



## ***Electromagnetic Compatibility***

**Test of:** Polyphase, Direct Connected, Electricity Meter

**Model Number:** ADL400-D

**Applicant:** Acrel

**Test Type:** Compliance

**Test Specification:** PD CLC/TR 50579: 2012\*

**SGS Serial Number:** EMA313177/1/TR50579

**Date of Receipt:** 12<sup>th</sup> February 2023

**Date of Test(s):** 24<sup>th</sup> February 2023

**Date of Issue:** 24<sup>th</sup> February 2023

**Issue Number:** 1

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*Tests marked \* are not UKAS accredited*

### ***Test Engineer***

**K. Hunter**

**Electricity Meter Approvals**

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**1. Client Information**

**Company Name:** Jiangsu Acrel Electrical Manufacturing Co. Ltd

**Address:** No.5, Dongmeng Road  
Nanzha  
Jiangyin  
Jiangsu  
China

## 2. Equipment Under Test (EUT)

### 2.1 Identification of EUT

<b>Model Number:</b>	ADL400-D
<b>Description of EUT:</b>	Polyphase, Direct Connected, Electricity Meter
<b>Accuracy Class:</b>	C (kWh)
<b>Supply Voltage/Current:</b>	3x230/400V, 10(80)A
<b>Ports present:</b>	Enclosure, AC Mains Supply
<b>Accessories Supplied:</b>	N/A

## 3. Test Specification, Methods and Procedures

### 3.1 Test Specification(s)

Standard	Date	Title
PD CLC/TR 50579	2012	Electricity metering equipment (a.c.)- Severity levels, immunity requirements and test methods for conducted disturbances in the frequency range 2kHz-150kHz
BS EN 61000-4-19	2014	Electromagnetic compatibility Part 4-19: Testing and measurement techniques — Test for immunity to conducted, differential mode disturbances and signalling in the frequency range 2 kHz to 150 kHz at a.c. power ports

## 4. Deviations from the Test Specifications

There were no deviations or exclusions from the test specification.

## 5. Operation of the EUT During Testing

### 5.1 Configuration and Peripherals

The voltage circuit was energised with nominal voltage and Iref applied to the current circuit.

### 5.2 Operating Mode and Environmental Conditions

The operating mode and environmental conditions used for the test is described in the test results section of this report.

### 5.3 Failure Criteria

The additional percentage error must not exceed  $\pm 2\%$

**6. Test Results**

**6.1 Modifications Made to the EUT**

No modifications were made to the EUT during the testing process.

**6.2 Summary of Test Results**

Standard	Test	Result
PD CLC/TR 50579: 2012	Electricity metering equipment (a.c.)- Severity levels, immunity requirements and test methods for conducted disturbances in the frequency range 2kHz-150kHz	Complied
BS EN 61000-4-19: 2014	Electromagnetic compatibility Part 4-19: Testing and measurement techniques — Test for immunity to conducted, differential mode disturbances and signalling in the frequency range 2 kHz to 150 kHz at a.c. power ports	Complied

**Result**

In the configuration tested, the EUT complies with the test standards detailed above.

**Conducted Disturbances Test Results**

**Environmental Conditions**

<b>Power Supply</b>	3x230/400V, 10A, 50Hz
<b>Temperature</b>	22°C
<b>Relative Humidity</b>	50%
<b>Barometric Pressure</b>	996mB

Sample No.: 11809192840054  
 Ports: Current Circuits  
**Test Level:** 2A & 1A  
**Frequency Range:** 2kHz to 150kHz  
**Dwell Time:** 10 seconds  
**Frequency Step Size:** 1%

The compliance test was performed as follows:

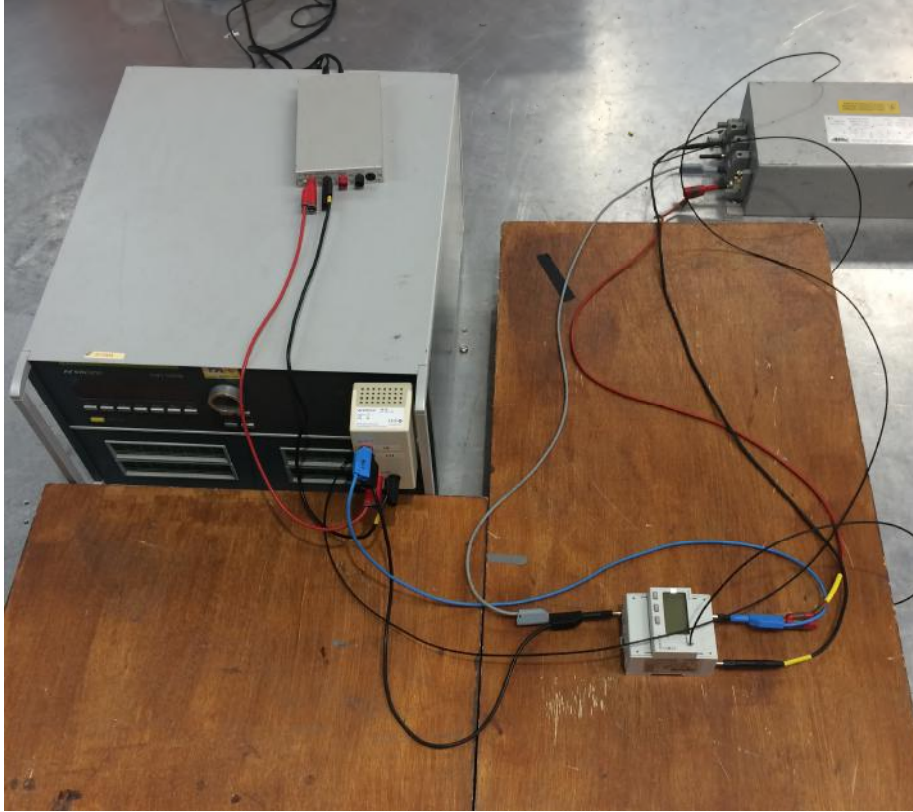
The disturbance signal was applied to the current circuits only.

**Operating Mode**

Voltage and auxiliary circuits energised with reference voltage and with basic current Iref applied

**Test Results**

Test Level & Frequency	Maximum % Errors Observed	Additional % Error Limit		
		Accuracy		
		Class A	Class B	Class C
No disturbance applied	0.00	-	-	-
2A 2-30kHz	-0.51	±6.0	±4.0	±2.0
1A 30-150kHz	-0.54	±6.0	±4.0	±2.0

**Conducted Disturbances Test Configuration****Test Equipment Used**

<b>Equipment Type</b>	<b>Model Number</b>
Continuous Wave Simulator	EM Test CWSA 500N4
Digital Multi Meter	Agilent U2741A
Oscilloscope	Siglent SDS 1202DL
Energy Standard	HEG VN42
Power Analyser	PA4400
Power Supply	AA Offer 3
Lighthouse Interface Unit	EMA64

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**\*\* End of Document \*\***

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