Medium voltage product

Instrument transformers for indoor applications
Product overview

Power and productivity
for a better world™

02

Contents

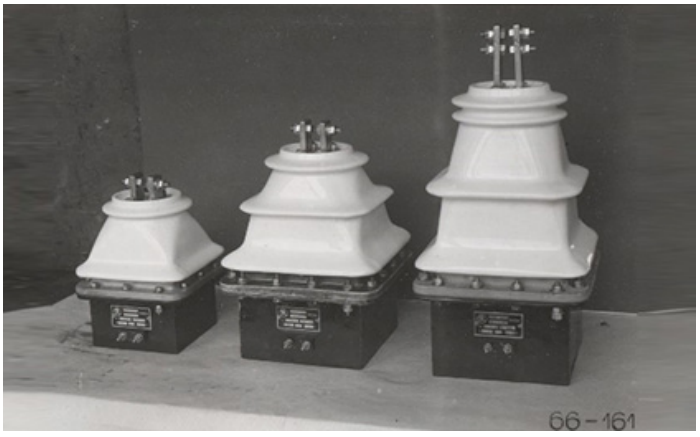
ABB - a global technology leader

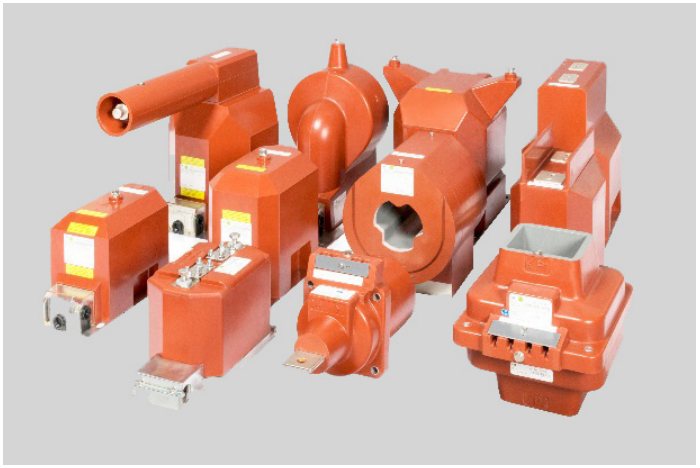
Foundation of the factory in Brno dates back to 1887. During its more than 120-year-history it gained deep knowledge and a strong position in the electro-technical field and became known all over the world. The production of transformers in the factory in Brno started in 1912. First transformers were oil insulated, production of transformers with epoxy insulation started already in 1952.

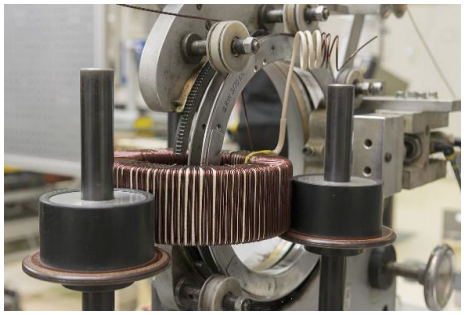
The production facility in Brno joined the ABB Group in 1993; since that time the production has been continuously developing and nowadays is one of the world's largest Instrument Transformers and Sensors production plant with an annual production of more than 150,000 units applications worldwide.

Thanks to the automation and investments, ABB in Brno became the technology leader using the most modern production systems and concepts, such as automated production lines and testing. Products gained their worldwide reputation in power distribution applications thanks to more than 2,000,000 installed units.

As a result of continuous research in ABB's Brno development center are products with latest design. As such, the center is committed to the pursuit for new opportunities, new technologies and to improve processes. One of the areas of the fully equipped development center is an independent testing laboratory used for type testing.









Additionally, the factory has its own testing laboratory with the latest equipment for precise measuring of all units, which are routinely tested according to required standards like IEC, CSN, GOST, BS, AS, ANSI. This laboratory is also certified by the following national bodies allowing ABB to issue metrology verification certificates when requested by customers:

- PTB (Germany)
- Electro Suisse (Switzerland)
- BEV (Austria)
- Energocert (Russia)
- Urad za meroslovje (Slovenia)
- SMU (Slovakia)

ABB's Instrument Transformers and Sensors factory in Brno offers a wide range of Conventional Instrument Transformers as well as Electronic Instrument Transformers (Sensors).

Our conventional portfolio includes more than 100 types of products for indoor applications in medium voltage systems for voltages from 0.72 kV up to 40.5 kV.

The main line of ABB instrument transformers is designed in accordance with DIN 42600, which offers compatibility with a wide portfolio of applications. The portfolio reflects the market trends and is continuously developing according to the customers' requirements.

ABB in Brno has been certified in the following quality management systems ensuring that products that come out of the factory are of the highest quality:

- ISO 9001
- ISO 14001
- OHSAS 18001

Current transformers

TPU

A current transformer so arranged that it acts as a support for the conductor in the primary circuit. TPU current transformers are suitable for the current air insulated switchgear portfolio, OEM (Original Equipment Manufacturer) partners, utilities and many others.

Characteristic

- Supporting type
- For measuring an protection with up to 6 secondary windings (12 clamps)
- Secondary or primary reconnectable
- Capacitive voltage divider in current transformer (CT) body for voltage indication available
- Most electrical standards available (IEC, GOST, AS, BS, ANSI, VDE, CSN, others on request)
- DIN dimensions according to 42600 part 8
- Transparent secondary terminal cover as an option
- Suitable for tariff metering
- Sealable secondary terminal

Ratings

- Highest voltage for equipment: 3.6 - 40.5 kV
- Primary current: 10 - 3 200 A
- Rated short - time thermal current: up to 100 kA /1 s
- Secondary current: 1 or 5 A
- Frequency: 50 or 60 Hz

TPE

A current transformer so arranged that it acts as a support for the conductor in the primary circuit. TPE current transformers have lower ratings suitable for secondary distribution system, OEM.

Characteristic

- Supporting type
- For measuring and protection with one or two secondaries only
- Secondary reconnectable versions
- Capacitive voltage divider in CT body for voltage indicator available
- Most standards available (IEC AS, BS, ANSI, VDE, CSN, others on request)
- Optional transparent secondary terminal

Ratings

- Highest voltage for equipment: 3.6 - 24 (25) kV
- Primary current: 30 - 1 250 A
- Rated short - time thermal current: 25 kA /1 s
- Secondary current: 1 or 5 A
- Frequency: 50 or 60 Hz

KOFA

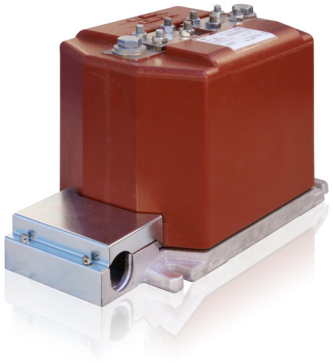
A current transformer so arranged that it acts as a support for the conductor in the primary circuit. KOFA current transformers are suitable for the former ABB air insulated switchgear like MH type , etc., OEM.

Characteristic

- Supporting type
- For measuring and protection with up to 3 secondary windings
- Primary reconnectable versions available
- Most standards available (IEC, ANSI, CAN, BS,..)
- Sealable secondary terminal

Ratings

- Highest voltage for equipment: 3.6 - 24 kV
- Primary current: 10 - 2 500 A
- Rated short - time thermal current: 54 kA /1 s
- Secondary current: 1 or 5 A
- Frequency: 50 or 60 Hz



IHBF

A current transformer so arranged that it acts as a support for the conductor in the primary circuit. IHBF current transformers are suitable for the former ABB air insulated switchgear like Safesix, etc., OEM.

Characteristic

- Supporting type
- For measuring and protection with up to 2 primary reconnectable versions
- Secondary or primary reconnectable versions
- Most standards available (IEC, ANSI, CAN, BS,..)
- Plug-in or clamp type secondary terminal available

Ratings

- Highest voltage for equipment: 3.6 - 24 kV
- Primary current: 10 - 2 000 A
- Rated short - time thermal current: 50 kA /1 s
- Secondary current: 1 or 5 A
- Frequency: 50 or 60 Hz

KOKS 12, 17.5

A current transformer without primary conductor, but with primary insulation which can be fitted directly over a conductor or busbar.

Characteristic

- Bus type
- For measuring an protection with up to 6 secondary windings
- Secondary reconnectable
- Most electrical standards available (IEC, GOST, AS, BS, ANSI, VDE, CSN, others on request)
- Suitable for tariff metering

Ratings

- Highest voltage for equipment: 3.6 - 17.5 kV
- Primary current: 500 - 4 000 A
- Rated short - time thermal current: 90 kA /1 s
- Secondary current: 1 or 5 A
- Frequency: 50 or 60 Hz

TTR

A current transformer with bar primary conductor so constructed that it can be used as a bushing. TTR current transformers are suitable as a bushing between two AIS compartments, different switchboards, OEM.

Characteristic

- Bar primary bushing type
- For measuring and protection with up to 2 secondary windings
- Secondary reconnectable versions available
- Most electrical standards available (IEC, CSN)

Ratings

- Highest voltage for equipment: 3.6 - 24 (25) kV
- Primary current: 100 - 2 500 A
- Rated short - time thermal current: 100 kA /1 s
- Secondary current: 1 or 5 A
- Frequency: 50 or 60 Hz

BB, BBO

A current transformer without primary conductor but with primary insulation of its own which can be used as a bushing.

Characteristic

- Bushing type
- For measuring and protection with up to 3 secondary windings
- Secondary reconnectable versions
- Most electrical standards available (IEC, CSN)

Ratings

- Highest voltage for equipment: 3.6 - 24 (25) kV
- Primary current: 600 - 5 000 A
- Rated short - time thermal current: 80 kA /1 s
- Secondary current: 1 or 5 A
- Frequency: 50 or 60 Hz

BP - 15

A current transformer suitable for outlets of generator, etc.

Characteristic

- Special type
- Current transformer in special design for generator outlets
- 1 to 3 secondary windings
- Most electrical standards available (IEC, CSN)

Ratings

- Highest voltage for equipment: 3.6 - 17.5 kV
- Primary current: 2 000 - 10 000 A
- Rated short - time thermal current: 80 kA /1 s
- Secondary current: 1 or 5 A
- Frequency: 50 or 60 Hz

KOKS 24

A current transformer without primary conductor, but with primary insulation which can be fitted directly over a conductor or busbar. Suitable for outlets of generator.

Characteristic

- Special type
- For measuring an protection with up to 4 secondary windings
- Most electrical standards available (IEC, AS, BS, ANSI, VDE, CSN, others on request)
- Secondary reconnectable versions available

Ratings

- Highest voltage for equipment: 24 kV
- Primary current: 1 000 - 8 000 A
- Rated short - time thermal current: 100 kA /1 s
- Secondary current: 1 or 5 A
- Frequency: 50 or 60 Hz

DUMMY CT

Dummy is supporting part which is used in application where does not have to be used current transformer.

Characteristic

- Supporting type
- Capacitive voltage divider in dummy body for voltage indication available
- DIN standard according to 42600 part 8

Ratings

- Highest voltage for equipment: 3.6 - 24 kV
- Primary current: up to 2 500 A
- Rated short - time thermal current: up to 63 kA /1 s, 40 kA /3s
- Frequency: 50 or 60 Hz

Voltage transformers

TJC

Single phase voltage transformer which is intended to have one end of its primary winding directly earthed. TJC voltage transformers are suitable for the current air insulated switchgear portfolio, OEM partners, utilities and many others.

Characteristic

- For measuring an protection with up to 3 secondary windings
- Reconnectable versions available
- Most electrical standards available (IEC, GOST, AS, BS, ANSI, VDE, CSN, others on request)
- DIN dimensions according to 42600 part 9
- Available variant with extended parameters for voltages 3.6 - 17.5 kV (TJCH)
- Optional transparent secondary terminal cover
- Suitable for tariff metering
- Sealable secondary terminal

Ratings

- Highest voltage for equipment: 3.6 - 40.5 kV
- Primary voltage: 3 000 /√3 - 35 000 /√3 V
- Secondary voltage: 100/√3 - 120/√3, 100/3 - 120/3 V
- Frequency: 50 or 60 Hz

TJE

Single phase voltage transformer which is intended to have one end of its primary winding directly earthed. TJE 3, TJE 4 voltage transformers have lower ratings and are suitable for mine switchboards, OEM.

Characteristic

- For measuring and protection with up to 2 secondary windings
- Reconnectable versions available
- Most electrical standards available (IEC, AS, BS, ANSI, VDE, CSN, others on request)
- Non DIN solution, optional DIN baseplate available
- Available variant for voltage 12 - 24 kV (TJCL)
- Optional transparent secondary terminal cover
- Sealable secondary terminal

Ratings

- Highest voltage for equipment: 3.6 - 12 kV
- Primary voltage: 3 000 /√3 - 11 000 /√3 V
- Secondary voltage: 100 /√3 - 120 /√3, 100 /3 - 120 /3 V
- Frequency: 50 or 60 Hz

TJP

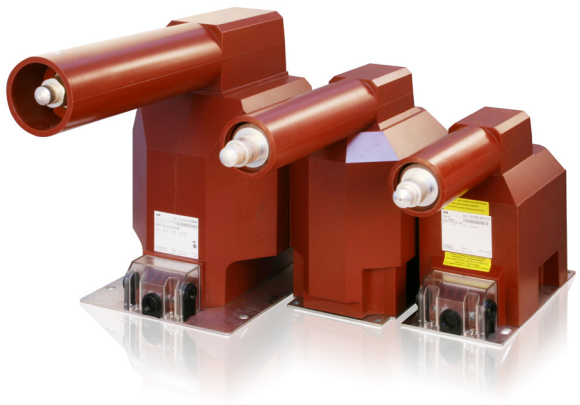
Single phase voltage transformer which is intended to have one end of its primary winding directly earthed. TJP transformer is equipped with fuse connected to primary winding.

Characteristic

- For measuring and protection with up to 3 secondary windings
- Reconnectable versions available
- Most electrical standards available (IEC, GOST, AS, BS, ANSI, VDE, CSN, others on request)
- DIN dimensions according to 42600 part 9
- Various fuses from 300 mA to 6.3 A
- Various high voltage terminals available (spring, cable connection,..)
- Available variant with extended parameters for voltages 3.6 - 17.5 kV (TJPH)
- Optional transparent secondary terminal cover
- Suitable for tariff metering
- Sealable secondary terminal

Ratings

- Highest voltage for equipment: 3.6 - 40.5 kV
- Primary voltage: 3 000 /√3 - 35 000 /√3 V
- Secondary voltage: 100 /√3 - 120 /√3, 100 /3-120 /3 V
- Frequency: 50 or 60 Hz



TDC

Double pole voltage transformer which has all parts of its primary winding, including terminals, insulated from the earth at a level corresponding to its rated insulation level.

Characteristic

- For measuring and protection with up to 2 secondary windings
- Reconnectable versions available
- Most electrical standards available (IEC, GOST, AS, BS, ANSI, VDE, CSN, others on request)
- DIN dimensions according to 42600 part 9
- Optional transparent secondary terminal cover
- Suitable for tariff metering
- Sealable secondary terminal

Ratings

- Highest voltage for equipment: 3.6 - 40.5 kV
- Primary voltage: 3 000 - 35 000 V
- Secondary voltage: 100 - 120 V
- Frequency: 50 or 60 Hz

KGUGI

KGUGI is single pole insulated voltage transformer with high power output.

Characteristic

- Voltage transformers for power supply
- For measuring and protection with up to 2 secondary windings
- IEC standard available (another on request)

Ratings

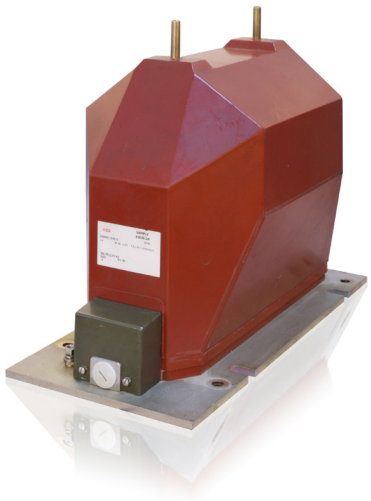
- Highest voltage for equipment: 24 - 36 kV
- Primary voltage: 15 000 /√3 - 30 000 /√3 V
- Secondary voltage: 100 /√3 - 120/√3, 100 /3 - 120 /3 V
- Thermal burden: up to 2 000 VA
- Frequency: 50 or 60 Hz

KGUG

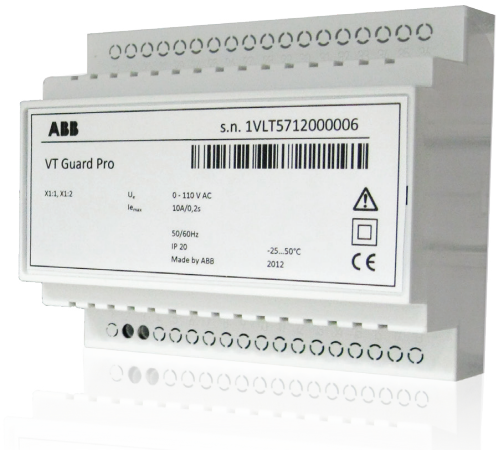
KGUG is double pole insulated voltage transformer with high power output.

Ratings

- Highest voltage for equipment: 24 - 36 kV
- Primary voltage: 15 000 - 35 000 V
- Secondary voltage: 100 - 120 V
- Thermal burden: up to 2 000 VA
- Frequency: 50 or 60 Hz



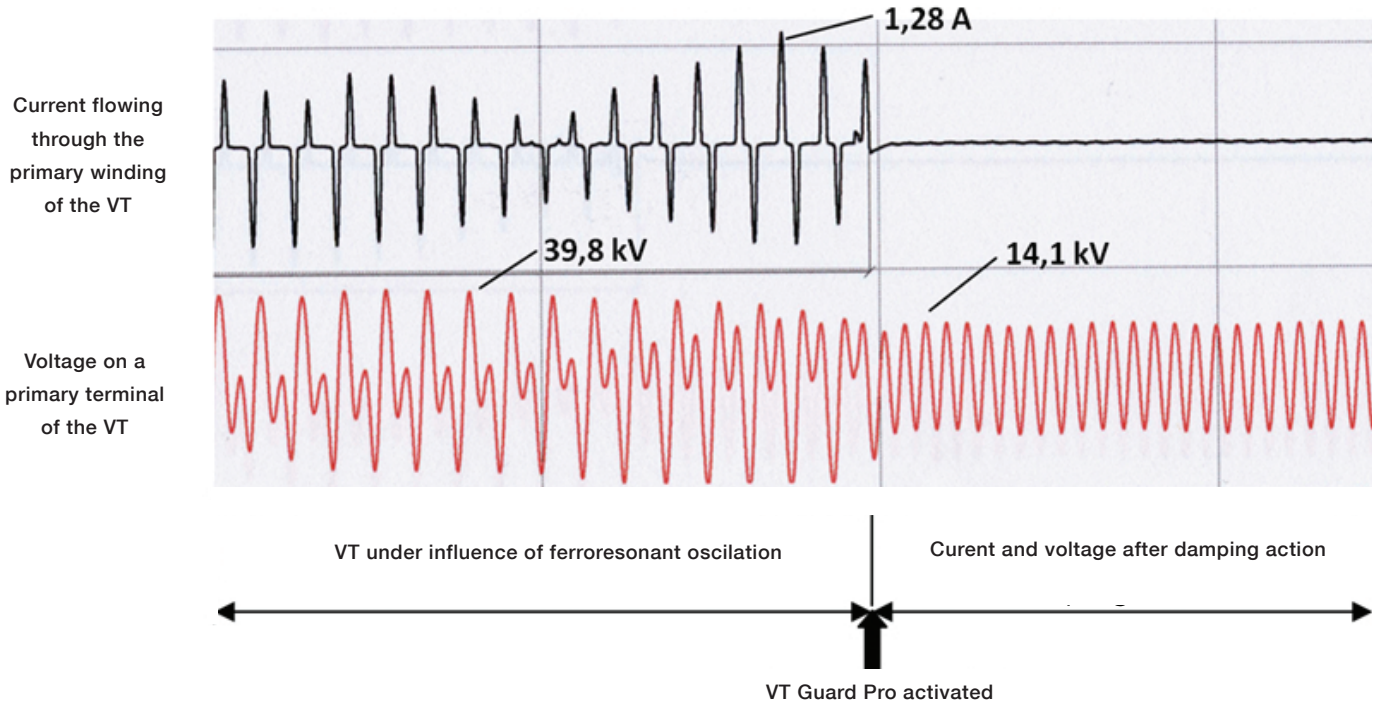
VT Guard Pro, Pro D



VT Guard Pro is an security device that protects medium voltage inductive voltage transformers against ferroresonant oscillation. Ferroresonance can arise in ungrounded power networks or in the networks where is not directly grounded neutral point. It is designed to be used in open- delta connection of three single-phase voltage transformers.
VT Guard Pro (Pro D) fully replace dumping resistor and save space in customer application.

Ratings

- Rated operational voltage: 100 /110 V AC
- Voltage range: 0 - 110 V AC
- Maximal operational current: 10 A /0.2 s
- Nominal frequency: 50 or 60 Hz
- Mounting in low voltage compartment of switchgear



Notes

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