

LOW-VOLTAGE CURRENT TRANSFORMERS FOR REVENUE METERING

Available as *Extended Range Current Transformers*

ROS-A Series



Introduction

Resin-insulated current transformers *ROS-A* Series, designed for billing purposes and suited to 0.72 kV (IEC) or 0.6 kV (IEEE) power systems, offer revenue metering accuracy of Class 0.15 to Class 0.3. Current Ratios available are from 100:5A to 4000:5A, and window diameter options are 38mm, 66mm, 78mm, and 146mm.

ROS-A current transformers are available in two series: Standard Series and ERCT Series (Extended Range Current Transformers). The Standard Series current transformers have a Continuous Thermal Rating Factor of up to 4.0 (see Note 1). The ERCT Series are able to maintain the rated accuracy and burden while measuring $1\% \sim 150\%$ or even $1\% \sim 200\%$ of the rated current, surpassing the usual metering-class requirement ($5\% \sim 100\%$).

All ROS-A current transformers have been type-tested by CIC's Advanced Electricity Lab, a testing facility accredited by a member of ILAC.

Features

- Standards: IEEE C57.13-2016 & IEC 61869-2:2012
- Secondary side equipped with a short-circuiting device
- Terminal cover provided for the secondary side
- Sealable
- Usage Environment: Indoors, or outdoors (See Note 2).
- Rated Voltage: Up to 0.72 kV
- Frequency: 60 Hz

- Metering Class: 0.15 to 0.3
- Type-tested by a laboratory accredited by an ILAC member
- Additional specification or customization may be requested to comply with various electrical standards and client requirements

Notes:

1. The Continuous Thermal Rating Factor, also called Thermal Rating Factor (TRF) or Rating Factor (RF), signifies how much the "actual primary current" can exceed the rated Primary Current and still meet accuracy and temperature guidelines. For example, a Rating Factor of 2.0 means the current transformer can continuously handle double its rated Primary Current without overheating.

2. While the product's water-repellent property and standard secondary cover allow for potential outdoor operation under certain conditions, it's not guaranteed to withstand all weather elements. For full outdoor use, contact CIC for our special outdoor option, providing IP65 protection.

Low-Voltage Current Transformers for Revenue Metering

ROS-A Series

Page 1/2 cic-ltd.com.tw

Selection Tables

• ERCT Series & Standard Series per IEEE C57.13-2016

| Model | Primary Current (A) | Secondary Current (A) | Accuracy, Burden & Rating Factor (30°C Ambient) | | | | | |
|----------|---------------------------|-----------------------------|--|-------------------|-----------------------|------------------|-------------|--------|
| | | | ERCT Series* | Standard Series | | Diameter (mm) | Weight (kg) | Figure |
| | | | | Class 0.3 | Class 0.15 | (11111) | (1.6) | |
| ROS-38A | 100 | 5 | 0.3 B-0.2, RF=1.5 | 0.3 B-0.2, RF=4.0 | - | 38 | 6.5 | - 1 |
| ROS-66A | 150 | | 0.3 B-0.1, RF=1.5 | 0.3 B-0.1, RF=4.0 | | 66 | 5.0 | |
| | 200~250 | | 0.3 B-0.5, RF=1.5 | 0.3 B-0.5, RF=4.0 | 0.15 B-0.5, RF=2.0 | | | |
| ROS-78A | 300~400 | | 0.3 B-0.5, RF=1.5 | 0.3 B-0.5, RF=4.0 | | 78 | 4.0 | |
| | 500 | | 0.3 B-0.5, RF=1.5 | 0.3 B-0.5, RF=3.0 | | | | |
| | 600~800 | | 0.3 B-0.5, RF=1.5 | 0.3 B-0.5, RF=2.0 | | | | |
| ROS-146A | 600~800 | | 0.3 B-0.2, RF=1.5 | 0.3 B-0.5, RF=3.0 | | 146 | 5.5 | 2 |
| | 1000~1200 | | 0.3 B-0.9, RF=1.5 | 0.3 B-0.9, RF=2.0 | | | | |
| | 1500 | | 0.3 B-0.9, RF=1.5 | 0.3 B-0.5, RF=3.0 | | | | |
| | 2000 | | 0.3 B-1.8, RF=1.5 | 0.3 B-1.8, RF=2.0 | | | | |
| | 2500~4000 | | 0.3 B-1.8, RF=1.5 | 0.3 B-1.8, RF=1.5 | | | | |

^{*} ERCT Operating Range for Accuracy: 1% ~ 150% of Rated Current Note: Other standards and specifications available

• ERCT Series per IEC 61869-2:2012

| Model | Primary Current (A) | Secondary Current (A) | Accuracy / Burden & Rating Factor (30°C Ambient) | Window Diameter (mm) | | |
|----------|---------------------------|-----------------------------|---|----------------------------|-----|---|
| ROS-66A | 200~250 | | 0.2S / 15VA, RF=2.0 ** | 66 | 5.0 | 1 |
| ROS-78A | 300~400 | | | 78 | 4.0 | |
| | 500 | | | | | |
| | 600~800 | | | | | |
| ROS-146A | 600~800 | | | 146 | 5.5 | 2 |
| | 1000~1200 | | | | | |
| | 1500 | | | | | |
| | 2000 | | | | | |
| | 2500~4000 | | | | | |

^{**} ERCT Operating Range for Accuracy: $1\% \sim 200\%$ of Rated Current







Figure 2



CHALLENGE INDUSTRIAL CO., LTD.

1F, No. 46, Ln. 80, Sec. 3, Nangang Rd., Taipei City 115 , Taiwan (R.O.C.) T: 886-2-2788-3368 ext. 2318