Trench Optical Current Transformers are a revolutionary alternative to conventional current transformers, providing an advanced solution for measurement and protection applications, based on cutting-edge optical sensing technology.
OPTICAL CURRENT TRANSFORMER

CHARACTERISTICS
• No ambient temperature limitation
• Filled with nitrogen compressed slightly above ambient pressure – to avoid ingress of moisture or other objects

GENERAL
• Aluminum housing with glass ring sensors
• Insulators made of composite materials that can withstand mechanical stresses, including tensile, short-circuit, and seismic forces
• A connection box for attaching a TOCT to the station’s fiber optic cables
• A signal processing unit, merging unit, containing a light source, photodetectors, and signal processing. It comes with up to three individual channels for measurement
OPTICAL CURRENT TRANSFORMER

APPLICATION AREAS
Suitable for low-temperature applications at -50 °C and below, in IEC 61850-9-2 compliant digital substations, thanks to digital “process bus” interface with long-distance fiber optic cable, which offers maximum flexibility for applications.

SUSTAINABILITY
REGENERA™ is our holistic approach to protecting ecosystems, fostering environmental harmony and promoting a circular economy.
MAIN FEATURES
Trust in our tailor-made solutions for your unique needs

Wide Application Range
Optical current sensor enables use of only one type of TOCT for a wide range of protection and measurement applications.

Passive System
No electronic components needed within the TOCT.

More Compact CT Design
Small and light-weight units compared to conventional CT design.

Reduced Cabling Effort
Single fiber-optic cable instead of several copper cables with large cross-sections.

Improved Operational Safety
Galvanic separation between primary and secondary side.

GWP Of Zero for Insulation Gas
Zero CO2 equivalent compared to 24,300 kg CO2 equivalents by using conventional gas.

Merging Unit 6Mu85 + IO245
Together with 6MU85, the IO245 forms the merging unit which provides an IEC 61850-9-2 interface with redundant digital connections to station bus, IEC 61850-8-1, and process bus, IEC 61850-9-2.

Complete TOCT Set for A 3-Phase Installation
Contains three TOCTs, primary equipment, one 6MU85, base merging unit, one IO245, providing the interface to the TOCTs.
INSIDE THE PRODUCT

Main components of the Optical Transformer

As a pioneer of innovation in the field of digital technologies in high-voltage switchgears, the powerful and durable Trench Optical Current Transformers do not require any harmful insulating medium.

SIMPLIFIED INSULATION SYSTEM
Eco-friendly without harmful insulators.

PRIMARY BAR
Designed for high rated currents up to 6000 A. Compact but rigid design, suitable for short time currents, short circuits, up to 80 kA, rms, /ls

PRIMARY TERMINALS
Customized HV-Connection, suitable for IEC, NEMA and others.

SUPPORT
Support for optical current sensors specially designed to minimize vibration effects.
THE FUTURE OF ENERGY IS NOW AND IT’S EXTRAORDINARY

THE CRUCIAL ROLE OF POWER TRANSMISSION

Our vision of a sustainable future starts with an eco-friendly portfolio of high voltage products and systems, brought to you by our dedicated team of global innovators.

Our mission is to support our customers, from power generation through transmission and distribution to the electricity consumers, in their transition to clean energy and a greener world.