

RING TYPE CURRENT TRANSFORMERS

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DESCRIPTION

A range of ring type tape wrapped current transformers suitable for primary currents from 1A - 10000A with 1A or 5A secondary output. This standard range of measuring and protective CTs is available in tape wrapped style.

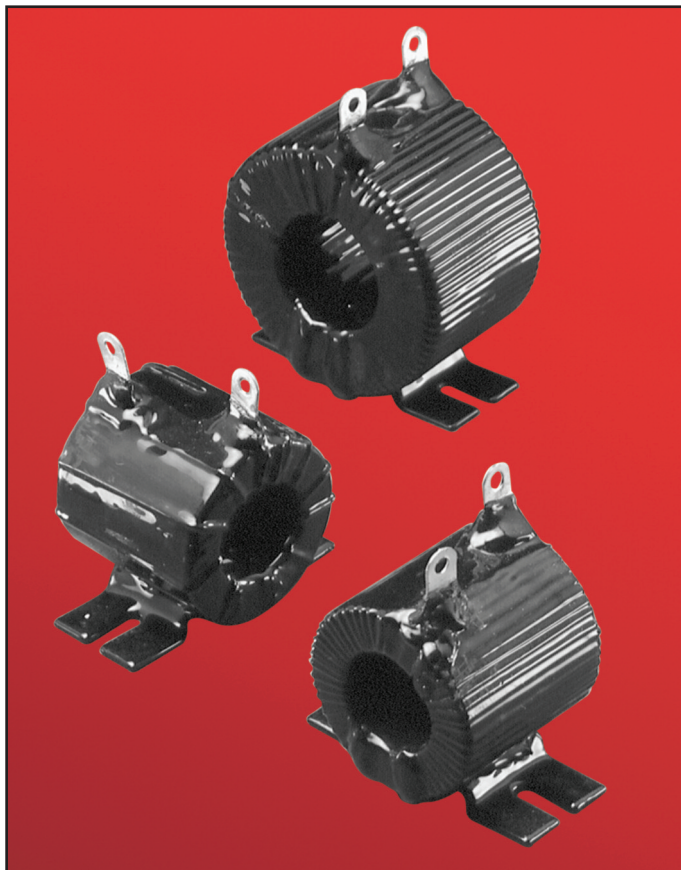
APPLICATION

Suitable for measuring or protective applications, available in standard Class 1, Class 0.5 and Class 5P10. Other accuracy class available on request such as Class 0.2, Class 0.5s, Class 10P10, Class 10P20 etc.

We also design to customer specification on request.



CE



FEATURES

- Primary currents from 1A - 10000A
- Measuring or Protective types.
- Base, busbar mounting or no fixing
- Choice of sizes to customers specification

TECHNICAL SPECIFICATION

- Conforms to IEC44-1, IEC 185, BS7626 and IEC 61869-2.
- Rated system voltage 0.72/3kV.
- Ambient temperature range -5°C to +50°C.
- Frequency range 50-60Hz (400Hz available on request).
- Insulation level, 3kV (50Hz) for 1 minute.
- Continuous current, 1.2 x rated current.
- Short-term thermal current (I_{th}), 60 x rated current.
- Dynamic current (I_{dyn}), 2.5 x I_{th}.

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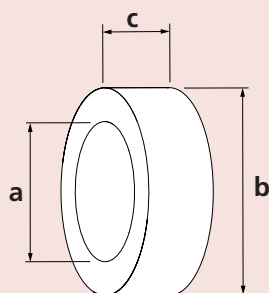
HOBUT

STANDARD RING TYPE MEASURING CURRENT TRANSFORMER RANGE

The Hobut range of measuring CTs converts an alternating current into a proportional current of lower value, which is measured by standard instruments. The CTs are for indoor, low voltage use only.

Dimensions (mm)

Please refer to the table opposite for standard CT dimensions. Alternatively our engineers will design CTs to customers specific dimensions.



a = internal diameter
b = outside diameter
c = depth

Order example

When ordering a ring type taped wrapped measuring CT from our standard range, please specify:

- Primary current
- Secondary current
- VA
- Accuracy Class
- Core or dimensions

e.g. 200/5, 15VA, Class 1
O/D 70mm, I/D 32mm, Depth 40mm
(or Core A5)

Ratio	VA	Class	O/D (b)	I/D (a)	Depth (c)	Core
40/5	5	3	70	32	73	A20
50/5	5	3	70	32	73	A20
60/5	5	1	70	32	73	A20
80/5	5	1	70	32	73	A20
100/5	15	1	70	32	73	A20
100/5	2.5	0.5	70	32	40	A10
150/5	15	1	70	32	73	A20
150/5	2.5	0.5	70	32	40	A10
200/5	15	1	70	32	40	A10
200/5	2.5	0.5	70	32	20	A5
250/5	15	1	70	32	40	A10
250/5	2.5	0.5	70	32	20	A5
300/5	15	1	70	32	40	A10
300/5	2.5	0.5	70	32	20	A5
400/5	15	1	85	45	40	D8
400/5	5	0.5	85	45	18	D4
500/5	15	1	86	45	32	D8
500/5	5	0.5	86	45	18	D4
600/5	15	1	86	45	32	D8
600/5	5	0.5	86	45	20	D4
800/5	15	1	100	66	18	E4
800/5	15	0.5	100	66	18	E4
1000/5	15	1	121	83	20	F4
1250/5	15	1	140	93	20	G4
1500/5	15	1	140	93	22	G4
1600/5	15	1	140	93	22	G4
2000/5	15	1	162	105	23	H4
2500/5	15	1	165	105	23	H4
3000/5	15	1	185	140	21	HJ4
4000/5	15	1	215	170	27	J4

MULTIPLE PRIMARY TURNS

The ratio of a current transformer can be reduced by passing more than one conductor turn through the centre of the CT. The ratio will therefore be the CT primary divided by the number of turns.

Example: a 400/5 CT with 2 primary turns passed through the centre will provide an actual ratio of 200/5. This practice is used when a lower ratio is required but not available as a standard CT, this is known as wound primary current transformer.

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STANDARD RING TYPE PROTECTION CURRENT TRANSFORMER RANGE

The Hobut range of protection CTs measures current in a system and produces a proportional isolated signal which is used as an input to protection relays, protecting part of the system in the event of a fault.

Dimensions (mm)

Ratio	VA	Class	O/D (b)	I/D (a)	Depth (c)	Core
100/5	7.5	5P10	110	36	89	2 x P1/9/40
150/5	7.5	5P10	110	36	70	P1/9/40 + P1/9/20
200/5	7.5	5P10	110	36	49	P1/9/40
300/5	10	5P10	110	36	49	P1/9/40
400/5	15	5P10	110	58	90	2 x P2/9/40
500/5	20	5P10	110	58	90	2 x P2/9/40
600/5	20	5P10	110	58	92	2 x P2/9/40
800/5	20	5P10	110	58	70	P3/9/40 + P3/9/20
1000/5	20	5P10	110	58	70	P3/9/40 + P3/9/20
1200/5	20	5P10	137	91	71	P3/9/40 + P3/9/20
1500/5	20	5P10	137	91	71	P3/9/40 + P3/9/20
2000/5	20	5P10	140	88	50?	P4/9/40
2500/5	20	5P10	-	-	-	P5/9/40
3000/5	20	5P10	-	-	-	P6/9/40
4000/5	20	5P10	-	-	-	P6/9/40

Other protection level is available on request including Class 10P10, 5P20, 10P20 and Class X.

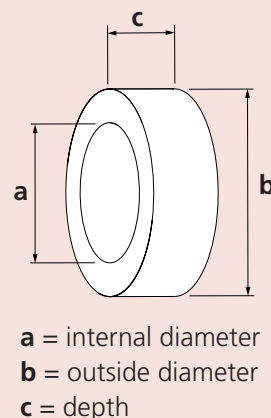
For Class X we would need additional information such as:

- Current transformer ratio
- Busbar size and busbar centres (or minimum aperture) i.e. physical constraints
- Earth fault level and secondary lead resistance (or size of wire and length)
- Kneepoint voltage (Vk) and maximum allowed CT resistance
- Mounting methods (normally no fixing)
- Type of relay used

For all other protective CT's we need to know:

- Current transformer ratio
- VA
- Size of CT including busbar or cable size to make sure the CT fits
- Mounting methods

Please refer to the table opposite for standard CT dimensions. Alternatively our engineers will design CTs to customers specific dimensions.



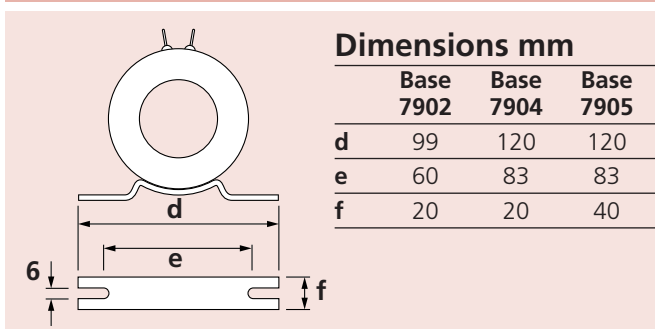
Order example

When ordering a ring type taped wrapped protective CT from our standard range, please specify:

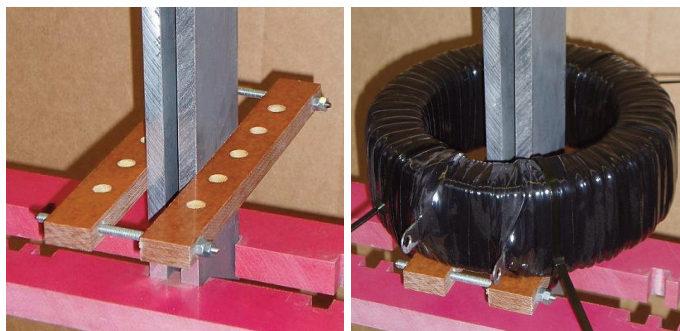
- Primary current
- Secondary current
- VA
- Accuracy Class
- Core or dimensions

e.g. 500/5 20VA class 5P10
O/D 110mm, I/D 58mm, Depth 90mm (or Core 2 x P2/9/40)

Base mounting



Separate Busbar clamp



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ELECTRICAL UTILITIES & SPECIAL CTs



Much of our production is devoted to special applications and our engineering team design many CTs for individual customers and for electrical utilities company.

Our speciality enable us to provide what the customer wants, ranging from type of CT's, rating, class to environmental.

These are just some of the types of CT's available in the ring type tape wrapped style:-

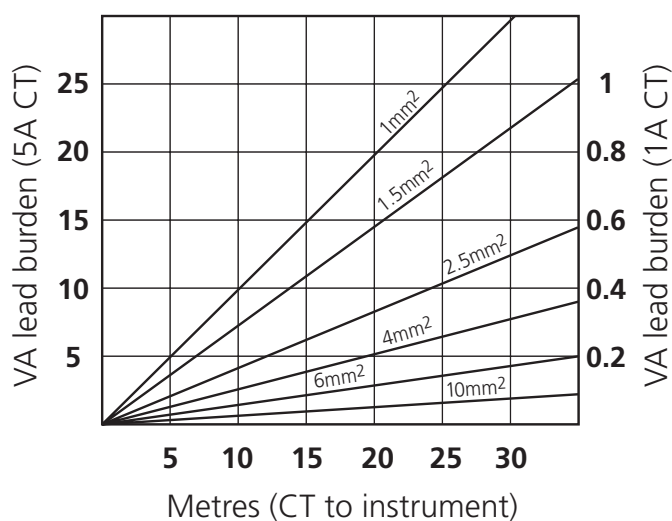
- Measuring CTs
- Protection CTs
- Class X CTs
- Double wound CTs
- Summation CTs
- Wedding ring CTs

BURDEN

When choosing the VA of a CT, the burden of the instrument should be taken into consideration as well as the length of wire used to connect them together, for example, a moving iron panel meter requires a VA of less than 2.5 with 5 meters of wire 2.5mm sq, for this you would need at least 5VA for 5 Amp CT or 1VA if the CT secondary is 1 Amp.

Where the instrument is remote from the CT, the VA imposed by the length of connection wires should be taken into consideration.

The graph opposite outlines the effect of connection wire length on VA losses.



TEST CERTIFICATES

Our production facilities allow automated printing of test certificates for individual current transformers at a cost only if requested.

TERMINAL COVERS

Ring type current transformers can be supplied with sealable terminal covers. Please specify on your order if required.

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