High power density supercapacitor modules for energy and industrial applications

Eaton's XLHV supercapacitor module is a building block for high power storage systems applied to microgrids, grid stability systems (STATCOMs), renewable firming, and peak power shaving.

Product description

Eaton's XLHV supercapacitor module is a building block for high power storage systems applied to microgrids, grid stability systems (STATCOMs), renewable firming, and peak power shaving. The module is easy to integrate with a standard form factor and connections. Standard systems up to 1500 V can be built up with combinations of series and parallel configurations; systems up to tens of kV can be built and assembled with special considerations and supporting components. The low internal resistance of the XLHV provides the highest power density for applications requiring power for up to a minute. With no moving parts or chemical reactions, these products can last 10 to 20 years, depending on operating temperatures and voltage conditions, with millions of charge/discharge cycles. Eaton's XLHV supercapacitors are eco-friendly, comprise no heavy or rare earth metals, and require no maintenance with low standby power consumption.

Features and benefits

- High power density module with millions of charge/discharge cycles
- Long life; up to 20 years
- Environmentally friendly
- Fewer modules for high voltage systems; series operation up to 1500 V (higher voltages possible with special configuration requirements)
- Standard 19" rack mounting for easy installation with standard cabinet components (allows up to 70 lbs per module)
- CANbus 2.0b, MODbus TCP/IP protocols for digital communications and advanced module monitoring
- High-reliability mechanical structure
- Low internal resistance high power and efficiency
- Excellent mechanical design for functionality (easy to access front connections, standard connectors), efficient cooling, and attractive aesthetics

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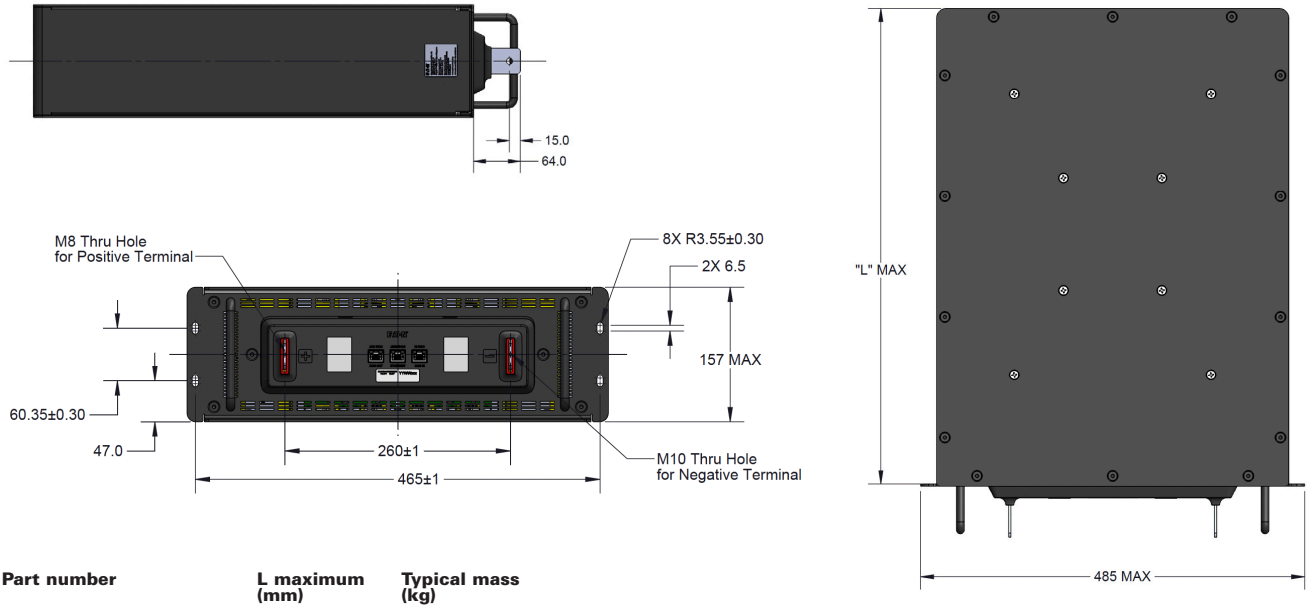
Specifications

Part number	Maximum Operating Voltage (V)	Capacitance (F) minimum	Maximum initial ESR (mΩ)	Nominal leakage current (mA)	Stored energy (Wh)	Peak power (kW)	Peak current (A)	Continuous current (A)	Typical thermal resistance Rth (°C/W)	Short circuit current (A)
XLHVS1020944C0B00	102	94.4	9.7	9	137	270	2500	64	0.38	10500
XLHVS1440625C0B00	144	62.5	12.5	8	180	420	2500	56	0.38	11500

Dimensions (mm) and mass (kg)



Part number	L maximum (mm)	Typical mass (kg)
XLHVS1020944C0B00	481	27
XLHVS1440625C0B00	603	35

Part numbering system

XLHV	S	102	0944	C0	B	00
Family code	Housing type S-standard	Maximum operating voltage (V)	Minimum initial capacitance (F) CCC.C 0944 = 94.4 F	User interface C0: CANbus/MODbus C1: none	Cell management type B: shunt	Options 00 = none

Packaging information

- Standard packaging: Bulk, 1 piece per box

Part Marking

- Manufacturer
- Capacitance (F)
- Module operating voltage (V)
- Family code or part number

Please see data sheet and user manual for complete details

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