



Three Phase Compact Smart Meter Calibration Report

Report number : EC2018008701

Issued date : 2018/06/04

Laboratory : Electrical and Temperature Calibration Laboratory

Address:No.6-6, Ronggong S Rd., Guanyin Township, Taoyuan
County 328, Taiwan, R.O.C.

Laboratory Accreditation Number : 0061



Taiwan Electric Research & Testing Center

Address:No.6-6, Ronggong S Rd., Guanyin Township, Taoyuan County 328, Taiwan, R.O.C.

TEL:886-3-483-9090

FAX:886-3-483-8119

E-mail:customer_service@ms.tertec.org.tw

Website:www.tertec.org.tw

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台灣大電力研究試驗中心

Taiwan Electric Research & Testing Center

Electrical and Temperature Calibration Laboratory

Report No. : EC2018008701

Calibration Report

Applicant : ICP DAS Co.,Ltd.

Issued Date : 2018/06/04

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

Calibration Date : 2018/05/24

Equipment : Power Meter

Temperature : 23 ± 2°C

Manufacturer : ICP DAS

Humidity : 50 ± 10%

Model No. : PM-3133-160

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

Serial No. : PM3133BCR0kuJBR00005

Remark : 1. Calibration items with the external current transformer(CT1,CT2,CT3) which Manufacturing number are the same as serial No. of the equipment).

2. The reading was obtained from the RS485 communication interface of the calibration product and the computer software(ICP DAS PM-3133 ver1.17) of the manufacturer.

Calibration Standard :

Equipment	Manufacturer / Model No.	I.D. Number	Cal. Source / Cal. Date/ Report No/Cycle
Three-Phase Watt/Var.	RADIAN/RD-30-211	300130	TERTEC / 107.03.16 / EC1070012 / 1 year
Multifunction Standard	FLUKE/5500A	6670008	Pink Technology / 2017.08.15/P708046-C/1 year

一、 Calibration Item & Result :

1. AC Watt (60Hz)

Item	Setting			Standard(kW)	Reading(kW)	Error(%)	Uncertainty(%)
	Voltage(V)	Current (A)	P.F				
A Phase	220	5	1.0	1.1000	1.0987	-0.12	0.27
B Phase	220	5	1.0	1.1000	1.0976	-0.22	0.27
C Phase	220	5	1.0	1.1000	1.0994	-0.05	0.27

2. AC Voltage (60Hz)

Item	Standard (V)	Reading (V)	Error(%)	Uncertainty(%)
A Phase	100.0000	99.9699	-0.03	0.27
B Phase	100.0000	99.9517	-0.05	0.28
C Phase	100.0000	99.9578	-0.04	0.27

The Report Issued by : Bang-yenn Lal

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60T-07-1803B



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二、Instruction :

1. Calibration method is refer to the laboratory Watt calibration instructions, It uses adjustable Multi-Function Standard to calculate error (%).
2. Calibration method is refer to the laboratory AC current calibration instructions, use stable AC power to source to the calculate error (%).
3. $Error(\%) = \frac{(EUUT - ESTD)}{ESTD} \times 100\%$.
4. The level of confidence of Expanded Uncertainty is 95% and the coverage factor $k=2$.
5. The use of standard calibration devices is traced back to National Measurement Laboratory(Report No.. E170502A, traceable data 2017-08-29, calibration cycle is 1 year) and Pink Technology Co. Ltd (Report No. P708046-C, traceable data 2017-08-15, calibration cycle is 1 year).

