

435



DDSF1352

Installation and operation instruction V1.0

ACREL Co.,Ltd

Declare

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1 General

DDSF1352 single phase electric energy meters is used for calculating the single phase active energy respectively on the frequency of 50 Hz. Measurement, statistic, communication and LCD display functions are installed in the power meter. It meets the related technical requirements of electronic power meter in the IEC62053-21, IEC62053-22 standards.

2 Main function

Function name		Function provide
	DDSF1352	
Measurement of kWh	Total active energy kWh (positive and negative in total)	■
Measurement of electrical parameters	U、I、P、Q、S、PF、F	■
LCD display	8 bits section LCD display	■
Communication	Communication interface: RS485, Communication protocol: MODBUS-RTU	■

(■: means standard; □: means optional)

3 Technical parameter

3.1 Electric performance

Technical parameter		DDSF1352
Voltage	Reference voltage	220V
	Reference frequency	50Hz
	Consumption	<4VA(Each phase)
Current	Input current	10(60)A
	Starting current	Connect directly: 0.004 Ib
	Consumption	<4VA (Maximum current)
Measurement performance	Accuracy of measuring	1 Class
Clock accuracy		Error $\leq 0.5s/d$
Active pulse	Pulse width	80ms \pm 20ms
	Pulse constant	1600imp/kWh
Communication	Interface	RS485(A+, B-)
	Connection mode	Shielded twisted pair conductors

	Protocol	MODBUS-RTU
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3.2 Mechanical performance

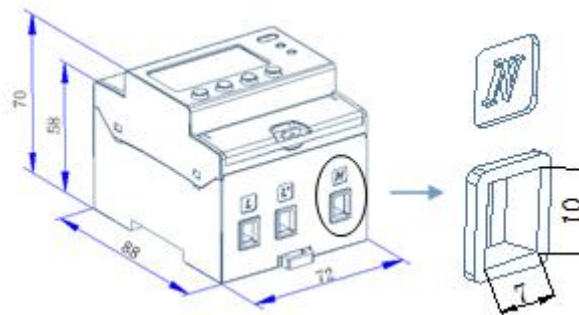
	DDSF1352
Outline (Length × Width × Height)	72mm×88mm×70mm
Maximum wiring ability (flexible cable)	25mm ²

3.3 Work environment

Temperature range	Work temperature	-25℃~55℃
	Storage Temperature	-40℃~70℃
Relative humidity	≤95%(No condensation)	
Altitude	<2000m	

4 Dimension drawings (Unit: mm)

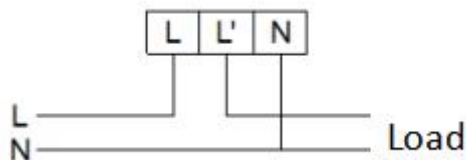
DDSF1352



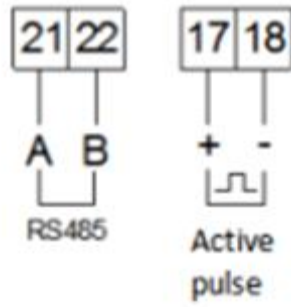
direct connect

Note: The torque of direct connect should not be greater than 4.0N·m.

5 Wiring and installing



DDSF1352



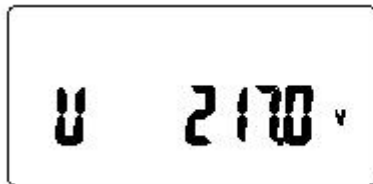
Auxiliary function

6 Display and operation

6.1 Display examples



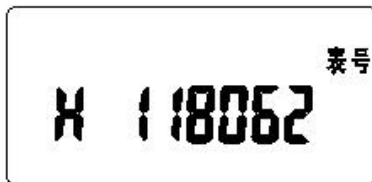
Total energy



Voltage display



Current Display



645Address (High six bit)



645Address (Low six bit)

7 Communication description

7.1 Communication protocol

The meters adapt Modbus. Please refer to the relevant standards for more information.

7.2 MODBUS address table

DDSF1352 address table

Address	Variable	Length	R/W	Notes
0000H	Current total active energy	4	R	unit: 0.01kWh
0002H	Current spike active energy	4	R	
0004H	Current peak active energy	4	R	
0006H	Current flat active energy	4	R	
0008H	Current valley active energy	4	R	
000AH	Code	2	R/W	
000BH	U Voltage	2	R	
000CH	I Current	2	R	
000DH	P Active power	2	R	unit: 0.001Kw
000EH	Q Reactive power	2	R	unit: 0.001Kvar
000FH	S Apparent power	2	R	unit: 0.001Kva
0010H	PF Power factor	2	R	Calculation factor: 0.001 (-1000~1000) effective range (-1000~1000)
0011H	Frequency	2	R	unit: 0.01Hz
0012H	Reserved			
0013H				
0014H				
0015H				
...				
003BH				
003CH	Current forward total active energy	4	R	
003EH	Current reversing total active energy	4	R	
0040H-03 5FH	Reserved			
0360H	Main communication: Communication address and baud rate	2	R/W	Address: 1~247 Baud rate 0:1200 1:2400 2:4800 3:9600 4:19200 5:38400
0361H	Check bit/ stop bit	2	R/W	Check bit: 0: None 1: Odd

				2: Even stop bit: 0:1 1:1.5 2:2
0362H-03 64H	645Address[]	6	R/W	BCD
0365H	The second communicate: Communication address and baud rate	2	R/W	The same as the DDSF1352
0366H	The second communicate: Check bit stop bit	2	R/W	
0367H-03 69H	The second communicate: 645Address[]	6	R/W	
036AH ... 1FFFH 2000H 2006H 201BH	Reserved			

There will not be control command because of the page limited, if there are any demand of these command, contact us with no hesitate.

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