BOCANT

72V 20AH TRIANGLE LITHIUM-ION BATTERY PACK SPECIFICATION

High-performance engineered power solution customized for electric motorcycles, high-power E-bikes, and demanding e-mobility conversion systems. Equipped with professional smart Bluetooth management and ruggedized architecture.

Product Model:	BA-7220-TR (PVC Series)
Application:	Electric Motorcycles / High-power Mobility

01. PRODUCT OVERVIEW

The BOOANT 72V 20Ah High-Performance PVC series represents the pinnacle of compact, high-voltage energy storage design. Tailored explicitly for demanding electric motorcycle platforms and high-wattage custom drivetrains, this pack utilizes top-tier lithium-ion chemistry configured to deliver continuous, uncompromised power density.

Key Design Features:

- **Premium Chemistry Architecture:** Utilizes ultra-reliable high-energy density cells matching extreme power draw demands.
- **Heavy Duty Interconnects:** Assembled with pure copper nickel-plated matrices to minimize internal resistance and voltage sag.
- **Optimized Form Factor:** Wrapped in ultra-durable, high-temperature insulated PVC film to minimize volume and weight while ensuring complete structural integrity.
- **Standardized Disconnects:** Integrated high-grade 10AWG temperature-resistant silicone wiring alongside robust anti-spark output terminals.

CORE BATTERY CONFIGURATION SPECS

MECHANICAL & CELL CONFIGURATION ARCHITECTURE	
Nominal Voltage	72V
Rated Capacity	20Ah (1440Wh)
Cell Type / Grade	Premium Samsung INR21700 - 50G Cells(Grade A Only)
Configuration Configuration	20S Custom Parallel Array (Optimized for space and heat rejection)
Enclosure Material	Heavy Duty Industrial PVC Heat-shrink Insulation Wrapping
Discharge Wire Gauge	Premium 10AWG Flexible High-Temperature Silicone Wire
Dimensions	≈280×175×90×220×65×75 mm11.0×6.9×3.5×8.7×2.6×3.0 in
Weight	≈ 6.5 kg / 14.3 lbs

02. INTELLIGENT SMART BMS SYSTEM

Safety and longevity are anchored by our integrated Smart Battery Management System (BMS). This high-drain solid-state protection architecture continuously monitors individual cell bands, balances differential capacity, and provides structural protection against anomalous operating environments.

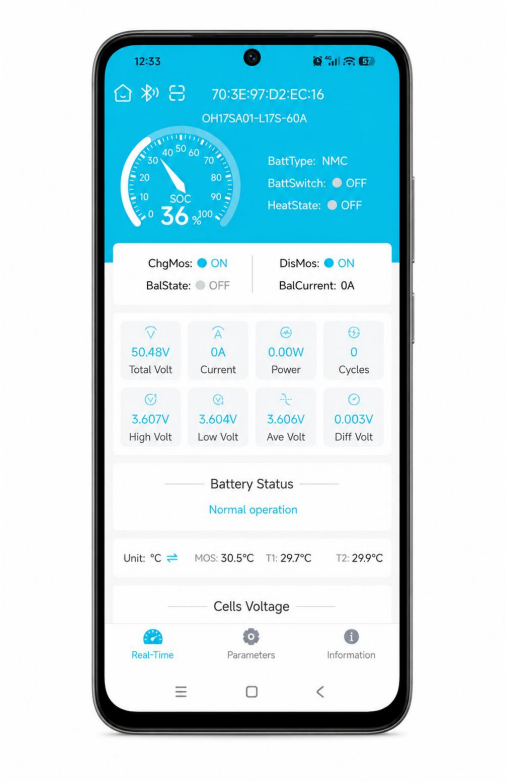
Protective Matrix Modules:

- **Dynamic Static Balancing:** Automated voltage equalization ensures optimal capacity retention across all 20 series groups during charging and resting phases.
- **Overcurrent Suppression:** Multi-tiered overcurrent thresholds safeguard internal cell ribbons from extreme mechanical surges.
- **Dual Temperature Cut-off:** Dual internal thermal sensors monitor both battery cells and the MOSFET thermal sinks, executing autonomous hard cuts if limits are breached.

BMS OPERATIONAL PARAMETER PROFILE	
Continuous Discharge Current	30A / 40A / 50A (Subject to option variant optimization)
Peak Surge Discharge Current	90A / 120A / 150A (Duration < 3 seconds)
Over-Charge Protection Threshold	4.25V ± 0.025V (Per Single Cell Series Element)
Over-Discharge Protection Threshold	2.50V ± 0.05V (Per Single Cell Series Element)
Short Circuit Recovery Protocol	Disconnect Load / Automatic Software Verification Reset
BMS Thermal Trip Limits	Discharge Cut-off: 75°C | Charge Cut-off: 65°C

03. REAL-TIME BLUETOOTH APP INTERFACE

The integrated Bluetooth module couples natively with the XiaoXiang E-Mobility application layer, bringing precise telemetry directly to iOS and Android devices. This enables complete operational insight into cell health indices, operational cycles, and thermal configurations.



Scan to Connect

[QR DOWNLOAD CODE]

Scan via Android or iOS native camera utilities to immediately fetch and install the latest stable version of the XiaoXiang E-Mobility Application suite.

MONITORED APP PARAMETERS

- **State of Charge (SOC) Precision:** Algorithmically derived capacity mapping tracking live percentage based on integration data.
- **Individual Cell Band Voltages:** Complete transparency of all 20 series sets down to millivolt (mV) tolerances to assess pack balance instantly.
- **Cycle Counter Matrix:** Tracks complete discharge equivalents to gauge aggregate lifetime asset depreciation accurately.
- **Programmable Profiles:** Certified operators can modify core profiles matching unique motor controllers or specific discharge requirements.

04. DEDICATED FAST CHARGING INFRASTRUCTURE

Maximizing battery lifespan requires strict compliance with charging curves. The package includes a commercial-grade smart charger engineered to provide clean, ripple-free constant current / constant voltage (CC/CV) profiles matched specifically to the 72V configuration.

CHARGING ARCHITECTURE SPECIFICATIONS

CHARGER ELECTRICAL & PERFORMANCE METRICS	
Input Supply Configuration	100 - 240V AC Adaptive Full-Range Input (50 / 60Hz)
Maximum DC Output Voltage	84V ± 0.2V DC (Fully Matched to 20S Li-ion Full Charge State)
Charging Current Waveform	3.0A / 5.0A Options (CC/CV Profile Transition Controls)
Efficiency Index	≥ 89% (At Nominal Grid Load Configuration)
Safety Compliance Standards	CE, FCC, RoHS Certified Protection Modules
Charging Indicator Sequence	LED 1: Red (Power Matrix Active) | LED 2: Red (Charging Process) -> Green (Complete / Full Saturation)

05. COMPREHENSIVE TECHNICAL PARAMETERS

The summary dataset listed below dictates the exact operating envelopes and mechanical limits required to achieve the engineered target lifecycle of the battery assembly.

COMPREHENSIVE ELECTRICAL OPERATING SPECIFICATIONS	
Battery Model Code	BA-7220-P
Nominal Capacity Configuration	20 Ah (At 0.2C Standard Rate Discharge Phase)
Full Charge Termination Voltage	84.0V DC
Discharge Cut-off Hard Limit	50.0V DC (BMS Enforced Protection Layer)
Standard Charging Current Limit	5.0A Continuous Rate
Maximum Permissible Charge Current	10.0A Continuous Rate Max Limits
Target Lifecycle Index	≥ 800-1000 Cycles (Retention ≥ 80% Original Capacity at 0.5C Standard Run)
Operational Environment (Charge)	0°C to 45°C (Relative Humidity Non-Condensing < 85%)
Operational Environment (Discharge)	-20°C to 60°C (Core Internal Thermal Sensors Limit Protection at 75°C)
Storage Environment Profile	-10°C to 35°C (Recommended 40-60% Charged State for Seasonal Storage)

SAFETY INTEGRATION PROTOCOL WARNINGS:

> **MANDATORY INSTRUCTIONS:** Do not subject the battery housing to sharp puncture loads or crush forces. Never immerse or allow liquid bridging near the core PVC seal layout. Never reverse polarity profiles when wiring directly to the electronic motor speed controllers (ESC). Always operate using the authorized BOOANT charging infrastructure to maintain full factory system warranty protection privileges.

BOOANT POWER SYSTEMS

LEADING E-MOBILITY ENERGY SOLUTIONS

OFFICIAL STOREFRONT URL

https://booant.com

PRODUCT DIRECT PIPELINE

72V 20Ah Electric Motorcycle Series

CORE TARGET MARKETS

Europe / United States / Canada / Australia

ENGINEERING FOCUS

Custom 24V - 72V Smart Lithium Solution Matrix

CORPORATE QUALITY FRAMEWORK GUARANTEE

BOOANT is dedicated to serving professional DIY players, engineering custom fleet networks, and upgrading urban micro-mobility conversions. Every system variation undergoes severe thermal test arrays, automated load cell cycle runs, and electronic firmware configuration checks before deployment.
