EU Type Examination Certificate Number: **0120/SGS0602**

Jiangsu Acrel Electrical Manufacturing. Co., Ltd

No.5, Dongmeng Road
Nanzha
Jiangyin
Jiangsu
China

Instrument Identification:
ADL400-*

Polyphase, Active Import/Export kWh, Electricity Meter

Instrument Traceable Number
0120/SGS0602

has been assessed and certified as meeting the requirements of

EU Directive 2014/32/EU

on Measuring Instruments Annex II, Module B

It is certified that the manufacturer's technical design and specimen for the above instrument has been examined and, based on the evidence submitted, it is considered that the instrument conforms to the requirements of Annex V of EU Directive 2014/32/EU

This certificate must be used in conjunction with a certificate covering the product verification as required in Annex II, Module D or Annex II, Module F

This certificate is valid for 10 years from 27 March 2023 until 26 March 2033
Issue 1

Certification is based on report number(s):
SHES220801610401 dated 14th March 2023, EMA313177/1/TR50579 dated 24th February 2023

Authorised Signature

Mikko Välimäki

SGS Fimko OY, Notified Body 0598
Takomotie 8, FI-00380 Helsinki, Finland
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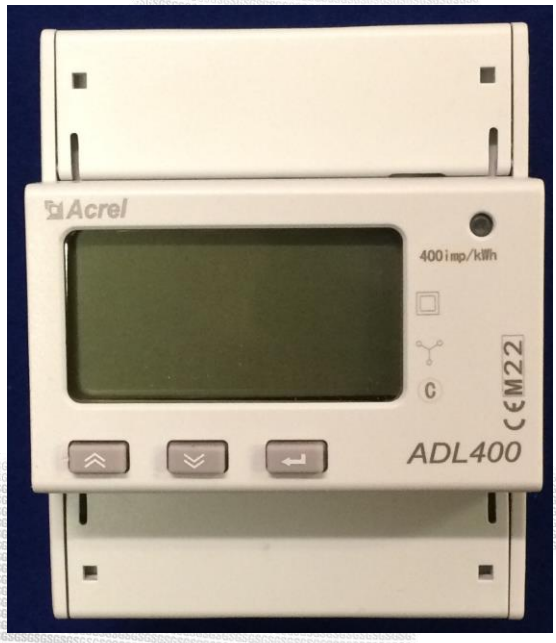
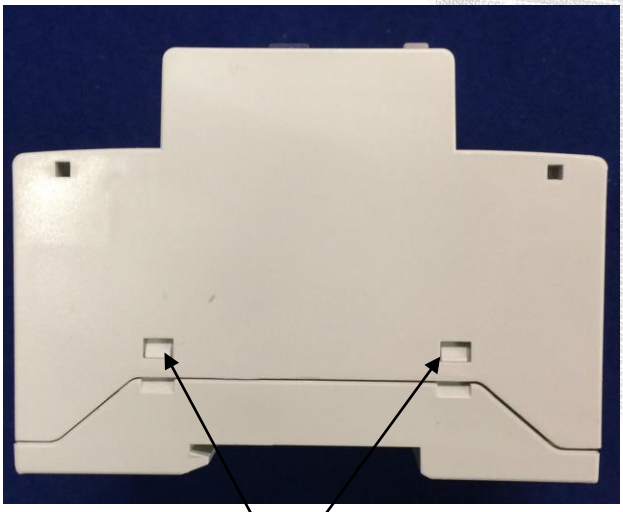
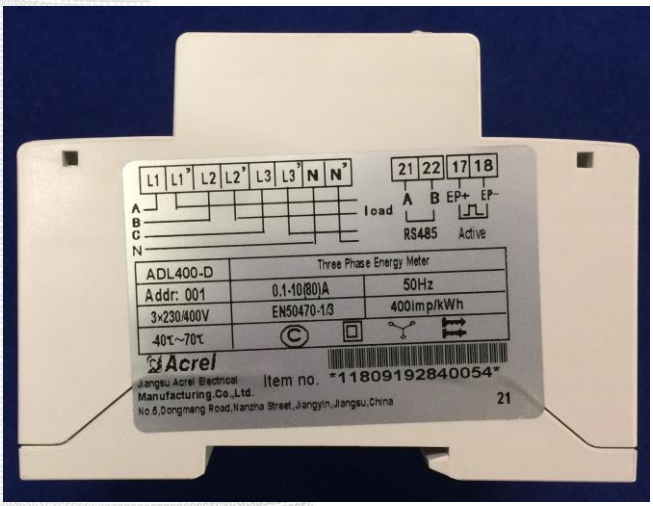
1. Technical Data

Manufacturer	Jiangsu Acrel Electrical Manufacturing Co. Ltd
Meter Type	ADL400-D, ADL400-U
Voltage Rating *(Un)*	3x230/400V
Current Rating *(Imin – Iref (Imax))*	0.1-10(80)A
Frequency *(Fn)*	50Hz
Active Accuracy Class *(kWh)*	C (kWh)
Type of circuit	3p3w, 3p4w
Temperature Range	-40ºC to +70ºC
Software/ Firmware Version No. **CRC Checksum** **Identification Location**	V1.01 B8EE40E8 LCD
Bill of Materials No's.	ADL400-D: YZ.40.07.00036 ADL400-U: YZ.40.07.00034
IP Rating	IP51 Must be installed in a suitable IP rated enclosure
Insulation Protective Class	Class II
LED Pulse Constant	400 imp/kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Main cover clipped in place and sealed with tamper proof sealing tape
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Terminal Arrangement(s)	DIN
Location of Manufacturers Address	Nameplate or Associated Documents

2. Photograph of Meter and Sealing Plan



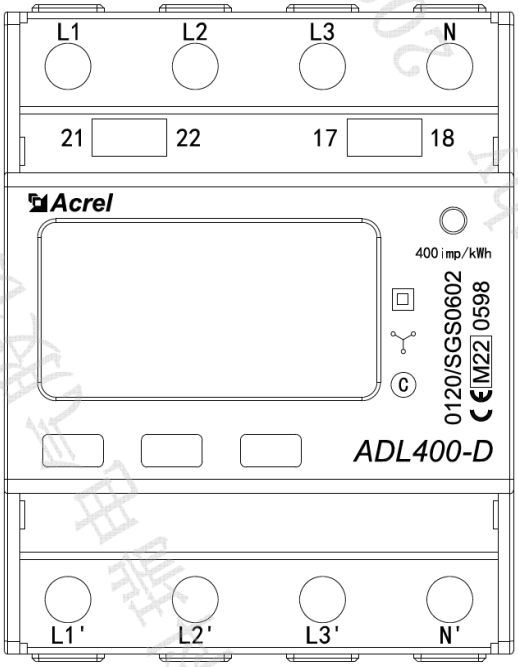




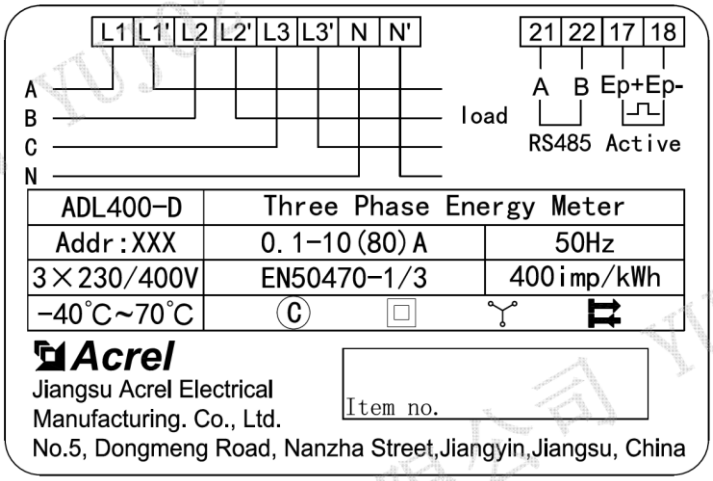
Main Cover Sealing Points

3. Nameplates

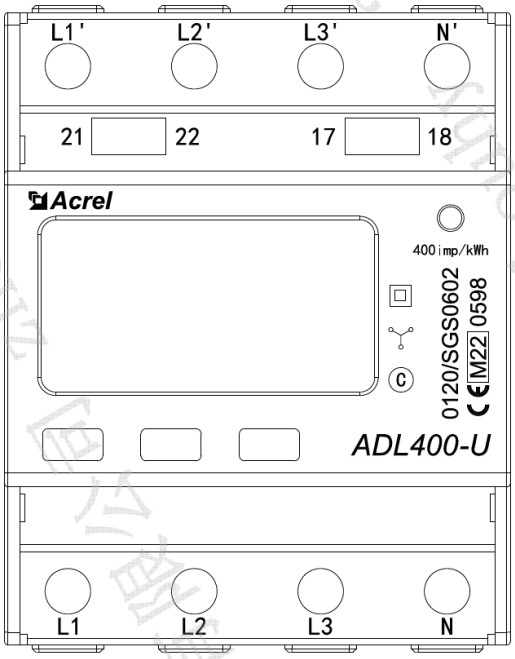
ADL400-D



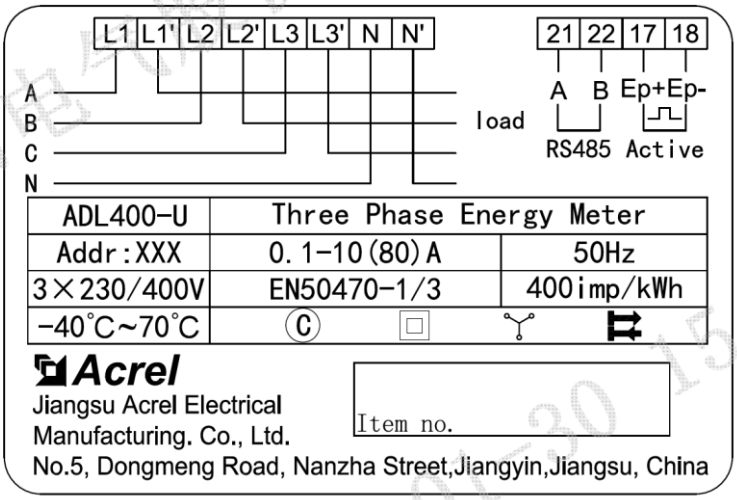
ADL400-D



ADL400-U



ADL400-U



4. Calculation of the composite error/ MPE

During the type approval examination the influence factors for temperature, frequency and voltage are determined per load point. The table below represents the sum of the square values per load, determined via the following formula:-

$$\delta e\,(T, U, f) = \sqrt{(\delta e^2\,(T, I, \cos\varphi)\,,\ \delta e^2\,(U, I, \cos\varphi)\,,\ \delta e^2\,(f, I, \cos\varphi))}$$

where

$\delta e(T, I, \cos\varphi)$ = Additional error due to variation of the temperature at the same load
$\delta e(U, I, \cos\varphi)$ = Additional error due to variation of the voltage at the same load
$\delta e(f, I, \cos\varphi)$ = Additional error due to variation of the frequency at the same load

		Influence Factors for Temperature. Frequency & Voltage							
Current	**PF Cos**	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
Imin	1.0	***0.83***	***0.55***	***0.32***	***0.15***	***0.04***	***0.07***	***0.09***	***0.07***
Itr	1.0	***0.80***	***0.53***	***0.30***	***0.14***	***0.07***	***0.09***	***0.11***	***0.09***
10Itr	1.0	***0.77***	***0.50***	***0.28***	***0.13***	***0.07***	***0.09***	***0.10***	***0.08***
Imax	1.0	***0.79***	***0.53***	***0.29***	***0.13***	***0.06***	***0.09***	***0.11***	***0.10***
Itr	0.5ind	***1.11***	***0.73***	***0.43***	***0.20***	***0.04***	***0.08***	***0.11***	***0.08***
10Itr	0.5ind	***0.82***	***0.55***	***0.31***	***0.15***	***0.07***	***0.08***	***0.08***	***0.05***
Imax	0.5ind	***0.78***	***0.48***	***0.25***	***0.15***	***0.15***	***0.21***	***0.21***	***0.14***
Itr	0.8cap	***0.68***	***0.45***	***0.26***	***0.11***	***0.05***	***0.08***	***0.09***	***0.08***
10Itr	0.8cap	***0.74***	***0.48***	***0.27***	***0.12***	***0.05***	***0.09***	***0.10***	***0.08***
Imax	0.8cap	***0.77***	***0.52***	***0.30***	***0.14***	***0.07***	***0.10***	***0.12***	***0.12***
						0.00	***0.00***	***0.00***	***0.00***
L1									
Itr	1.0	***0.72***	***0.47***	***0.25***	***0.10***	***0.04***	***0.06***	***0.05***	***0.03***
10Itr	1.0	***0.69***	***0.44***	***0.23***	***0.09***	***0.06***	***0.06***	***0.05***	***0.05***
Imax	1.0	***0.72***	***0.46***	***0.26***	***0.12***	***0.08***	***0.08***	***0.08***	***0.07***
Itr	0.5ind	***1.02***	***0.68***	***0.40***	***0.18***	***0.05***	***0.11***	***0.15***	***0.15***
10Itr	0.5ind	***0.74***	***0.48***	***0.27***	***0.16***	***0.06***	***0.07***	***0.07***	***0.05***
Imax	0.5ind	***0.78***	***0.47***	***0.28***	***0.12***	***0.07***	***0.09***	***0.07***	***0.07***
L2									
Itr	1.0	***0.89***	***0.59***	***0.40***	***0.16***	***0.06***	***0.10***	***0.14***	***0.14***
10Itr	1.0	***0.85***	***0.57***	***0.33***	***0.15***	***0.06***	***0.12***	***0.15***	***0.15***
Imax	1.0	***0.88***	***0.59***	***0.35***	***0.17***	***0.06***	***0.12***	***0.16***	***0.16***
Itr	0.5ind	***1.23***	***0.84***	***0.51***	***0.23***	***0.04***	***0.04***	***0.03***	***0.09***
10Itr	0.5ind	***0.99***	***0.70***	***0.44***	***0.20***	***0.05***	***0.07***	***0.07***	***0.03***
Imax	0.5ind	***0.96***	***0.58***	***0.35***	***0.16***	***0.08***	***0.08***	***0.12***	***0.11***
L3									
Itr	1.0	***0.80***	***0.53***	***0.31***	***0.14***	***0.05***	***0.09***	***0.10***	***0.08***
10Itr	1.0	***0.77***	***0.51***	***0.30***	***0.13***	***0.05***	***0.08***	***0.08***	***0.06***
Imax	1.0	***0.78***	***0.53***	***0.29***	***0.12***	***0.07***	***0.10***	***0.14***	***0.10***
Itr	0.5ind	***0.95***	***0.69***	***0.39***	***0.17***	***0.06***	***0.13***	***0.19***	***0.17***
10Itr	0.5ind	***0.60***	***0.50***	***0.26***	***0.11***	***0.07***	***0.10***	***0.10***	***0.08***
Imax	0.5ind	***0.66***	***0.52***	***0.27***	***0.22***	***0.05***	***0.15***	***0.17***	***0.15***

5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
ADL400-D	3x230/400V, 0.1- 10(80)A, Current Terminals Up Iin, Down Iout
ADL400-U	3x230/400V, 0.1-10(80)A, Current Terminals Down Iin, Up Iout

Modifications to the meter(s) described according to approval No.**0120/SGS0602** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

6. Document Revision History

Issue	Date	Comments
1	27/03/2023	Initial Issue

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END OF CERTIFICATE