

Polaris

Certifications & Test Reports



DAE Instrument Corp.

<http://daeinstrument.com/>

Contents

(1) UL Certificate of Compliance.....	3
(2) CTEP Certificate of Approval	4
(3) CE-EMC Certification	5
(4) CE-LVD Verification	6
(5) Temperature and Humidity Test Report	7

(1) UL Certificate of Compliance

CERTIFICATE OF COMPLIANCE

Certificate Number 20121130-E350834
Report Reference E350834-A2-UL
Issue Date 2012-NOVEMBER-30

Issued to: DAE INSTRUMENT CORP
5TH FL 157 XINHU 1ST RD
NEIHU DISTRICT
TAIPEI
114 TAIWAN

This is to certify that representative samples of Measuring, Testing and Signal Generation Equipment Components
Polaris-X-Y (X=120 or 240, Y=A, B or C)

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 61010-1 - Electrical Equipment for Measurement, Control, and Laboratory Use; Part 1: General Requirements
CAN/CSA-C22.2 No. 61010-1 - Electrical Equipment for Measurement, Control, and Laboratory Use; Part 1: General Requirements

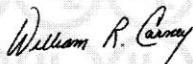
Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and

"US" identifiers:  the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product.



William R. Carney, Director, North American Certification Programs
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at www.ul.com/contactus





(2)CTEP Certificate of Approval

State of California
Department of Food and Agriculture
Division of Measurement Standards

Certificate Number: 5760-15

Page 1 of 3

California Type Evaluation Program Certificate of Approval for Weighing and Measuring Devices

For:

Electric Watt-hour Meter
Electronic with current transformers
Model: Polaris-XXXX-B
Class: 200 (200 Amps Max.)
TA: 30 Amps
Voltage Rating: 120/208/240VAC

Submitted by:

DAE CONTROLS, LLC
2707 Golfview Dr. 103
Troy, MI 48064
Tel: (248) 635-3708
Fax: (248) 822-8138
Contact: JJ Liao
E-Mail: jjliao@daecontrols.com
Internet: www.daecontrols.com

Standard Features and Options

Meter Model Designation:

Polaris	XYZ	B
Base Model	120 = 120VAC to neutral	B = Class 200
	208 = 208 VAC to neutral	
	240 = 240VAC to neutral	

Current Transformer (CT):

DAE Model: CT-200D3 (black in color, closed loop style), Accuracy class 0.2, Rating, 200A:66.7mA
CTs are not direction sensitive; however, DAE CTs include a load direction arrow.

LED Display Register:

LED (Light Emitting Diode) display is 0.1kWh registration

NOTE:

1. The mark "M:XXXX XXXX" on the meter label is the ordering code not the model number.
2. The term "Polaris 1000, 1500, 2000, 2500, 3000" on the label is the manufacturer's form of identification and does not depict their physical Ampere Class.

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: October 12, 2015

Kristin J. Macey, Director

(3) CE-EMC Certification

CERTIFICATION	
Applicant	: DAE INSTRUMENT
Address	: 5F, No. 157, XinHu First Road, NeiHu District, Taipei City 114, Taiwan (R.O.C)
Manufacturer	: DAE INSTRUMENT
Address	: 5F, No. 157, XinHu First Road, NeiHu District, Taipei City 114, Taiwan (R.O.C) NO. 57, Gongming 2nd Rd, Annan District, Tainan City 709, Taiwan(R.O.C)
Description of EUT	: Digital Energy Meter
Trade Name	: DAE
Model Number	: Polaris-CE-240-A
Product Series	: Polaris-CE-240-B, Polaris-CE-240-C, Polaris-CE-120-A, Polaris-CE-120-B, Polaris-CE-120-C
Type of Test	: EMC Directive 2004/108/EC for CE Marking
Technical Standard	: Emission EN 61000-6-4:2007 EN 61000-3-2:2006/A1:2009+A2:2009 EN 61000-3-3:2008 Immunity EN 61000-6-2:2005 EN 61000-4-2:2009 EN 61000-4-3:2006/A2:2010 EN 61000-4-4:2004/A1:2010 EN 61000-4-5:2006 EN 61000-4-6:2009 EN 61000-4-8:2010 EN 61000-4-11:2004
Report Number	: HA110458-CE
Receipt Date	: 19-OCT-2011
Issue Date	: 28-OCT-2011
Test Result	: Compliance
The above equipment was tested by HongAn TECHNOLOGY CO., LTD. , in compliance with the requirement set forth in EMC Directive 2004/108/EC and the technical standards mentioned above.	
Note : 1. The results of the test report relate solely and exclusively to the sample tested. 2. The testing report shall not be reproduced except in full, without the written approval of HongAn TECHNOLOGY CO., LTD.	
Approved by:	 Peter chin Section Manager
	HongAn TECHNOLOGY CO., LTD. NO.15-1,CWEISHUH KENG,CWEIPIN VILLAGE, LINKOU DIST., NEW TAIPEI CITY, TAIWAN, R.O.C. BSMI Registration No. : SL2-IN-E-0023,SL2-IS-E-0023, SL2-A1-E-0023,SL2-R1-E-0023, SL2-R2-E-0023,SL2-L1-E-0023 FCC Designation No. : TW1001
	TEL : 886-2-26030362 FAX : 886-2-26019259 E-mail : hatlab@ms19.hinet.net Nemko Authorization No. : ELA184 TAF Accreditation No. : 1163 VCCI Registration No. : R-2156, C-2329, T-219
	

(4) CE-LVD Verification

INTEGRITY

Verification

of Test Report No.: IL111010010



Product.....: Digital Energy Meter

Model No.....: Polaris-CE-240-A

Series No.....: Polaris-CE-240-B, Polaris-CE-240-C, Polaris-CE-120-A, Polaris-CE-120-B, Polaris-CE-120-C

Applicant.....: DAE INSTRUMENT

5F., No.157, XinHu First Road, NeiHu District, Taipei City 114, Taiwan
(R.O.C.)

Issue Date.....: Dec.21, 2011

A sample of the equipment has been tested for CE marking
according to the EC Low Voltage Directive 2006/95/EC.

Standard(s) used for showing compliance with essential requirements of the directive.

Standard:

EN 61010-1:2010

Safety requirements for electrical equipment for measurement, control, and laboratory use-
Part 1: General requirements

The referred test report(s) show that the product fulfills the requirement in the EC Low Voltage Directive for CE marking. On the basis, together with the manufacturer's own documented production control, the manufacturer (or his European authorized representative) can in his EC Declaration of Conformity verify with the EC Low Voltage Directive.

This verification shall be accompanied with test report.

Approved by: Raven M. J.
(Managing Director)

Test site: Integrity EnE Lab Inc.
12F, No.27-1, Ln. 169, Kangning St., Xizhi Dist., New Taipei City 221, Taiwan. (R.O.C.)
Tel: +886-2-2695-6367 Fax: +886-2-8695-1713

(5) Temperature and Humidity Test Report



ELECTRONICS TESTING CENTER, TAIWAN

Report No.: 14-09-EAT-027-E00

TEST REPORT

Report No. : 14-09-EAT-027-E00
Applicant's : DAE Instrument Corp.
Address : No. 57, Gongming 2nd Rd., An Nan District, Tainan City 70968
, Taiwan
Commodity : Digital Energy Meter
Model : 1. POLARIS 3p3W, 100, 1.5(6)A, 50Hz
2. POLARIS 3p4W, 120/208V, 5A, 60Hz
3. POLARIS 3p4W, 240/416V, 5A, 60Hz
Quantity : 1 piece / model, Total : 3 pcs
Date of Receipt : Sep. 05, 2014
Testing Item : Temperature and humidity test

Testing Laboratory Name : Electronics Testing Center, Taiwan
Environmental and Reliability Testing Laboratory
Address : No. 8, Lane 29, Wenming Rd., Guishan Dist.
Taoyuan City 33383, Taiwan
TEL:03-3280026
FAX:03-3276127
<http://www.etc.org.tw>



Tested by : Dennis Chang
(Signature) Dennis Chang

Approved by : Antony Chou
(Signature) Antony Chou

Contents : Total 5 pages

Note: 1. The results of the testing report relate only to the items tested.
2. The testing report shall not be reproduced except in full, without the written approval of ETC.



Testing Conditions : According to applicant's specifications

Temperature and humidity test

Temperature and humidity condition : Ref to Table 1 and Curve 1

Sample condition : Refer to Figure 1 to Figure 3

Sample setup : Refer to Figure 4

Test condition : Refer to Figure 5

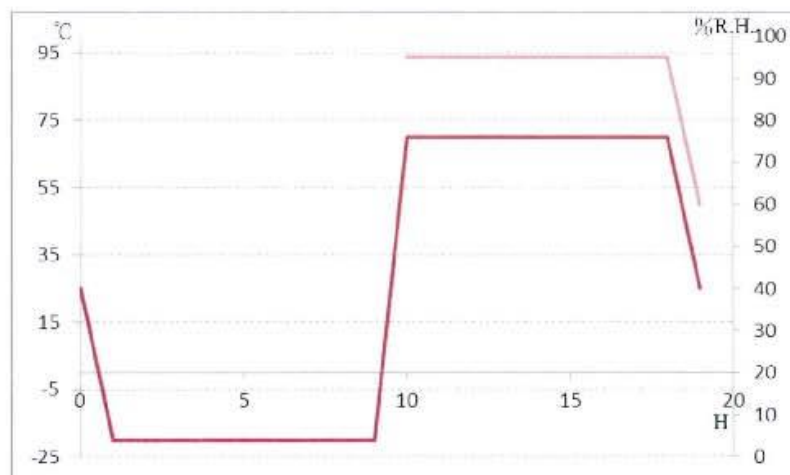
Input voltage : A. 110 V_{ac} for 3p3W, 100, 1.5(6)A, 50Hz

3p4W, 120/208V, 5A, 60Hz

B. 220 V_{ac} for 3p4W, 240/416V, 5A, 60Hz

Duration (H)	Temperature and humidity
0	25 °C / 60 %R.H.
1	-20 °C
8	-20 °C
1	70 °C / 95 %R.H.
8	70 °C / 95 %R.H.
1	25 °C / 60 %R.H.

Table 1



Curve 1



ELECTRONICS TESTING CENTER, TAIWAN

Report No.: 14-09-EAT-027-E00



Figure 1 : POLARIS 3p3W, 100, 1.5(6)A,
50Hz



Figure 2 : POLARIS 3p4W, 120/208V, 5A,
60Hz



Figure 3 : POLARIS 3p4W, 240/416V, 5A,
60Hz

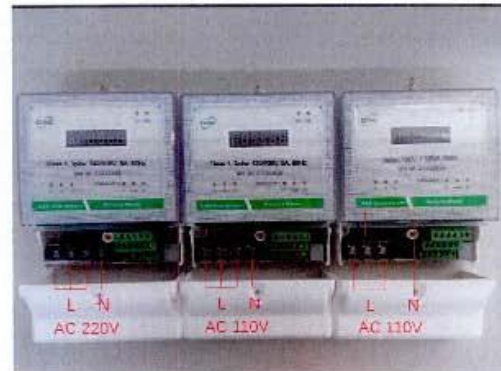


Figure 4 : Sample setup



Figure 5 : Temperature and humidity test



Testing Equipment :

Name	Model	Cal. Date	Due Date
T & H Chamber	ESPEC PR-2KP	Nov. 11, 2013	Nov. 10, 2014

~ END ~



Test Result :

Temperature and humidity test

Date of testing : Sep. 11, 2014 to Sep. 12, 2014

Measure environment : Temp. 22 °C to 24 °C / 51 %R.H. to 55 %R.H.

Model	Function check	Visual check	Remark
POLARIS 3p3W, 100, 1.5(6)A, 50Hz	Power on is normal	Normal	Figure 6
POLARIS 3p4W, 120/208V, 5A, 60Hz	Power on is normal	Normal	Figure 7
POLARIS 3p4W, 240/416V, 5A, 60Hz	Power on is normal	Normal	Figure 8



Figure 6 : 3p3W, 100, 1.5(6)A, 50Hz
(Final condition)

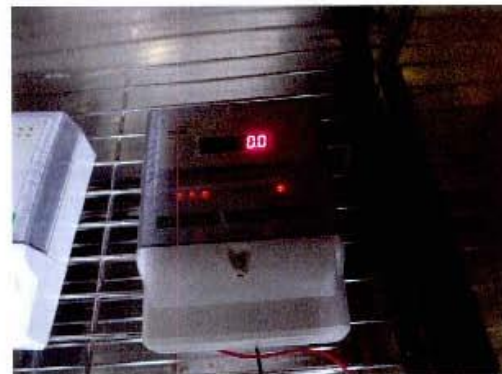


Figure 7 : 3p4W, 120/208V, 5A, 60Hz
(Final condition)



Figure 8 : 3p4W, 240/416V, 5A, 60Hz
(Final condition)

