



## Three Phase Power Meter Calibration Report

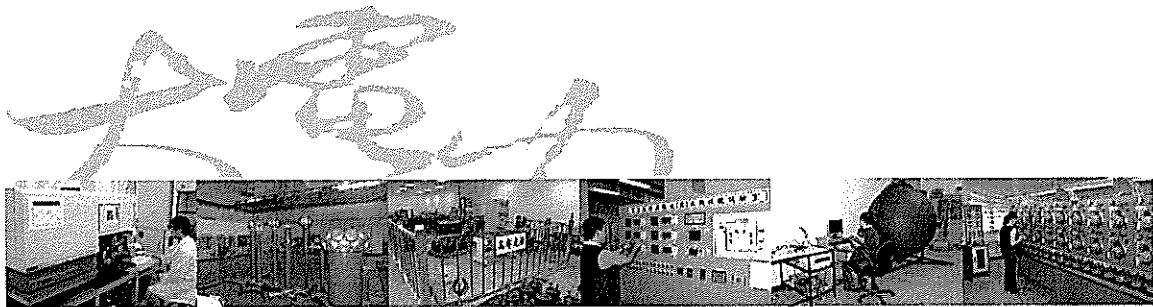
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Issued date : 2015/08/21

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Laboratory Accreditation Number : 0061



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Taiwan Electric Research &amp; Testing Center

Electrical and Temperature Calibration Laboratory

Report No. : EC20150198D

## 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.

—,Calibration Item &amp; Result :

## 1.AC Power(50 Hz)

Power Source Set Value				Standard Value (kW)	Indication Value (kW)	Error Value (%)
Phase/Wire	Voltage(V)	Current(A)	P.F.			
3P4W	220	5	1.0	3.3000	3.2960	-0.12
3P4W	220	1	1.0	0.6600	0.6588	-0.18

## 2. AC Current (60Hz)

Phase/Wire	Standard Value (A)	Indication Value (A)	Error Value(%)
A	5.0000	4.9996	-0.01
B	5.0000	4.9992	-0.02
C	5.0000	4.9991	-0.02

The report issued by : *Bang-yen Lai*

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60T-07-1801C



## Calibration Report

### 3. AC Voltage (60Hz)

Phase/Wire	Standard Value (A)	Indication Value (A)	Error Value(%)
A	220.0000	219.9051	-0.04
B	220.0000	219.9149	-0.04
C	220.0000	219.9235	-0.03

### 4.P.F.

Voltage (V)	Freq.(Hz)	Standard Value	Indication Value	Error Value(%)
220V×5A	60	1.0000	1.0000	0
220V×5A(Lag)	60	0.5000	0.4972	-0.55
220V×5A	50	1.0000	1.0000	0
220V×5A(Lag)	50	0.5000	0.4977	-0.47

### 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.  $Error(\%) = ((E_{UUT} - E_{STD}) / E_{STD}) \times 100\%$ ,  $E_{UUT}$  : 3Phase compact smart 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).