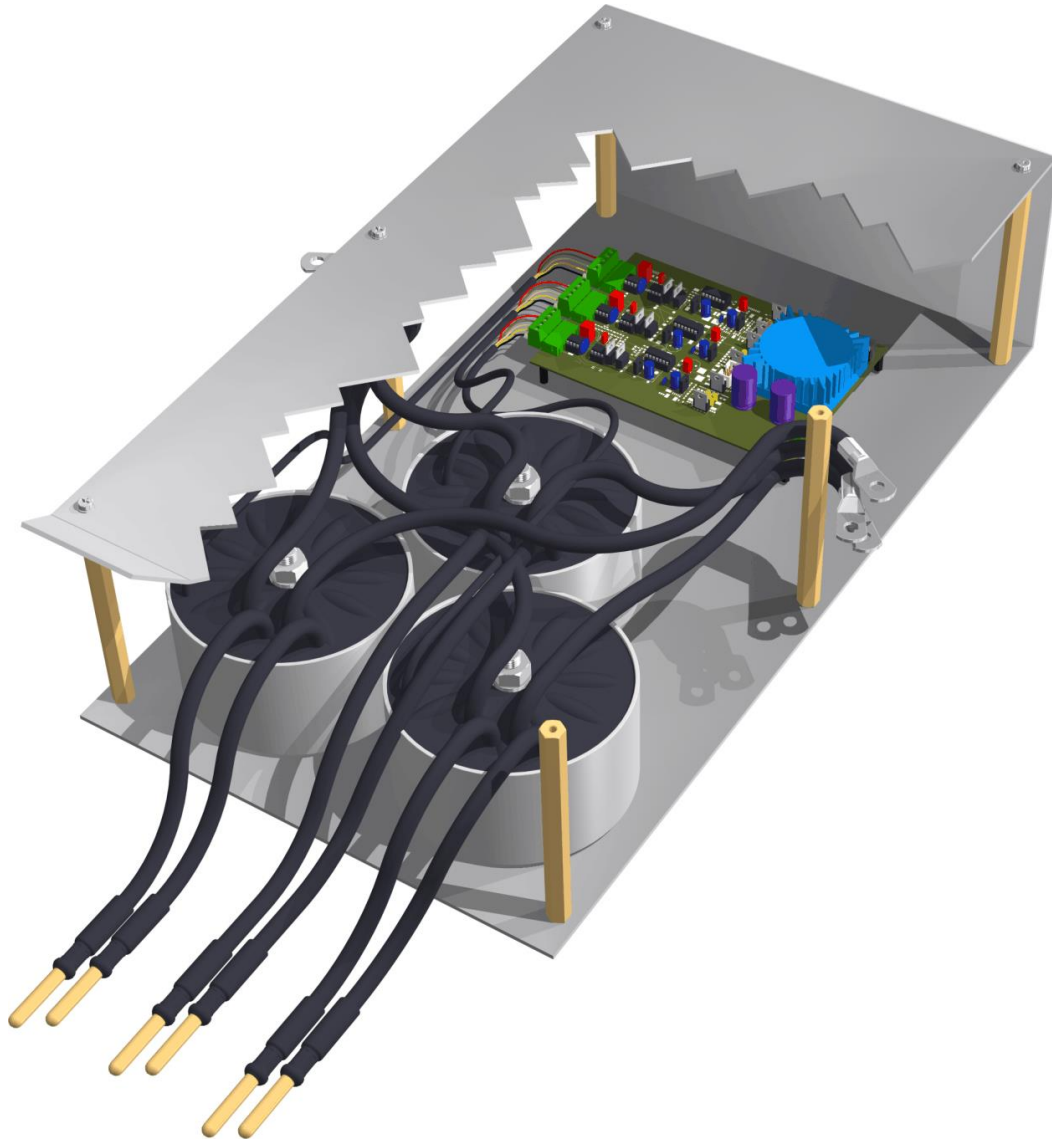


ICT 1.3-200 A

Three-phase Isolation Current Transformer



The ICT 1.3 three-phase Isolation Current Transformer is used on multi position test benches for testing three-phase meters with closed links between the current and voltage measuring circuits (C-P links). Meter of this type are produced and used with increasing frequency.

While testing meters with fix closed C-P links, unwanted connections between voltage and current path at each test position will cause significant accuracy reduction.

In this case transformers in the current circuit are required to decouple the voltage from the current path.

To achieve complete decoupling the test installation must be fitted with one current transformer per phase for each test position. In this way each meter under test is supplied with isolated test currents via these toroidal-core current transformers.

Normally the current ratio is 1:1 and a phase error over the required current range small enough not to introduce significant additional errors.

Advantages

- Wide current range from 25 mA up to 200 A
- Output power max. 100 VA
- High accuracy class 0.05 by electronic error compensation
- Overload protected

Application

- Multi position test systems for meters with closed current-voltage links
- Module for modernisation of older test systems

Technical Data ICT 1.3-200 A

General characteristics

Auxiliary supply:	230 V $\pm$ 15 %, 50 Hz $\pm$ 5 % or 60 Hz $\pm$ 5 %	
Power consumption:	max. 10 VA	
Housing:	Metal carrier plate with three isolation current transformers	
Dimensions:	W 325 x D 170 x H 590 mm	
Operation temperature:	- 10°C ... +50°C	
Storage temperature:	- 20°C ... +60°C	
Weight:	approx. 25 kg	
Terminals:	Primary:	Cables with cable shoes (6 pieces)
	Secondary:	Cables with fingers $\varnothing$ 8 mm (6 pieces, length: 560 mm)

Transformer characteristics

Nominal frequency fn:	50 Hz (47 ... 55 Hz) or 60 Hz (54 ... 66 Hz)
Ratio:	1:1 (primary current = secondary current)
Current range:	25 mA ... 200 A
Class:	0.05 (100 mA ... 200 A)
Operating isolation voltage:	0.72 kV, 50 / 60 Hz (input or output to earth, input to output)

Output power (per phase)

Output power max.:	100VA	80 VA	60 VA	50 VA	40 VA	30 VA	5.0 VA
	at 200 A	at 160 A	at 120 A	at 100 A	at 80 A	at 60 A	at 10 A

Power dissipation max.:	68 VA	44 VA	24 VA	17 VA	11 VA	6 VA	0.17 VA
	at 200 A	at 160 A	at 120 A	at 100 A	at 80 A	at 60 A	at 10 A

(Input burden: 1.7 m Ω)

Output burden (per phase)

Output burden voltage:	max. 0.5 V ($\cos \beta = 0.5 \dots 0.6 \dots 0.75$)
Range:	1 A ... 200 A (R in Ω : 0.5 V divided by actual current)

Output burden max.:	2.5 m Ω	3.1 m Ω	4.17 m Ω	5 m Ω	6.2 m Ω	8.3 m Ω	50 m Ω
	at 200 A	at 160 A	at 120 A	at 100 A	at 80 A	at 60 A	at 10 A

Error

Range:	100 mA ... 200 A (whole output burden range)	25 mA ... 100 mA (whole output burden range)	10 mA ... 25 mA (whole output burden range)
Ratio error:	$\leq \pm 0.05 \%$	$\leq \pm 0.10 \%$	$\leq \pm 0.20 \%$
Angle error:	$\leq \pm 0.8 \text{ min}$	$\leq \pm 1.5 \text{ min}$	$\leq \pm 15 \text{ min}$

Range:	100 mA ... 200 A	25 mA ... 100 mA	10 mA ... 25 mA
Typical (max.) error of meter test system with ICT:	$\cos \varphi = 1$ $\cos \varphi = 0.5c \dots 1 \dots 0.5i$	$\cos \varphi = 1$ $\cos \varphi = 0.5c \dots 1 \dots 0.5i$	$\cos \varphi = 1$ $\cos \varphi = 0.5c \dots 1 \dots 0.5i$
ICT 1.3 + SRS 200.3 / 200 A (Classe 0.02)	$\leq \pm 0.03 \%$ (0.07 %) $\leq \pm 0.05 \%$ (0.14 %)	$\leq \pm 0.05 \%$ (0.12 %) $\leq \pm 0.10 \%$ (0.24 %)	$\leq \pm 0.15 \%$ (0.22 %) $\leq \pm 0.50 \%$ (1.00 %)
ICT 1.3 + SRS 121.3 (Classe 0.05)	$\leq \pm 0.05 \%$ (0.10 %) $\leq \pm 0.10 \%$ (0.20 %)	$\leq \pm 0.10 \%$ (0.15 %) $\leq \pm 0.15 \%$ (0.30 %)	$\leq \pm 0.15 \%$ (0.25 %) $\leq \pm 0.50 \%$ (1.00 %)

Safety requirements

Dielectric strength: 3 kV, 50 / 60 Hz, 1 min

Block diagram

