN-rail by means of optional supply of snap-on mounting.
- High climatic and mechanical durability, PU-resin hardened enclosures of all electrical components.

Transfer ratio of the CCT 41.4 RMS:



Wiring Diagram of the CCT 41.4 RMS:



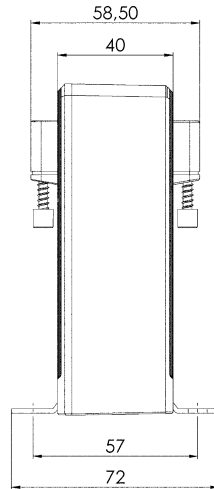
Order list:

Type	Primary current $I_{\text{RMS}} [\text{A}]$	Art.-no.	Current output
CCT 41.4 RMS	150	1203-10005	4...20 mA DC
	200	1203-10006	
	250	1203-10007	
	300	1203-10008	
	400	1203-10009	
	500	1203-10010	

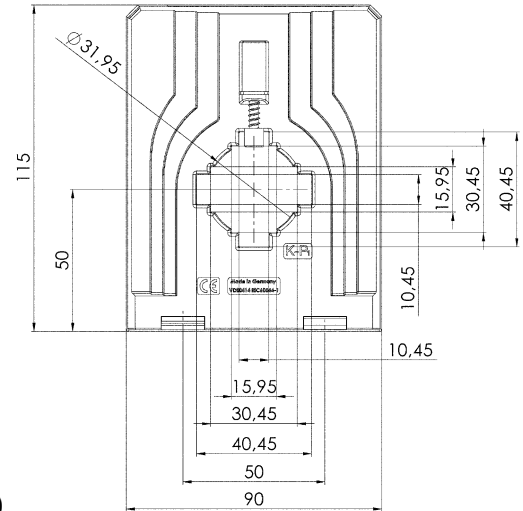
CCT 41.4 I (Compensation current transformer, MBS All current sensors)

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 to clip onto
35 mm DIN rail (Art.-no. 52012)



Dimensions:

Bus bar 1: 40x10 mm
Bus bar 2: 30x15 mm
Round conductor: 31,5 mm
Transformer width: 90 mm
Transformer height: 115 mm
Transformer depth: 58,5 mm

Applicable technical standards:

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

Electric connections:

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

Technical data:

Measuring range:	0...500 A DC / AC I_{eff} , depends on varieties! (Nominal current ranges adjusted to standard values according to IEC)
Frequency range:	0...100 kHz, any signal curves
Current output at AC-input signal:	AC: 0...20 mA I_{eff} , (± 28.2843 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)
Current limit under overload:	< 25 mA
Accuracy:	$\pm 0,5 \%$
Max. operating voltage U_m :	0,72 kV, U_{eff}
Isolation test voltage:	6,4 kV, U_{eff} , 50 Hz, 5 sec., primary conductor against measuring output / housing
Auxiliary voltage:	± 12 V DC, $\pm 15\% < 70$ mA, external protection via microfuse 100 mA / 250 V, fast!
Energia response time (90 % I_{PN} , $di/dt = 100$ A / μs):	$\leq 1 \mu s$ (typ. 150 ns)
Signal rise velocity di/dt :	< 100 A / μs
Isolation class	E
Protection class	IP 20
Operating altitude	≤ 2000 m (DIN EN 61010-1)
Max. temperature of the primary conductor:	100° C
Operating temperature:	-25° C < T_U < +60° C, 0...95% rH, without condensation
Storage temperature:	-40° C < T_L < +90° C

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

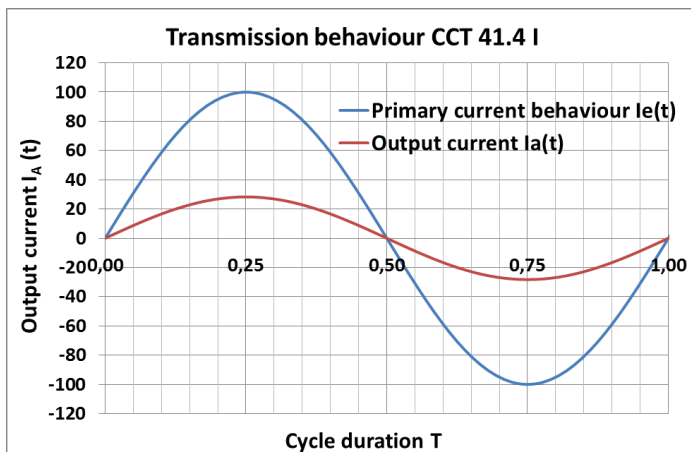
Functions of the CCT 41.4 I:

- Electricity is conducted over the magnetic field and is captured by the measuring core. The current induced in the measuring core is proportional to the magnetic flow and is captured by a semi-conductor element. An integrated electronic control unit converts the semi-control signal to a value of the measuring size in proportion to the DC output current signal.
- A contactless inductive captured parameter creates a galvanically separated output signal.
- Electrical contact with the secondary circuit of the current transformer is achieved by means of a 4-pole-spring-clamp. This clamp is suitable for connection to a flexible conductor up to 2.5 mm².
- A DC auxiliary voltage of ± 12 V is required to supply the electronic controls. The auxiliary voltage input must be secured by a HRC fuse size of 100 mA / 250 V microfuse.

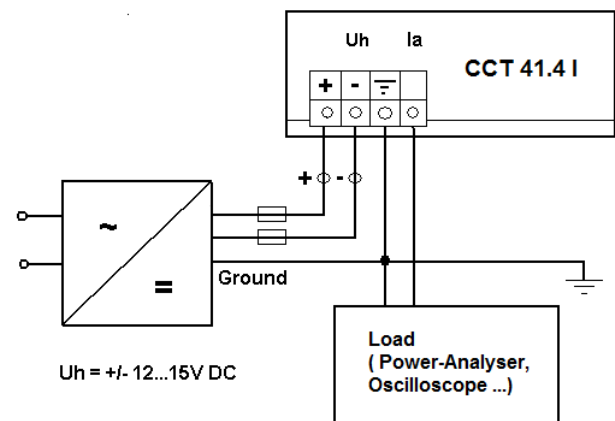
Advantages and benefits of the CCT 41.4 I:

- Measuring of direct current as well as alternating current with only one current transformer is possible.
- Large working frequency range from 0 Hz (DC)... 100 kHz (AC).
- High electric protection of the galvanically isolated capture of the measured variable.
- Low power-consumption (≤ 2.5 VA)
- Easy and safety electrical connection by means of spring clamp terminal.
- Direct mounting onto the bus bar by means of integrated fixing screws which are part of the unit.
- Mounting onto 35 mm DIN-rail by means of optional supply of snap-on mounting.
- High climatic and mechanical durability, PU-resin hardened enclosures of all electrical components.

Transfer ratio of the CCT 41.4 I:



Wiring Diagram of the CCT 41.4 I:



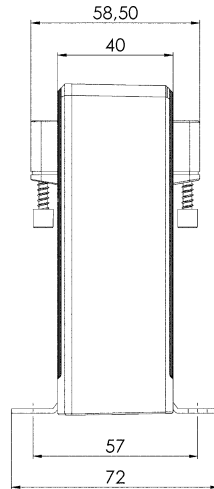
Order list:

Type	Primary current [A] DC / AC (I_{eff})	Art.-no.	Current output
CCT 41.4 I	150	1201-10005	DC: 0...± 20mA AC: 0...20 mA I_{eff}
	200	1201-10006	
	250	1201-10007	
	300	1201-10008	
	400	1201-10009	
	500	1201-10010	

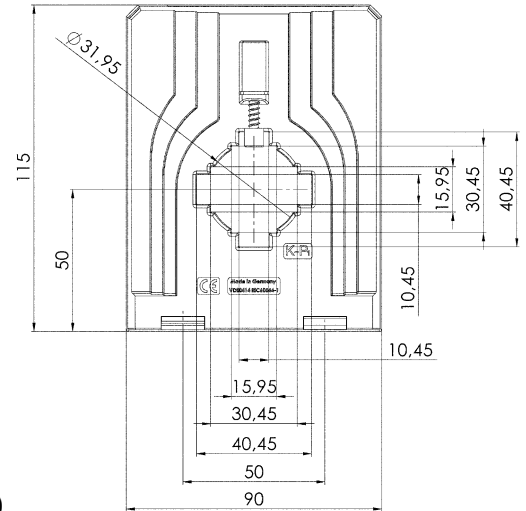
CCT 41.4 U (Compensation current transformer, MBS All current sensors)

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 to clip onto
35 mm DIN rail (Art.-no. 55012)



Dimensions:

Bus bar 1: 40x10 mm
Bus bar 2: 30x15 mm
Round conductor: 31,5 mm
Transformer width: 90 mm
Transformer height: 115 mm
Transformer depth: 58,5 mm

Applicable technical standards:

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

Electric connections:

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

Technical data:

Measuring range:	0...500 A DC / AC I_{eff} , depends on varieties! (Nominal current ranges adjusted to standard values according to IEC)
Frequency range:	0...100 kHz, any signal curves
Voltage output, AC Input:	$2,5 \pm 1$ V, U_{eff} , AC; $2,5 \pm 1,414$ V (Peak-Peak)
Voltage output, DC Input:	$2,5 \pm 1$ V, DC
Min. burden resistance at current output:	$R_B \geq 100$ k Ω
Current limit under overload:	< 5 V
Accuracy:	$\pm 0,5$ %
Max. operating voltage U_m :	0,72 kV, U_{eff}
Isolation test voltage:	6,4 kV, U_{eff} , 50 Hz, 5 sec., primary conductor against measuring output / housing
Auxiliary voltage:	± 12 V DC, $\pm 15\%$ < 70 mA, external protection via microfuse 100 mA / 250 V, fast!
Energia response time (90 % I_{PN} , $di/dt = 100$ A / μ s):	≤ 1 μ s (typ. 150 ns)
Signal rise velocity di/dt :	< 100 A / μ s
Isolation class	E
Protection class	IP 20
Operating altitude	≤ 2000 m (DIN EN 61010-1)
Max. temperature of the primary conductor:	100° C
Operating temperature:	-25° C < T_U < +60° C, 0...95% rH, without condensation
Storage temperature:	-40° C < T_L < +90° C

MBS AG

Eisbachstraße 51 · 74429 Sulzbach-Laufen
Germany

Telefon: +49 7976 9851-0 · Telefax: +49 7976 9851-90
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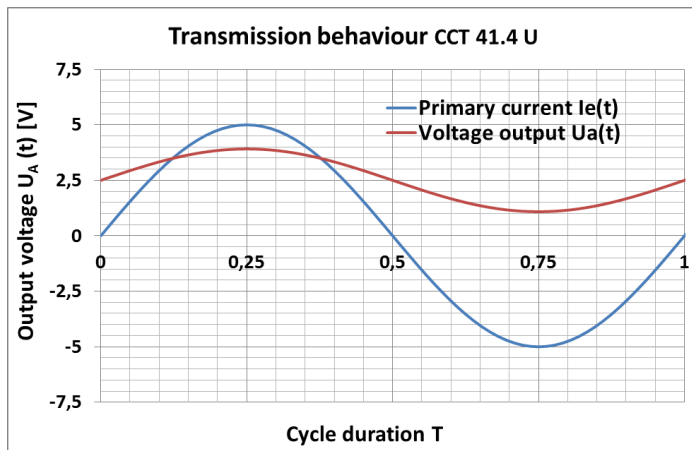
Functions of the CCT 41.4 U:

- Electricity is conducted over the magnetic field and is captured by the measuring core. The current induced in the measuring core is proportional to the magnetic flow and is captured by a semi-conductor element. An integrated electronic control unit converts the semi-control signal to a value of the measuring size in proportion to the DC output current signal.
- A contactless inductive captured parameter creates a galvanically separated output signal.
- Electrical contact with the secondary circuit of the current transformer is achieved by means of a 4-pole-spring-clamp. This clamp is suitable for connection to a flexible conductor up to 2.5 mm².
- A DC auxiliary voltage of ± 12 V is required to supply the electronic controls. The auxiliary voltage input must be secured by a HRC fuse size of 100 mA / 250 V microfuse.

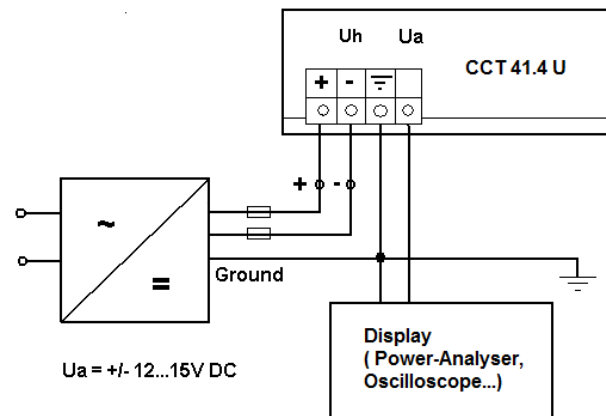
Advantages and benefits of the CCT 41.4 U:

- Measuring of direct current as well as alternating current with only one current transformer is possible.
- Large working frequency range from 0 Hz (DC)... 100 kHz (AC).
- High electric protection of the galvanically isolated capture of the measured variable.
- Low power-consumption (≤ 2.5 VA)
- Easy and safety electrical connection by means of spring clamp terminal.
- Direct mounting onto the bus bar by means of integrated fixing screws which are part of the unit.
- Mounting onto 35 mm DIN-rail by means of optional supply of snap-on mounting.
- High climatic and mechanical durability, PU-resin hardened enclosures of all electrical components.

Transfer ratio of the CCT 41.4 U:



Wiring Diagram of the CCT 41.4 U:

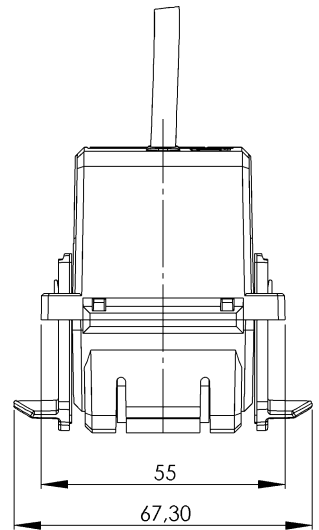
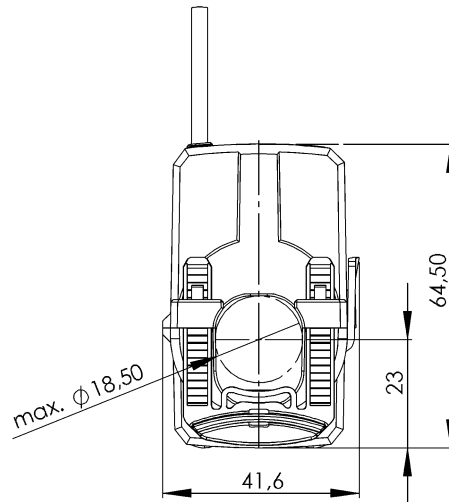


Order list:

Type	Primary current I_{eff} [A] DC / AC (I_{eff})	Art.-no.	Voltage output
CCT 31.3 U	150	1202-10005	DC: 2.5 ± 1 V AC: $2.5 \pm 1,414$ V (Peak-Peak)
	200	1202-10006	
	250	1202-10007	
	300	1202-10008	
	400	1202-10009	
	500	1202-10010	

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 61869, part 1 + 2

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

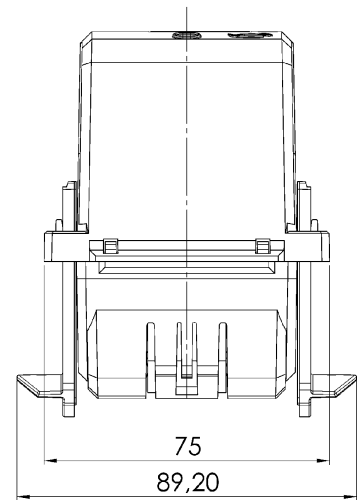
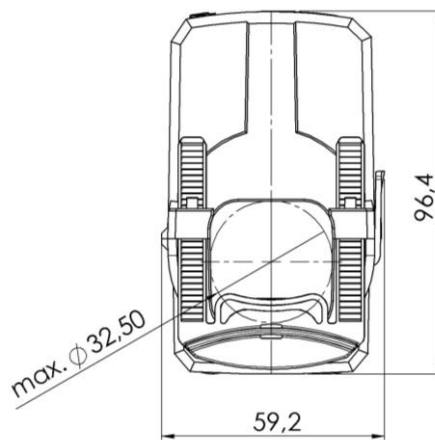
- Split-core current transformers are mainly used for an easy fitment and subsequent assembly into an already existing installation, without separating the primary conductor.
- The compact split-core current transformer KBR 18 has been developed to have easy access in already existing installations.
- 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; S1 = brown; S2 = blue). 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 (Min. burden resistance ≥ 1 k Ω).
- 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		
		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	1		18-0027	200	18-1026
	3	18-0026			
250	1.5		18-0032	250	18-1031
	4	18-0031			

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 61869, part 1 + 2

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

- Split-core current transformers are mainly used for an easy fitment and subsequent assembly into an already existing installation, without separating the primary conductor.
- The compact split-core current transformer KBR 32 has been developed to have easy access in already existing installations.
- Due to the „click“-system and the fixing-clasps even a one-hand mounting is possible.
- The KBR 32 with secondary 1A will be delivered with 2.5 m connection cable $2 \times 0.75 \text{ mm}^2$ (color coded; S1 = brown; S2 = blue). Other lengths of the connection cables are possible on request. The secondary 5A – version will be delivered with 0.5m connection cable $2 \times 1.5 \text{ mm}^2$.
- For the use as a current sensor the KBR 32 is optionally deliverable with a voltage output of 0 – 333 mV (min. burden resistance $\geq 1 \text{ k}\Omega$).
Moreover the KBR 32 is deliverable as a measuring transducer with a measuring output of 4...20 mA DC.
- Operating temperature: $-5^\circ\text{C} < T < +50^\circ\text{C}$
- Storage temperature: $-25^\circ\text{C} < T < +70^\circ\text{C}$

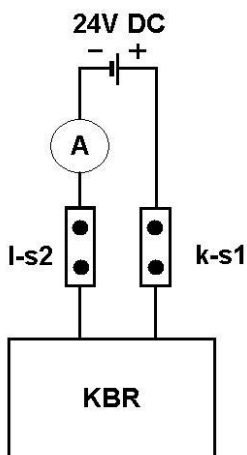
Order list

Secondary current		5A		1A		Output signal	0...333 mV AC	4...20 mA DC
Primary-current [A]	Burden [VA]	Accuracy class		Accuracy class		Primary-current [A]	Accuracy class	Accuracy class
		3FS5	1FS5	3FS5	1FS5		1	1
		Art.-no.	Art.-no.	Art.-no.	Art.-no.		Art.-no.	Art.-no.
100	1.5	32-5011				100	32-1011	32-2011
	2.5			32-0011				
125	2.5	32-5016				125	32-1016	32-2016
	3			32-0016				
150	3	32-5021		32-0021		150	32-1021	32-2021
200	3	32-5026				200	32-1026	32-2026
	5			32-0026				
250	3	32-5031				250	32-1031	32-2031
	5			32-0031				
300	2.5		32-5035			300	32-1034	32-2034
	5				32-0035			
400	5		32-5037		32-0037	400	32-1036	32-2036
500	5		32-5039		32-0039	500	32-1038	32-2038
600	5		32-5041		32-0041	600	32-1040	32-2040

Technical characteristics for the KBR with output signal 4...20 mA:

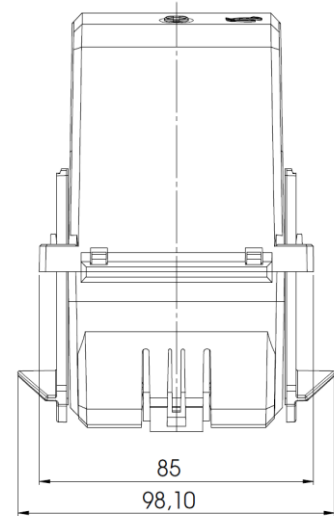
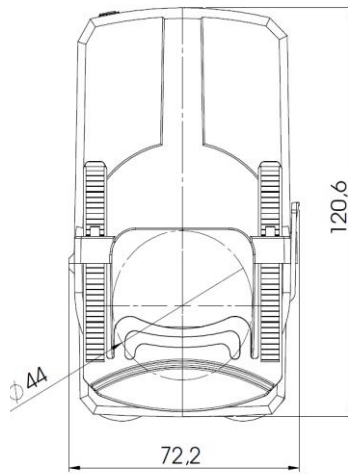
- 2-wire connection, auxiliary power via output circuit
- Auxiliary power: 24 V DC $\pm$ 15 %, P_V = max. 1 VA
- Load-independent DC current: Live-zero, 4...20 mA
- External resistance: max. 300 Ω
- Current limit under overload: < 30 mA
- Residual ripple of the output current: $\leq$ 1 % p.p.
- Response time: < 300 ms

Wiring diagram of the KBR 32 (4...20 mA):



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 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 61869, part 1 + 2

Further information about our new split-core current transformer KBR 44:

- Split-core current transformers are mainly used for an easy fitment and subsequent assembly into an already existing installation, without separating the primary conductor.
- The compact split-core current transformer KBR 44 has been developed to have easy access in already existing installations.
- Due to the „click“-system and the fixing-clasps even a one-hand mounting is possible.
- The KBR 44 with secondary 1A will be delivered with 2.5 m connection cable $2 \times 0.75 \text{ mm}^2$ (color coded; S1 = brown; S2 = blue). Other lengths of the connection cables are possible on request.
The secondary 5A – version will be delivered with 0.5m connection cable $2 \times 1.5 \text{ mm}^2$.
- For the use as a current sensor the KBR 44 is optionally deliverable with a voltage output of 0 – 333 mV (min. burden resistance $\geq 1 \text{ k}\Omega$).
Moreover the KBR 44 is deliverable as a measuring transducer with a measuring output of 4...20 mA DC.
- Operating temperature: $-5^\circ\text{C} < T < +50^\circ\text{C}$
- Storage temperature: $-25^\circ\text{C} < T < +70^\circ\text{C}$

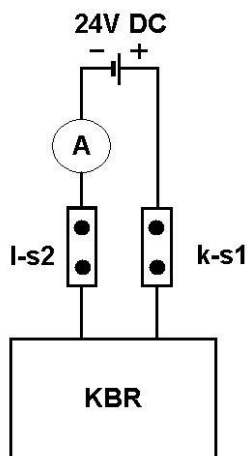
Order list

Secondary current		5A	1A	Output signal	0...333 mV AC	4...20 mA DC
Primary current [A]	Burden [VA]	Accuracy class	Accuracy class	Primary current [A]	Accuracy class	Accuracy class
		1FS5	1FS5		1	1
		Best.-Nr.	Best.-Nr.		Best.-Nr.	Best.-Nr.
250	1.5	44-5001		250	44-1001	44-2001
	2.5		44-0001			
300	2.5	44-5006	44-0006	300	44-1006	44-2006
400	5	44-5011	44-0011	400	44-1011	44-2011
500	5	44-5016	44-0016	500	44-1016	44-2016
600	5	44-5021	44-0021	600	44-1021	44-2021
750	5	44-5026	44-0026	750	44-1026	44-2026
800	5	44-5031	44-0031	800	44-1031	44-2031
1000	5	44-5036	44-0036	1000	44-1036	44-2036

Technical characteristics for the KBR with output signal 4...20 mA:

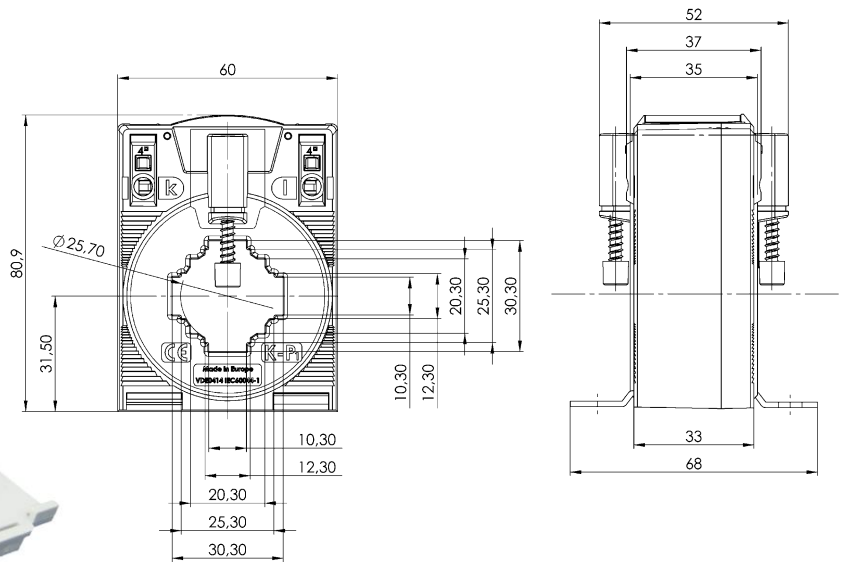
- 2-wire connection, auxiliary power via output circuit
- Auxiliary power: 24 V DC $\pm$ 15 %, P_V = max. 1 VA
- Load-independent DC current: Live-zero, 4...20 mA
- External resistance: max. 300 Ω
- Current limit under overload: < 30 mA
- Residual ripple of the output current: $\leq$ 1 % p.p.
- Response time: < 300 ms

Wiring diagram of the KBR 44 (4...20 mA):



CTB 31.35

Plug-in current transformer



Dimensions:

Bus bar 1: 30 x 10 mm
 Bus bar 2: 25 x 12 mm
 Bus bar 3: 20 x 20 mm
 Round conductor: 25.7 mm
 Transformer width: 60 mm
 Transformer height: 80.9 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 : 1.2 kV, U_{eff}
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 / 60 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 61869, part 1 + 2

Further information:

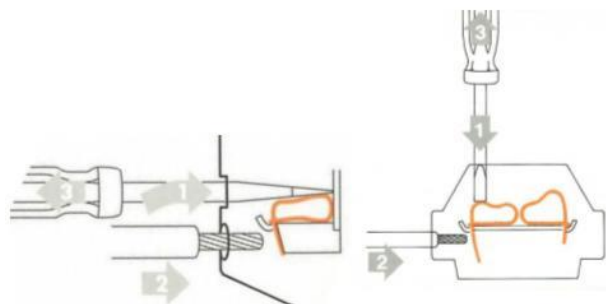
- World's first CT with screwless connection technology for the secondary caps – „Cage Clamp®“
- **UL certification.** Certificate no.: 20100426-E336996
- Innovative time-saving connection of either solid or flexible terminals not exceeding 4 mm² to be fitted either on the top or bottom or in the center without ferrules.
- Vibration and shock resistant
- Maintenance free gas-tight connection
- High current carrying capacity
- High mechanical enclosure strength
- Low voltage CT for maximum operating voltage to 1.2 kV. Use in 690 V networks possible
- Primary nominal current ranges from 50 A up to 750 A
- Accuracy classes 3, 1 and 0.5
- Overload operation limit up to 120 % of the primary rated current
- Over-current limiting factor: See rating plate
- 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 31.35

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.
50	1.25	50-0001			50-0021		
60	1.25		50-0017			50-0037	
75	2.5		50-0018			50-0038	
80	2.5		50-0019			50-0039	
100	2.5		50-0002			50-0022	
125	1.5			50-2001			50-2021
	2.5		50-0003			50-0023	
150	2.5			50-2002			50-2022
	5		50-0004			50-0024	
200	2.5			50-2003			50-2023
	5		50-0005			50-0025	
250	5		50-0006	50-2004		50-0026	50-2024
300	5		50-0007	50-2005		50-0027	50-2025
	10		50-0008			50-0028	
400	5		50-0009	50-2006		50-0029	50-2026
	10		50-0010	50-2007		50-0030	50-2027
500	5		50-0011	50-2008		50-0031	50-2028
	10		50-0012	50-2009		50-0032	50-2029
600	5		50-0013	50-2010		50-0033	50-2030
	10		50-0014	50-2011		50-0034	50-2031
750	5		50-0015	50-2012		50-0035	50-2032
	10		50-0016	50-2013		50-0036	50-2033

Accessories

Quick-Fix (Art.-no.: 55021)



Sealed shutter (Art.-no.: 59057)



Snap-on mounting to clip the current transformer onto 35 mm DIN rail (Art.-no. 55015)



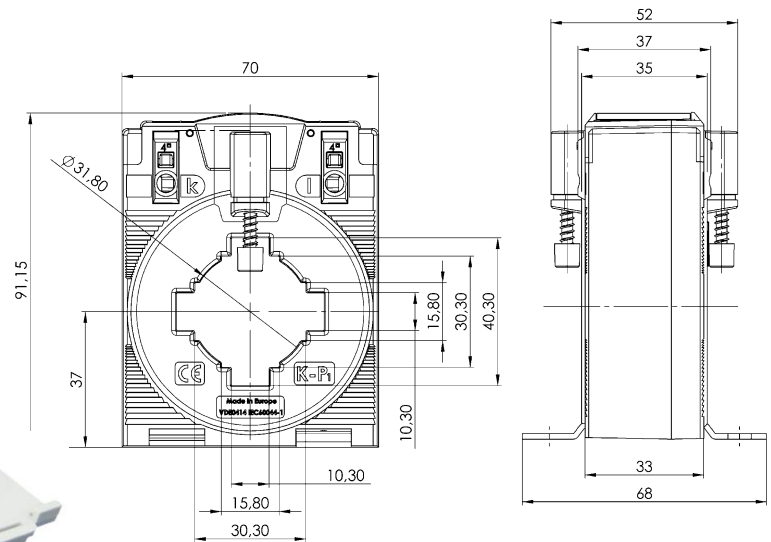
MBS AG

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 41.35

Plug-in current transformer



Dimensions:

Primary conductor 1: 40 x 10 mm
 Primary conductor 2: 30 x 15 mm
 Round conductor: 31.8 mm
 Transformer width: 70 mm
 Transformer height: 91.15 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 : 1.2 kV, U_{eff}
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 / 60 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 61869, part 1 + 2

Further information:

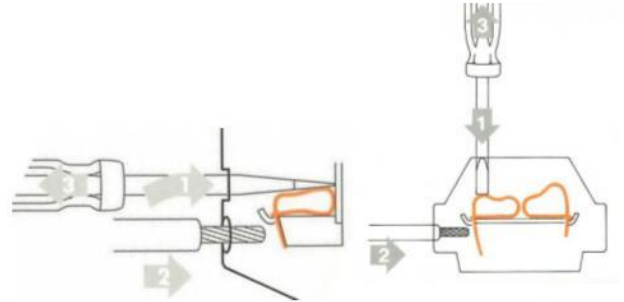
- World's first CT with screwless connection technology for the secondary caps – „Cage Clamp®“
- **UL certification.** Certificate no.: 20100426-E336996
- Innovative time-saving connection of either solid or flexible terminals not exceeding 4 mm² to be fitted either the top or bottom or in the center without ferrules
- Vibration and shock resistant
- Maintenance free gas-tight connection
- High current carrying capacity
- High mechanical enclosure strength
- Low voltage CT for maximum operating voltage up to 1.2 kV. Application up to 690 V possible
- Primary nominal current ranges from 75 A up to 1000 A
- Accuracy classes 3, 1 and 0.5
- Capable of being constantly overloaded to 120 % of the primary rated current
- Over-current limiting factor: See rating plate
- 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			50-2072
	5		50-0057			50-0077	
400	5		50-0058	50-2053		50-0078	50-2073
500	5		50-0059	50-2054		50-0079	50-2074
	10		50-0060			50-0080	50-2075
600	5		50-0061	50-2055		50-0081	50-2076
	10		50-0062	50-2056		50-0082	50-2077
750	5		50-0063	50-2057		50-0083	50-2078
	10		50-0064	50-2058		50-0084	
800	5		50-0065	50-2059		50-0085	50-2079
	10		50-0066	50-2060		50-0086	50-2080
1000	5		50-0067	50-2061		50-0087	50-2081
	10		50-0068	50-2062		50-0088	50-2082

Accessories

Quick-Fix (Art.-no.: 55021)



Sealed shutter (Art.-no.: 59057)



Snap-on mounting to clip the current transformer onto 35 mm DIN rail (Art.-no. 55015)



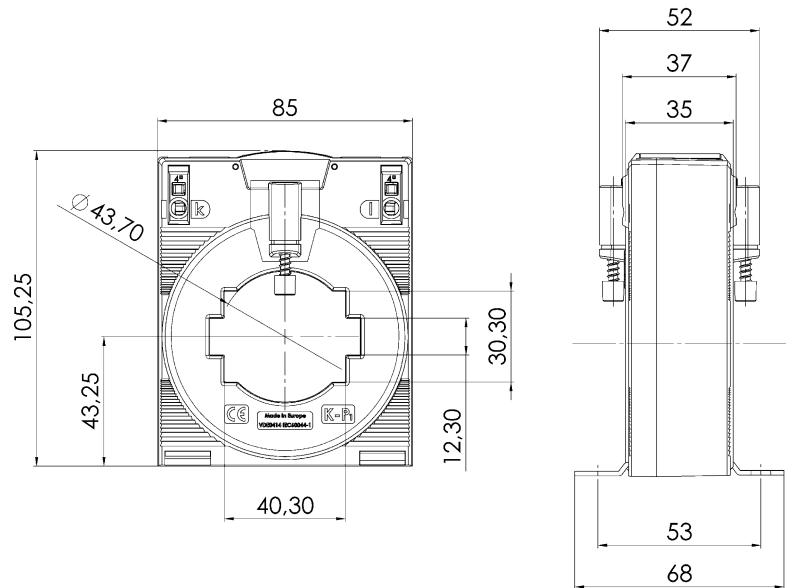
MBS AG

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 51.35

Plug-in current transformer



Dimensions:

Primary conductor 1: 50 x 12 mm
 Primary conductor 2: 40 x 30 mm
 Round conductor: 43.7 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 : 1.2 kV, U_{eff}
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 / 60 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 61869, part 1 + 2

Further information:

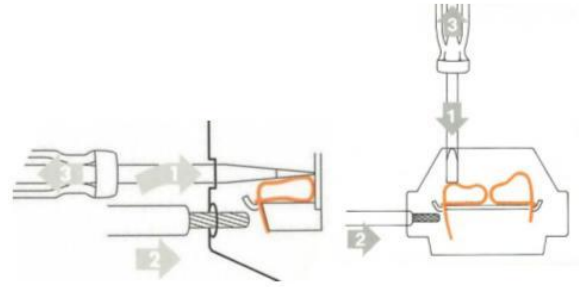
- World's first CT with screwless connection technology for the secondary caps – „Cage Clamp®“
- **UL certification.** Certificate no.: 20100426-E336996
- Innovative time-saving connection of either solid or flexible terminals not exceeding 4 mm² to be fitted either the top or bottom or in the center without ferrules.
- Vibration and shock resistant
- Maintenance free gas-tight connection
- High current carrying capacity
- High mechanical enclosure strength
- Low voltage CT for maximum operating voltage to 1.2 kV. Use in 690 V networks possible
- Primary nominal current ranges from 100 A up to 1250 A
- Accuracy class 1 and 0.5
- Overload operation limit up to 120 % of the primary rated current
- Over-current limiting factor: See rating plate
- 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

Accessories

Quick-Fix (Art.-no.: 55021)



Sealed shutter
(Art.-no.: 59058)



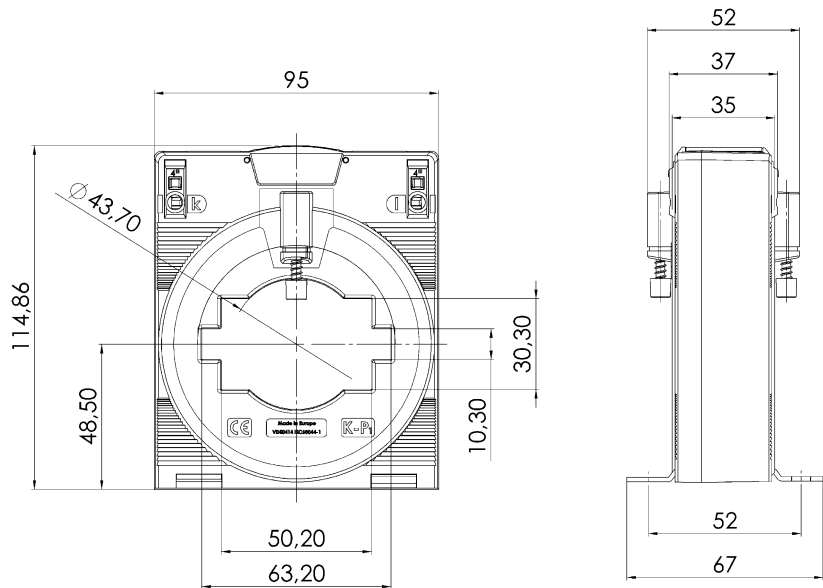
MBS AG

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 61.35

Plug-in current transformer



Dimensions:

Primary conductor 1: 63 x 10 mm
 Primary conductor 2: 50 x 30 mm
 Round conductor: 43.7 mm
 Transformer width: 95 mm
 Transformer height: 114.86 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 : 1.2 kV, U_{eff}
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 61869, part 1 + 2

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 connection of either solid or flexible terminals not exceeding 4 mm² to be fitted either on the top or bottom or in the center without ferrules.
- Vibration and shock resistant
- Maintenance free gas-tight connection
- High current carrying capacity
- High mechanical enclosure strength
- Low voltage CT for maximum operating voltage to 1.2 kV. Use in 690 V networks possible
- Primary nominal current ranges from 200 A up to 1600 A
- Accuracy class 1 and 0.5
- Overload operation limit up to 120 % of the primary rated current
- Over-current limiting factor: See rating plate
- 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
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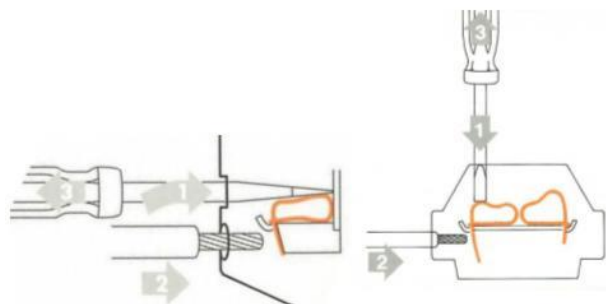
CTB 61.35

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

Accessories

Quick-Fix (Art.-no.: 55021)



Sealed shutter
(Art.-no.: 59059)



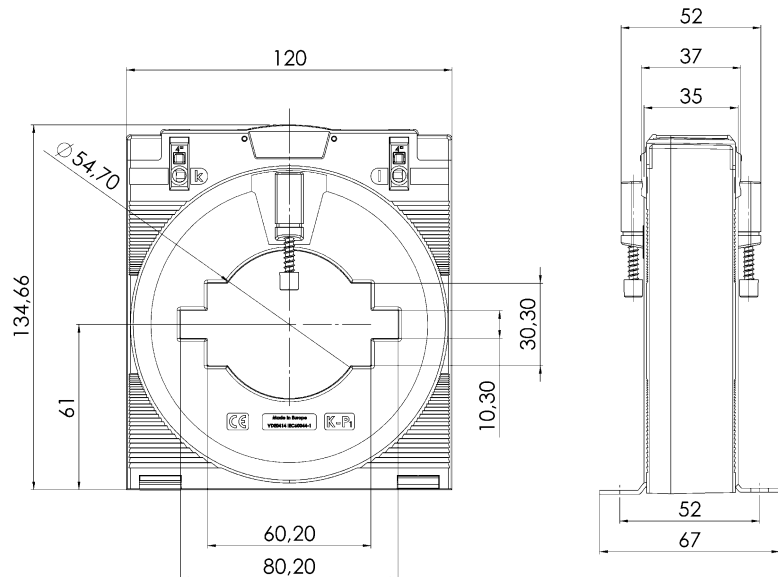
MBS AG

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 81.35

Plug-in current transformer



Dimensions:

Primary conductor 1: 80 x 10 mm
 Primary conductor 2: 60 x 30 mm
 Round conductor: 54.7 mm
 Transformer width: 120 mm
 Transformer height: 134.66 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 : 1.2 kV, U_{eff}
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 61869, part 1 + 2

Further information:

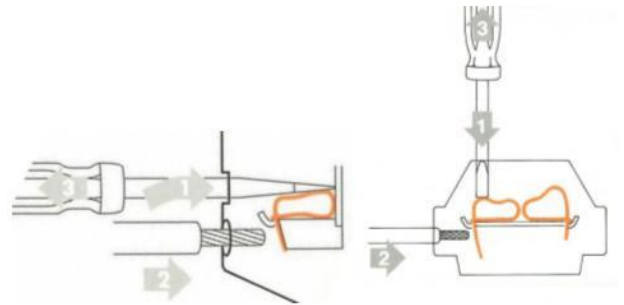
- World's first CT with screwless connection technology for the secondary caps – „Cage Clamp®“
- **UL certification.** Certificate no.: 20100426-E336996
- Innovative time-saving connection of either solid or flexible terminals not exceeding 4 mm² to be fitted either on the top or bottom or in the center without ferrules.
- Vibration and shock resistant
- Maintenance free gas-tight connection
- High current carrying capacity
- High mechanical enclosure strength
- Low voltage CT for maximum operating voltage to 1.2 kV. Use in 690 V networks possible
- Primary nominal current ranges from 400 A up to 2000 A
- Accuracy class 1 and 0.5
- Overload operation limit up to 120 % of the primary rated current
- Over-current limiting factor: See rating plate
- 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 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

Accessories

Quick-Fix (Art.-no.: 55021)



Sealed shutter (Art.-no.: 59059)



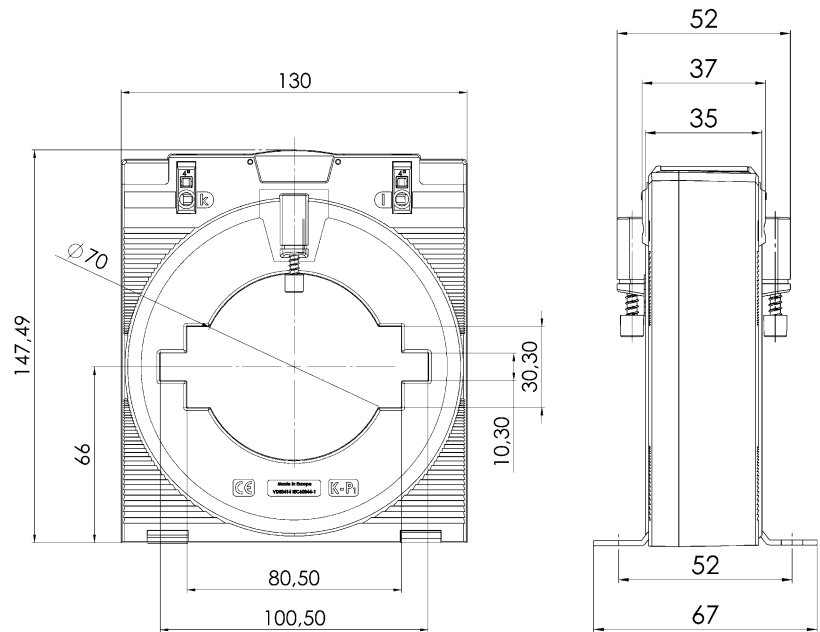
MBS AG

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 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: 147.49 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 : 1.2 kV, U_{eff}
 Isolation test voltage: 6 kV, U_{eff} , 50 Hz, 1 Min.
 Rated frequency: 50 Hz
 Isolation class: E
 Applicable technical standards: DIN EN 61869, part 1 + 2

Further information:

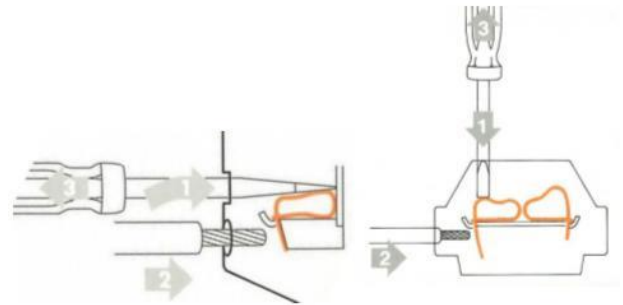
- World's first CT with screwless connection technology for the secondary caps – „Cage Clamp®“
- **UL certification.** Certificate no.: 20100426-E336996
- Innovative time-saving connection of either solid or flexible terminals not exceeding 4 mm² to be fitted either on the top or bottom or in the center without ferrules.
- Vibration and shock resistant
- Maintenance free gas-tight connection
- High current carrying capacity
- High mechanical holding forces
- Low voltage CT for maximum operating voltage to 1.2 kV. Use in 690 V networks possible
- Primary nominal current ranges from 400 A to 2500 A
- Accuracy class 1 and 0.5
- Overload operation limit up to 120 % of the primary rated current
- Over-current limiting factor: See rating plate
- 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 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

Accessories

Quick-Fix (Art.-no.: 55021)



Sealed shutter (Art.-no.: 59059)



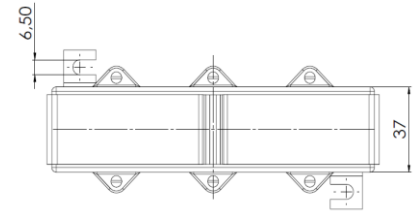
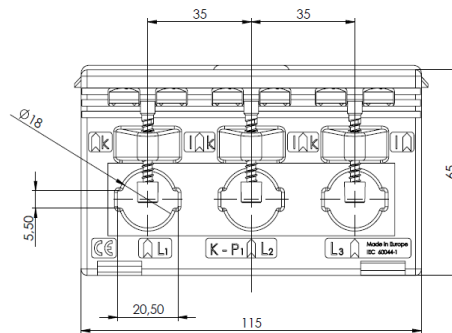
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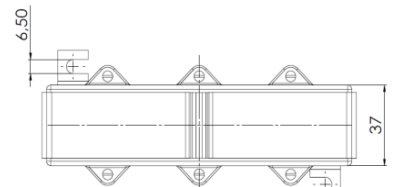
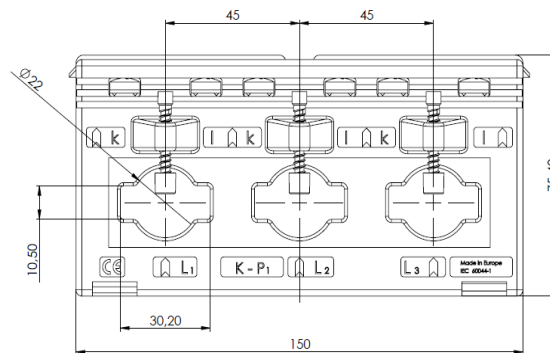
Telefon: +49 7976 9851-0 · Telefax: +49 7976 9851-90
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Three single-phase current transformers

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 61869, part 1 + 2

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

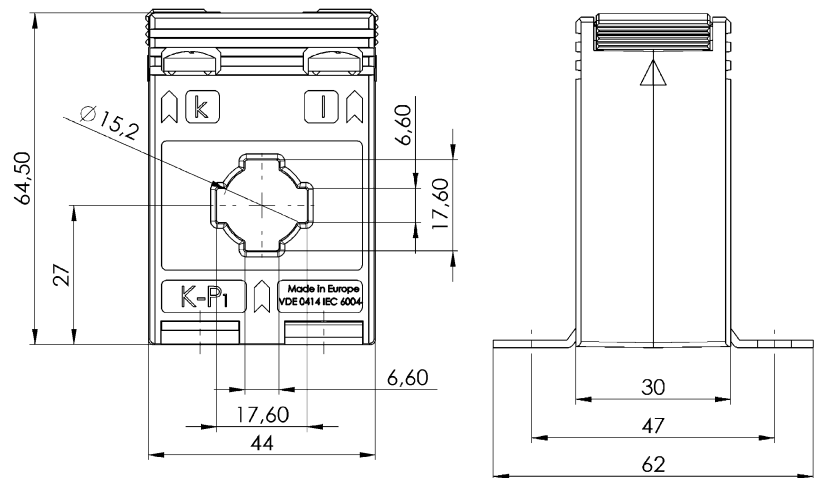
Secondary current		5A	1A
Primary current [A]	Burden [VA]	Accuracy class	Accuracy class
		1	1
		Art.-no.	Art.-no.
250	2.5	D310-010	D310-020
300	3.75	D310-011	D310-021
400	5	D310-012	D310-022
500	5	D310-013	D310-023
600	5	D310-014	D310-024

Application example:



(E)AS 176.3

Plug-in current transformer suitable for **SlimLineXR** 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 61869, part 1 + 2

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: 1 and 0.5
- Overload operation limit up to 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

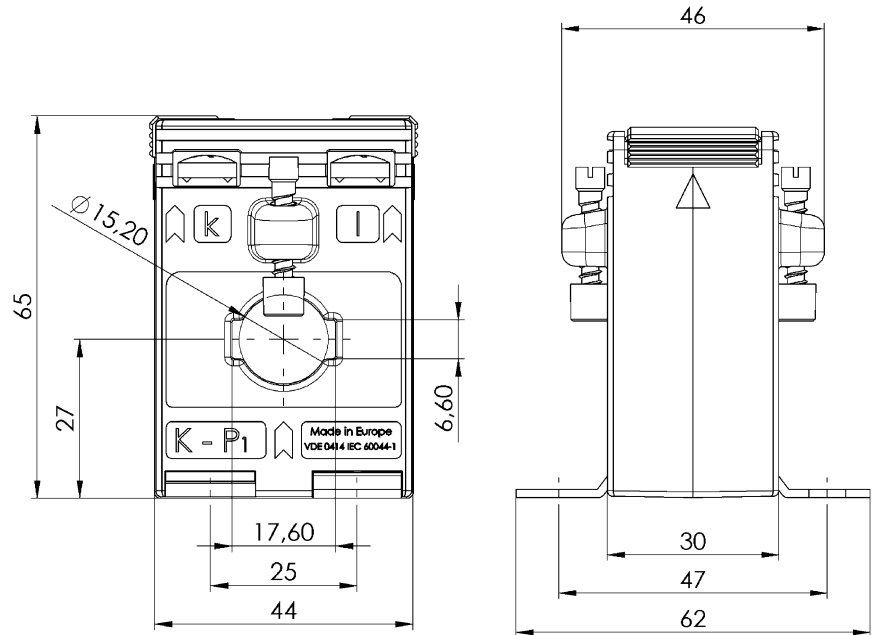
Secondary current		5A		1A	
Primary current [A]	Burden [VA]	Accuracy class		Accuracy class	
		1	0.5	1	0.5
		Art.-no.	Art.-no.	Art.-no.	Art.-no.
75	1.5	1030006009		1030206009	
80	1.5	1030006010		1030206010	
100	1		1030005007		1030205007
	2	1030006001		1030206001	
125	1.5		1030005008		1030205008
	2.5	1030006002		1030206002	
150	1.5	1030006007	1030005001	1030206007	1030205001
	2.5	1030006003	1030005006	1030206003	1030205006
160	2.5	1030006004	1030005004	1030206004	1030205004
200	2.5	1030006005	1030005002	1030206005	1030205002
250	2.5	1030006008	1030005003	1030206008	1030205003
	3.75	1030006006		1030206006	

EAS 176.3 - Plug-in current transformer for tariff applications

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	1.5		1030505004		1030705004
150	1.5		1030505001		1030705001
	2.5		1030505005		1030705005
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 61869, part 1 + 2

Further information:

- Available for primary nominal currents from 75 A up to 250 A
- Accuracy class: 1 and 0.5
- Constant overload 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

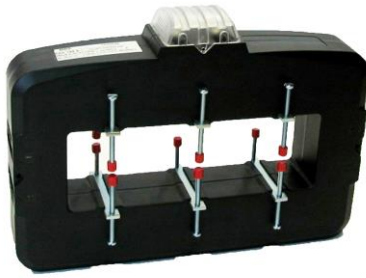
Secondary current		5A		1A	
Primary current [A]	Burden [VA]	Accuracy class		Accuracy class	
		1	0,5	1	0,5
		Art.-no.	Art.-no.	Art.-no.	Art.-no.
75	1.5	1020006009		1020206009	
80	1.5	1020006010		1020206010	
100	1		1020005007		1020205007
	2	1020006001		1020206001	
125	1.5		1020005008		1020205008
	2.5	1020006002		1020206002	
150	1.5	1020006007	1020005001	1020206007	1020205001
	2.5	1020006003	1020005006	1020206003	1020205006
160	2.5	1020006004	1020005004	1020206004	1020205004
200	2.5	1020006005	1020005002	1020206005	1020205002
250	2.5	1020006008	1020005003	1020206008	1020205003
	3.75	1020006006		1020206006	

EASK 176.3 - Plug-in current transformer for tariff applications

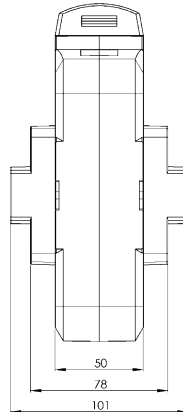
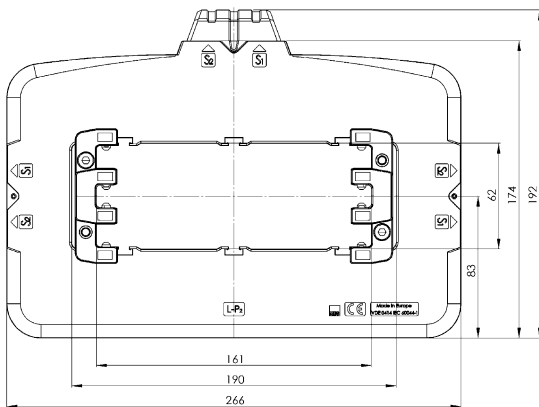
Secondary current		5A		1A	
Primary current [A]	Burden [VA]	Accuracy class		Accuracy class	
		1	0,5	1	0,5
		Art.-no.	Art.-no.	Art.-no.	Art.-no.
100	1.5		1020505004		1020705004
150	1.5		1020505001		1020705001
	2.5		1020505005		1020705005
200	2.5		1020505002		1020705002
250	2.5		1020505003		1020705003

ASK 165.5

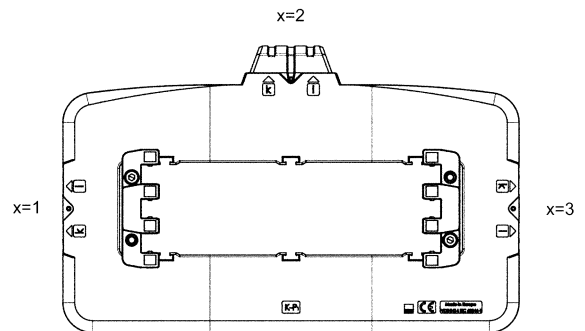
Plug-in current transformer with partial resin hardened measuring system



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



Connection options



Dimensions:

Bus bar 1: 3x 160x10 mm
Bus bar 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 61869, part 1 + 2

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 variable 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
- 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: $-5^\circ\text{C} < T < +50^\circ\text{C}$
- Storage temperature: $-25^\circ\text{C} < T < +70^\circ\text{C}$

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

- 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

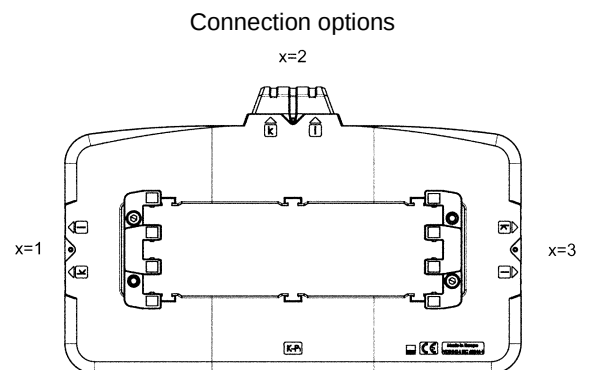
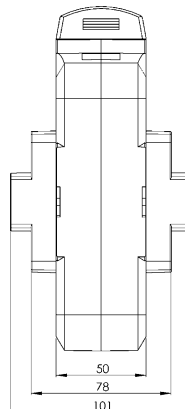
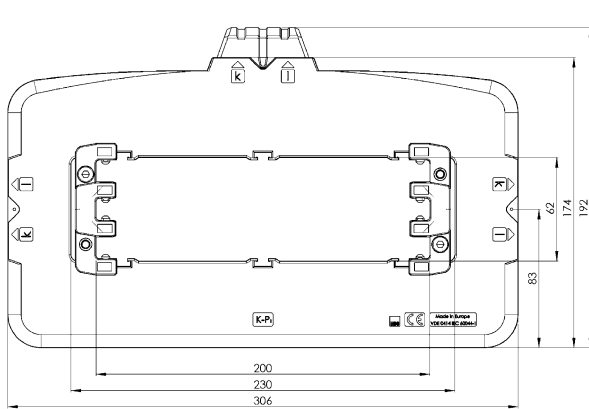
Secondary current		5A			1A		
Primary current [A]	Burden [VA]	Accuracy class			Accuracy class		
		1	0.5	0.2	1	0.5	0.2
		Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.	Art.-no.
1000	5	1650006021-x	1650005001-x	1650003001-x	1650206021-x	1650205001-x	1650203001-x
	10	1650006022-x	1650005002-x		1650206022-x	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 61869, part 1 + 2

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 variable 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
- 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: $-5^{\circ}\text{C} < T < +50^{\circ}\text{C}$
- 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

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		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

Features / Benefits



- Tube current transformer with 1...4 measuring systems integrated in one housing
- Rated voltage 0.72 / 3 / - kV
- Primary current range 40A ... 1250A
- Secondary currents: 5 A, 2 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:

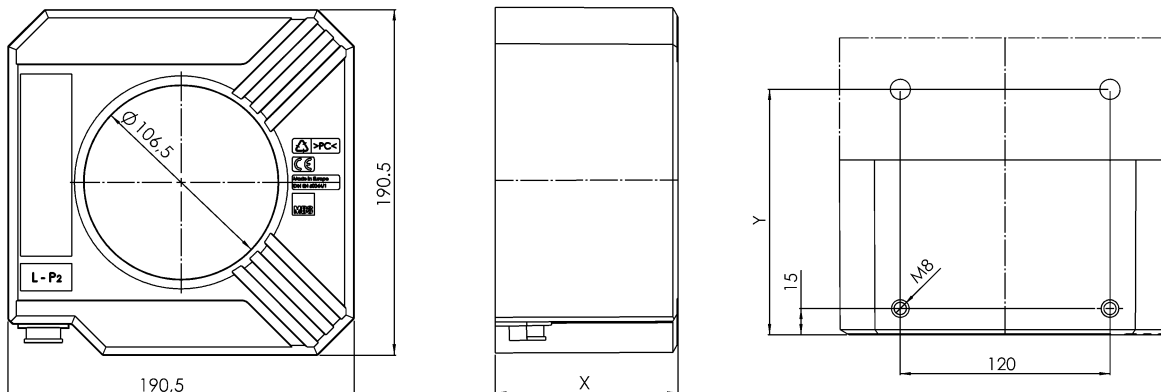
Thermal nominal continuous rated current I_{cth} : $1.2 \times I_N$, other values upon request
Thermal nominal short-time current I_{th} : 25 kA, 3 sec., other values upon request
Maximum operating voltage U_m : 0.72 kV
Isolation test voltage: 3 kV, U_{eff} , 50 Hz, 1 min.
Rated frequency: 50 Hz, other values upon request
Isolation class: F
Applicable technical standards: DIN EN 61869, part 1 + 2

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

- 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
- Over current rated limiting factor: See rating plate
- Operating temperature: $-5^{\circ}\text{C} < T < +60^{\circ}\text{C}$
- 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
- Mounting of current transformer with 2 pieces (optional 4 pieces) hexagon bolts M8x30
- Packaging unit: 1 pc.
- Customs tariff number: 85043129

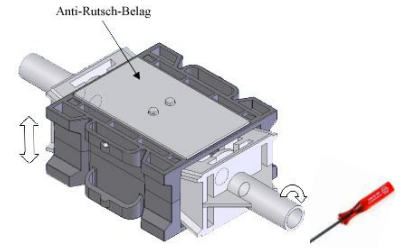
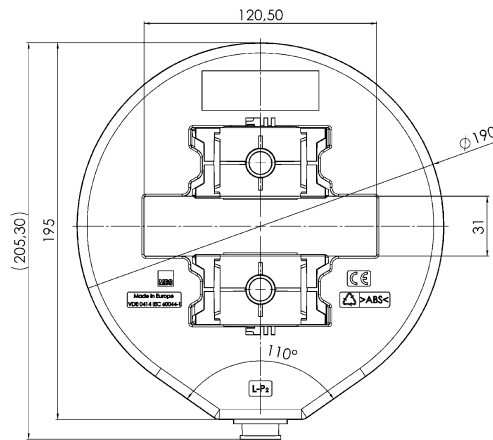
Measurements:



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



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_{cth} : $1.2 \times I_N$
 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 61869, part 1 + 2

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, 2 A or 1 A, other values upon request
- Accuracy classes: 1; 0.5; 0.5s; 0.2 and 0.2s
- Protection classes: 5P10, 10P10, 5P20, 10P20, PX

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

- 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
- Overload operation limit up to 120% of the primary rated current
- Over current rated limiting factor: See rating plate
- Operating temperature: $-5^{\circ}\text{C} < T < +60^{\circ}\text{C}$
- 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

Application example:





SWMU 31.5

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.

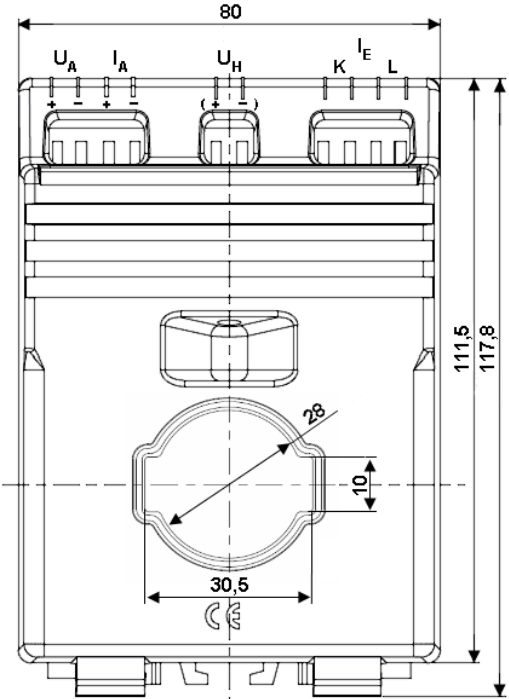
Technical data SWMU 31.51/52 SWMU 32.51/52

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 protection	IP 40, housing (test wire, EN 60529) IP 20, connection terminals (test digit, EN 60529)
max. burden voltage	$\leq$ 15V	contamination class	2
current limit under overload	$\leq$ 34 mA	test voltages (DIN 57411)	4 kV, active circuits against housing 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	

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



Depth: 50 (72) mm

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



SWMU 41.5

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 ... 800 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.

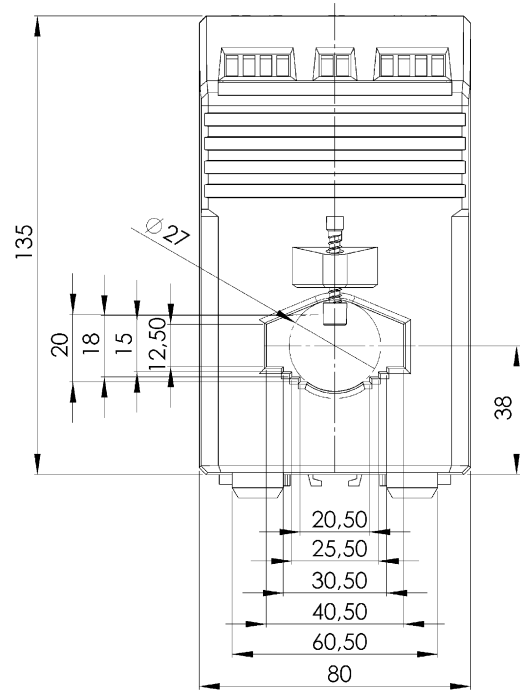
The measuring transducer fulfills the requirements and regulations with regard to the electromagnetic compatibility (EMV) and security (IEC 1010 and EN 61010). This measuring transducer has been designed, produced, and tested in accordance with ISO 9001.

Technical data SWMU 41.51/52 SWMU 42.51/52

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 41.52	1...10 A	power input	$\leq$ 1.5 W (2.5 VA)
SWMU 41.51	15...800 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
imprinted DC voltage	0...10 V or 2...10 V*	(DIN 57411)	4 kV, auxiliary voltage against measuring output (230 V AC-version) 500 V, auxiliary voltage against measuring output (24 V DC-version)
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	

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
41.52	1	61006	62006	63006	64006
	5	61007	62007	63007	64007
	10	61008	62008	63008	64008
41.51	15	61009	62009	63009	64009
	20	61010	62010	63010	64010
	25	61011	62011	63011	64011
	30	61012	62012	63012	64012
	40	61013	62013	63013	64013
	50	61014	62014	63014	64014
	60	61015	62015	63015	64015
	75	61016	62016	63016	64016
	100	61017	62017	63017	64017
	150	61018	62018	63018	64018
	200	61019	62019	63019	64019
	250	61020	62020	63020	64020
	300	61021	62021	63021	64021
	400	61022	62022	63022	64022
	500	61023	62023	63023	64023
	600	61024	62024	63024	64024
	750	61025	62025	63025	64025
	800	61026	62026	63026	64026



Depth: 50 (72) mm

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
41.52	1	65006	66006	67006	68006
	5	65007	66007	67007	68007
	10	65008	66008	67008	68008
41.51	15	65009	66009	67009	68009
	20	65010	66010	67010	68010
	25	65011	66011	67011	68011
	30	65012	66012	67012	68012
	40	65013	66013	67013	68013
	50	65014	66014	67014	68014
	60	65015	66015	67015	68015
	75	65016	66016	67016	68016
	100	65017	66017	67017	68017
	150	65018	66018	67018	68018
	200	65019	66019	67019	68019
	250	65020	66020	67020	68020
	300	65021	66021	67021	68021
	400	65022	66022	67022	68022
	500	65023	66023	67023	68023
	600	65024	66024	67024	68024
	750	65025	66025	67025	68025
	800	65026	66026	67026	68026

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
42.52	1	69006
	5	69007
	10	69008
42.51	40	69013
	50	69014
	60	69015
	75	69016
	100	69017
	150	69018
	200	69019
	250	69020
	300	69021
	400	69022
	500	69023
	600	69024
	750	69025
	800	69026

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



- Current transformers for industry
- Current transformers for tariff
- Accessories for current transformers
- Medium-voltage CTs
- Bus bar insulators / -supports
- Shunts
- Voltage transformers
- All current sensors
- Measuring transducers
- Energy meters with or without MID approval
- Accessories for energy meters
- Panel board heaters, filter fans, roof fans and control units



www.mbs-ag.com



MBS AG
Eisbachstraße 51 • 74429 Sulzbach-Laufen • Germany
Telefon: +49 7976 9851-0 • Telefax: +49 7976 9851-90
info@mbs-ag.com • www.mbs-ag.com