

AC Split Core Current Transformer Series

CT-SC-010, CT-SC-012, CT-SC-024, CT-SC-036

Data sheet

SAFETY

Read and understand all associated documents before using the device and its components. The following safety instructions present an overview of all safety measures required for operating the device and its components. Observe the safety instructions and warning notices for your personal safety and to prevent property damage.

Special operating conditions may require additional measures! It also essential to observe the special safety instructions which are included in the respective documents for the device and its components! Documents that accompany our products can be found on our web site www.janitza.de > Support > Downloads.

Electrically qualified personnel

To prevent personal injuries and property damage, only electrically qualified personnel may work on the devices and their components, assemblies, systems and circuits. They must also have knowledge

- of the national and international accident prevention regulations.
- of safety technology standards.
- in installation, commissioning, operation, enabling, grounding and labeling of electrical equipment.
- of the requirements for personal protective equipment.

Electrically qualified personnel, in terms of the safety-related notes in all documents accompanying the device and its components, are persons who can prove a professional qualification as an electrician.

Intended use

The devices and their components are

- intended for installation in switching cabinets and small installation distributors.
- **not** intended for installation in vehicles! Using the devices and their components in mobile equipment is considered an unusual environmental condition and is only permissible by special agreement.
- **not** intended for installation in areas exposed to harmful oils, acids, alkalis, gases, vapors, dust, radiation, etc.

The prerequisites for smooth and safe operation of the devices and their components include proper transport, storage, setup and assembly, operation and maintenance, as well as observance of the safety instructions and warning notices.

Find further safety instructions on our website under www.janitza.de > Support > Downloads.

WARNING

Risk of injury due to electrical voltage!

Serious personal injuries or death may occur!

Therefore, please observe the following:

- **Before starting work on your system, disconnect the system from the power supply! Secure it against being switched back on! Verify disconnection from power! Ground and short circuit! Cover or block off neighboring parts that are under voltage!**
- **Also make sure to check your system for dangerous voltage and switch it off if necessary during the operation and troubleshooting (especially with top hat rail devices)!**
- **For work on electrical systems, wear protective clothing and safety equipment according to applicable directives!**
- **Before connection, ground the device/ components at the ground wire connection, if available!**
- **Do not touch exposed or stripped cores that are under voltage! Fit wire end ferrules on the conductors made of individual wires!**
- **Dangerous voltages may be present in all circuit parts connected to the power supply.**
- **Secure your lines, cables and devices with a suitable circuit breaker/fuse (for dimensioning, see documentation for the device)!**
- **Never switch off, dismantle or manipulate safety devices!**
- **There may still be dangerous voltages present in the device or in the components even after disconnection of the supply voltage (capacitor storage).**
- **Do not operate operating equipment with open current transformer circuits.**
- **Only connect screw-type terminals with the same number of poles and same type!**
- **Do not exceed the threshold values stated in the user manual and on the rating plate; this must also be observed during inspection and commissioning.**
- **Safety instructions and warning notices in the documents that accompany the devices and their components!**

⚠ WARNING

Risk of injury due to high currents and high electrical voltages on the current transformers!

Open current transformers that are operated on the secondary side (high voltage peaks that are dangerous to touch) can result in serious bodily harm or even death.

- **Avoid the open operation of the current transformers. Overloaded transformers short circuit!**
- **Before interrupting the power supply, short circuit the secondary connections of the current transformer. Test switch, automatically short circuit the secondary lines of the current transformer, bring into the "Test" status (check test switch/short-circuiter beforehand)!**
- **Only use current transformers with a basic insulation according to IEC 61010-1:2010!**
- **Caution, even safe open current transformers can be dangerous to touch during open operation!**
- **Make sure that screw-type terminals for the current transformer connection on the device are sufficiently fastened!**
- **Observe the instructions and provisions in the documentation for your current transformer!**
- **Connect existing grounding connections on the secondary windings of the current transformers to ground!**
- **Make sure that the primary conductor is de-energized and secure it against unintentional restart**

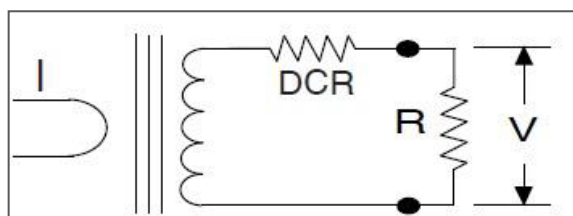
⚠ CAUTION

Risk of injury or damage to the device due to high measured currents at the connections of the current transformer!

During high measured currents, temperatures up to 80 °C (176 °F) can arise at the connections of the current transformer.

- **Use lines which are designed for an operating temperature of at least 80 °C (176 °F)!**
- **Current transformers can still be hot even after the power supply has been switched off. Let the current transformer connections and the connection lines cool down before contact!**

CONNECTION

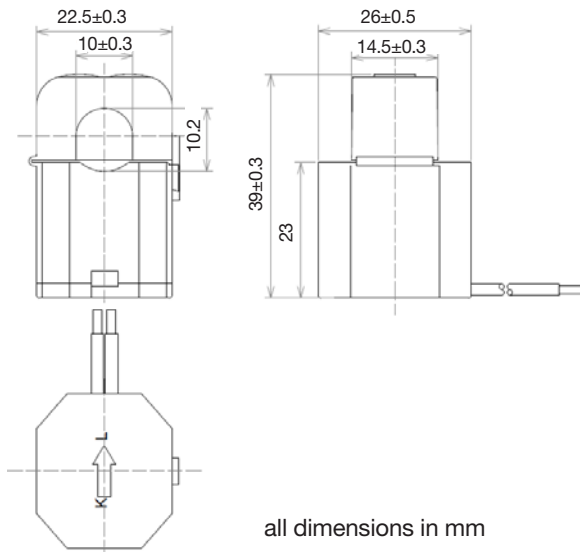


$$V = \frac{I \times R}{T_e}$$

$$V_L = V_{\max} - \left[\frac{I \times DCR}{T_e} \right]$$

TECHNICAL DATA & DIMENSIONS

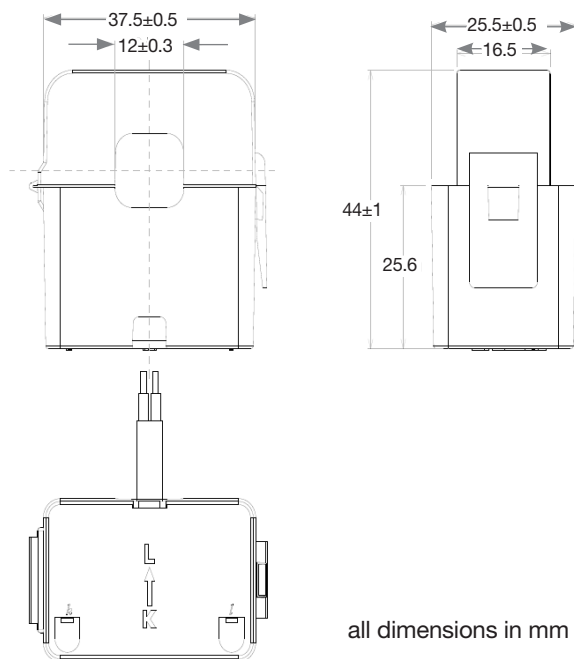
Type	Cable length	Input current
CT-SC-010-50	2.0 m (78.74 in)	50 A
CT-SC-010-50-JZ	0.25 m (9.84 in)	50 A
CT-SC-010-75	2.0 m (78.74 in)	75 A
CT-SC-010-75-JZ	0.25 m (9.84 in)	75 A



Specifications	Data
Weight appr.	60 g (0.13 lb)
Voltage Output	0.33 V
PVC wire leads	24 ~18 AWG
Accuracy class	0.5*
Frequency	50 - 400 Hz
Insulation voltage	2500 Vac/1min
Operating temperature	-40 °C to 70 °C (-40 °F to 158 °F)
Storage temperature	-45 °C to 85 °C (-49 °F to 185 °F)
Standards	ANSI C57.13, IEC61869-1, RoHS compliant
Case	Rigid housing case with UL 94 V-0 durable plastic

*further classes on request

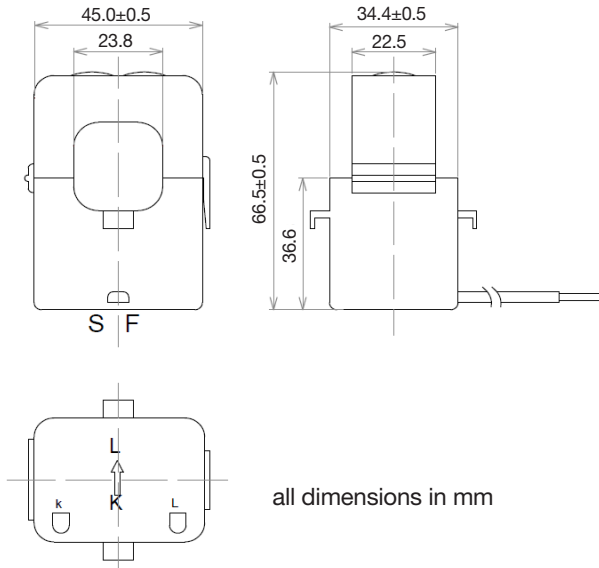
Type	Cable length	Input current
CT-SC-012-100	2.0 m (78.74 in)	100 A
CT-SC-012-100-JZ	0.25 m (9.84 in)	100 A



Specifications	Data
Weight appr.	70 g (0.15 lb)
Voltage Output	0.33 V
PVC wire leads	26 ~ 20 AWG
Accuracy class	0.5*
Frequency	50 - 400 Hz
Insulation voltage	2500 Vac/1min
Operating temperature	-40 °C to 70 °C (-40 °F to 158 °F)
Storage temperature	-45 °C to 85 °C (-49 °F to 185 °F)
Standards	ANSI C57.13, IEC60044-1, RoHS compliant
Case	Rigid housing case with UL 94 V-0 durable plastic

*further classes on request

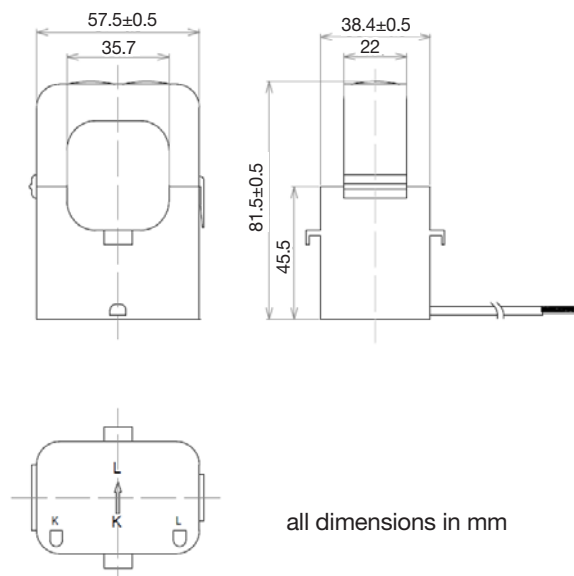
Type	Cable length	Input current
CT-SC-024-100	2.0 m (78.74 in)	100 A
CT-SC-024-200	2.0 m (78.74 in)	200 A
CT-SC-024-250	2.0 m (78.74 in)	250 A



Specifications	Data
Weight appr.	180 g (0.4 lb)
Voltage Output	0.33 V
PVC wire leads	22 ~16 AWG
Accuracy class	0.5*
Frequency	50 - 400 Hz
Insulation voltage	2500 Vac/1min
Operating temperature	-40 °C to 70 °C (-40 °F to 158 °F)
Storage temperature	-45 °C to 85 °C (-49 °F to 185 °F)
Standards	ANSI C57.13, IEC60044-1, RoHS compliant
Case	Rigid housing case with UL 94 V-0 durable plastic

*further classes on request

Type	Cable length	Input current
CT-SC-036-400	2.0 m (78.74 in)	400 A
CT-SC-036-600	2.0 m (78.74 in)	600 A



Specifications	Data
Weight appr.	350 g (0.8 lb)
Voltage Output	0.33 V
PVC wire leads	22 ~ 16 AWG
Accuracy class	0.5*
Frequency	50 - 400 Hz
Insulation voltage	2500 Vac/1min
Operating temperature	-40 °C to 70 °C (-40 °F to 158 °F)
Storage temperature	-45 °C to 85 °C (-49 °F to 185 °F)
Standards	ANSI C57.13, IEC61869-1, RoHS compliant
Case	Rigid housing case with UL 94 V-0 durable plastic

*further classes on request

OVERVIEW & ART.NO.

Type	Art. no.	Input Current	Ø mm (in)	Cable lenght m (in)	Accuracy class	Usable for Interface board
CT-SC-010-50-JZ	15.03.170	50 A	10 (0.394)	0.25 (0.394)	0.5*	Floating
CT-SC-010-50	15.03.133	50 A	10 (0.394)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-010-75-JZ	15.03.130	75 A	10 (0.394)	0.25 (0.394)	0.5*	Floating
CT-SC-010-75	15.03.134	75 A	10 (0.394)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-012-100-JZ	15.03.131	100 A	12 (0.472)	0.25 (0.394)	0.5*	Floating
CT-SC-012-100	15.03.172	100 A	12 (0.472)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-024-100	15.03.135	100 A	24 (0.945)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-024-200	15.03.136	200 A	24 (0.945)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-024-250	15.03.137	250 A	24 (0.945)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-036-400	15.03.138	400 A	36 (1.420)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-036-600	15.03.139	600 A	36 (1.420)	2,0 (78.74)	0.5*	DIN-Rail

*further classes on request

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