



Three Phase Power Meter Calibration Report

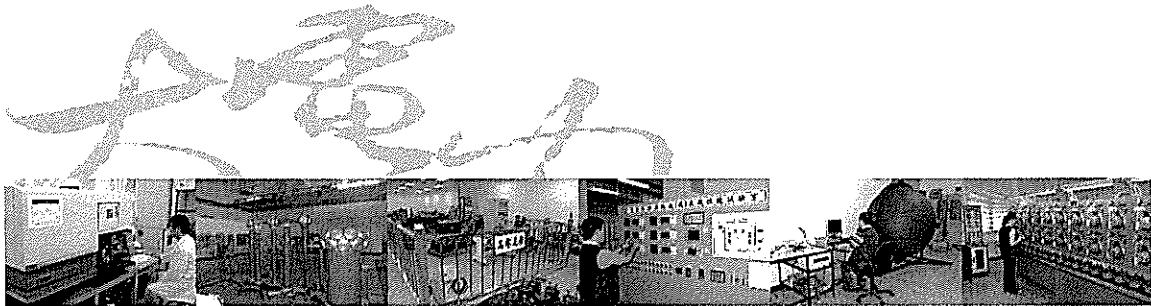
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Issued date : 2015/08/21

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Laboratory Accreditation Number : 0061



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Taiwan Electric Research & Testing Center

Electrical and Temperature Calibration Laboratory

Report No. : EC20150198

Calibration Report



Applicant : ICP DAS Co.,Ltd

Issued Date : 2015/08/21

Address : No. 111, Guangfu N. Rd., Hukou Township,
Hsinchu County 30351, Taiwan, R.O.C.

Calibration Date : 2015/08/13

Equipment : 3 Phase Power Meter

Temperature : 23±2°C

Manufacturer : ICP DAS Co.,Ltd

Humidity : 50±10%

Model No. : PM-3033

Procedure Used : 60I-07-1812, 60I-07-1818, 60I-07-1819

Serial No. : PM3033A000YEHHA00001

Remark : Calibration items RS485 communication interface and manufacturer of computer software(ICP DAS PM-3033 V1.8) reader to indication value.

Calibration Standard			
Equipment	Manufacturer / Model No.	I.D. Number	Cal. Source / Cal. Date/ Report No/Cycle
Three Phase Standard	RADIAN/RD-30-211	300130	TERTEC / 2015.03.18 / EC1040026 / 1 year
Multi Calibration Standard	FLUKE/5500A	1855004	Pink Technology/2014.12.04 / P411065-C/1 year

一、 Calibration Item & Result :

1.AC Power (60Hz)

Power Source Set Value				Standard Value(kW)	Indication Value(kW)	Error Value(%)	Uncertainty (%)
Phase/Wire	Voltage(V)	Current(A)	P.F				
3P4W	220	5	1.0	3.3000	3.2966	-0.10	0.19
3P4W	220	1	1.0	0.6600	0.6590	-0.15	0.08

2. AC Current (60Hz)

Phase/Wire	Standard Value (A)	Indication Value (A)	Error Value(%)	Uncertainty (%)
A	1.0000	0.9998	-0.02	0.31
B	1.0000	0.9991	-0.09	0.31
C	1.0000	0.9992	-0.08	0.31

The report issued by : *Bang-yuan Lai*

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60T-07-1801C



Calibration Report

3. AC Voltage (60Hz)

Phase/Wire	Standard Value (A)	Indication Value (A)	Error Value(%)	Uncertainty (%)
A	100.0000	99.9201	-0.08	0.27
B	100.0000	99.9244	-0.08	0.58
C	100.0000	99.9334	-0.07	0.31

二、Instruction :

1. Test method : according to Wattmeter calibration procedure, used of P,F source correction devices apply the watt/var Standard calculating the 3Phase compact smart Meter error value(%).
2. Calibration method(AC current、AC Voltage) : reference to AC Current and AC Voltage calibration procedure, used of Multifunction Calibrator correction devices when the standard device and the calculation error (%)
3. $Error(\%) = ((E_{UUT} - E_{STD}) / E_{STD}) \times 100\%$, E_{UUT} : 3 Phase Power Meter Energy Standard , E_{STD} : Energy Standard
4. Expanded uncertainty the level of confidence is 95% and the coverage factor $k=2$.
5. The use of standard calibration devices traceable to national standards of weights and measurement laboratory(report No.E140566A, traceable data 2014.10.07, calibration cycle is one year) and Pink Technology Co.Ltd (report No.P411065-C, traceable data 2014.12.04, calibration cycle is one year).