

Starvo Polaris 180

180 kW DC Ultra-Fast Charger

Polaris 180 is Starvo's high-power outdoor DC fast charger engineered for ultra-high-turnover public sites, highway corridors, and large fleet depots. The cabinet combines a rugged IP55/IK10 enclosure with a 10" touch screen LCD HMI, RFID/QR payment capabilities, and OCPP 1.6J protocol for seamless integration with the Starvo platform. Dual guns with clear A/B user interface maximize bay utilization and operational efficiency.



180 kW Power
6 x 30 kW modules for dual CCS2 DC fast charging



OCPP 1.6J
Full interoperability with remote monitoring and OTA updates



IP55/IK10 Rated
Outdoor-ready galvanized-steel cabinet for extreme conditions



10" Touch HMI
Intuitive LCD interface with RFID and RGB status LED

Technical Excellence

Input Specifications

- **Power supply:** 3-Phase, 5-wire
- **AC voltage:** AC 380V ±15%
- **AC frequency:** 50/60 Hz
- **Max input current:** 273 A (at full load)
- **Power factor:** ≥ 0.99
- **Total harmonic current (THDi):** < 5% at rated input

Environmental Resilience

- **Operating temperature:** -40°C to +50°C
- **Storage temperature:** -40°C to +75°C
- **Humidity range:** 5%–95% RH (non-condensing)
- **Working altitude:** ≤ 2000 m
- **Cooling method:** Forced air cooling
- **Noise level:** ≤ 65 dB

Output Performance

- **Rated power:** 180 kW total (2 x 90 kW per gun)
- **DC voltage range:** 150–1000 VDC
- **Max DC current per gun:** 350 A
- **Charging guns:** 2 x CCS2 (Dual)
- **System efficiency:** ≥ 95%
- **Voltage regulation accuracy:** ≤ ±0.5%
- **Current regulation accuracy:** ≤ ±1%

Standards & Compliance

- **CCS PLC:** DIN 70121 & ISO 15118
- **EMC/Safety:** CE certified
- **Standards:** EN 61000-6-3, EN 61000-6-1 (Class A)
- **Charging:** EN 61851-1, EN 61851-23, EN 61851-24
- **Protection:** IP55/IK10 (IK08 screen)

Smart Features & Connectivity

1

Advanced HMI
10" touch screen LCD with RFID (ISO/IEC 14443 A/B) and RGB panel LED for clear status indication

2

Precision Metering
DC energy meter compliant with applicable metering standards for accurate and reliable billing

3

Multi-Mode Charging
Flexible charging modes: Auto, Time, Amount, Energy, and SOC-based charging options

4

Network Ready
OCPP 1.6J protocol, LAN 10M/100M Ethernet, internal LTE wireless modem with 3G/4G connectivity

Comprehensive Safety Systems

The Polaris 180 incorporates multiple layers of protection to ensure safe, reliable operation in all conditions. Built-in emergency stop functionality provides immediate shutdown capability, while insulation detection and leakage protection safeguard against electrical faults. The system actively monitors and protects against short-circuit, over-voltage, under-voltage, over-temperature conditions, and includes lightning protection for outdoor resilience.

- **Emergency Protection**
Integrated emergency stop with insulation detection and leakage protection for immediate fault response
- **Electrical Safeguards**
Short-circuit, input over/under-voltage, output over-voltage, and reverse-polarity protection systems
- **Thermal & Environmental**
Over-temperature protection and lightning protection for safe outdoor operation in all weather conditions

Physical Specifications

Dimensions

H x W x D:
2046 x 836 x 801 mm

Weight

Total:
425 kg

Installation

Type:
Floor-standing cabinet



Power Modules
6 x high-efficiency power modules (30 kW / 1000 V each) with soft-start 3–8 seconds and low ripple output



Cable Configuration
2 x CCS2 charging cables with 350 A capacity and top-mounted cable management system

Typical Applications

The Polaris 180 is ideally suited for high-demand commercial and public charging scenarios where maximum power, reliability, and user experience are paramount. Its robust design and flexible configuration make it the perfect choice for operators seeking to maximize uptime and customer satisfaction.

- **Public Charging Hubs**
High-traffic urban locations and highway corridors requiring ultra-fast turnaround
- **Retail & Hospitality**
Shopping centers, hotels, and restaurants offering premium fast-charging amenities
- **Workplace Charging**
Corporate campuses and office buildings supporting employee EV adoption
- **Fleet Depots**
Commercial and municipal fleet operations requiring reliable, high-power charging
- **Mixed-Use Developments**
Residential and commercial complexes with diverse high-power charging requirements

Contact & Ordering Information

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Contact our sales team for detailed specifications, pricing, installation requirements, and customization options. We provide comprehensive support from site assessment through installation and ongoing maintenance.