

# **DIN-rail Type Power Meter**

## **Operation Manual**

**This manual is applied to the following models:**

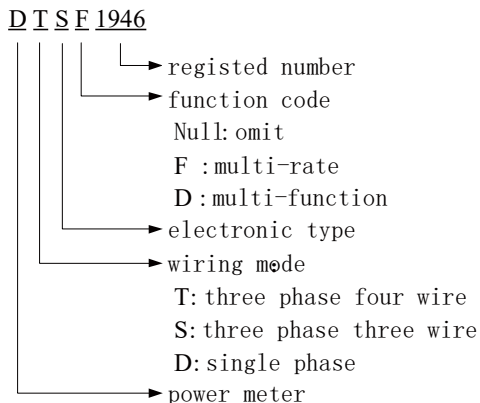
DDSF1946

**JIANGSU SFERE ELECTRIC CO., LTD.**

# 1. Introduction

DIN-rail type electric energy meters are designed and produced according to user's real electricity consumption situation by adopting advanced energy measurement IC and using digital sampling processing and SMT technologies. They adopt modularity structure with the features such as **small volume, convenient installation and reliable working**.

## 2. Naming rule



## 3. Model Selection

Model		Single phase
		DDSF1946
Wiring mode	Single phase	√
	Three phase three wire	-
	Three phase four wire	-
Voltage range	220V	√
	3×220V/380V	-
	3×380V	-
Current specification	Direct input	5(100)A
	Input via CT	1.5(6)A

Real-time measurement	Voltage & current	√
	Power	√
	Power factor	√
	Frequency	√
	THD	-
Energy metering	Bi-directional energy	√
	Four-quadrant energy	-
	Multi-rate energy	√
Demand		-
Events record		-
Communication interface	RS485	○
Energy pulse		√
Display mode		LCD

Note: in the upper format, √ means the function is available; - means the function is not available; ○ means the function is optional.

#### 4. Technical index

Electrical feature		
Model		DDSF1946
Function		
Accuracy		Voltage, current: 0.5 Class; Power, active energy: 1 Class
Rated voltage		220V
Input current	Direct input	5(100)A
	Input via CT	1.5(6)A
Frequency		50/60 Hz
Wiring mode		1P2W
Voltage range		0.8Un ~ 1.2Un
Consumption	voltage circuit consumption	< 5VA
	current circuit	< 2VA

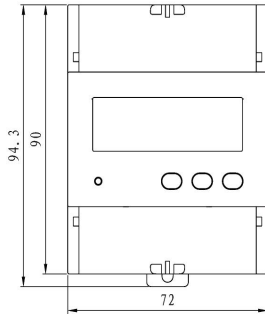
	consumption	
Start current	direct input	0.004Ib
	input via CT	0.002In
Energy pulse	One optoelectronic isolation output, pulse width (80±20%) ms	
RTC error	≤0.5s/day	
<b>Communication feature</b>		
RS485 port	Modbus-RTU protocol, baud rate up to 9600bps DL/T 645 protocol, baud rate up to 9600bps	
<b>Mechanical feature</b>		
Dimension	72×90×63.5	
IP protection	IP54 (front case) /IP20 (rear case)	
<b>Environment feature</b>		
Work temperature	(-10~55)°C	
Storage temperature	(-25~70)°C	
Relative humidity	(5~95)% (no condensation)	
<b>EMC</b>		
Electrostatic discharge immunity	IEC 61000-4-2-III class	
Radiated, radio-frequency, electromagnetic field immunity	IEC 61000-4-3-III class	
Electrical fast transient/burst immunity test	IEC 61000-4-4-IV class	
<b>Surge immunity</b>	<b>IEC 61000-4-5-IV class</b>	
Immunity to conducted disturbances, induced by radio-frequency fields	IEC 61000-4-6-III class	
Power frequency magnetic field immunity	IEC 61000-4-8-III class	
Voltage dips, short interruptions and voltage variations immunity	IEC 61000-4-11-III class	

## 5. Installation and wiring

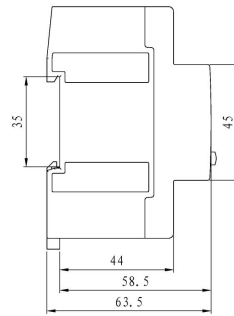
### 5.1 Outline dimension

Single phase meter outline dimension (mm)

front view



side view



## 5.2 Installation method

