

UniSec Toroidal current transformers

Air-insulated medium-voltage switchgear
for secondary distribution
up to 24 kV, 1250 A, 25 kA



Operation and advantages of using toroidal CT in UniSec MV switchgear

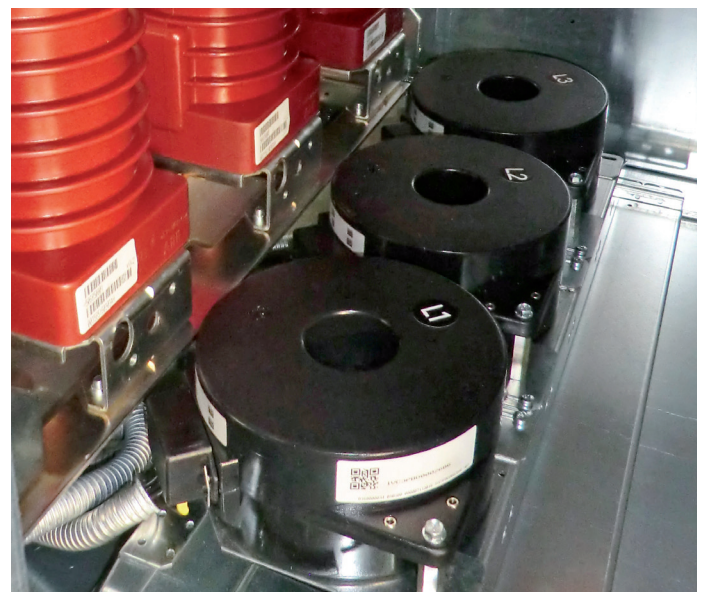
A few details and the benefits in using the toroidal current transformers that ABB proposes in UniSec MV secondary distribution switchgear are outlined below.

- Toroidal current transformers are low voltage devices for internal use that are suitable for both protection and measurement.
- The type of signal transmitted from the secondary winding is identical in DIN and Toroidal transformers. This means that both can be used for measurement and protection systems with multifunctional relays or simple ammeters or voltmeters.
- Just like the DIN type, toroidal current transformers are available in various ratio, class and performance versions.
- These toroidal current transformers are designed, manufactured and tested in accordance with the pertinent IEC international standards.
- Toroidal current transformers have been successfully used in the market for years in a wide variety of applications.
- Toroidal current transformers are much lighter than the DIN type. This means that they reduce panel weight to a considerable extent.
- Since these toroidal current transformers are a low voltage product, they can be installed around an insulated cable, thus saving space in the panel.
- Being low voltage products, the toroidal current transformers can be installed near to each other and save additional space. This is impossible with DIN transformers, where distance is required so as to avoid discharge.

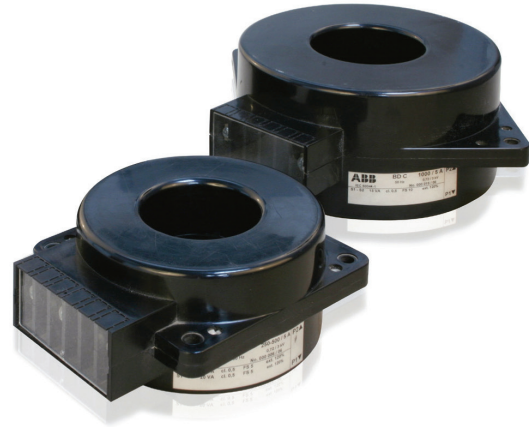
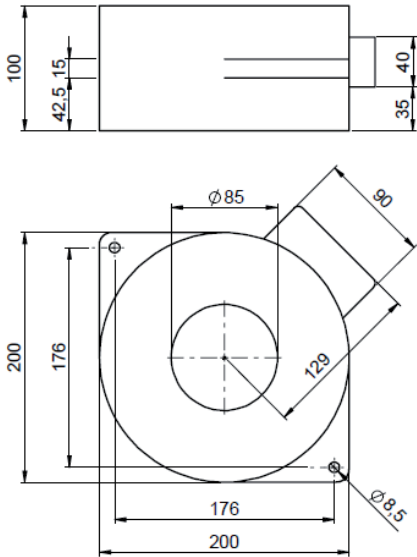
Installation of toroidal CT in UniSec MV switchgear

Toroidal current transformers are usually installed at the bottom of UniSec panels using dedicated fastening kits to maintain them in the correct position.

They can be easily installed on site when the MV cables are being connected in the panel.



Installation examples



Types of toroidal CT in UniSec MV switchgear

ABB analyzed all the various situations, considering both the typical units of UniSec switchgear and the possible sections of MV cable for secondary distribution ratings, and consequently defined just 1 single type of toroidal current transformer able to cover all requirements and facilitate the customers' choice. With its 85 mm internal diameter, this toroidal CT covers ratings up to 1000 A, 24 kV, 25 kA, 3 sec, 50/60 Hz with MV cable sections up to 630 mm².

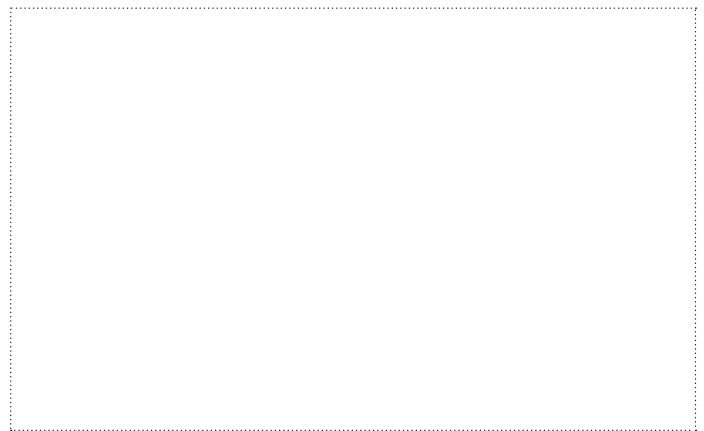
Electrical characteristics of the toroidal CT in UniSec MV switchgear

ABB has developed a complete, easy-to-choose-from range for each of the types described above. Suitable for all requirements, the products are guaranteed by ABB for optimal use with Relion multifunctional relays for both protection and measurement functions.

The characteristic types of CT recommended by ABB are outlined in the table below:

Ratio	Range covered [A]	Class	Performance [VA]
100/1	10-70	0.5 - 5P20	1
300/1	70-240	0.5 - 5P20	2
500/1	240-400	0.5 - 5P20	2
700/1	400-560	0.5 - 5P20	2
800/1	560-640	0.5 - 5P20	2
1000/1	640-800	0.5 - 5P20	2

Detailed calculations are available. Contact the manufacturer for further details



Your sales contact: www.abb.com/contacts

More product information: www.abb.com/productguide

The data and illustrations are not binding. We reserve the right to make changes in the course of technical development of the product.

© Copyright 2016 ABB.
All rights reserved.