

MENARA PACK SERIES



Designed to

- ISO 26262
- SAE J2380
- SAE J2464
- UN 38.3
- UL 2580

ROMEO POWER'S PROPRIETARY PACK FAMILY EXHIBITS APPLICATION FLEXIBILITY AND IS CAPABLE OF POWERING A RANGE OF COMMERCIAL VEHICLES SPANNING FROM CLASS 3 DELIVERY VEHICLES TO THE LARGEST, LONG-HAUL CLASS 8 VEHICLES. A NOD TO NATIVE MALAYSIAN TREES, ROMEO POWER'S TOWER PACK SERIES IS CALLED MENARA – WHICH TRANSLATES TO "TOWER" IN MALAY.

MENARA-30



200.52+ Wh/l

Volumetric
Energy Density



165+ Wh/kg

Gravimetric
Energy Density



180+ kWh

Complete
6P System

MENARA-80



224.3+ Wh/l

Volumetric
Energy Density *8S



160+ Wh/kg

Gravimetric
Energy Density



480+ kWh

Complete
6P System

FEATURES

- HEAVY-DUTY, WEATHERPROOF STRUCTURE FOR DIRECT INTEGRATION (IP67 AND IP6K9K)
- SINGLE CELL FAULT TOLERANCE PER UL 2580
- DESIGNED ACCORDING TO SAE J2380/2464
- SCALABLE AND CONFIGURABLE SYSTEM DESIGN
- EXTERNAL MASTER CAN SUPPORT UP TO 6P CONFIGURATION
- SERVICEABLE JUNCTION BOX
- INTEGRATED BMS WITH SOC AND SOP ESTIMATIONS, CELL AND PACK PROTECTIONS, PRECHARGE, CONTACTOR CONTROL, CAN COMMUNICATION (J1939 AND UDS), ISOLATION RESISTANCE MONITORING, AND CELL BALANCING
- INTEGRATED MANIFOLDS FOR SUPERIOR THERMAL PERFORMANCE

| MENARA-30 | | | Configurable |
|---|----------------------------|----------------------------|---------------|
| Module Count (configuration) | 7 (7S1P) | 8 (8S1P) | No |
| Module Cell Count (configuration) | 576 (24S24P) | 576 (24S24P) | Yes |
| System Capacity (total) <small>(25°C, 0.33C Charge, 0.2 C Discharge)</small> | 115.4 Ah, 71.61 kWh | 115.2 Ah, 81.84 kWh | Yes (Only Ah) |
| System Capacity (usable) <small>(25°C, 0.33C Charge, 0.2 C Discharge)</small> | 99.36 Ah, 61.60 kWh | 99.84 Ah, 70.40 kWh | Yes (Only Ah) |
| System Voltage Operating (min, max, nom) | 420.0 V, 705.6 V, 619.92 V | 480.0 V, 806.4 V, 708.48 V | Yes |
| Cell Cycle Life ¹ (20% Capacity fade at 0.3C charge, 0.5C discharge, 25°C, 2.85V-4.1V) | >2000 (use case dependent) | >2000 (use case dependent) | No |
| Normal Charging Time (0.3C charge, 25°C, 3.0V - 4.1V) | 3-4 Hours | 3-4 Hours | Yes |
| Fast Charging Time ² (TBD charge, 25°C, 3.0V - 4.1V) | 2.5 Hours | 2.5 Hours | Yes |

| MENARA-80 | | | | Configurable |
|---|----------------------------|----------------------------|-----------------------------------|---------------|
| Module Count (configuration) | 3 (3S1P) | 3 (3S1P) | 3 (3S1P) | No |
| Module Cell Count (configuration) | 576 (32S18P) | 576 (32S18P) | 576 (32S18P) | Yes |
| System Capacity (total) <small>(25°C, 0.33C Charge, 0.2 C Discharge)</small> | 87.39 Ah, 30.528 kWh | 84.71 Ah, 29.67 kWh | 86.6 Ah, 30.72 kWh | Yes (Only Ah) |
| System Capacity (usable) <small>(25°C, 0.33C Charge, 0.2 C Discharge)</small> | 73.044 Ah, 25.53 kWh | 71.80 Ah, 25.2 kWh | 75 Ah, 26.4 kWh | Yes (Only Ah) |
| System Voltage Operating (min, max, nom) | 240.0 V, 403.2 V, 348.5 V | 240.0 V, 403.2 V, 349.4 V | 240.0 mV, 403.2 V, 354.2 V | Yes |
| Cell Cycle Life ¹ (20% Capacity fade at 0.3C charge, 0.5C discharge, 25°C, 2.85V-4.1V) | >2000 (use case dependent) | >2000 (use case dependent) | >2000 cycles (use case dependent) | No |
| Normal Charging Time (0.3C charge, 25°C, 3.0V - 4.1V) | 3-4 Hours | 3-4 Hours | 3-4 Hours | Yes |
| Fast Charging Time ² (TBD charge, 25°C, 3.0V - 4.1V) | 2.5 Hours | 2.5 Hours | 2.5 Hours | Yes |

¹Fast charging significantly reduces battery cycle life. Details upon request.

²Warranty planning is handled in a dedicated conversation based on each vehicle's planned use case, environmental factors, and metrics from real world use