

All current sensors for AC and DC

We make energy measurable and secure your future



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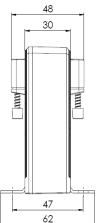


CCT 31.3 RMS (Compensation current transformer, GMW All current sensors)

Current transformers for the measurement of direct and alternating currents

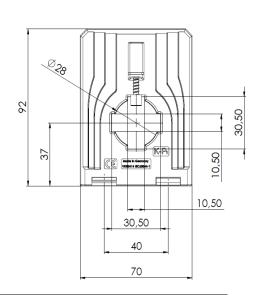
- For measuring of non-sinusoidal and distorted networks
- As a measuring transducer for the direct input wiring of SPS input cards





Additional accessories:

Snap-on mounting to clip onto 35 mm DIN rail (Art.-no. 53011)



Dimensions:

Bus bar: 30x10 mm Round conductor: 28 mm Transformer width: 70 mm Transformer height: 92 mm Transformer depth: 48 mm Applicable technical standards: DIN EN 50178, 1997 DIN EN 61010-1, 2002 VDE 0160

Technical data:

Measuring range:	0300 A DC / 0300 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:	420 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:	± 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 / μ s):	≤ 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, 095% rH, without condensation
Storage temperature:	-40° C < T _L < +90° C

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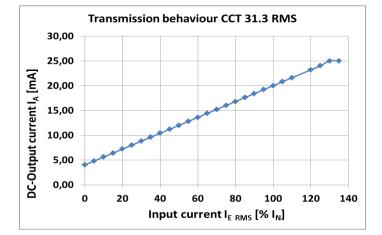
Functions of the CCT 31.3 RMS:

- 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.

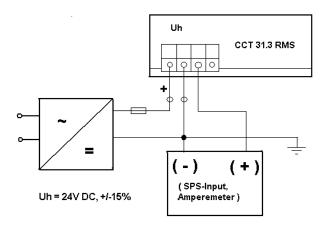
Advantages and benefits of the CCT 31.3 RMS:

- 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:

Туре	Primary current I _{RMS} [A]	Artno.	Current output
	50	1103-10001	
	100	1103-10003	
CCT 31.3 RMS	150	1103-10005	420 mA DC
	200	1103-10006	420 IIIA DC
	250	1103-10007	
	300	1103-10008	

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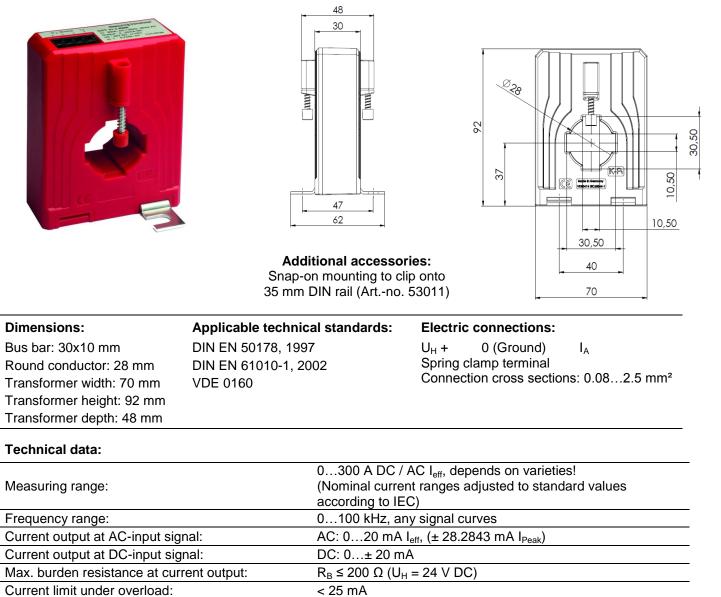
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CCT 31.3 I (Compensation current transformer, GMW All current sensors)

Current transformers for the measurement of direct and alternating currents

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



Isolation test voltage:	6,4 kV, U _{eff} , 50 Hz, 5 sec., primary conductor against
isolation test voltage.	measuring output / housing
Auvilianusaltanas	± 12 V DC, ± 15% < 70 mA, external protection via
Auxiliary voltage:	microfuse 100 mA / 250 V, fast!
Energia response time (90 % I_{PN} , di/dt = 100 A / μ s):	≤ 1 µs (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, 095% rH, without condensation
Storage temperature:	-40° C < T ₁ < +90° C

± 0,5 %

0,72 kV, U_{eff}

6,4 kV, U_{eff}, 50 Hz, 5 sec., primary conductor against

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Accuracy:

Max. operating voltage U_m:



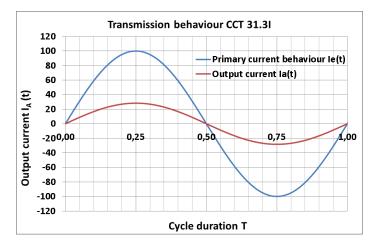
Functions of the CCT 31.3 I:

- 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-polespring-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.

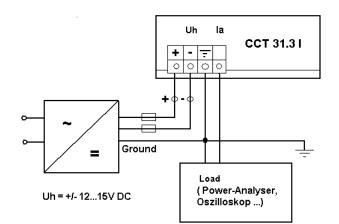
Advantages and benefits of the CCT 31.3 I:

- 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:

Туре	Primary current [A] DC / AC (I _{eff})	Artno.	Current output
	50	1101-10001	
CCT 31.3 I	100	1101-10003	
	150	1101-10005	DC: 0± 20mA
	200	1101-10006	AC: 0…20 mA l _{eff}
	250	1101-10007	AG. 020 IIIA I _{eff}
	300	1101-10008	

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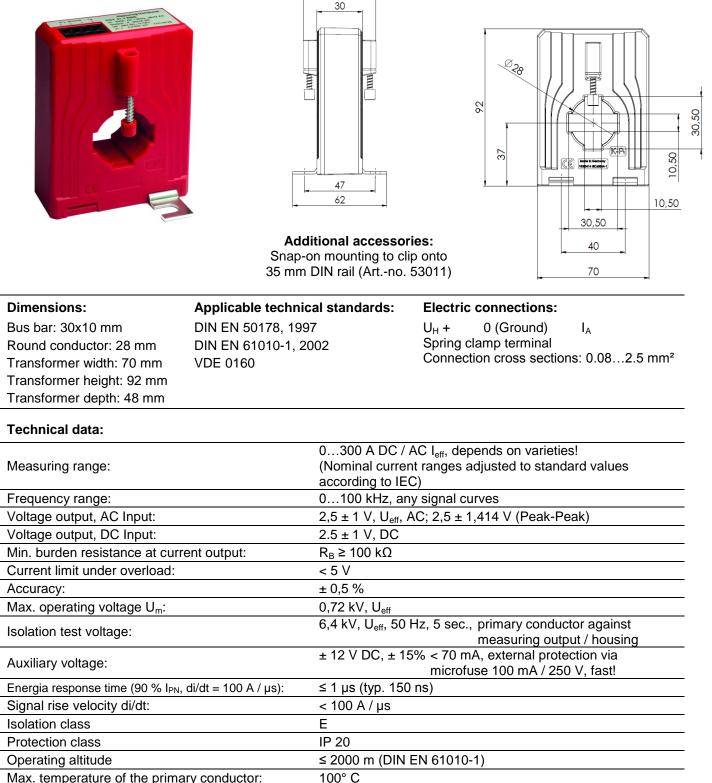


CCT 31.3 U (Compensation current transformer, GMW All current sensors)

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Current transformers for the measurement of direct and alternating currents

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



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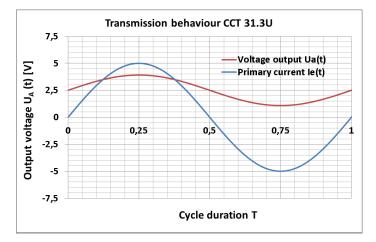
Functions of the CCT 31.3 U:

- 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-polespring-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.

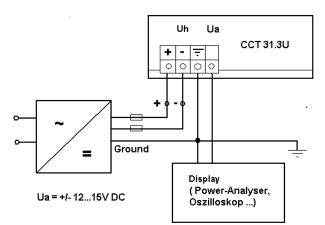
Advantages and benefits of the CCT 31.3 U:

- 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:

Туре	Primary current I _{eff} [A] DC / AC (I _{eff})	Artno.	Voltage output
	50	1102-10001	
	100	1102-10003	DC: 2.5 ± 1V
CCT 31.3 U	150	1102-10005	
001 31.3 0	200	1102-10006	AC: 2,5 ± 1,414 V
	250	1102-10007	(Peak-Peak)
	300	1102-10008	

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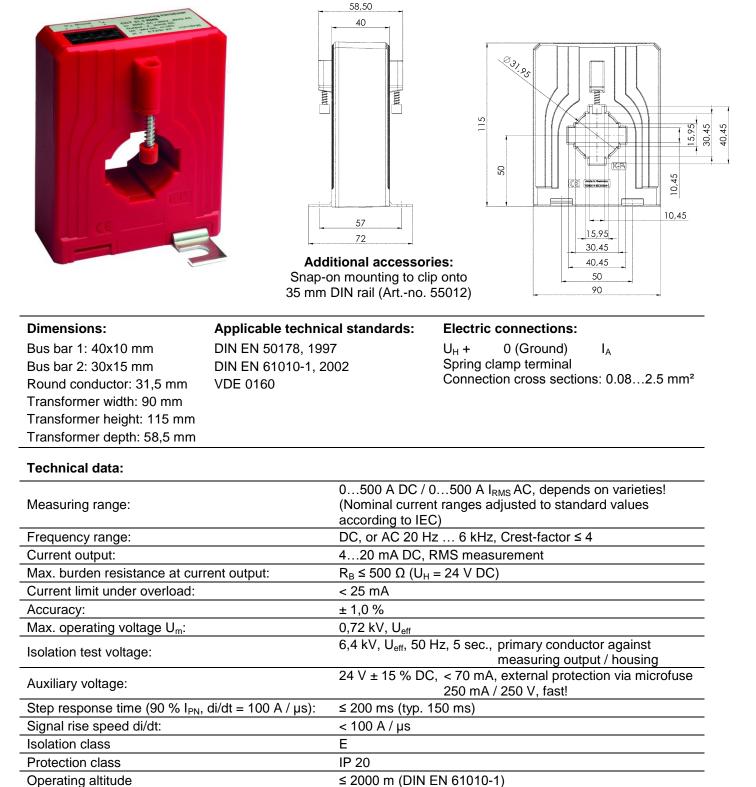
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CCT 41.4 RMS (Compensation current transformer, GMW All current sensors)

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



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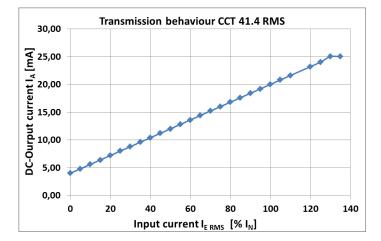
Functions of the CCT 41.4 RMS:

- 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.

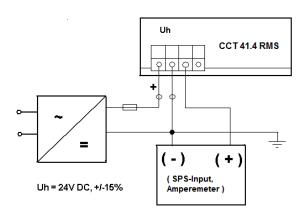
Advantages and benefits of the CCT 41.4 RMS:

- 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:

Туре	Primary current I _{RMS} [A]	Artno.	Current output
	150	1203-10005	
	200	1203-10006	
CCT 41.4 RMS	250	1203-10007	420 mA DC
	300	1203-10008	420 IIIA DC
	400	1203-10009	
	500	1203-10010	

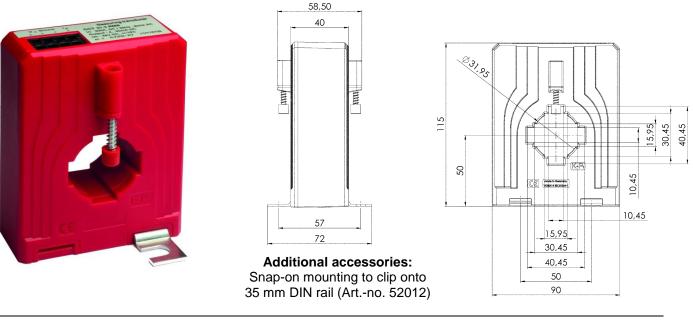
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CCT 41.4 I (Compensation current transformer, GMW All current sensors)

- Current transformers for the measurement of direct and alternating currents
- For network analysis, monitoring,
- and measuring of non-sinusoidal and distorted networks



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

Technical data:

Measuring range:	0500 A DC / AC I_{eff} , depends on varieties! (Nominal current ranges adjusted to standard values according to IEC)
Frequency range:	0100 kHz, any signal curves
Current output at AC-input signal:	AC: 020 mA I _{eff} , (± 28.2843 mA I _{Peak})
Current output at DC-input signal:	DC: 0± 20 mA
Max. burden resistance at current output:	$R_B \le 200 \Omega (U_H = 24 V DC)$
Current limit under overload:	< 25 mA
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 A / μ s):	≤ 1 µs (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:	$-40^{\circ} \text{ C} < \text{T}_{\text{L}} < +90^{\circ} \text{ C}$

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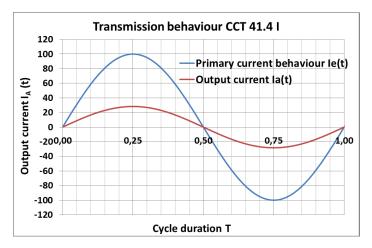
Functions of the CCT 41.4 I:

- 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-polespring-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.

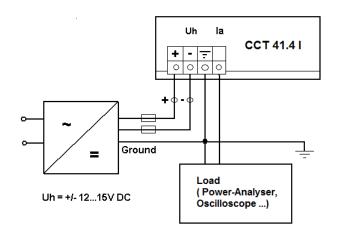
Advantages and benefits of the CCT 41.4 I:

- 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:

Туре	Primary current [A] DC / AC (I _{eff})	Artno.	Current output
	150	1201-10005	
	200	1201-10006	DC: 0± 20mA
CCT 41.4 I	250	1201-10007	DC. 0± 2011A
	300	1201-10008	AC: 020 mA I _{eff}
	400	1201-10009	
	500	1201-10010	

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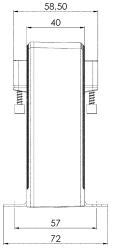


CCT 41.4 U (Compensation current transformer, GMW All current sensors)

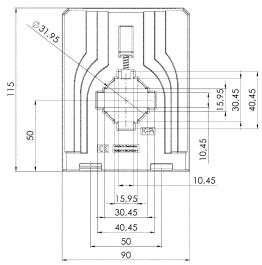
Current transformers for the measurement of direct and alternating currents

- 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

Technical data:

Measuring range:	0500 A DC / AC I _{eff} , depends on varieties! (Nominal current ranges adjusted to standard values according to IEC)
Frequency range:	0100 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 ≥ 100 kΩ
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 A / µs):	≤ 1 μs (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, 095% rH, without condensation
Storage temperature:	-40° C < T _L < +90° C

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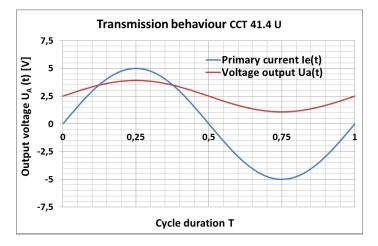
Functions of the CCT 41.4 U:

- 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-polespring-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.

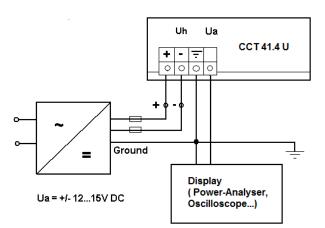
Advantages and benefits of the CCT 41.4 U:

- 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:

Туре	Primary current I _{eff} [A] DC / AC (I _{eff})	Artno.	Voltage output
	150	1202-10005	
	200	1202-10006	DC: 2.5 ± 1V
CCT 31.3 U	250	1202-10007	
001 31.3 0	300	1202-10008	AC: 2,5 ± 1,414 V
	400	1202-10009	(Peak-Peak)
	500	1202-10010	

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Notes

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10 Reasons for GMW



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