
DISTRIBUTION SOLUTIONS

ISZ 17

Bus current transformers



—
01 ISZ 17 rating plate
example

Description

The cast resin insulated single-phase current transformers with seal wire or bus-mounted type ISZ 17 are intended for supplying measuring instruments and protective circuits of electrical power devices with the maximum permissible voltage of the power network 17.5 kV, and frequency 50 (60) Hz. The range of rated primary currents is from 100 to 8000 A. The rated secondary current is 5 A or 1 A.

Table of variants

| Type | Inner diameter | Length |
|----------|----------------|--------|
| ISZ 17 S | 85 mm | 160 mm |
| ISZ 17 L | 85 mm | 260 mm |

Operation conditions

The current transformers type ISZ are designed for operation in indoor equipments, in temperate and tropical climate conditions, at ambient temperatures from 268 K (−5°C) to 313 K (+40°C). The lowest permissible temperature during transportation and storage is 218 K (−55°C). The altitude for use should be lower than 1000 m above the sea level. The transformers may be used also in higher or lower ambient temperatures and higher altitudes when agreed between the manufacturer and purchaser.

The current transformers type ISZ 17 are single-phase, low power transformers, operating in quasi short-circuit conditions, transforming the primary current flowing in the high voltage circuit to the secondary current at low potential with an accuracy according to their class. The terminals of secondary winding, protruding from resin casting are protecting by steel sheet cap. The basic structural components are: the secondary windings and the magnetic cores. The whole transformer is cast in epoxy resin, which takes on the shape of construction and constitutes the main insulation of the transformer. The current transformer can be mounted in any position.

The transformer position is fixed by using four screws M12 and washers.

Compliance with standards

Current transformers are designed, tested and produced according to international or national standards required by customers and agreed by producer. Specific standard is always mentioned on the Rating plate of transformer.

For example: IEC 60044-1, IEC 60044-6, VDE, BS, ANSI, GOST

If it is agreed between customer and producer is possible to deliver also other standard or standards which are mentioned above with different revision.

Ordering details

The order should contain following data:

- type of current transformer
- rated primary current/rated secondary current [A/A]
- rated burden and accuracy class for each winding [VA]
- short-time thermal current I_{th}
- standard
- quantity

Example:

Current transformer type ISZ 17 L


2000//5/5 A/A/A ext. 120%

I core: 60 VA cl. 0.5 FS10

II core: 30 VA 10P15

I_{th} = 25kA, 1s I_{dyn} =63kA 50Hz

IEC 60044-1

| | | | |
|-----------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------|
| ABB | | SN: 1YMP010ISZ00284 | |
| Type: ISZ17 L | |  | |
| Order No.: 327781#70 | | f: 60Hz | Amb. T.: 40°C |
| 400-600/1 A/A 600/1 A/A ext. 200% | | | |
| 1S1-1S2 | 400/1 A/A TFS Rct<1.20hm; Ual<=280V; Ial<=30mA; K.1.2; Kssc.63; Rb.2.40hm; | | |
| 1S1-1S3 | 600/1 A/A TFS Rct<1.80hm; Ual<=420V; Ial<=30mA; K.1.2; Kssc.42; Rb.3.60hm; | | |
| 2S1-2S2 | 600/1 A/A 10VA cl.0.5 | | |
| 17,5/38/95kV | | I_{th} : 25kA/1s I_{dyn} : 63kA | t.cl.B |
| IEC 60044-1, IEC 60044-6 | | Made by ABB | 2010 |

Technical data

| Highest voltage for equipment | Insulation levels | | Rated frequency | Rated primary current | Rated short-time thermal current | Rated dynamic current | Weight |
|-------------------------------|-------------------------------------------|-------------------------------------------|-----------------|-----------------------|----------------------------------|-----------------------|--------|
| | Power frequency withstand voltage (r.m.s) | Lighting impulse withstand voltage (peak) | | | | | |
| [kV] | [kV] | [kV] | [Hz] | [A] | [kA] | [kA] | [kg] |
| 17.5 | 38 (42*) | 95 | 50 (60) | 100-8000 | up to 90 | $2.5 \times I_{th}$ | 20-50 |

* for GOST standard

| Environmental conditions | Indoor installation (IEC 600721-3-3) |
|-------------------------------------------------------|----------------------------------------------------------------|
| Rated insulation levels | 7.2/20/60 kV 12/28/75 kV 17.5/38/95 kV 17.5/42/95 kV* |
| Primary current I_{pn} | 100 to 8000 A |
| Continuous thermal current I_{con} | 1.2; 1.5; $2.0 \times I_{pn}$ |
| Short-time thermal current I_{th} , 1s. | $100 \times I_{pn}$ (maks. do 90 kA) |
| Dynamic current I_{dyn} | $2.5 \times I_{th}$ (maks. do 225 kA) |
| Secondary current I_{sn} | 5 or 1 A |
| Rated frequency | 50 or 60 Hz |
| Rated output | 1 to 100 VA |
| Accuracy class | 0.1; 0.2; 0.2S; 0.5; 0.5S; 1; 3; 5P; 10P; PX; TPS |
| Security Factor (FS) | 5, 10 |
| Accuracy Limit Factor (ALF) | 5, 10, 15, 20, 30 |
| Insulation class | B |
| Ambient temperature | -5/40°C |
| International Protection Rating of sec. terminals box | IP 40 (IEC 60529) |
| No. of secondary terminals | 6, (8 – special version of sec. terminals box) |
| Multi-ratio (reconnectable) | max. 5 taps (on the secondary side) |
| Multiple cores | 1 to 3 (4 – special version of sec. terminals box) |

* for GOST standard

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02 ISZ 17 secondary
terminal box

Additional information

Together with instrument transformer are delivered:

- routine test report
- two rating plates

The following information can be included on the request. These are free of charge:

- theoretical current errors and phase displacement values
- theoretical excitation curves

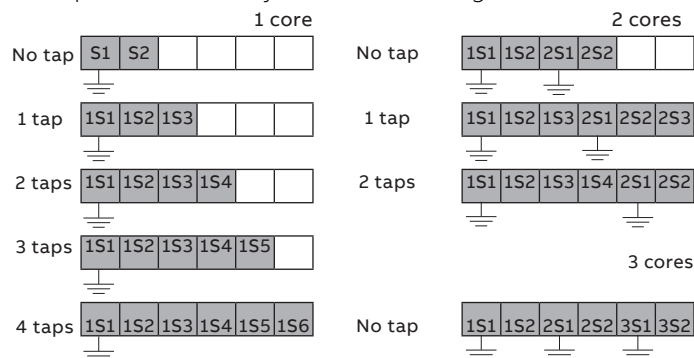
There are additional extra paid reports which can be supplied on request:

- magnetizing curve
- additional labels (if more then 2)
- verification tests



02

Example Of Secondary Terminal Marking



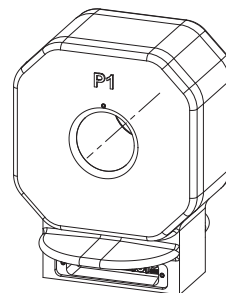
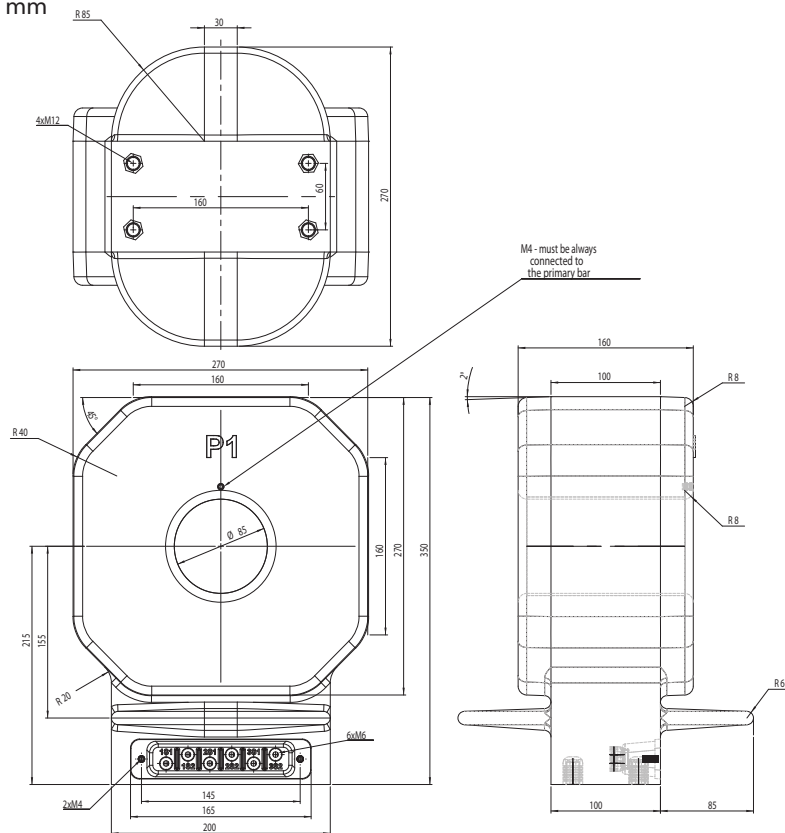
Dimensional Drawings

ISZ 17 S

H = 160 mm

Weight: 20-28 kg

Drawing no.: 1YMA231153

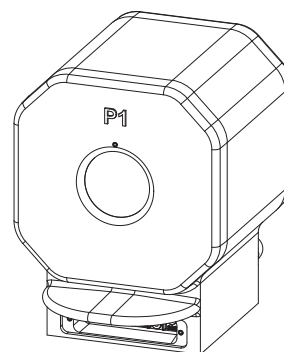
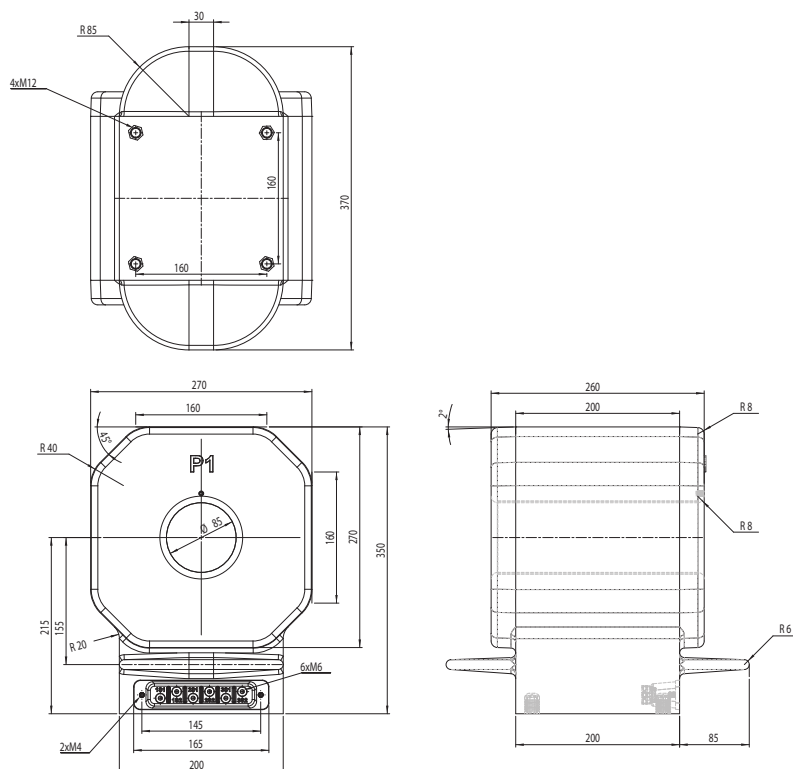


ISZ 17 L

H = 260 mm

Weight: 28-50 kg

Drawing no.: 1YMA231155



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