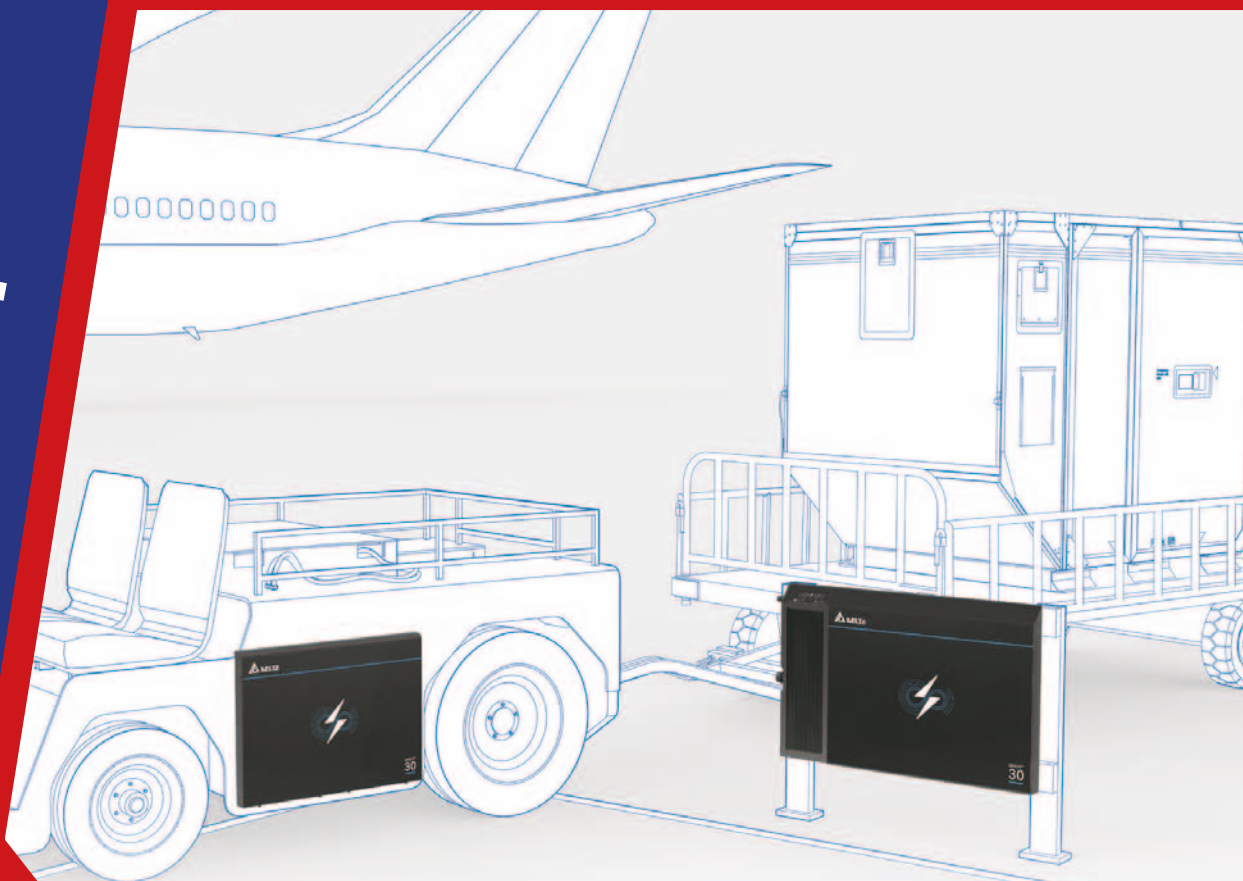


# NEW PRODUCT



## 30 kW Wireless Charging System MOOV<sup>air</sup>30

Highly efficiency wireless charging for industrial electric vehicles providing up to 300 A. Ideal for fast and opportunity charging.

### Versatile Charging

- Multiple vehicles can share one base
- Unmanned 24/7 operation
- Can be used in a wide range of harsh and polluted environments.

### Easy Integration

- Fully automated charging
- Power transfer over a 150 mm (6") gap
- Ethernet for integrating to a warehouse management system
- CAN bus for connecting vehicle systems

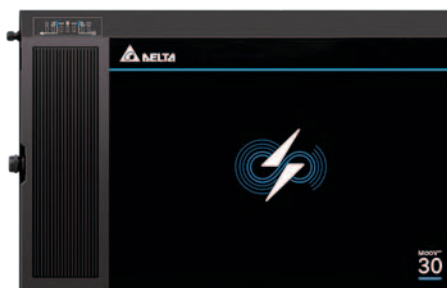
### Wireless Power Transfer

- Efficiency meets or exceeds traditional wired chargers
- No connector wear
- No maintenance downtime to replace worn connectors
- Safe operation. Meets all industrial standards for wireless power transfer

## Product Overview



Primary Box (WPB)



Primary Pad (WPP)



Secondary Unit (WSU)

# 30 kW Wireless Charging System MOOV<sup>air</sup>30

## Specifications

| AC Input                           |                 |                                                                                                                                  |                                                                                                 |         |
|------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------|
| AC Input Rated Voltage             |                 | 380 to 480 V <sub>AC</sub> 3PH                                                                                                   |                                                                                                 |         |
| AC Input Voltage Range             |                 | 342 to 528 V <sub>AC</sub> 3PH                                                                                                   |                                                                                                 |         |
| AC Input Frequency                 |                 | 47 Hz to 63 Hz                                                                                                                   |                                                                                                 |         |
| Maximum AC Input Current           |                 | 48 A                                                                                                                             |                                                                                                 |         |
| Power Factor (100% Load)           |                 | 0.95                                                                                                                             |                                                                                                 |         |
| Peak Efficiency                    |                 | > 95%                                                                                                                            |                                                                                                 |         |
| Standby Power <sup>1</sup>         |                 | ≤ 10 W                                                                                                                           |                                                                                                 |         |
| DC Output                          |                 |                                                                                                                                  |                                                                                                 |         |
| DC Output Nominal Voltage          |                 | 100 V <sub>DC</sub>                                                                                                              |                                                                                                 |         |
| DC Output Voltage Range            |                 | 72 to 120 V <sub>DC</sub>                                                                                                        |                                                                                                 |         |
| Maximum Charge Current             |                 | 300 A                                                                                                                            |                                                                                                 |         |
| Maximum Output Power               |                 | 30 kW                                                                                                                            |                                                                                                 |         |
| Battery Type                       |                 | Lithium Ion                                                                                                                      |                                                                                                 |         |
| Output Protection                  |                 | Over voltage, over current, short circuit, reverse connection                                                                    |                                                                                                 |         |
| Parallel Operation                 |                 | Pending                                                                                                                          |                                                                                                 |         |
| Standby Power <sup>2</sup>         |                 | < 2 W                                                                                                                            |                                                                                                 |         |
| Environmental Conditions           |                 |                                                                                                                                  |                                                                                                 |         |
| Operating Temperature <sup>3</sup> | WPB             | +5 °C to +40 °C (41 °F to 104 °F)                                                                                                |                                                                                                 |         |
|                                    | WPP             | -40 °C to +70 °C (-40 °F to 158 °F)                                                                                              |                                                                                                 |         |
|                                    | WSU             | -40 °C to +80 °C (-40 °F to 176 °F)                                                                                              |                                                                                                 |         |
| Storage Temperature                |                 | -45 °C to +70 °C (-49 °F to 158 °F)                                                                                              |                                                                                                 |         |
| Relative Humidity                  | WPB             | 5% to 85%, non-condensing                                                                                                        |                                                                                                 |         |
|                                    | WPP             | 4% to 100%                                                                                                                       |                                                                                                 |         |
|                                    | WSU             | 15% to 100%                                                                                                                      |                                                                                                 |         |
| Maximum Operating Altitude         |                 | 3,000 m (9,842 ft)                                                                                                               |                                                                                                 |         |
| Ingress Protection                 | WPB             | IP21                                                                                                                             |                                                                                                 |         |
|                                    | WPP             | IP69                                                                                                                             |                                                                                                 |         |
|                                    | WSU             | IP69                                                                                                                             |                                                                                                 |         |
| Mechanical Design                  |                 |                                                                                                                                  |                                                                                                 |         |
| Pad Air-gap Range                  |                 | 105 <sup>+/-5</sup> to 155 <sup>+/-5</sup> mm (4.1 <sup>+/-0.2</sup> to 6.1 <sup>+/-0.2</sup> in)                                |                                                                                                 |         |
| Maximum Misalignment               |                 | ± 50 mm (± 2.0 in) up/down and left/right                                                                                        |                                                                                                 |         |
| Dimensions (L x W x H)             | WPB             | 1020 x 550 x 400 mm (40.2 x 21.7 x 15.7 in)                                                                                      |                                                                                                 |         |
|                                    | WPP             | 665 x 1020 x 65 mm (26.2 x 40.2 x 2.6 in)                                                                                        |                                                                                                 |         |
|                                    | WSU             | 565 x 735 x 50 mm (22.2 x 28.9 x 2.0 in)                                                                                         |                                                                                                 |         |
| Weight                             | WPB             | 105 kg (231.5 lbs)                                                                                                               |                                                                                                 |         |
|                                    | WPP             | 77 kg (169.7 lbs)                                                                                                                |                                                                                                 |         |
|                                    | WSU             | 47 kg (103.6 lbs)                                                                                                                |                                                                                                 |         |
| Cable Lengths                      | WPB → WPP       | 5.0 m (196.8 in)                                                                                                                 |                                                                                                 |         |
|                                    | WSU (DC Output) | 2.0 m (78.7 in)                                                                                                                  |                                                                                                 |         |
|                                    | WSU Aux / Comms | 0.5 m (19.7 in)                                                                                                                  |                                                                                                 |         |
| Cooling                            | WPB             | Forced air                                                                                                                       |                                                                                                 |         |
|                                    | WPP             | Convection                                                                                                                       |                                                                                                 |         |
|                                    | WSU             | Convection                                                                                                                       |                                                                                                 |         |
| Status LED's                       |                 | WPB & WPP, stack light interface                                                                                                 |                                                                                                 |         |
| Approvals and Compliance           |                 | Europe (EEA/EFTA/UK)                                                                                                             | USA                                                                                             | Canada  |
| Safety Marks                       |                 | CE                                                                                                                               | cMET <sub>US</sub>                                                                              |         |
| Safety                             |                 | EN 62368-1:2014 + A11:2017                                                                                                       | UL 62368-1:2019 Ed.3<br>CSA C22.2 No.62368-1:2019 Ed.3<br>UL 1564 Ed.4<br>CSA 22.2 No. 107.2-01 |         |
| EMC                                |                 | EN 303 446-2 V1.2.1<br>EN 301 489-1 V2.2.3;<br>EN 301 489-3 V1.6.1<br>EN 55011:2016 + A1:2017+A11 :2020<br>EN IEC 61000-6-2:2019 | FCC part 18 subpart C                                                                           | Pending |
| RF                                 |                 | EN 300 330                                                                                                                       | FCC part 15 subpart C                                                                           | Pending |
| EMF                                |                 | EN 62311                                                                                                                         | FCC Part 1.1307<br>KDB 447498 D01<br>KDB 680106 D01                                             | Pending |
| Interfaces                         |                 |                                                                                                                                  |                                                                                                 |         |
| Infrastructure                     |                 | Ethernet                                                                                                                         |                                                                                                 |         |
| Vehicle                            |                 | CANopen <sup>®</sup>                                                                                                             |                                                                                                 |         |

<sup>1</sup> WPB connected to AC but not charging

<sup>2</sup> Secondary Unit connected to battery and not charging

<sup>3</sup> Derating above 40 °C

