



Automation for a Changing World

Delta Power Meter DPM Series



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.



Features

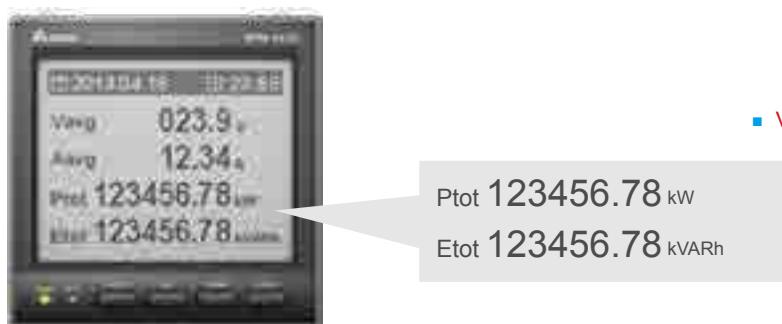
High Precision Power Measurement

- ▶ Highly precise measurement of bidirectional electrical energy and power parameters, meeting Class 0.5S of IEC62053 and CNS14607 standards.
- ▶ Supports power quality measurement, including total and individual harmonic distortion, voltage and current unbalance, and more.
- ▶ Supports 31st harmonics distortion measurement.

Large Screen LCD

DPM-C530A

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



■ Visibility better than segment-type LCD

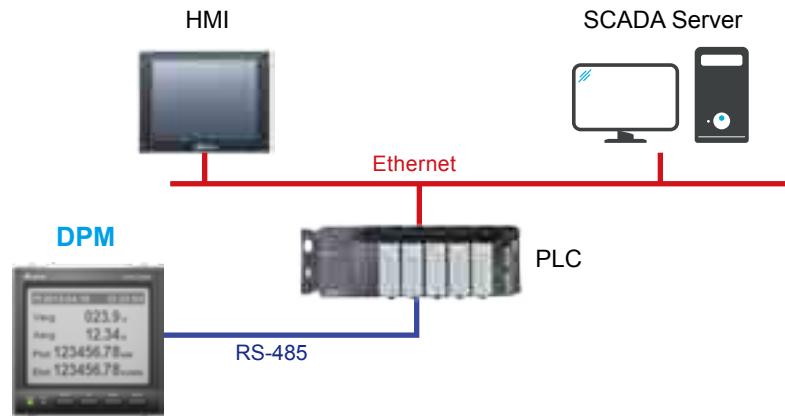
Ptot 123456.78 kW
Etot 123456.78 kVARh



ERSY

Easy Operation and Installation

- ▶ Two mounting clips hold the meter in place, no other tools required.
- ▶ Language customization: Traditional Chinese, Simplified Chinese and English.
- ▶ Built-in RS-485 communication port supports MODBUS communication.
- ▶ Transmission of all measurement values to the PLCs via communication.



Event Alarms and History Logs

▶ DPM-C530A

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

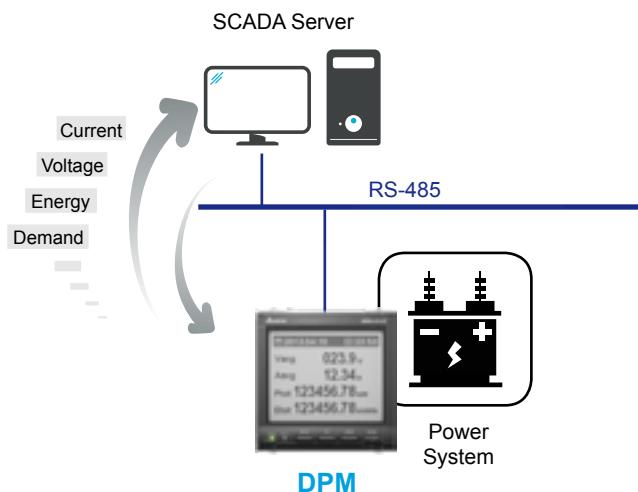
- Two built-in individual data registers record active/reactive energy in a certain given time lapse when triggered through communication.



Features

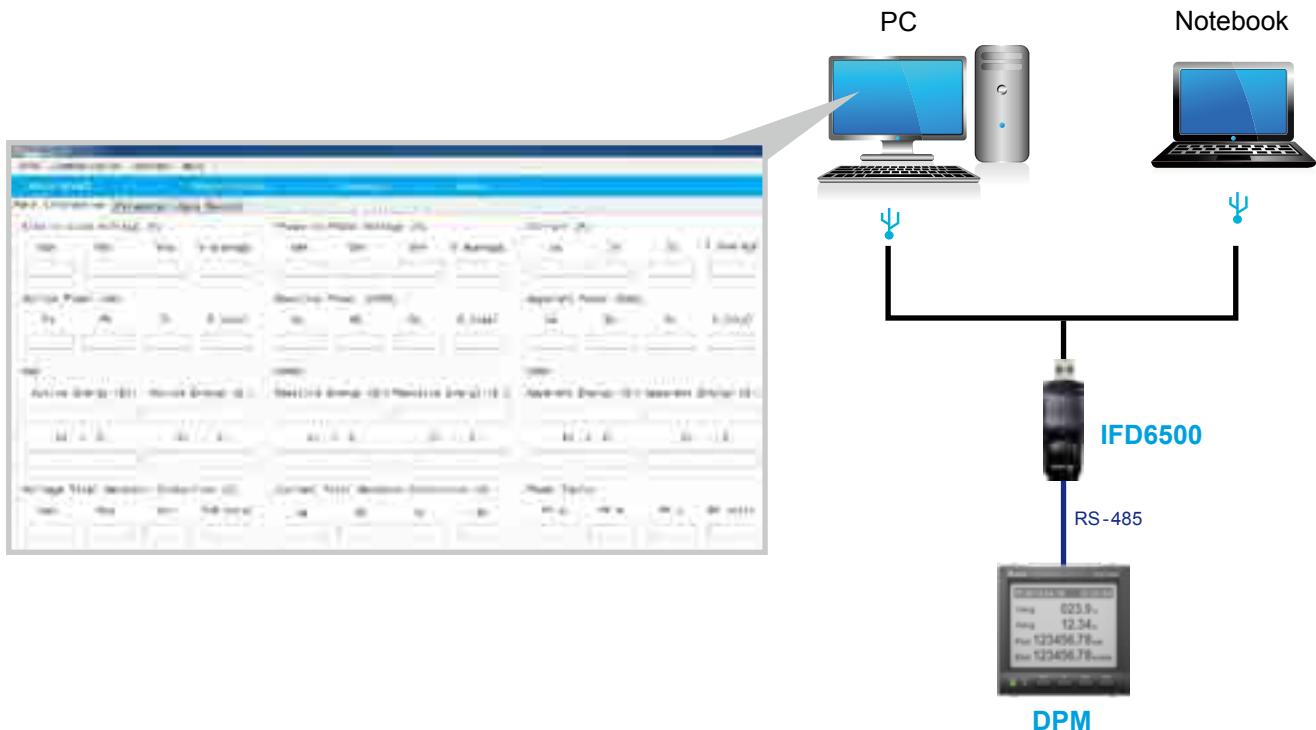
Parameter Grouping

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



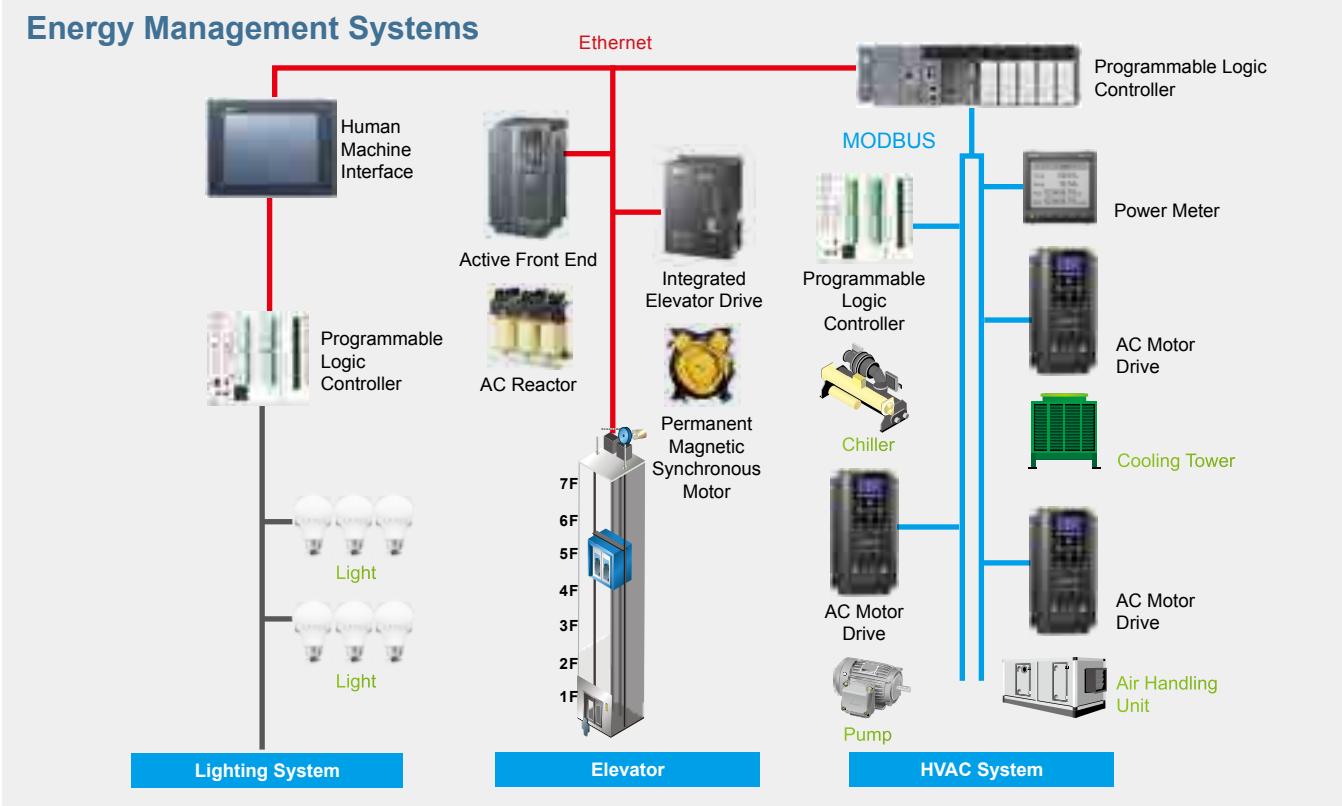
PC-based Configuration Software

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

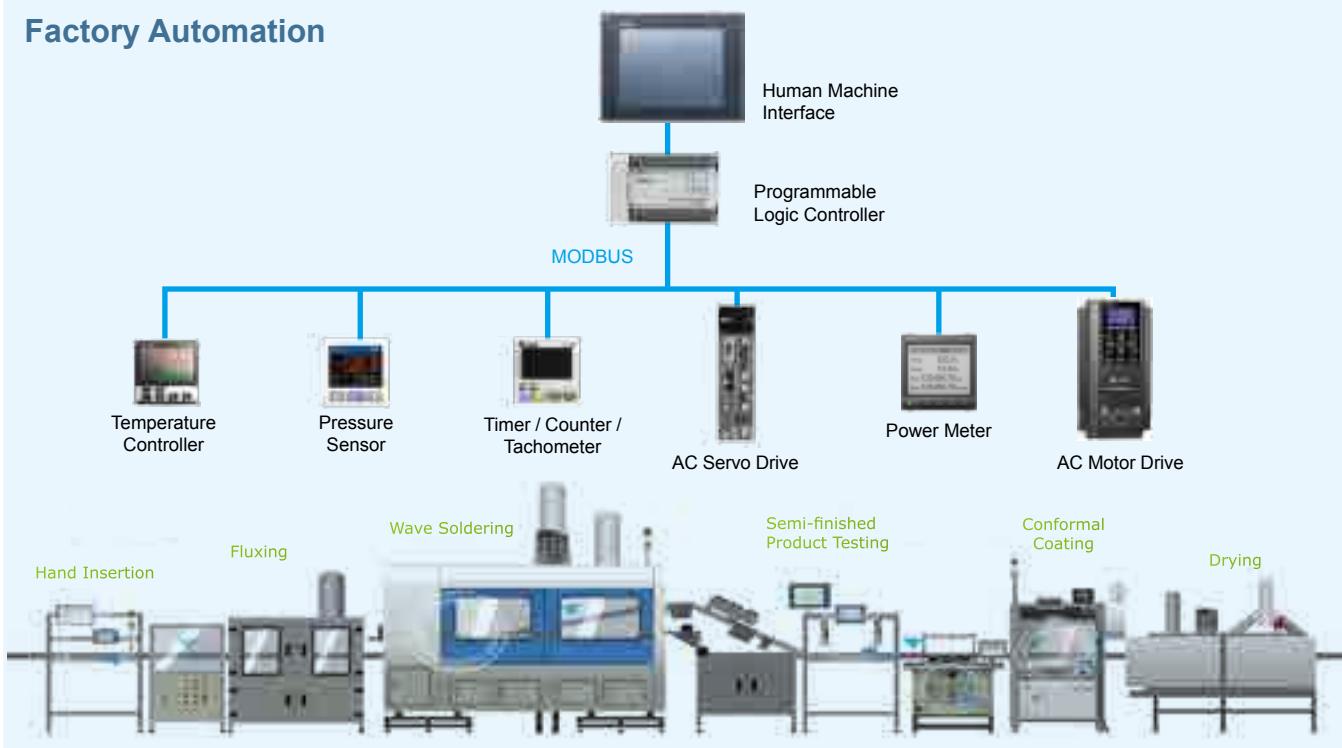


Applications

- ▶ 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.



Factory Automation



Specifications

| | Model | | DPM-C530A | DPM-C520 |
|----------------------------|-----------------------------------|--|--|------------|
| Functional Characteristics | Display | Display Type | White backlit LCD | LCD |
| | Instantaneous RMS Values | Current | ■ | ■ |
| | | Voltage | ■ | ■ |
| | | Frequency | ■ | ■ |
| | | Real, Reactive, and Apparent Power | ■ | ■ |
| | Energy Values | Power Factor | ■ | ■ |
| | | Active, Reactive, and Apparent Energy | ■ | ■ |
| | | Auto Metering | ■ | ■ |
| | Demand Values | Current | ■ | - |
| | | Power | ■ | - |
| | | Calculation Mode | Block | - |
| | 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 ^{*1} | ■ | ■ |
| | | Data Logs Type ^{*3} | Selectable 17 measurement values | - |
| | | Data Logs Recording Duration | Up to 2 months | - |
| | | Alarms History | 500 | - |
| | Alarms | Alarms Types ^{*2} | 29 | 10 |
| | Communication | RS-485 Port | ■ | ■ |
| | | Parameters Grouping | ■ | ■ |
| | | MODBUS | MODBUS RTU / ASCII | MODBUS RTU |
| Electrical Characteristics | Measurement Accuracy | Current | $\pm 0.2\%$ | |
| | | Voltage | $\pm 0.5\%$ | |
| | | Power | $\pm 0.5\%$ | |
| | | Active Energy | IEC62053-22 0.5S | |
| | | Reactive Energy | $\pm 0.5\%$ | |
| | | Power Factor | $\pm 0.5\%$ | |
| | | Frequency | $\pm 0.5\%$ | |
| | Measurement Input Characteristics | Wiring Method | 1P2W/1P3W/3P3W/3P4W | |
| | | Measured Voltage | L-L: 35~690V _{AC} L-N: 20~400V _{AC} | |
| | | Measured Current | 1A / 5A | |
| | | Frequency Range | 45~70Hz | |
| | Power Supply | | 80~265V _{AC} (Max. power consumption 4.6W) 100~300V _{DC} | |
| Communication | RS-485 Communication Interface | | Baud rate 9600/19200/38400bps, MODBUS | |

| Model | | | DPM-C530A | DPM-C520 |
|-------------------------------|----------------------------------|-----------------------------|-------------------|------------------------------|
| Mechanical Characteristics | IP Degree of Protection | Front Display Meter Body | IP54 IP20 | |
| Dimensions (W x H x D) | | | 96 x 96 x 95.4 mm | |
| Environmental Conditions | Operating Temperature | | | -20 °C ~ 70 °C |
| | Storage Temperature | | | -30 °C ~ 80 °C |
| | Humidity Rating | | | 0 ~ 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 |
| | Conducted and Radiated Emissions | | | FCC part 15 EN 55011 Class A |
| | Harmonics Emissions | | | IEC 61000-3-2 |
| | Flicker Emissions | | | IEC 61000-3-3 |
| Safety | Europe | | | CE IEC61010 |

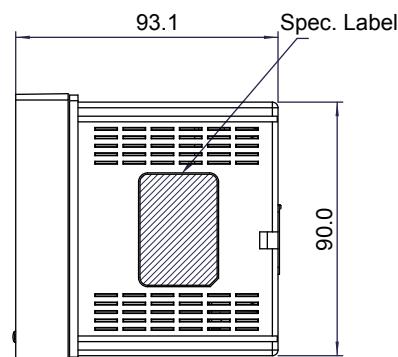
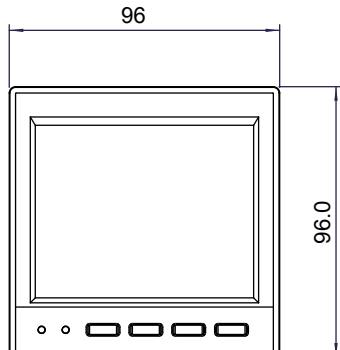
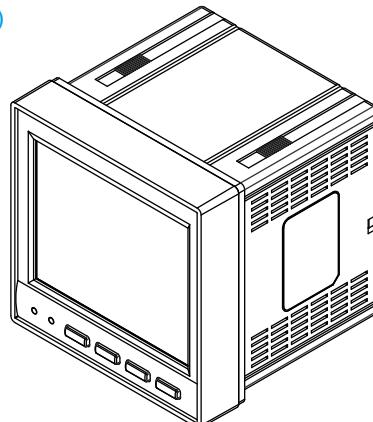
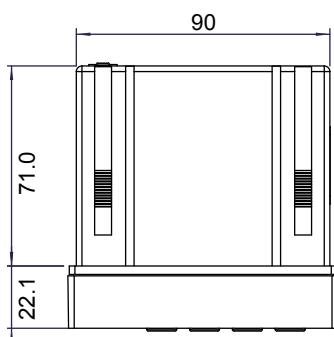
*1 Min/max of instantaneous: Phase voltage, line voltage, current, frequency, total 3-phase active power, total 3-phase reactive power, total 3-phase apparent power, total power factor, total voltage harmonic distortion, total phase voltage harmonic distortion, total current harmonic distortion, phase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

*2 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

*3 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



Dimensions (Units: mm)

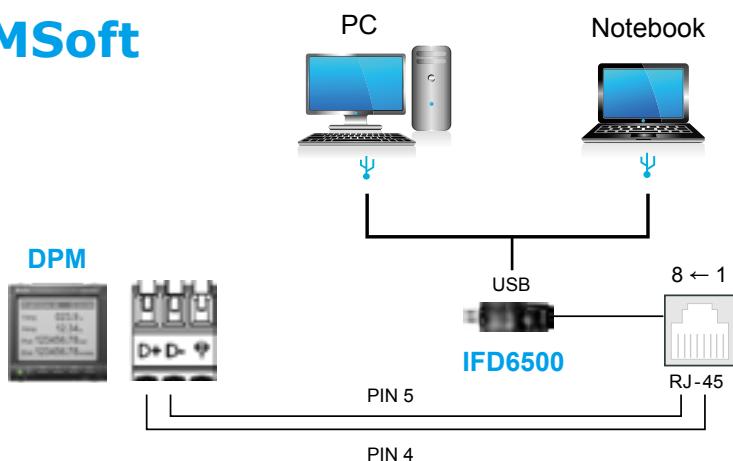


Wiring Diagrams

| | | |
|--|---|---|
| <ul style="list-style-type: none"> • 1-Phase 2-Wire (1CT) | <ul style="list-style-type: none"> • 3-Phase 3-Wire, Δ-connection (3CT, no PT) | <ul style="list-style-type: none"> • 3-Phase 4-Wire, Y-connection (3CT, no PT) |
| <ul style="list-style-type: none"> • 1-Phase 3-Wire (2CT) | <ul style="list-style-type: none"> • 3-Phase 3-Wire, Δ-connection (2CT, no PT) | <ul style="list-style-type: none"> • 3-Phase 4-Wire, Y-connection (2CT, 3 PT) |
| | <ul style="list-style-type: none"> • 3-Phase 3-Wire, Δ-connection (3CT, 2PT) | <ul style="list-style-type: none"> • 3-Phase 4-Wire , Y-connection (3CT, 3 PT) |

How to Connect DPMSoft

| PIN | Definition |
|-----|------------|
| 4 | D+ |
| 5 | D- |



Optional Accessories

| Model | Primary Current | Secondary Current | Max. Load | Measurement Accuracy | Sizes (mm) | |
|-----------|-----------------|-------------------|-----------|----------------------|-------------|------------------|
| | | | | | Outer Frame | Inner Frame |
| 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.

Global Operations

ASIA (Taiwan)



Taoyuan
Technology Center
(Green Building)



Taoyuan Plant 1



Taoyuan Plant
(Diamond-rated Green Building)

ASIA (China)



Wujiang Plant 3



Delta Electronics

▲ Factories

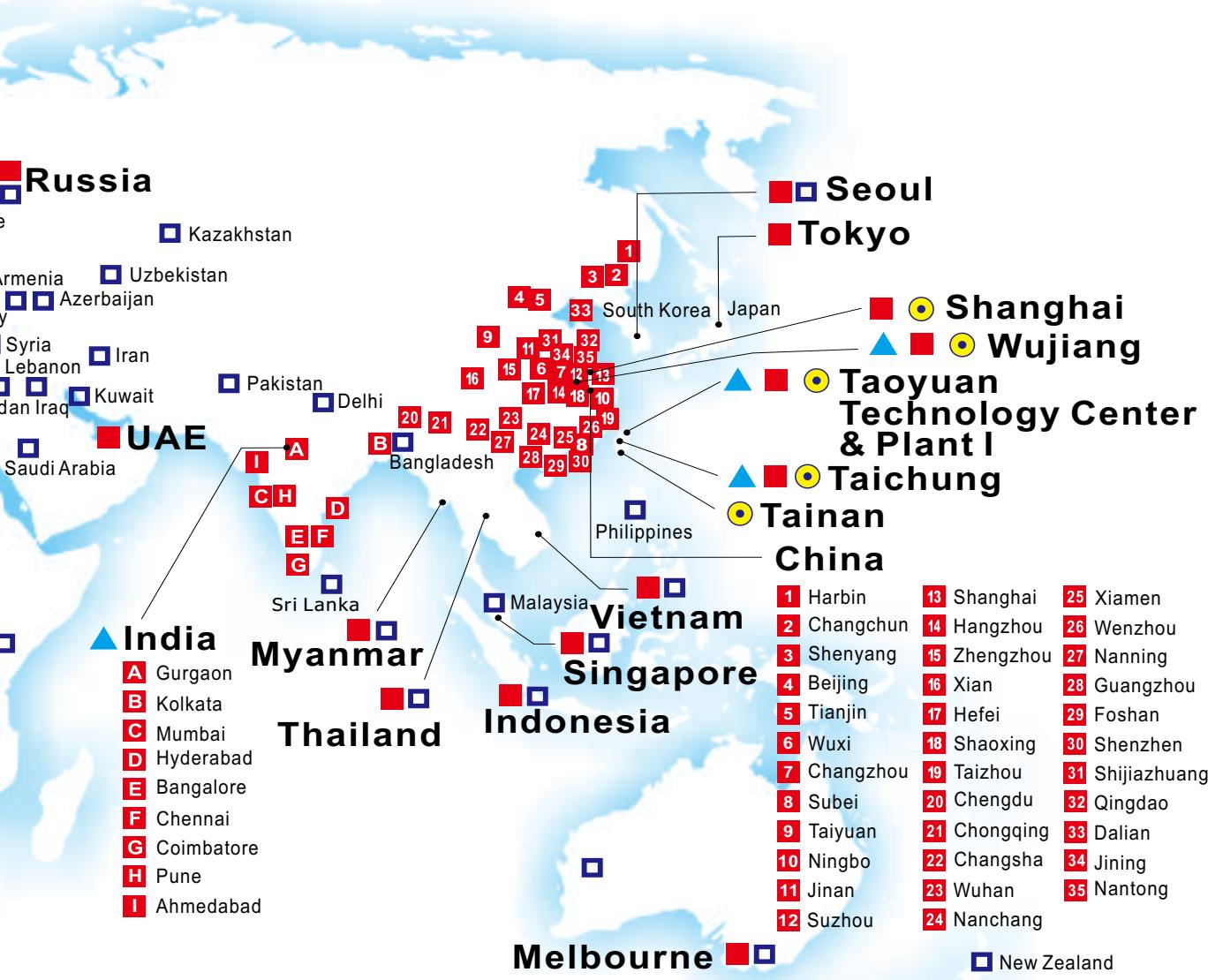
Sales Channels of Delta Industrial Automation are Located Worldwide in 74 Countries





4 Branch Offices 71 R&D Centers 5 Distributors 711

countries





Smarter. Greener. Together.

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