

# SFERE D-series

## Electronic DIN rail energy meter



The D-series electronic meters are manufactured using energy metering microprocessor, utilizing digital sampling and SMT circuit technology.

It conforms to IEC 62053-22:2003 energy measurement accuracy. It is primarily used for low voltage AC network kWh metering. It also measures the electrical parameters of voltage, current, power, energy and power factor.

The DIN rail mount construction allows the meter to be installed in compact electrical distribution box. Measurements are displayed with a large LCD display for ease of reading.

Pulse kWh output are standard feature for remote network reading. Anti-tampering sealing seal for closing the meter against unauthorized access. Modbus-RTU communication interface and multi tariff are optional feature.



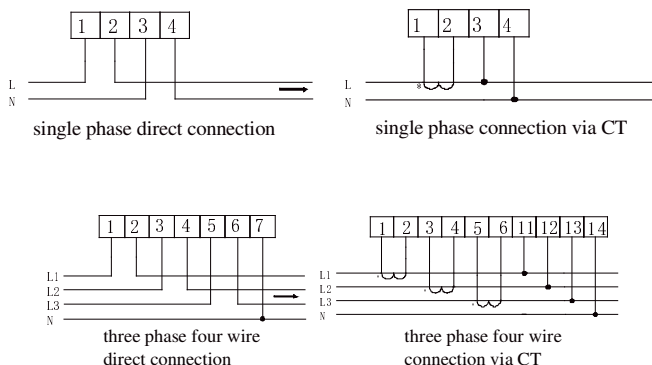
### General Specification

Input Current	Direct Connection	Single Phase meter 5(30)A, 10(60)A, 20(100)A Three Phase meter 20(100)A, 20(120)A
	CT Connection	1.5(6A) all type CT Ratio Selectable
Class Accuracy	Class 0.5 (also available Class 1)	
Frequency	50Hz/ 60Hz	
Voltage Range	0.90Un to 1.10Un	
Burden (Direct Circuit)	< 5VA	
Burden (CT Circuit)	< 2VA	
Operating Temperature	-10°C to 55°C	
Storage Temperature	-25°C to 70°C	
Relative Humidity	5 to 95%RH non-condensing	
IP Protection	IP 54 (panel) IP 20 (case)	

### Standard

Electricity metering equipment	IEC 62053-22: 2003
EMC, Surge & Transient Immunity	IEC 61000 -4-2, 3, 4, 5, 6, 8, 11 IEC 61000-2-6
Humidity & Thermal test (12h+12h cycle)	IEC60068-2-30

### Wiring diagram



### Model overview

Model	Electric Network	Voltage	Multi Tariff
<b>DDS 1946</b>	1P2W	230VAC L-N	No
<b>DDSF 1946</b>	1P2W	230VAC L-N	Yes
<b>DTS 1946</b>	3P4W	400VAC L-L 230VAC L-N	No
<b>DTSF 1946</b>	3P4W	400VAC L-L 230VAC L-N	Yes
<b>DSS 1946</b>	3P3W	400VAC L-L	No
<b>DSSF 1946</b>	3P3W	400VAC L-L	Yes

### Dimension diagram (mm)

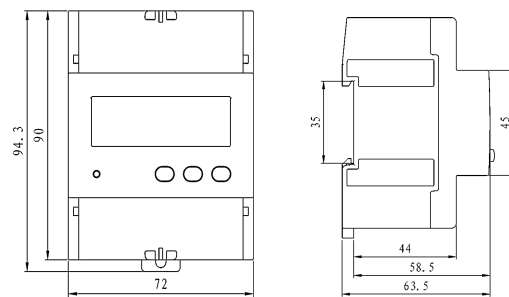


Fig 1. Dimension for 1P2W model

(DDS1946, DDSF1946)  
72(W) x 94.3(H) x 63.5(D) mm

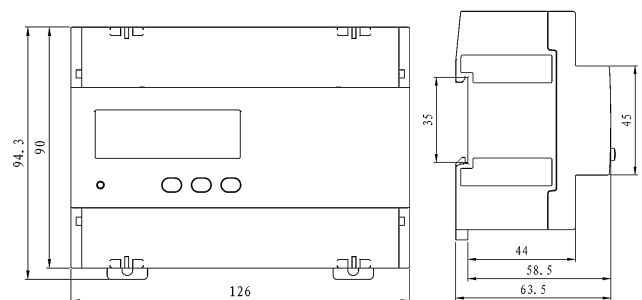


Fig 2. Dimension for 3P3W & 3P4W model

(DTS1946, DTSF1946, DSS1946, DSSF1946)  
126(W) x 94(H) x 63.5(D) mm

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### Model Variant Specifications

		Single Phase		Three Phase			
		DDS 1946/ DDS 1946T	DDSF 1946	DSS 1946/ DSS 1946T	DSSF 1946	DTS 1946/ DTS 1946T	DTSF 1946
Wiring mode	Single phase (1P2W)	●	●	-	-	-	-
	Three phase three wire (3P3W)	-	-	●	●	-	-
	Three phase four wire (3P4W)	-	-	-	-	●	●
Voltage range	230V	●	●	-	-	-	-
	3×230/400V	-	-	-	-	●	●
	3×400V	-	-	●	●	-	-
Current specification	Direct input	5(30)A, 10(60)A, 20(100)A		20(100)A, 20(120)A			
	Input via CT	1.5(6)A CT Ratio user selectable 30-5,000A/5A					
Real-time measurement	Voltage & current	●	●	●	●	●	●
	Power	●	●	●	●	●	●
	Power factor	●	●	●	●	●	●
	Frequency	●	●	●	●	●	●
	THD V&I (via ModBus)	-	-	● (DSS 1946T only)	●	● (DTS 1946T only)	●
Energy metering	Bi-directional energy	●	●	●	●	●	●
	Four-quadrant energy	-	-	-	-	-	-
	Multi-rate energy	-	●	-	●	-	●
Demand		-	-	-	-	-	-
Events record		-	-	-	-	-	-
Communication interface	RS485 Modbus-RTU	T model only	●	T model only	●	T model only	●
Energy pulse		●	●	●	●	●	●
Display mode		LCD	LCD	LCD	LCD	LCD	LCD

- : Yes
- : No
- : Optional

Note:  
 120A 3P4W & 3P3W Direct connection models are available on request.  
 Other voltage available on request.  
 THD V&I reading via ModBus access only.

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