

Test Object : Current Instrument Transformer

Type : CTS 25 X

Ratings:

Design: cast resin insulated for indoor use			
Serial number:		021667 / 2004	021668 / 2004
Rated primary current	[A]	5	100
Rated secondary current	[A]	5	1
Highest system voltage	[kV]	25	25
Power frequency withstand voltage	[kV]	50	50
Lightning-impulse withstand voltage	[kV]	125	125
Rated output	[VA]	10	30
Accuracy class		0,2S	0,5
Rated short - time thermal current	[kA]	2	20
Rated dynamic current	[kA]	5	50
Rated frequency	[Hz]	50	50
n		< 5	< 10

Manufacturer: KPB Intra s.r.o, BUČOVICE

Test performed : Dielectric tests according to requirements of customer:
Lightning impulse test on primary winding
Power - frequency withstand test on primary windings

Test specification : ČSN EN 60044 – 1 (2001), IEC 60044 – 1 (1997)
KPB Intra s.r.o, order Nr. 003000366/2005

Test results : The transformers CTS 25 X, serial number 021667 / 2004 and 021668 / 2004, have been tested in accordance with IEC 60044-1 and ČSN EN 60044 – 1 (2001). Transformers are considered to comply with the above standards.

Date of test : 16. 5. 2005

23. 5. 2005

Date of issue

Test manager

Laboratory manager

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- The transformers CTS 25 X, serial number 021667 / 2004 and 021668 / 2004 have been subjected to the dielectric tests in compliance with Standard ČSN EN 60044-1(2001) and IEC 60044-1 (1997):

TEST PROGRAM:

standard

- | | |
|---|---|
| 1. Verification of terminal markings | ČSN EN 60044-1, cl. 8.1
IEC 60044-1, cl. 8.1 |
| 2. Lightning impulse test | ČSN EN 60044-1, cl. 7.3
IEC 60044-1, cl. 7.3 |
| 3. Power - frequency withstand test on primary windings | ČSN EN 60044-1, cl. 8.2
IEC 60044-1, cl. 8.2 |

Results of tests performed on transformer CTS 25 X:

Serial No.: 021667 / 2004

page 3

Serial No.: 021668 / 2004

page 4

All tests and measurements have been performed in Technical laboratory ABB s.r.o EJF, Brno.

Ambient air conditions during tests:

Temperature:	22,2° C
Rel. humidity:	38%
Pressure:	1009 hPa

Devices and equipment used:

Test transformer 100 kV Nr. 93425

Measuring system TETTEX type 9124 Nr. 136810

Impulse generator TUR Dresden Nr. 94272

Digital Impulse Voltage Measuring System TR – AS 25-8 , Dr.STRAUSS

List of symbols used::

I_p	Rated primary current	[A]
I_s	Rated secondary current	[A]
P	Rated output	[VA]
U_m	Highest system voltage	[kV]
f	Rated frequency	[Hz]
I_{th}	Rated short - time thermal current	[kA]
I_{dyn}	Rated dynamic current	[kA]
U_{zk}	Test voltage	[kV]



Standard: ČSN EN 60044 – 1 (2001), IEC 60044 – 1 (1997)					
TYPE : CTS 25 X			Serial No. : 021667/2004		
RATINGS :					
I_p [A]	5	I_s [A]	5	P [VA]	10
Accuracy	0,2S	n	< 5	ALF	--
U_m/ U_{zk} [kV]	25 / 50 / 125	f [Hz]	50	I_{th} / I_{dvn} [kA]	2 / 5

1. Verification of terminal markings: ČSN EN 60044-1, cl. 8.1, IEC 60044-1, cl. 8.1

- It was verified that the terminal markings are correct and in accordance with drawings.

2. Lightning - impulse test: ČSN EN 60044-1, cl. 7.3, IEC 60044-1, cl. 7.3

- Test voltage applied between short-circuited primary winding and earth. The short-circuited secondary windings and the frame connected to earth.
- Voltage form was in accordance with IEC 60060-1

Test voltage	impulses	flashovers	Result:
+ 125 kV	15	0	has passed
– 125 kV	15	0	has passed

3. Power-frequency withstand test on primary windings: ČSN EN 60044-1, cl. 8.2,
IEC 60044-1, cl. 8.2

- Test voltage applied between short-circuited primary winding and earth. The short-circuited secondary windings and the frame connected to earth:

Test voltage	frequency	test duration	Result:
50 kV	50 Hz	60 sec.	has passed



Technical Laboratory

TEST REPORT No. 1VLR 016395

Page 4 of 4

issued by Technical laboratory in accordance with EN 17025

Standard: ČSN EN 60044 – 1 (2001), IEC 60044 – 1 (1997)					
TYPE : CTS 25 X			Serial No. : 021668/2004		
RATINGS :					
I _p [A]	100	I _s [A]	1	P [VA]	30
Accuracy	0,5	n	< 10	ALF	--
U _m / U _{zk} [kV]	25 / 50 / 125	f [Hz]	50	I _{th} / I _{dvn} [kA]	20 / 50

1. Verification of terminal markings: ČSN EN 60044-1, cl. 8.1, IEC 60044-1, cl. 8.1

- It was verified that the terminal markings are correct and in accordance with drawings.

2. Lightning - impulse test: ČSN EN 60044-1, cl. 7.3, IEC 60044-1, cl. 7.3

- Test voltage applied between short-circuited primary winding and earth. The short-circuited secondary windings and the frame connected to earth.
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Test voltage	impulses	flashovers	Result:
+ 125 kV	15	0	has passed
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3. Power-frequency withstand test on primary windings: ČSN EN 60044-1, cl. 8.2, IEC 60044-1, cl. 8.2

- Test voltage applied between short-circuited primary winding and earth. The short-circuited secondary windings and the frame connected to earth:

Test voltage	frequency	test duration	Result:
50 kV	50 Hz	60 sec.	has passed