

Automation for a Changing World

Delta Power Meter DPM Series



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DELTA
Smarter. Greener. Together.

Product Introduction

Delta's Power Meter DPM Series offers precise measurement of various electrical energy values and power quality parameters, including power factor, harmonics, and current/voltage unbalance with functions such as off-limit alarms and history logs. It provides exceptional communication quality and monitoring functions that are especially suitable for sectors where power quality is critical.

Specifications

Model Name	DPM-C530A	DPM-C520	DPM-D520I
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Product Appearance



Accuracy Class	DPM-C530A	DPM-C520	DPM-D520I
Active Energy (IEC 62053-22)	Class 0.5S	Class 0.5S	Class 0.5S
Measurement Accuracy			
Current	1A/5A	1A/5A	63A
Voltage	●	●	●
Frequency	●	●	●
Active, Reactive, and Apparent Power	●	●	●
Power Factor	●	●	●
Active, Reactive, and Apparent Energy	●	●	●
Interval Energy	●	-	●
Demand Values			
Current	●	-	●
Power	●	-	●
Calculation Mode	Block	-	Block
Multiple Rate			
Interval Numbers	8 groups	-	8 groups
Power Quality Measurement			
Current / Voltage Unbalance	●	●	●
Total Voltage Harmonic Distortion	●	●	●
Total Current Harmonic Distortion	●	●	●
Individual Current / Voltage Harmonic Distortion	2~31	-	-
Data Recording			
Max. / Min. of Instantaneous Values With Timestamp	●	●	●
Data Logs Type	Selectable 17 measurement values	-	Selectable 17 measurement values
Data Logs Recording Duration	Up to 2 months	-	Up to 2 months
Alarms History	500	-	500
Alarms			
Alarm Types	29	10	29
Communication			
RS-485 Interface	●	●	●
Parameter Grouping	●	●	●
MODBUS	MODBUS RTU/ASCII	MODBUS RTU	MODBUS RTU/ASCII

* Min. / max. of instantaneous : Phase voltage, line voltage, current, frequency, total 3 - phase active power, total 3 - phase reactive power, total 3 - phase apparent power, total power factor, total voltage harmonic distortion, total phase voltage harmonic distortion, total current harmonic distortion, phase voltage unbalance, 3 - phase voltage unbalance, 3 - phase current unbalance

* Alarm types: Over-current, under-current, over natural current, over line voltage, under line voltage, over phase voltage, under phase voltage, over voltage unbalance, over current unbalance, over active power, over reactive power, over apparent power, power factor (lead), power factor (lag), over current demand, over active power demand, over reactive power demand, over apparent power demand, over frequency, under frequency, over total voltage harmonic distortion, over total current harmonic distortion, phase lose, meter restore factory, phase sequence reversal, over DUI, over EU

* Data log: Phase voltage, line voltage, current, natural current, power factor, displacement power factor, total active power, total reactive power, total apparent power, positive active energy, reversed active energy, positive reactive energy, reversed reactive energy, positive apparent energy, reversed apparent energy, total voltage harmonic distortion, total current harmonic distortion

Features

High Precision Power Measurement

- ▶ Highly precise measurement of bidirectional electrical energy and power parameters, meeting Class 0.5S of IEC 62053 and CNS14607 standards.
- ▶ Supports power quality measurement, including total and individual harmonic distortion, voltage and current unbalance, and more.

Large Screen LCD

DPM-C530A

- ▶ White-light widescreen LCD with resolution of 198x160 dots.



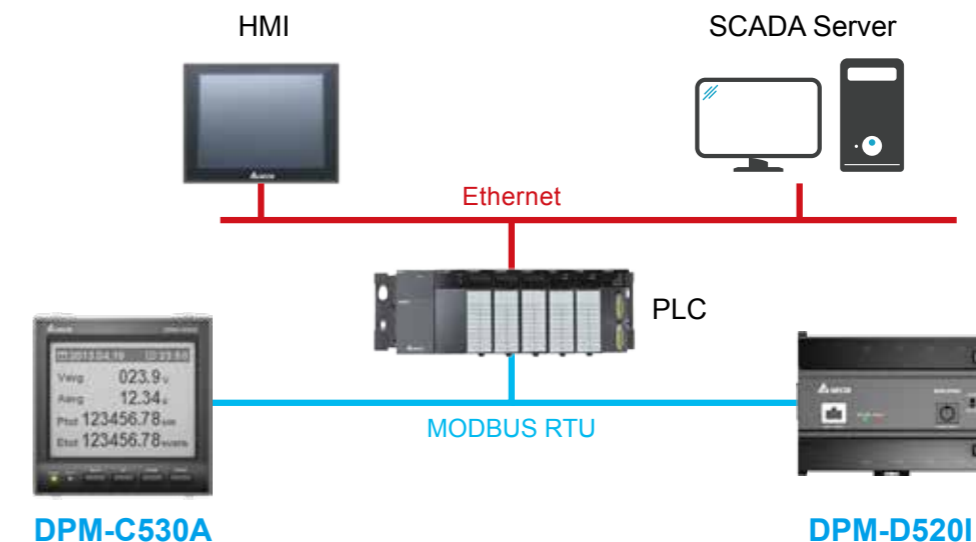
■ Visibility better than segment-type LCD

Ptot 123456.78 kW
Etot 123456.78 kVAh



Easy Operation and Installation

- ▶ Easy installation and disassembling with two fixing mounts, no screws or extra tools required.
- ▶ Built-in RS-485 communication port supports MODBUS communication.
- ▶ Transmission of all measurement values to the PLCs via communication.



Features

Event Alarms and History Logs

DPM-C530A & DPM-D520I

- ▶ Keeps max. 2 months of power and electricity energy measurement values for history analysis. Up to 17 power parameters selectable for recording different time intervals (ex. recording 17 electricity parameters every 5 minutes, for up to 2 months). 29 types of built-in event alarms for up to 500 event records.

DPM-C520

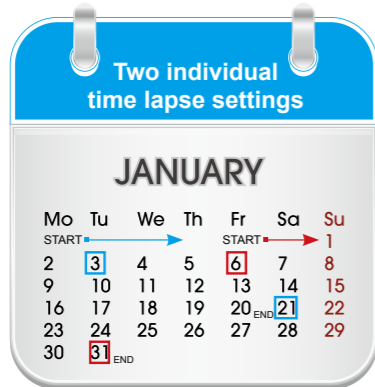
- ▶ 10 types of built-in event alarms.
- ▶ Front LED indicators for real-time alarms. Alarm messages with time stamps can be transmitted to PLCs via communication.



Auto Meter Reading

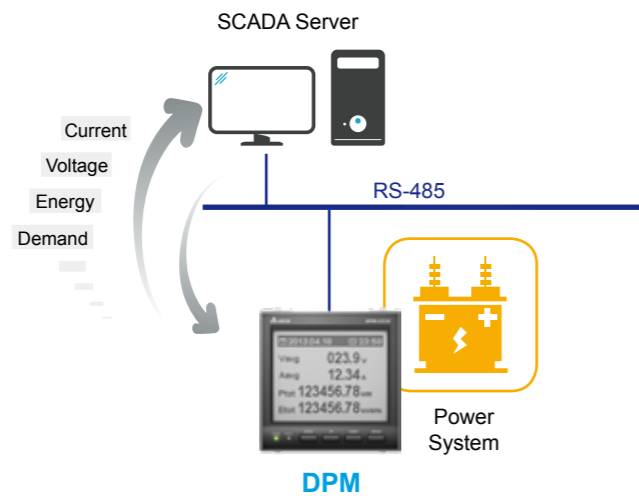
DPM-C530A & DPM-D520I

- ▶ Two built-in individual data registers record active/reactive energy in a certain given time lapse when triggered through communication.



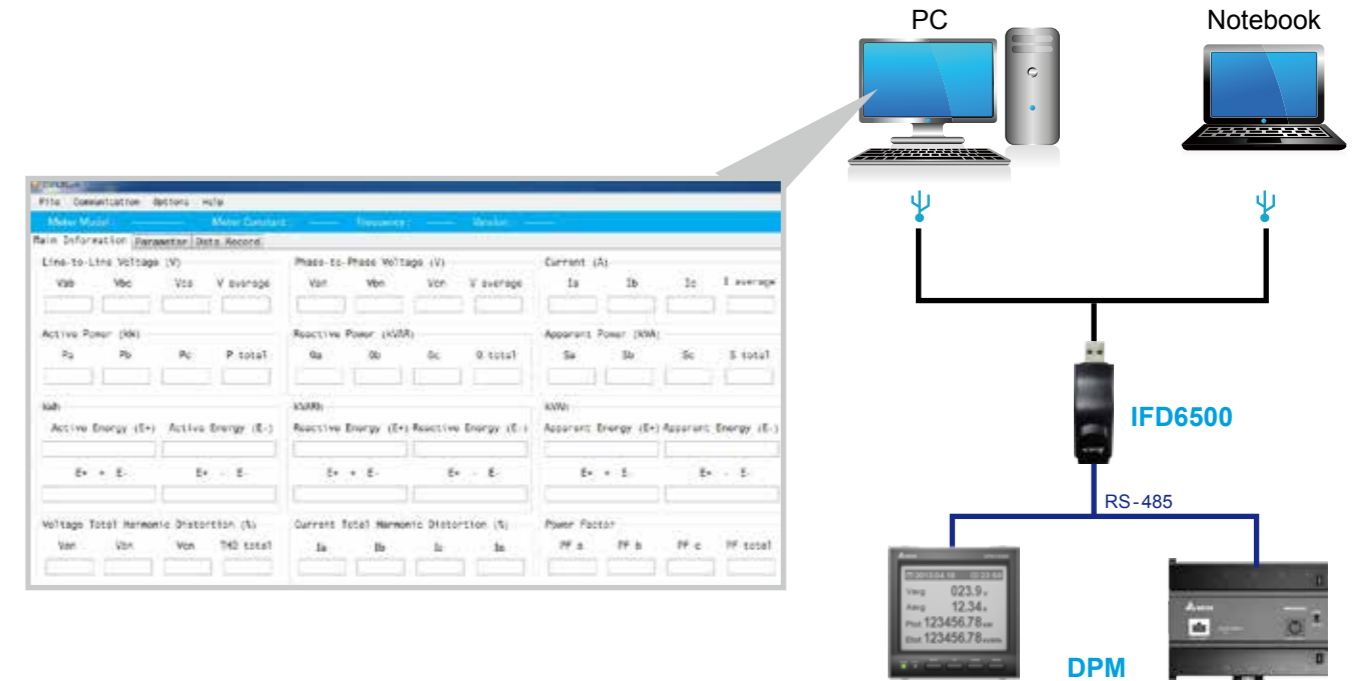
Parameter Grouping

- ▶ Grouping the measurands for faster data transmission and reading by the PLCs improves the efficiency and performance of data transmission.



PC-based Configuration Software

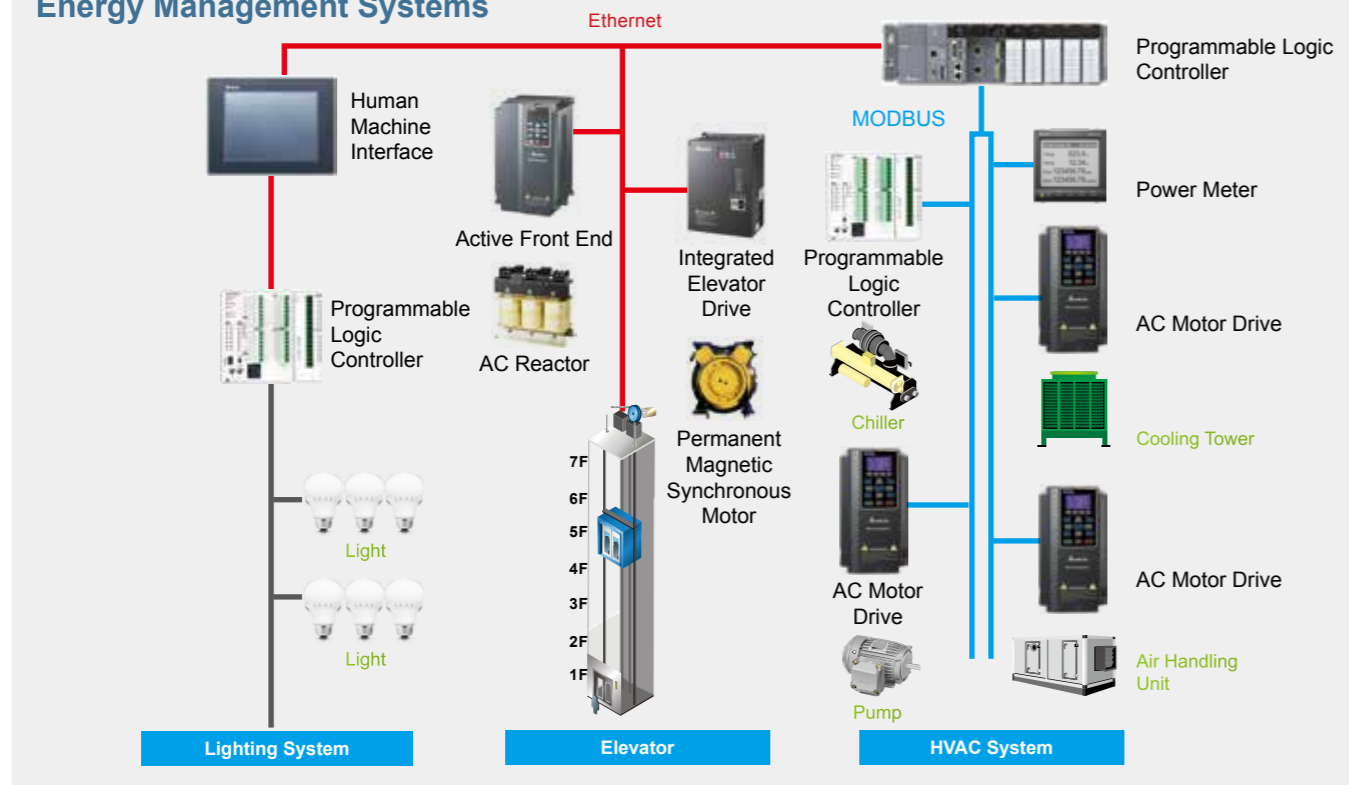
- ▶ Utilizing DPMSoft software through MODBUS communication for power meter setup and data acquisition provides easy power management and analysis.



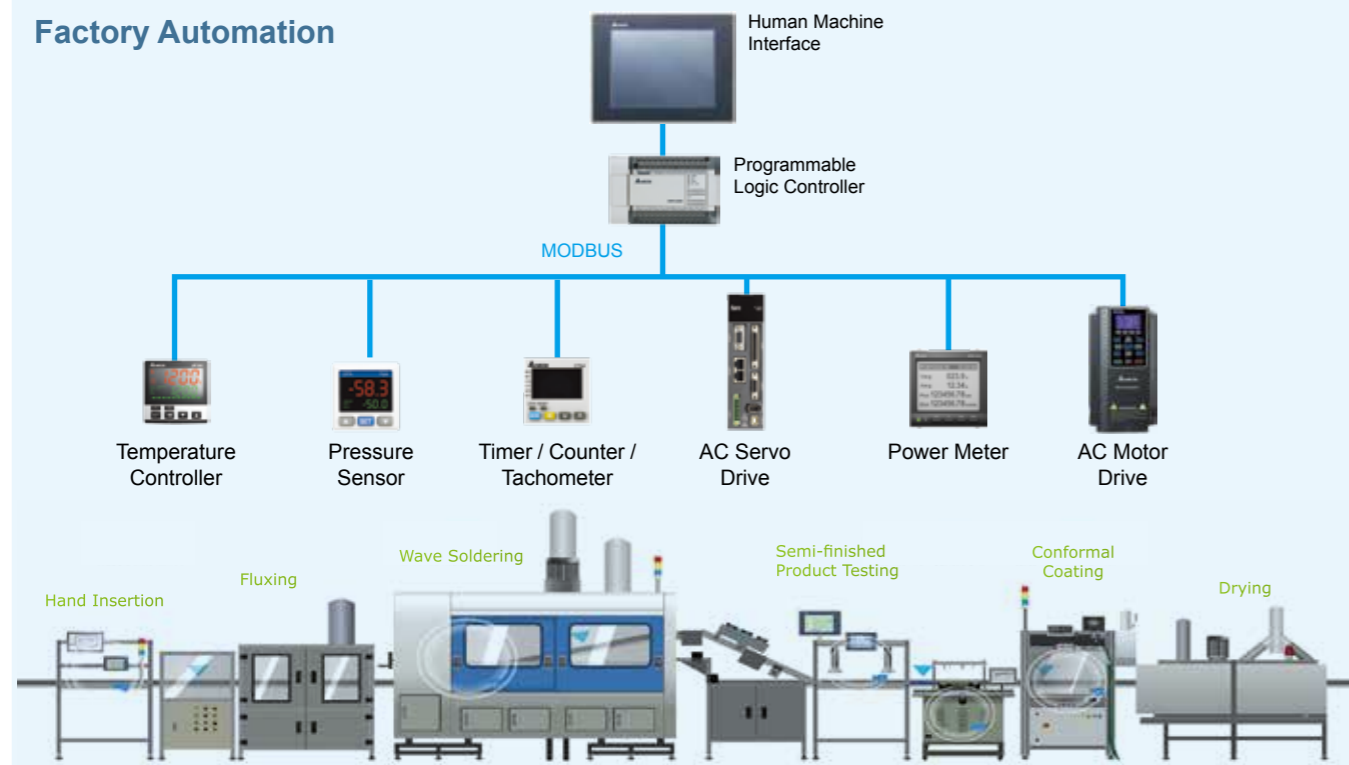
Applications

- ▶ Power Monitoring and Control, Energy Management Systems, Medium/Low Voltage Power Distribution Panels, Building Energy Management Systems, Factory Energy Management Systems, Factory Automation and Intelligent Buildings.

Energy Management Systems



Factory Automation

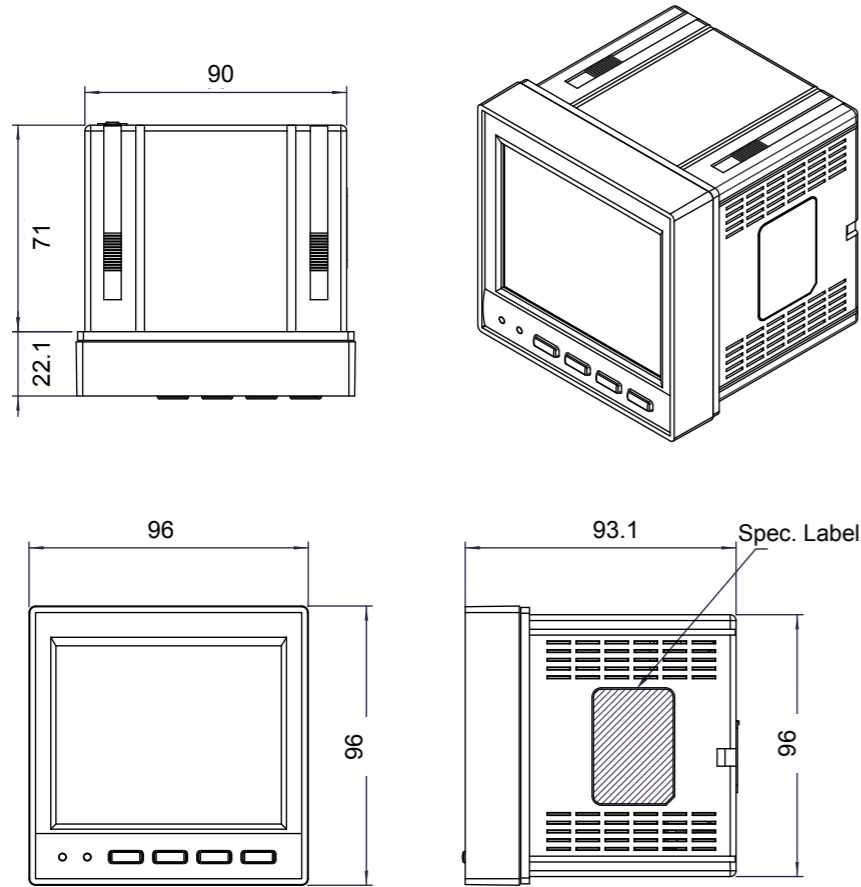


Common Technical Data

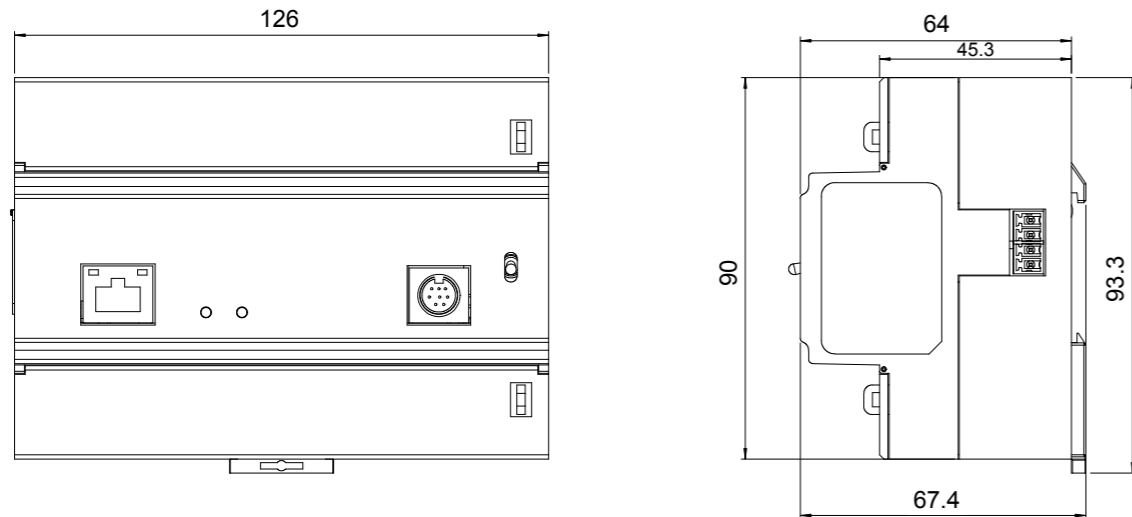
Model Name	DPM-C530A	DPM-C520	DPM-D520I
Electrical Characteristics			
Measurement Accuracy	Current	±0.2%	±0.5%
	Voltage	±0.2%	±0.5%
	Power	±0.5%	
	Active Energy	IEC 62053-22 Class 0.5S	
	Reactive Energy	±0.5%	
	Power Factor	±0.5%	
	Frequency	±0.5%	
Input	Wiring Method	1P2W, 1P3W, 3P3W, 3P4W	3P3W, 3P4W
	Voltage	Wire voltage: 35~690 V _{AC} (L-L) Phase voltage: 20~400 V _{AC} (L-N)	
	Current	1A/5A	63A
	Frequency Range	45~70Hz	
	Power Supply	80~265 V _{AC} (Max. power consumption 4.6 W) 100~300 V _{DC}	
Communication			
RS-485 Interface	Baud rate 9600 / 19200 / 38400 bps, MODBUS		
Mechanical Characteristics			
IP Degree of Protection	Front Display	IP54	-
	Meter Body	IP20	IP20
Dimensions (W x H x D)	96x96x95.4 mm		126x90x67.4 mm
Environmental Conditions			
Operating Temperature	-20 °C ~ +70 °C		
Storage Temperature	-30 °C ~ +80 °C		
Relative Humidity	~95% RH		
Altitude	Below 2000 m		
Electromagnetic Compatibility			
Electrostatic Discharge	IEC 61000-4-2		
Immunity to Radiated Fields	IEC 61000-4-3		
Immunity to Fast Transients	IEC 61000-4-4		
Immunity to Impulse Waves	IEC 61000-4-5		
Conducted Immunity	IEC 61000-4-6		
Immunity to Magnetic Fields	IEC 61000-4-8		
Immunity to Voltage Dips	IEC 61000-4-11		
Radiated Emissions	FCC part 15 EN 55011 Class A		
Conducted Emissions	FCC part 15 EN 55011 Class A		
Harmonics Emissions	IEC 61000-3-2		
Flicker Emissions	IEC 61000-3-3		
Safety			
Europe	CE, IEC 61010		-

Dimensions (Units: mm)

Panel Type

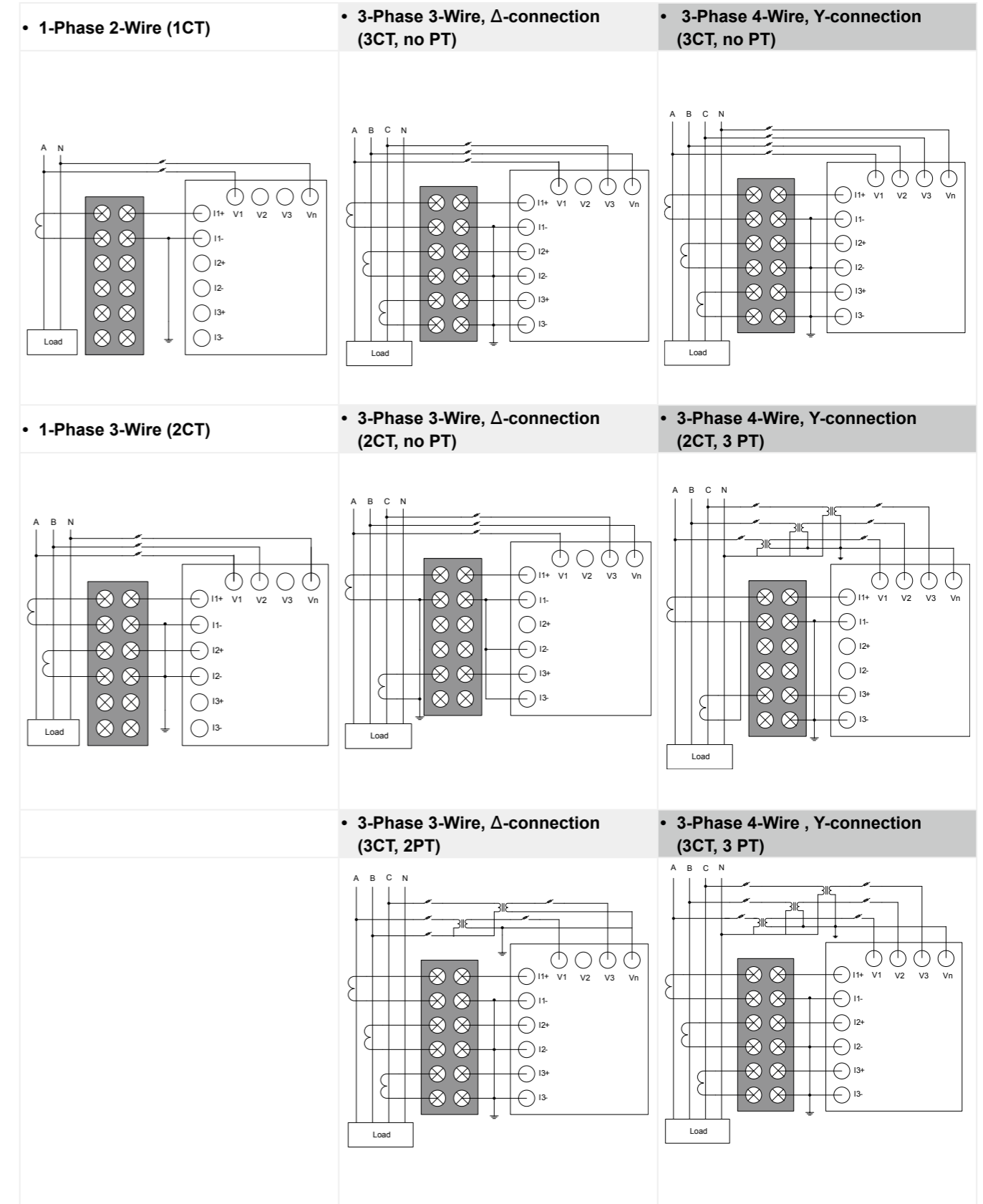


DIN Rail Type



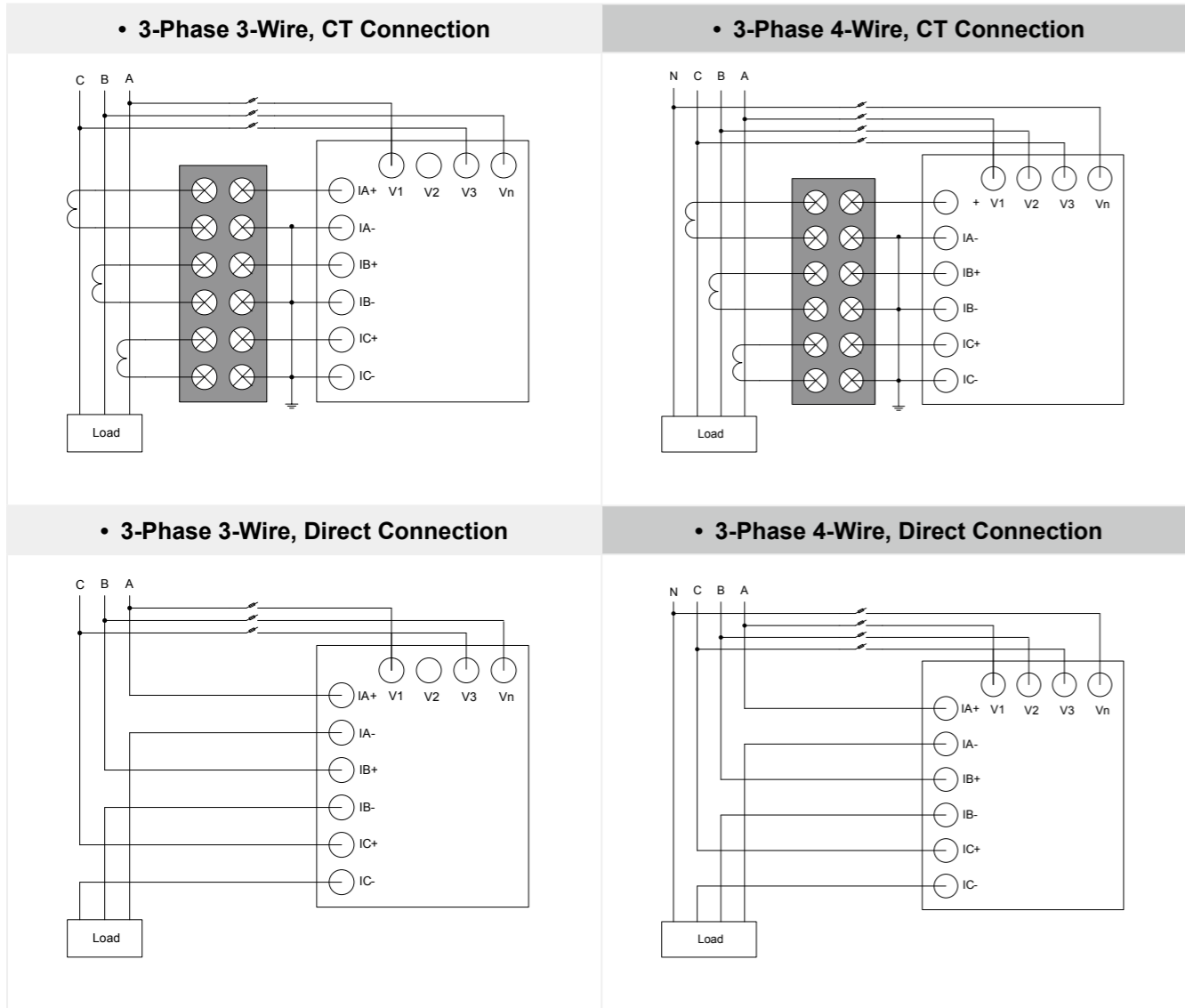
Wiring Diagrams

Panel Type



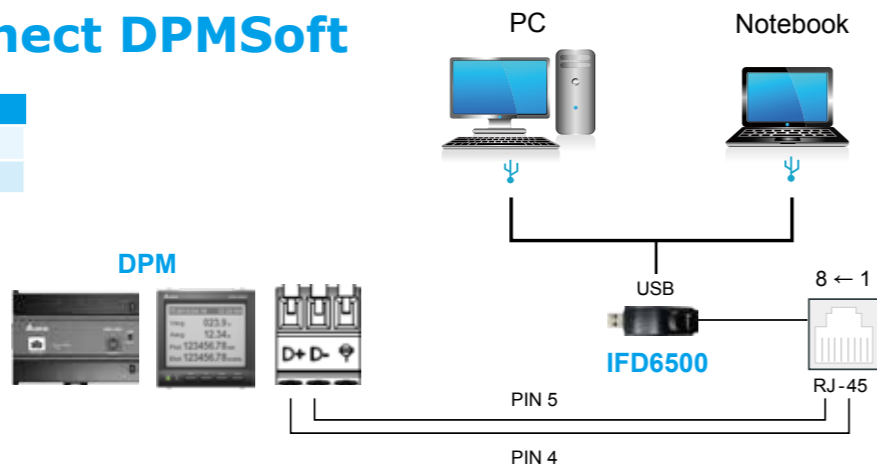
Wiring Diagrams

DIN Rail Type



How to Connect DPMSOFT

PIN	Definition
4	D+
5	D-



Optional Accessories

Model	Primary Current	Secondary Current	Max. Load	Measurement Accuracy	Sizes (Units: mm)	
DCT-S301C	100A	5A	1.5VA	1.0%	Outer Frame: 115 x 89 x 51 Inner Frame: 32 x 21 x 32	
DCT-S211C	200A	5A	1.0VA	0.5%	Outer Frame: 115 x 89 x 51 Inner Frame: 32 x 21 x 32	
DCT-S221C	300A	5A	1.5VA	0.5%	Outer Frame: 115 x 89 x 51 Inner Frame: 32 x 21 x 32	
DCT-S231C	400A	5A	2.5VA	0.5%	Outer Frame: 115 x 89 x 51 Inner Frame: 32 x 21 x 32	
DCT-S241C	500A	5A	2.5VA	0.5%	Outer Frame: 145 x 116 x 51 Inner Frame: 80 x 50 x 32	
DCT-S251C	600A	5A	2.5VA	0.5%	Outer Frame: 145 x 116 x 51 Inner Frame: 80 x 50 x 32	
DCT-S261C	750A	5A	3.0VA	0.5%	Outer Frame: 145 x 116 x 51 Inner Frame: 80 x 50 x 32	
DCT-S271C	1000A	5A	5VA	0.5%	Outer Frame: 145 x 116 x 51 Inner Frame: 80 x 50 x 32	
DCT-S281C	1500A	5A	7.5VA	0.5%	Outer Frame: 196 x 146 x 51 Inner Frame: 122 x 80 x 32	
DCT-S291C	2000A	5A	10VA	0.5%	Outer Frame: 250 x 186 x 1.4 Inner Frame: 160.5 x 81 x 32	
DCT-S2A1C	2500A	5A	15VA	0.5%	Outer Frame: 250 x 186 x 51.4 Inner Frame: 160.5 x 81 x 32	
DCT-S2B1C	3000A	5A	20VA	0.5%	Outer Frame: 250 x 186 x 51.4 Inner Frame: 160.5 x 81 x 32	

* All models are CE-certified but not UL-certified.



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*We reserve the right to change the information in this catalogue without prior notice.