



中国认可
国际互认
校准
CALIBRATION
CNAS L0134

Certificate No.: 2016F12-10-000448



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SHANGHAI INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY
NATIONAL CENTER OF MEASUREMENT AND TEST FOR EAST CHINA

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CALIBRATION CERTIFICATE

Customer Shanghai Himalayal Co., Ltd

Address of Customer /

Name of Instrument Standard Voltage Transformer

Manufacturer Shanghai Himalayal Co., Ltd

Model/Specification HJB-66G1

No. of Instrument 282500

Instrument Accuracy /

Approved by / Functions 朱剑平 朱剑平 室主任

(Calibration Official Seal) Checked by 朱力 朱力

Calibrated by 周力任 周力任

Date for calibrated 2016 Year 02 Month 26 Day

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Inquire line : 800-820-5172 Tel. for complaint : 021-50798262



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The number of the Certificate of Metrological Authorization to the Legal Metrological Verification Institution is No. (2012) 01039/ No. (2012) 01019

The number of the certificate accredited by CNAS is No.L0134

Reference documents for the calibration (code , name):

JJG314-2010 Verification Regulation of Instrument Voltage Transformers

Main measurement standards used in this calibration:

Name/Model	Number	Certificate No./Due date	Measurement range/accuracy class or maximum permissible errors or uncertainty of measurement
Voltage transformer/ HJ-B110G0.5	KF080416	(计)字第 201510307 号/ 2017.03.17	$(110/\sqrt{3})\text{kV}/(100/\sqrt{3})\text{V}/$ Class 0.005 $(110/\sqrt{3})\text{kV}/(100/3)\text{V}/\text{Class } 0.1$
Standard transformer/ HJ-35E	9901	(计)字第 201510766 号/ 2019.07.05	$(15/\sqrt{3} \sim 35)\text{kV}/$ $(100/\sqrt{3})\text{V}, 100\text{V}/$ Class 0.005
Standard transformer/ BY0101	100706	(计)字第 201410831/ 2016.08.31	$(1 \sim 10)\text{kV}/100\text{V}/\text{Class } 0.002$
Inductive voltage divider/ HJF3	9988	(计)字第 201410827 号/ 2016.08.31	$(0.1 \sim 1000)\text{V}/(0 \sim 222.222)\text{V}/$ Class 0.001

Quantity values of above measurement standards used in this calibration are traced to those of the national primary standards in the P.R. China.

Location and environmental condition for the calibration:

Location: 104 calibrator lab, electricity laboratory, headquarters

Ambient temperature: 20 °C; humidity: 40 %RH; Others: /

Expanded uncertainty:

See continued pages

Results of calibration and additional explanation:

See continued pages

The data are valid only for the instrument(s).



Results of calibration and additional explanation (continued page) :

Upn/Usn	Percentage of rated voltage	20%	50%	80%	100%	120%	Secondary burden
6.6kV/ 110V	f(%)	0.0062	0.0066	0.0074	0.0078	0.0084	0.1VA cosΦ=1.0
	U(%) (k=2)	0.0052	0.0039	0.0026	0.0026	0.0026	
	δ(')	0.28	0.18	0.11	0.08	0.05	
	U(') (k=2)	0.14	0.11	0.07	0.07	0.07	
	f(%)	0.0059	/	/	0.0073	/	0VA
	U(%) (k=2)	0.0052	/	/	0.0026	/	
	δ(')	0.26	/	/	0.07	/	
	U(') (k=2)	0.14	/	/	0.07	/	
(6.6/√3)kV/ (110/√3)V	f(%)	0.0049	0.0061	0.0066	0.0069	0.0063	0.1VA cosΦ=1.0
	U(%) (k=2)	0.0052	0.0039	0.0026	0.0026	0.0026	
	δ(')	0.34	0.25	0.18	0.12	0.11	
	U(') (k=2)	0.14	0.11	0.07	0.07	0.07	
	f(%)	0.0042	/	/	0.0065	/	0VA
	U(%) (k=2)	0.0052	/	/	0.0026	/	
	δ(')	0.30	/	/	0.10	/	
	U(') (k=2)	0.14	/	/	0.07	/	
11kV/ 110V	f(%)	0.0038	0.0049	0.0059	0.0073	0.0084	0.1VA cosΦ=1.0
	U(%) (k=2)	0.012	0.0090	0.0060	0.0060	0.0060	
	δ(')	0.16	0.06	-0.01	-0.05	-0.07	
	U(') (k=2)	0.40	0.30	0.20	0.20	0.20	
	f(%)	0.0033	/	/	0.0068	/	0VA
	U(%) (k=2)	0.012	/	/	0.0060	/	
	δ(')	0.13	/	/	-0.08	/	
	U(') (k=2)	0.40	/	/	0.20	/	



Results of calibration and additional explanation (continued page) :

Upn/Usn	Percentage of rated voltage	20%	50%	80%	100%	120%	Secondary burden
(11/√3)kV/ (110/√3)V	f(%)	0.0028	0.0043	0.0044	0.0048	0.0055	0.1VA cosΦ=1.0
	U(%) (k=2)	0.012	0.0090	0.0060	0.0060	0.0060	
	δ(')	0.22	0.15	0.11	0.07	0.02	
	U(') (k=2)	0.40	0.30	0.20	0.20	0.20	
	f(%)	0.0033	/	/	0.0051	/	0VA
	U(%) (k=2)	0.012	/	/	0.0060	/	
	δ(')	0.23	/	/	0.10	/	
	U(') (k=2)	0.40	/	/	0.20	/	
22kV/ 110V	f(%)	-0.0019	0.0027	0.0034	0.0059	0.0066	0.1VA cosΦ=1.0
	U(%) (k=2)	0.012	0.0090	0.0060	0.0060	0.0060	
	δ(')	0.05	-0.01	-0.07	-0.13	-0.14	
	U(') (k=2)	0.40	0.30	0.20	0.20	0.20	
	f(%)	-0.0022	/	/	0.0047	/	0VA
	U(%) (k=2)	0.012	/	/	0.0060	/	
	δ(')	0.08	/	/	-0.11	/	
	U(') (k=2)	0.40	/	/	0.20	/	
(22/√3)kV/ (110/√3)V	f(%)	-0.0083	-0.0028	0.0011	0.0039	0.0045	0.1VA cosΦ=1.0
	U(%) (k=2)	0.012	0.0090	0.0060	0.0060	0.0060	
	δ(')	0.11	0.02	0.00	-0.02	-0.06	
	U(') (k=2)	0.40	0.30	0.20	0.20	0.20	
	f(%)	-0.0068	/	/	0.0042	/	0VA
	U(%) (k=2)	0.012	/	/	0.0060	/	
	δ(')	0.13	/	/	-0.06	/	
	U(') (k=2)	0.40	/	/	0.20	/	



Results of calibration and additional explanation (continued page) :

Upn/Usn	Percentage of rated voltage	20%	50%	80%	100%	120%	Secondary burden
33kV/ 110V	f(%)	0.0124	0.0092	0.0075	0.0064	0.0057	0.1VA cosΦ=1.0
	U(%) (k=2)	0.012	0.0090	0.0060	0.0060	0.0060	
	δ(')	-0.09	-0.02	0.03	0.05	0.06	
	U(') (k=2)	0.40	0.30	0.20	0.20	0.20	
	f(%)	0.0113	/	/	0.0068	/	0VA
	U(%) (k=2)	0.012	/	/	0.0060	/	
	δ(')	-0.12	/	/	0.03	/	
	U(') (k=2)	0.40	/	/	0.20	/	
(33/√3)kV/ (110/√3)V	f(%)	0.0132	0.0114	0.0093	0.0088	0.0082	0.1VA cosΦ=1.0
	U(%) (k=2)	0.012	0.0090	0.0060	0.0060	0.0060	
	δ(')	-0.11	-0.07	-0.02	0.01	0.01	
	U(') (k=2)	0.40	0.30	0.20	0.20	0.20	
	f(%)	0.0126	/	/	0.0082	/	0VA
	U(%) (k=2)	0.012	/	/	0.0060	/	
	δ(')	-0.10	/	/	0.04	/	
	U(') (k=2)	0.40	/	/	0.20	/	
44kV/ 110V	f(%)	0.0093	0.0084	0.0068	0.0064	0.0059	0.1VA cosΦ=1.0
	U(%) (k=2)	0.012	0.0090	0.0060	0.0060	0.0060	
	δ(')	-0.09	-0.03	0.02	0.05	0.06	
	U(') (k=2)	0.40	0.30	0.20	0.20	0.20	
	f(%)	0.0097	/	/	0.0066	/	0VA
	U(%) (k=2)	0.012	/	/	0.0060	/	
	δ(')	-0.11	/	/	0.07	/	
	U(') (k=2)	0.40	/	/	0.20	/	



Results of calibration and additional explanation (continued page) :

Upn/Usn	Percentage of rated voltage	20%	50%	80%	100%	120%	Secondary burden
(44/√3)kV/ (110/√3)V	f(%)	0.0093	0.0090	0.0087	0.0078	0.0076	0.1VA cosΦ=1.0
	U(%) (k=2)	0.012	0.0090	0.0060	0.0060	0.0060	
	δ(')	-0.13	-0.07	-0.04	0.02	0.02	
	U(') (k=2)	0.40	0.30	0.20	0.20	0.20	
	f(%)	0.0090	/	/	0.0072	/	0VA
	U(%) (k=2)	0.012	/	/	0.0060	/	
	δ(')	-0.11	/	/	0.06	/	
	U(') (k=2)	0.40	/	/	0.20	/	
66kV/ 110V	f(%)	0.0063	0.0051	0.0044	0.0039	0.0036	0.1VA cosΦ=1.0
	U(%) (k=2)	0.012	0.0090	0.0060	0.0060	0.0060	
	δ(')	0.04	0.08	0.10	0.11	0.09	
	U(') (k=2)	0.40	0.30	0.20	0.20	0.20	
	f(%)	0.0072	/	/	0.0045	/	0VA
	U(%) (k=2)	0.012	/	/	0.0060	/	
	δ(')	0.07	/	/	0.12	/	
	U(') (k=2)	0.40	/	/	0.20	/	
(66/√3)kV/ (110/√3)V	f(%)	0.0076	0.0057	0.0048	0.0037	0.0035	0.1VA cosΦ=1.0
	U(%) (k=2)	0.012	0.0090	0.0060	0.0060	0.0060	
	δ(')	0.04	0.05	0.06	0.08	0.09	
	U(') (k=2)	0.40	0.30	0.20	0.20	0.20	
	f(%)	0.0081	/	/	0.0046	/	0VA
	U(%) (k=2)	0.012	/	/	0.0060	/	
	δ(')	0.09	/	/	0.12	/	
	U(') (k=2)	0.40	/	/	0.20	/	

Rated primary voltage (6.6/√3)kV~66kV , Rated secondary voltage (110/√3)V、110V ,
Power Factor 1.0 , Rated burden 0.1VA , Rated frequency 50 Hz, Application Standard

End.