SMC TECHNOLOGY
GREEN & SAFE SALT BATTERY

HORIEN
Salt Battery Solutions

TL RANGE

Telecom, Energy Storage, Residential and other industrial applications.

AVAILABILITY

- Zero self-discharge when stored, at any state of charge
- Zero ageing in floating or storage condition
- Integrated system (BMS) for monitoring, diagnostics and data logging
- Module level redundancy
- Effective theft deterrent

ENVIRONMENT

- No active cooling required.
  Constant performance and >20 years design life at:

  -20°C to +60°C / -4°F to +140°F continuous operation
  -40°C to +75°C / -40°F to +167°F peak
- Suitable for outdoor installation and marine environment
- Module ingress protection of IP55
- Free of toxic material and 96% recyclable

OPERATIONAL

- Up to 80% reduction in footprint and 3 times in weight than conventional batteries
- Status LED on front panel
- Low total cost of ownership (TCO)
- Scalable modules in parallel
- Expandable without limitation on battery age
- Parallel operation with other batteries
- Hot swappable
- Embedded DC breaker for low voltage disconnect (LVD) and short circuit protection
- Boost charging not required
- No memory effect
- Compatible with any standard DC power supply and rectifiers

SAFETY

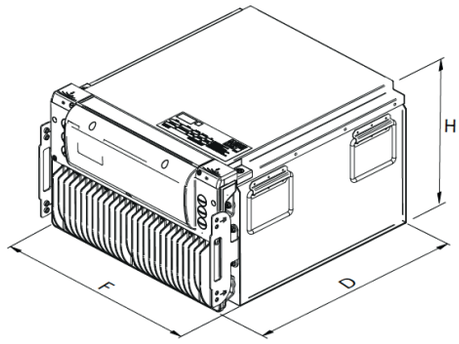
- No gassing or emission
- No risk of explosion even in presence of external fire
- Safest among existing batteries in all conditions: transport, storage and operation
- Embedded DC protection for load disconnection and short circuit protection
- Ready for remote monitoring
- Stainless steel case

DIMENSIONS AND WEIGHT

MODEL	FRONT	DEPTH	HEIGHT	WEIGHT
48TL120	498 mm / 19.6 in.	558 mm / 21.9 in.	320 mm / 12.6 in.	77 kg / 170 lb
48TL160	498 mm / 19.6 in.	558 mm / 21.9 in.	320 mm / 12.6 in.	91 kg / 201 lb
48TL200	498 mm / 19.6 in.	558 mm / 21.9 in.	320 mm / 12.6 in.	104 kg / 229 lb

GENERAL CHARACTERISTICS

OPERATING TEMPERATURE RANGE	-20°C / +60°C -4°F / +140°F continuous -40°C / +75°C -40°F / +167°F peak*
STORAGE DURATION	Indefinite (-40°/+60°C -40°F / +140°F)
DESIGN LIFE	>20 years
INGRESS PROTECTION	IP55
MAX CHARGING CURRENT	Self limited up to 0.2C
CYCLES	>4500 Cycles at 80% DoD



*Tested up to 16 hours continuously

SPECIFIC CHARACTERISTICS PER MODEL

MODEL	NOMINAL VOLTAGE (V)	CHARGE VOLTAGE RANGE (V)	NOMINAL CAPACITY at 4 hour late		MINIMUM VOLTAGE (V)	MAX DISCHARGE CURRENT* (A)	MAX CHARGING CURRENT (A)	INTERFACE
			(Ah)	(Wh)				
48TL120	48	55-59	120	5700	40	90	24	RS485 / USB
48TL160	48	55-59	160	7700	40	120	32	RS485 / USB
48TL200	48	55-59	200	9600	40	150	40	RS485 / USB

*Higher peak can be tolerated for limited period of time

HORIEN MANUFACTURING

- More than 1 GWh deployed in 50 countries
- Made in Switzerland
- ISO 9001 - Quality Management System
- ISO 14001 - Environmental Management System

APPLICABLE STANDARDS

- EN IEC 61000-6-2 / EN IEC 61000-6-4
- CE
- UL9540A (Safety)
- UL1973
- IEC62984 / IEC60529
- NEBS DA1976 Level 1 and Level 3
- EN IEC 62485-1 / EN IEC 62485-2
- Comply with DNV and ABS rules for offshore installations