

## Outdoor current transformers TPO xx.xx

Rated voltages: 25 kV and 40,5 kV

Rated currents: 10 ÷ 3000A



TPO 6x.xx



TPO 7x.xx

The TPO xx.xx current transformers are cast in hydrophobic epoxy resin, capable of withstanding outdoor environmental conditions and designed for insulation voltages up to:

- 25 kV for TPO 6x.xx,
- 40,5kV for TPO 7x.xx,

### Main features:

- Designed and type tested according to IEC 61869-2,
- High level breaking performance with current up to 100kA,
- Casted with HCEP mixture which gives hydrophobicity performance,
- Designed and tested for harsh conditions.

### Description

For insulation and protection, transformers are cast in hydrophobic cycloaliphatic epoxy resin (HCEP), capable of withstanding outdoor environmental conditions. The HCEP material offers superior arc track, ozone, and ultraviolet-resistive properties while maintaining physical strength.

The hydrophobic surface properties of HCEP ensure highly reliable performance in wet or humid environments.

The TPO xx.xx transformers are designed as single-or multiple turn transformers, with one transformer ratio, and, if necessary, with the possibility to be reconnectable on the primary or secondary side. The number of secondary windings ranges from 1 to 4 (but usually 2) depending on parameters (such as the accuracy class, short-circuit current, overcurrent factor, burden....).

The secondary windings are used for measurement or protection purposes, or for special use (testing winding, "PX" class).

One terminal of each secondary winding used and one terminal of the unused, short-circuited, wind-

ings must be earthed during transformer operation. The transformer body is fixed by using four screws. For ease of handling and assembly the transformer is supplied with suspension lugs. The secondary winding is led out into a cast secondary terminal board covered with a sealed cover. The transformers are designed and manufactured to conform with the requirements and recommendations of IEC 61869-2 standard.

### Terminals

Primary terminals are electro-tin copper. Clamp-type secondary terminals accommodate up to 6 mm<sup>2</sup> wire.

### Junction box

The junction box is equipped with PG21 cable gland. The box is casted together with transformer. Junction box cover is screwed to junction box with additional protection sealing.

### Mounting

The TPO is mounted by corrosion-resistant aluminum rails and can be mounted in vertical positions (as visible on the pictures above).

Stress relief devices should be used to support cable connections.

### Test reports

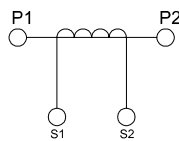
Test reports are stored electronically and can be e-mailed in various formats at the time of shipment.

## Parameters

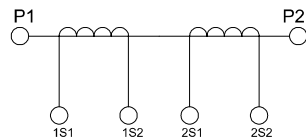
		TPO 6x.xx	TPO 7x.xx
Rated primary currents <sup>1)</sup>	[A]	10 ÷ 3000	
Primary current changeover	[A]	20-40 ÷ 600-1200	
Rated secondary currents <sup>2)</sup>	[A]	5;1	
Rated frequency	[Hz]	50;60	
Insulation levels	[kV]	17.5/38/95 24/50/125 25/55/125	36/70/170 38.5/80/180 40.5/95/200
Rated short - time thermal current [1s]	[kA]	100	
Max. rated burden/ classes <sup>3)</sup>	[VA/cl]	3 ÷ 60/ 0,2;0,2S;0,5;0,5S;1;3; 5P;10P	
Insulation class		E	
Ambient temperature	[°C]	-60...+55	
Reconnectable		primary or secondary	
Weight	[kg]	62	90
Creepage distance	[mm]	1100	1600

- 1) Different primary currents can also be provided to special order.
- 2) It is possible to combine different values in one transformer.
- 3) Other classes are available on request.

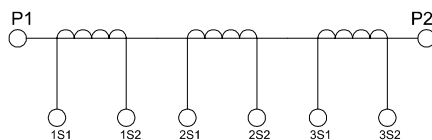
## Marking of the current transformer outlets



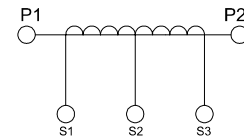
a) Single-core design



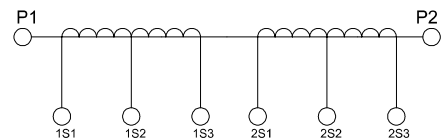
b) Double-core design



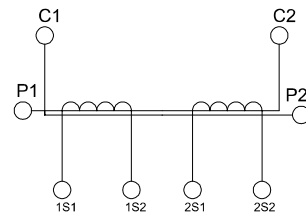
c) Three-core design



d) Single-core design reconnectable on secondary side

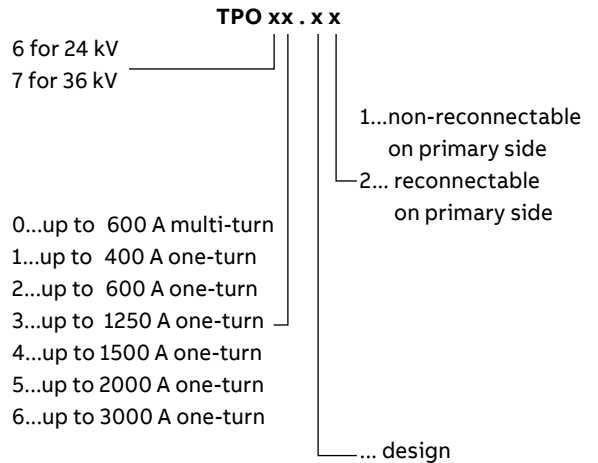


e) Double-core design, reconnectable on the secondary side



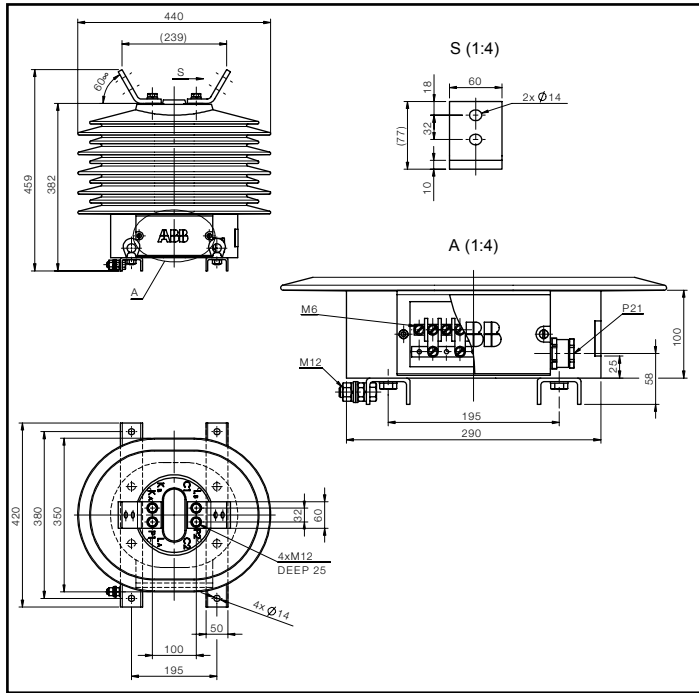
f) Double-core design, reconnectable on the primary side

## Basic marking

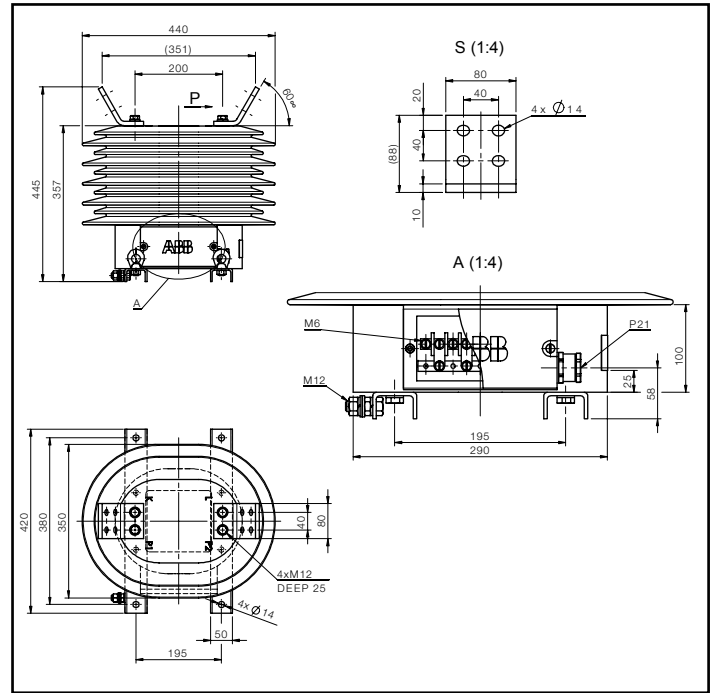


Dimension drawing

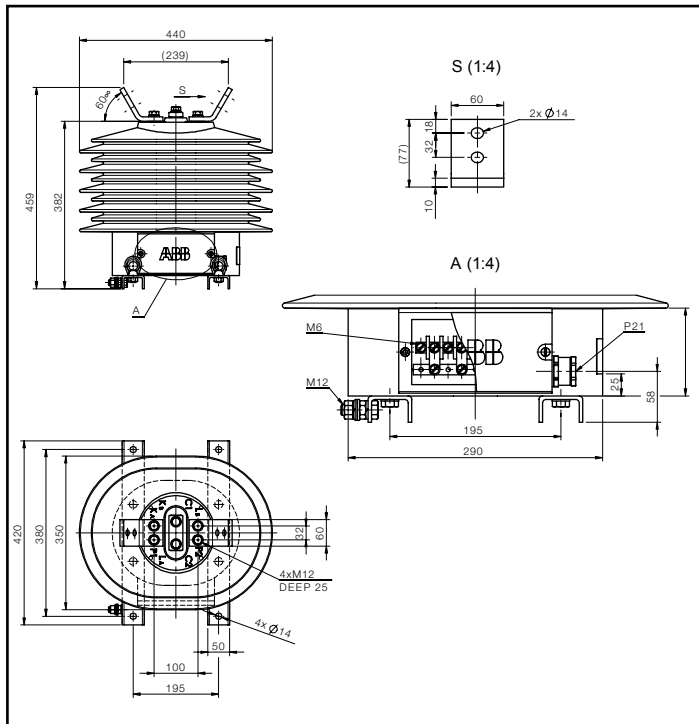
TPO 60.11



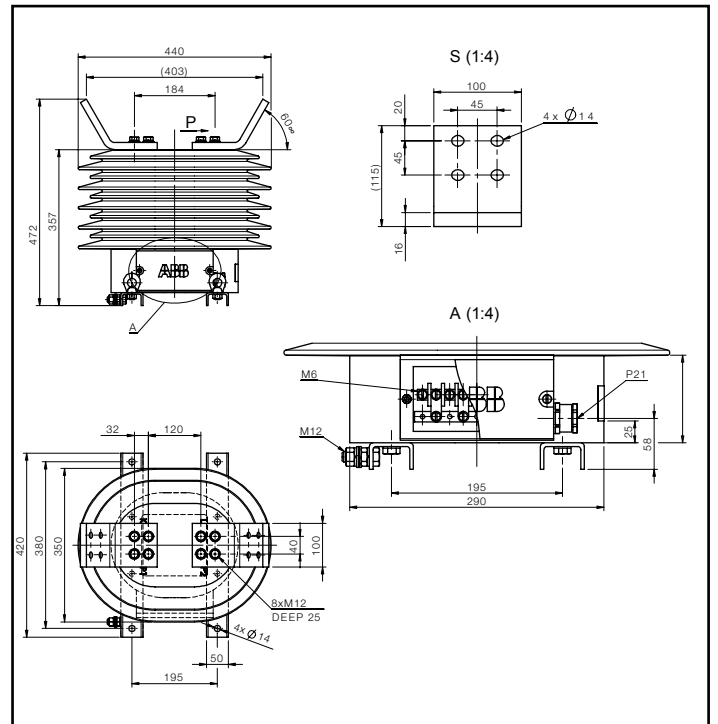
TPO 61.11-63.11



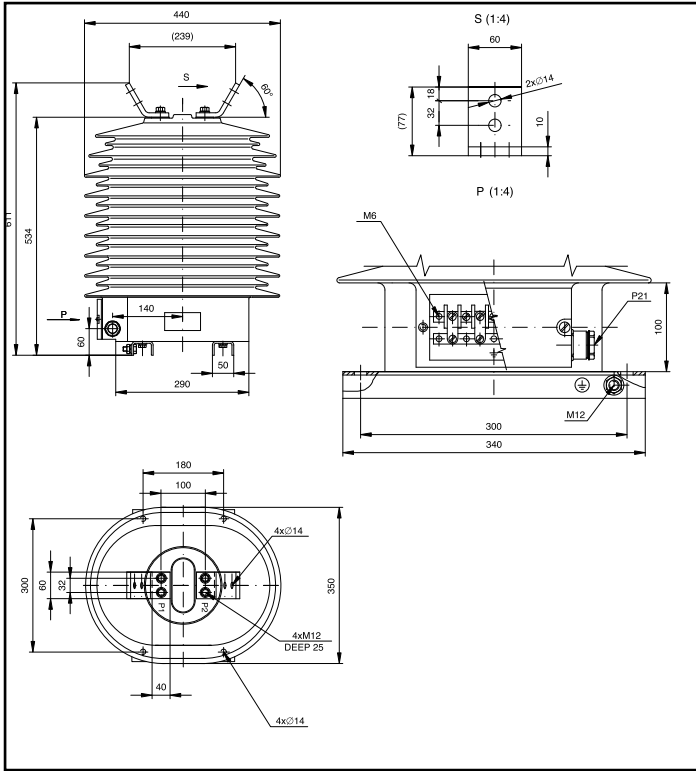
TPO 60.12



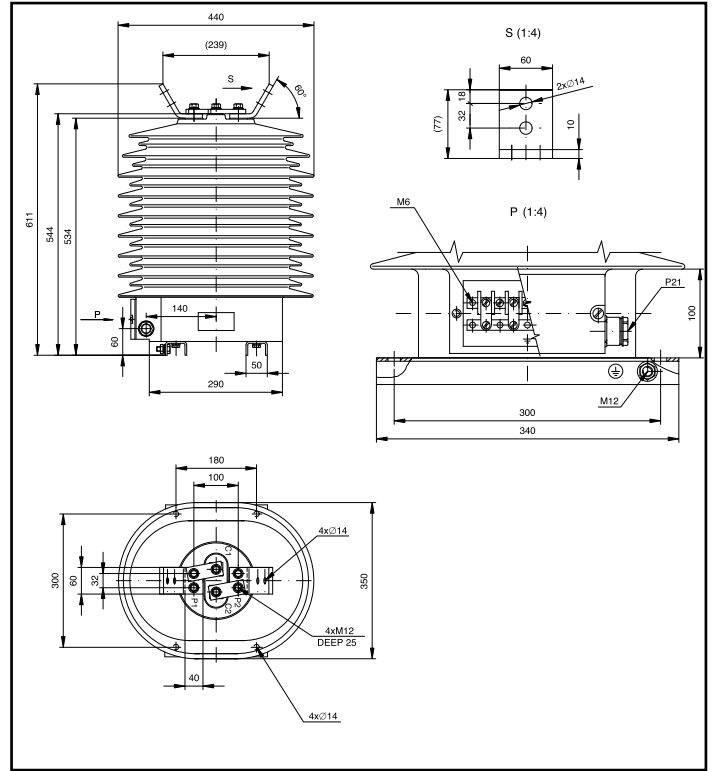
TPO 64.11 - 66.11



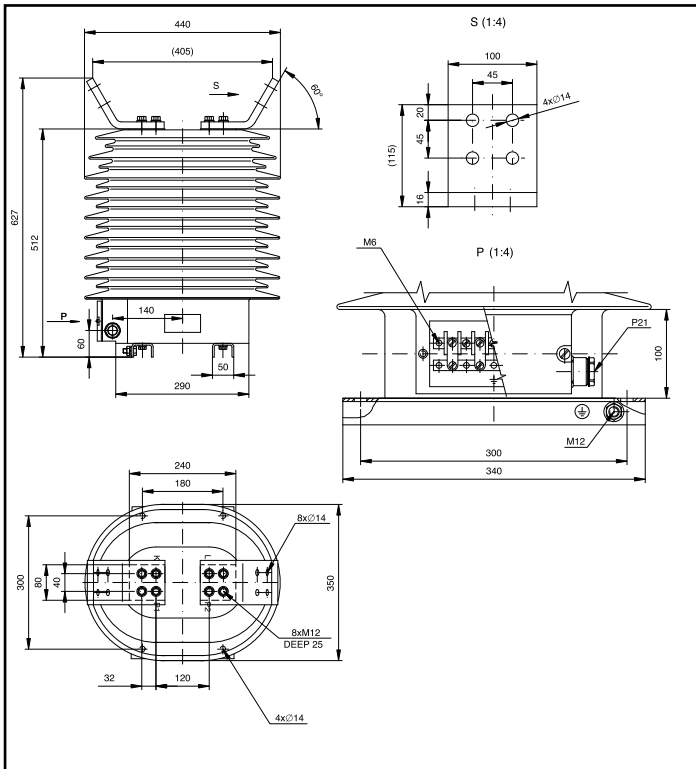
### TPO 70.11



### TPO 70.12



### TPO 71.11-76.11



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