

DB400 Solid Core Current Transformers

DB400 solid current transformers are used with EM72 and other suitable electricity meters. A suitable size current transformer is selected according to the requirements.

Features

- For primary currents from 60A up to 1000A
- For secondary currents of 5A
- Testing voltage 3kV for 1 minute
- Frequency of 50 up to 60Hz
- Precision Class 0.5 and 1 according to IEC 1036



Model Type	Model	Description
	DB400-60-5A	Solid Core Current Transformer, Primary 60A/5A
	DB400-100-5A	Solid Core Current Transformer, Primary 100A/5A
	DB400-150-5A	Solid Core Current Transformer, Primary 150A/5A
	DB400-200-5A	Solid Core Current Transformer, Primary 200A/5A
	DB400-250-5A	Solid Core Current Transformer, Primary 250A/5A
	DB400-300-5A	Solid Core Current Transformer, Primary 300A/5A
	DB400-400-5A	Solid Core Current Transformer, Primary 400A/5A
	DB400-500-5A	Solid Core Current Transformer, Primary 500A/5A
	DB400-600-5A	Solid Core Current Transformer, Primary 600A/5A
	DB400-800-5A	Solid Core Current Transformer, Primary 800A/5A
	DB400-1000-5A	Solid Core Current Transformer, Primary 1000A/5A

Technical Data		
Primary Current		See Table Above
Secondary Current		5A
Frequency		50..60Hz
Precision Class		0.5 to 3 according to IEC 1036
Amb Temperature		-25..+60°C
Storage Temp		-40..+80°C
Housing		Self extinguishing thermoplastic according to V0 to UL94
Insulation		Class E
System Voltage		720V max.
Test Voltage		3kV for 1 Minute
Dynamic Short Circuit		$I_{dyn} = 2.5 I_{th}$
Saturation Co-Efficient		<5

Terminal Markings	Primary P1 and P2 (K & L) Secondary S1 & S2 (k & l)
Reference Standards	BS7626 1993, BS3938 CENELEC HD 533 S2 1993 IEC185, VDE 0414 CEI 38-1, UTE NF 42-502

Important Notes

1. It is essential with certain instrumentation that the CT is physically positioned correctly on the conductor. P1 (K) must face the supply feeder, and P2 (L) must face the load. It is also important to ensure that secondary connections are made in accordance with instrument diagrams.
2. The secondary terminals of the CT must NOT be open-circuited on load as dangerously high voltages may be present under these conditions. It is recommended that one side of the secondary windings is earthed.

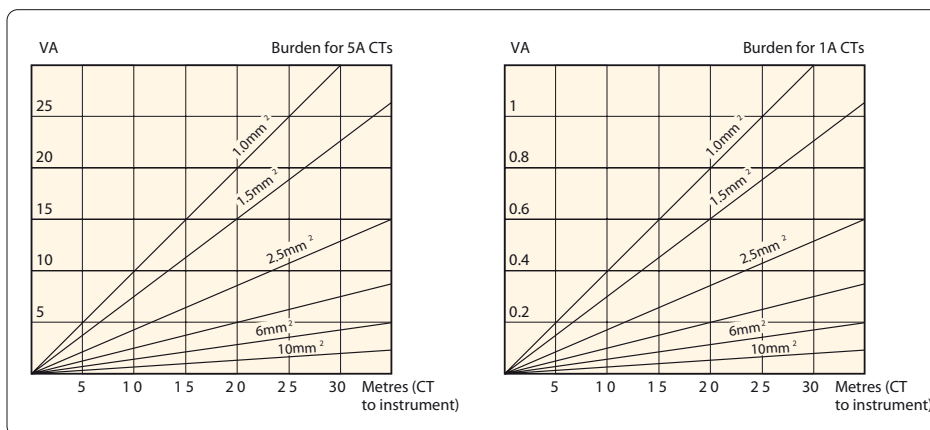
Application Note

When using CT's with an aperture, it is possible to reduce primary ratio by passing multiple turns of the primary conductor cable through the aperture. The resultant ratio will be CT primary divided by the number of turns, e.g. a 200/5A CT with the primary conductor passed through the aperture twice will produce a CT ratio of 100/5A.

Secondary Lead Burden

When selecting a current transformer, it is important to consider the power absorbed by the cables connected between the CT secondary terminals and the measuring instrument. The resultant cable burden should be added to the equipment burden, and the total should not exceed the available VA of the CT. Where the current transformer is to be mounted remotely, a -/1A secondary is recommended.

For every 10°C variation in temperature, the VA absorbed by the cables will increase by 4% (Ambient Reference Temp °C)



An example: Cable size for estimating burden. Cable size from CT to meter 2.5 mm². Length of cable 5m. Burden with 5A CTs is about 2.5VA. With 150A CT the maximum burden to reach accuracy class 1 is 3VA, hence the installation would achieve accuracy class 1 for the 150A CT.

Primary current A	Burden		
	DB400		
	cl.0.5 VA	cl.1 VA	cl.3 VA
50	-	-	1
60	-	-	2
70	-	-	3
75	-	-	3
80	-	-	3
100	-	1	4
120	-	2	5
125	-	2	6
150	1	3	6
200	1.5	3	6
250	2.5	5	8
300	4	8	12
400	8	12	15
500	10	12	15
600	10	12	15
700	10	12	15
750	10	12	15
800	10	12	15
1000	10	12	15
1A or 5A secondary			

Dimensions