

1. General

The DTSD1352 (ADL3000) electricity meter is a new generation of miniature electricity meters developed by Acrel Electric. This manufacturer possesses many years of experience in designing electricity meters and provides now an advanced product to complete the AlphaESS Storage System.

The power meter contains a LCD display and an electricity pulse output function. Beside the normal function of the clock, the rate period parameters can be set through this additionally. Via the integrated RS485 communication the meter can exchange data with the AlphaESS energy management system and facilitate the automated power administration.

This power meter has the advantages of a smaller volume, a higher precision, a good EMC, an easily installing and even more. It also meets the related technical requirements of electronic power meters in the GB/T 17215, GB/T 17883 and DL/T 614 standards.

2. Product Specification

Type	Accuracy class	Rated voltage	Current specification	Pulse constant
DTSD 1352 (ADL3000)	0.5	3 x 220 / 380V	3 x 1.5 (6) A	6400imp/kWh
			3 x 5 (20) A	1600imp/kWh
			3 x 10 (40) A	800imp/kWh
			3 x 20 (80) A	400imp/kWh

Table 1. Product Specification

3. Technical Parameter

Item		Technical Value
		DTSD1352 (ADL3000)
Accuracy class		Active: 0.5 Class ; Reactive: 2 Class
Rated voltage UN		3 x 220 / 380V
Current specification		1.5 (6) A, 5 (20) A, 10 (40) A, 20 (80) A
Operational voltage		Normal Operational voltage rage: 0.9~1.1 Un Limit Operational voltage range: 0.7~1.2 Un
Reference frequency		50Hz or 60Hz
Starting current	Direct connecting	0.004Ib
	Via CT connecting	0.002In
Power Consumption	Voltage line	≤5VA/phase
	Current line	<4VA/phase
Electricity pulse output		Pulse width: 80ms ± 20ms Photo isolator, collector open output
Digital communication		RS485, MODBUS-RTU
Clock error		≤0.5s/d
Temperature range		Normal working temperature: -10°C - +45°C Limit working temperature: -20°C - +55°C Storage temperature: -40°C - +70°C
Relative humidity		≤95% (No condensation)
Outline Dimension (WxDxH)		126 x 109 x 74 (mm)
Mean time between failures (h)		≥50.000

Table 2. Technical Parameter

4. Meter Description

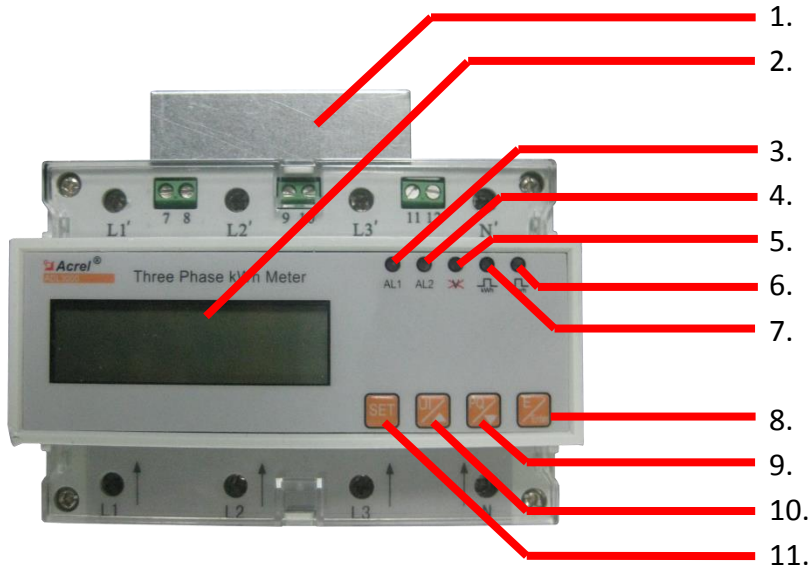


Figure 1. Meter - Description

No	Name	Status	Function
1	RS485 Plug-In		RS485 terminal
2	LCD		LCD display
3	Alarm	Indicator lights	Abnormal meter instructions
4	Phase sequence	Indicator lights	Phase sequence error indication
5	Pressure loss	Indicator lights	Loss of pressure status indication
6	Reactive	Indicator lights	Reactive energy pulse indication
7	Active	Indicator lights	Active energy pulse indication
8	Enter Button		Confirm button
9	Down Button		Display the Down button
10	Up Button		Display the Up button
11	SET Button		Set button

Table 3. Meter - Description