

Multi-function power quality meter
performing up to 31 IO processing simultaneously

gems9000



High-performance digital power quality meter

iDPM300 is a multi-functional digital power quality meter with outstanding performance. It measures energy in real time and performs various functions such as power quality, alarm, and data logging. Measured data is displayed on a high-definition LCD and supports various network communications.

The measurement precision is 0.2% precision for voltage and current and satisfies Class 0.2S of the IEC620530-22 standard for power and wattage, enabling accurate analysis and diagnosis of various problems in energy management and power facilities. Measuring equipment.

iDPM300 supports 24 digital inputs, 3 digital outputs, 4 temperature sensors, and 4 4-20mA sensors simultaneously

1. Main features

- Precision measurement elements
- Phase/line voltage
- line current
- frequency
- Active/reactive/apparent power
- Voltage/current imbalance
- Power factor

PQ analysis

- Harmonic analysis (voltage current harmonic 63rd order)

2. High accuracy

IEC 62053 22 class 0.2S accuracy

3. True RMS

iDPM300 allows you to measure non-linear loads with very high accuracy. True RMS measurements of 533 sampling/cycle (60Hz) are performed using high-level sampling techniques.

4. Statistical data

iDPM300 provides statistical information such as maximum, minimum, and average values of voltage, current, and power within the data collection cycle. It also captures momentary fluctuations in measurement parameters, enabling precise analysis of power quality trends in voltage, current, and power.

5. Detailed power quality and energy reports

- Monitor and record parameters that support PQ.
- EN 50160 format (some items not supported)
- ITIC(CBEMA) curve
- harmonic analysis
- Display waveform and PQ data
- Data and event logging

6. I/O Modules

iDPM300 is a multi-function power quality meter that can perform up to 34 IO processing simultaneously.

- 4 Analog Inputs (4~20mA sensors)
- 3 Analog Inputs (Temp, PT100 3-Wire)
- 24 Digital Inputs
- 3 Digital Outputs



iDPM300 provides Class 0.2 accurate measurements for voltage and current, and active power energy complies with IEC62053 22 Class 0.2S. It also provides various information essential for electrical quality management, such as Sag, Swell, Crest Factor, K factor, and harmonics (63rd).

iDPM300 is a device that records and analyzes electrical data, and all collected data can be accessed through a LAN communication port running Modbus TCP.

General	Current accuracy		Class 0.2
	Voltage accuracy		Class 0.2
	Active energy accuracy		Class 0.2S
	Sample frequency		32kHz
Instantaneous rms values	Current, voltage, frequency		✓
	Active, reactive, apparent power	Total and per phase	✓
	Power factor	Total and per phase	✓
Energy values	Active, reactive, apparent energy		✓
Demand values	Current	Present and max. values	✓
	Active, reactive, apparent power	Present and max. values	✓
Power quality measurements	Harmonic distortion	Current and voltage	✓
	Individual harmonics	Front panel	63 st
	Waveform capture		✓
	Detection of voltage swells and sags		✓
	Fast acquisition	1/2 cycle data	✓
Data recording	Min/max of instantaneous values		✓
	Data logs		✓
	Event logs		✓
	Trending/forecasting		✓
	SER(Sequence of event recording)		✓
	Time stamping		✓
Display and I/O	Front panel display		✓
	Analog inputs (Temp, PT100 3-Wire)		4
	Analog inputs (4-20mA)		6
	Digital Inputs		24
	Digital Outputs		6
Communication	RS-485 (Modbus, Slave (1), Master(4))		5
	Ethernet port (Modbus / TCP)		2
	PDM port		1

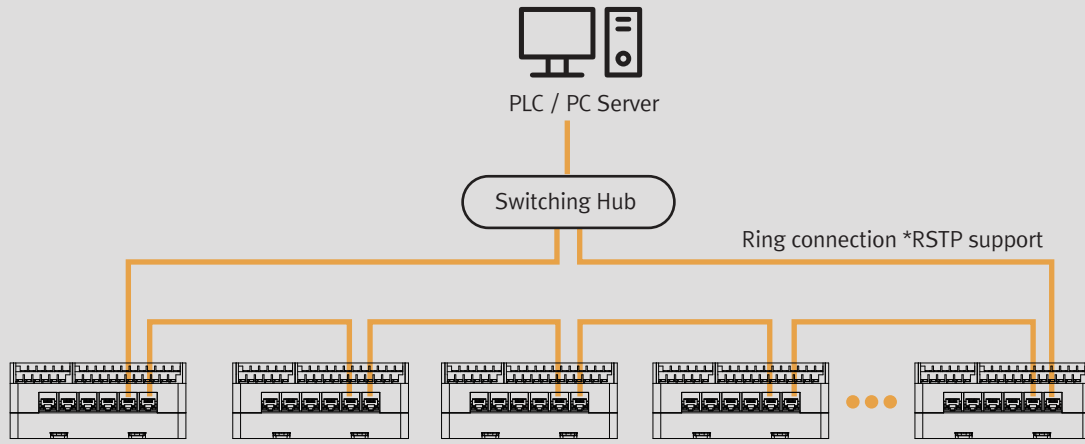


Electrical characteristics	Type of measurement		True rms to 533 samples per cycle @ 60Hz
	Measurement accuracy	Current & voltage	Class 0.2 (IEC 61557-12)
		Active Power	Class 0.2 (IEC-61557-12)
		Active Energy	Class 0.2S (IEC 62053-22)
		Frequency	Class 0.02 (IEC61557-12)
	Input-voltage characteristics	Specified accuracy voltage	AC 690V 3~L-L, 400V L-N
		Impedance	2.4M ohm per phase
		Specified accuracy frequency	45 to 65 Hz (50/60 Hz nominal)
	Input-current characteristics	Rated nominal current	Built-in 5A CT
		Starting Current	5mA (Selectable)
Power supply AC/DC	AC / DC	90 ~ 264 VAC	
	DC	100 ~ 370 VDC	
Mechanical characteristics	Type		Panel Mounting
	Dimensions	Front - 193.3 x 157.4 x 34.7mm	
		Rear - 193.3 x 157.4 x 67.4mm	
	IP degree of protection	IP 54 - Front degree of protection	
		IP 54 - Rear degree of protection	
LCD type		7" Color TFT LCD	

Environmental conditions	Operating temperature	-10 °C to 55 °C
	Storage temperature	-25 °C to 85 °C
	Humidity rating	5 % to 80 % non-condensing
	Operating altitude (maximum)	2000 m above sea-level
Electromagnetic compatibility	EMC standards	IEC62052-11 and IEC 61326-1
	Immunity to electrostatic discharge	IEC 61000-4-2
	Immunity to radiated fields	IEC 61000-4-3
	Immunity to fast transients	IEC 61000-4-4
	Immunity to surges	IEC 61000-4-5
	Immunity to conducted disturbances	IEC 61000-4-6
Safety	Immunity to voltage dips & interruptions	IEC 61000-4-11
	Safety Construction	IEC 61000-1 3 rd edition
Communication	Serial port RS-485	Baud rates of 2400 to 115200
	Ethernet port(s)	Include 2 port switching Hub, 10/100BASE-TX, RJ45 connector (UTP)
	Protocol	Modbus

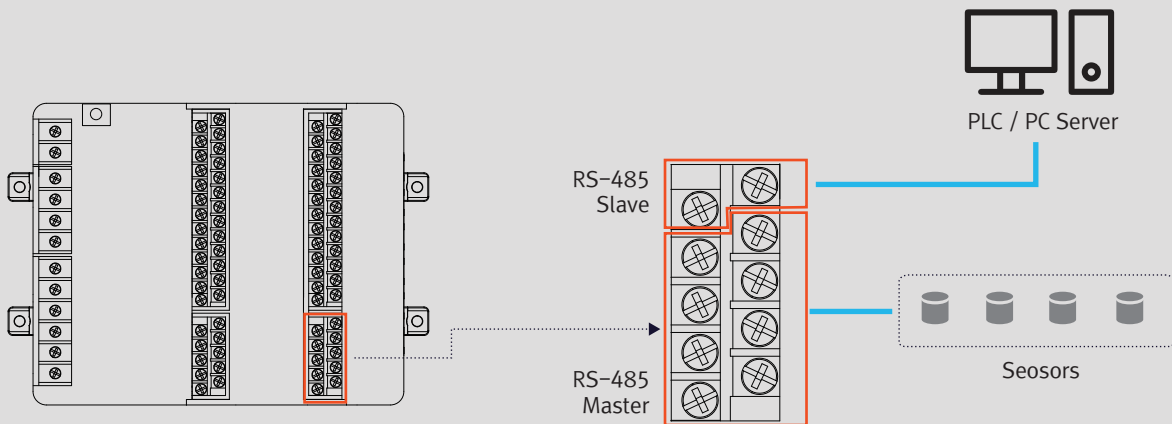
iDPM300 supports easy network connection with a built-in 2-port hub that supports RSTP.

LAN Communication



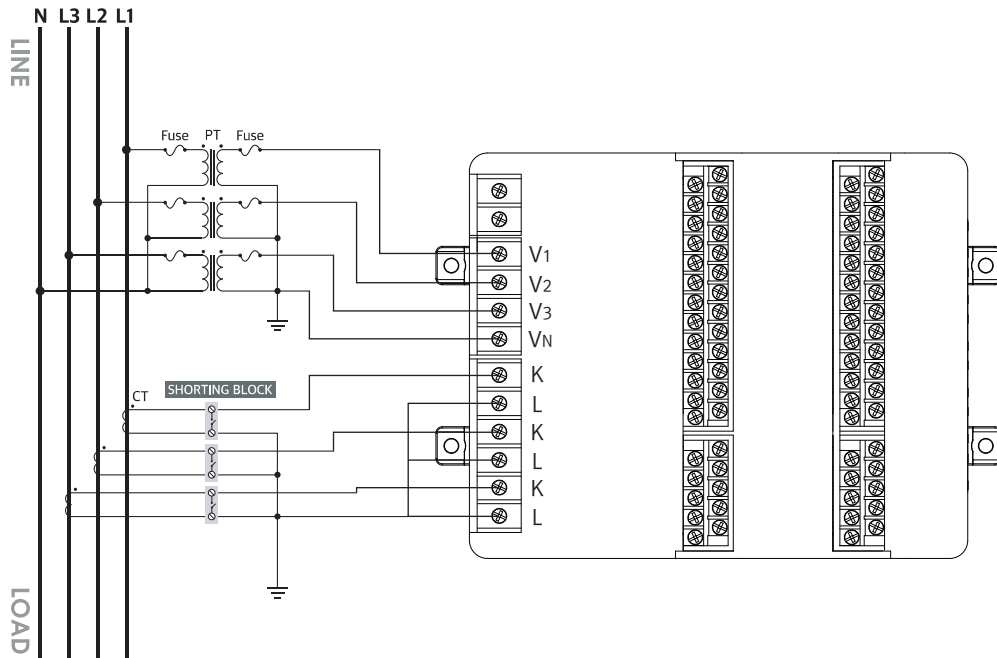
*RSTP(Rapid Spanning Tree Protocol) 지원

RS-485 Communication

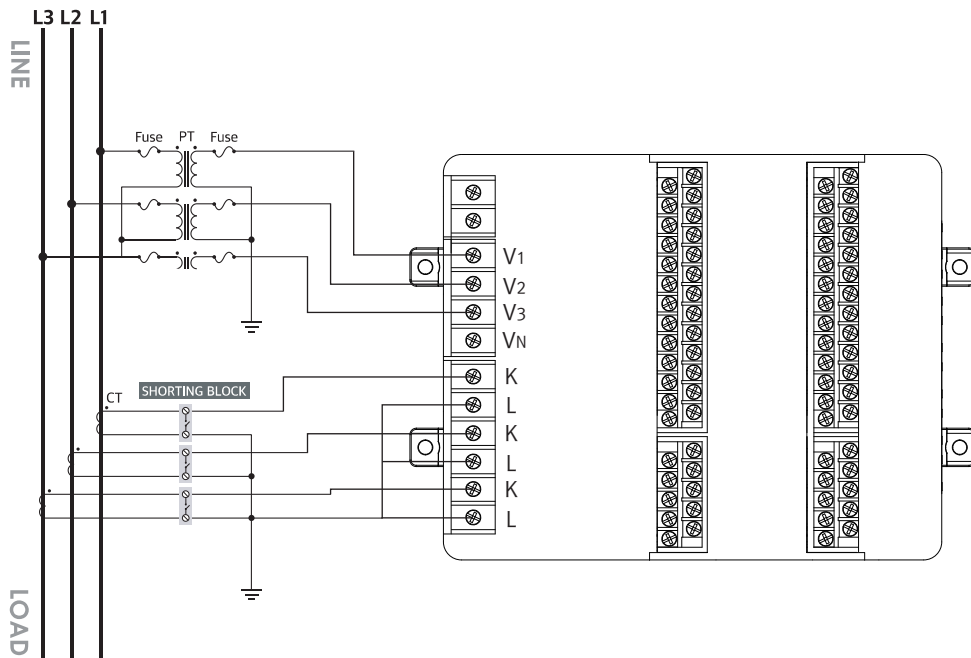


*8-pin terminal for easy connection of multiple sensors

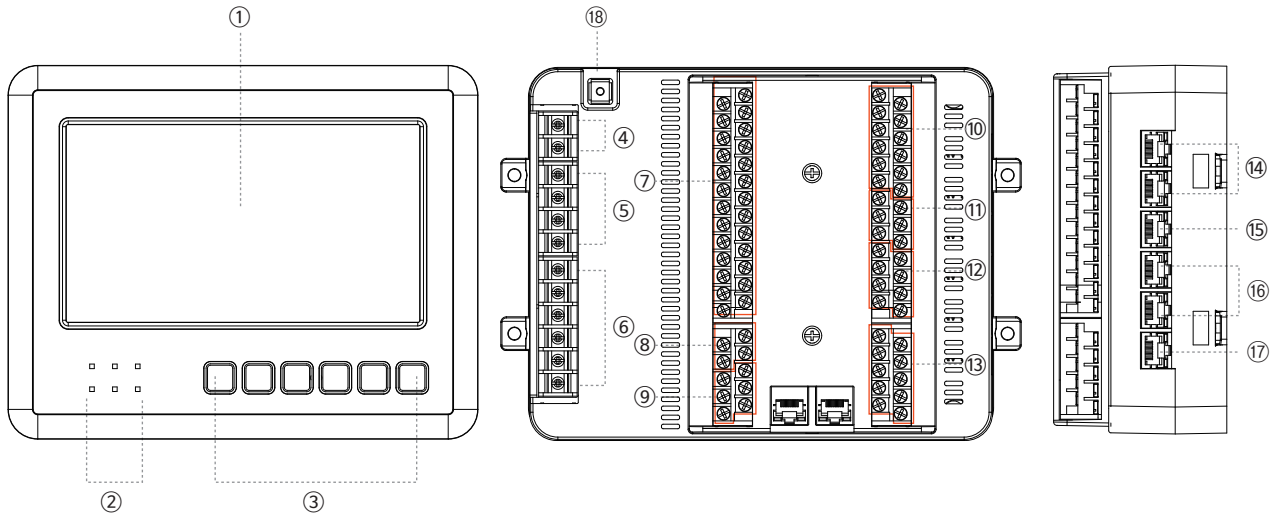
3P4W 3PT, 3CT wiring



3P4W 2PT, 3CT wiring



PART NAMES



No.	Item	Detail
	Display	7" Color TFT LCD
2	Status LED	Device Status
3	Input Key	6 Control keys
4	Power	Connect power for device operation(AC/DC 100~240V)
5	Voltage Input Terminal	Input Power for Measurement
6	CT Terminal	CT connection terminal
7	DI Terminal	DI 24ea
8	24V DC Input	24V DC Input (2 port for DC power redundancy)
9	DC Measurement	Voltage 1ea, Current 2ea
10	PT100 Sensor	PT100(3 wire) 3ea
11	DO Terminal	DO 3ea
12	AI Terminal	4~20mA AI 4ea
13	RS485	RS-485 (Master 1ea, Slave 1ea)
14	Ethernet Port	- Port connecting the device to the parent system - Protocol : Modbus TCP/IP(Slave), RSTP
15	PDM port	PDM Connection
16	Spare port	Reserved for Serial communication support
17	ISP port	Firmware update
18	FG	Frame Ground

