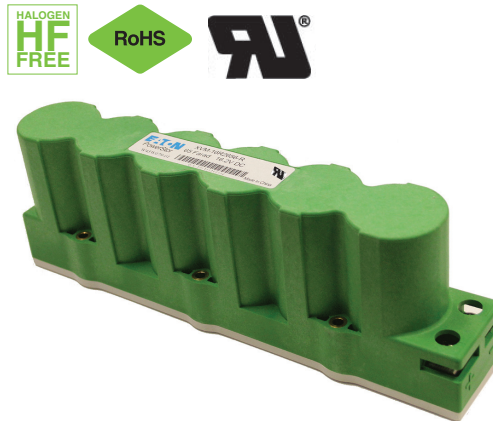


XVM Supercapacitors

16 V, 65 F module



Description

Eaton supercapacitors are unique, ultra-high capacitance devices utilizing electric double layer capacitor (EDLC) construction combined with new, high performance materials. This combination of advanced technologies allows Eaton to offer a wide variety of capacitor solutions tailored to specific applications.

The 16 V XVM supercapacitor module offers a means to easily achieve higher voltage, power or discharge time through series or parallel connection of multiple modules.

Features

- Compact size for easy mounting as replacement for, or in conjunction with a 12 V battery
- Series or parallel connection of multiple modules for higher voltage, power or discharge time
- High reliability, green solution for pulse or backup power applications
- Maintenance free
- UL recognized

Applications

- Industrial computer and emergency backup energy
- Battery assist engine starting, especially for cold or frequent starts
- Graceful system shutdown for robotics, PLCs and electrical switches

*Supercapacitor lifetimes vary based on charge voltage and temperature. See Eaton's application guidelines or contact your local Eaton sales representative for more information on lifetime estimates

Ratings

| | |
|-----------------------------|---------------------|
| Capacitance | 65 F |
| Working voltage | 16.2 V |
| Surge voltage | 17 V |
| Capacitance tolerance | 0% to +20% (+20 °C) |
| Operating temperature range | -40 °C to +65 °C |

Specifications

| Capacitance ¹ (F) | Part number | Maximum initial dc ESR ¹ (mΩ) (Equivalent Series Resistance) | Max continuous current (A) | Max leakage current ¹ (mA) | Max power ² (kW) | Stored energy ³ (Wh) | Typical mass (kg) | Typical thermal resistance ⁴ (°C/W) |
|------------------------------|---------------|---|----------------------------|---------------------------------------|-----------------------------|---------------------------------|-------------------|--|
| 65 | XVM-16R2656-R | 22 | 20 | 23 | 3.0 | 2.4 | 0.75 | 1.5 |

1. Capacitance, ESR and Leakage current are all measured according to IEC 62391-1 at +20 °C
2. Max. Power = Working Voltage² / 4 / DC ESR
3. Stored energy = ½ Capacitance x Working Voltage² / 3600
4. Thermal resistance (Rth) cell body temperature to ambient in open air in degrees C per Watt (°C/W)

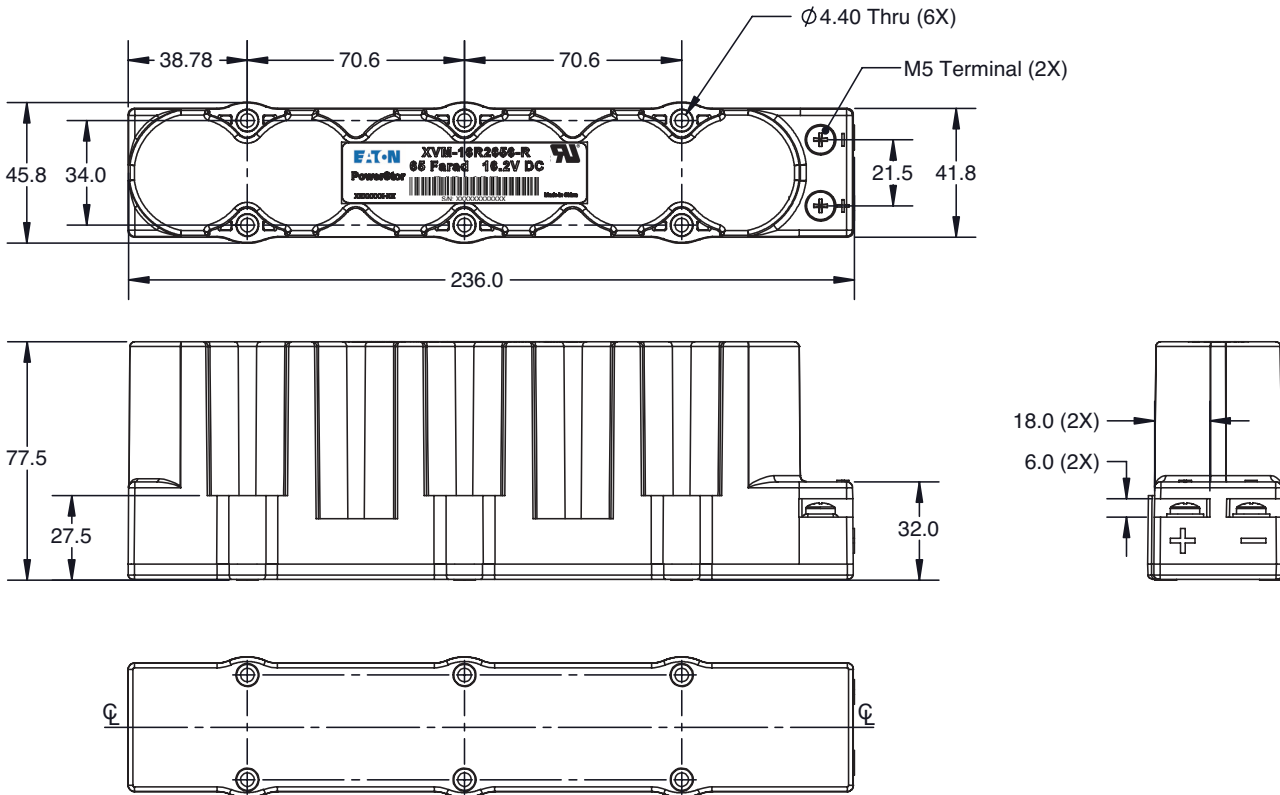
Performance

| Parameter | Capacitance change (% of initial value) | ESR (% of initial value) |
|---|---|--------------------------|
| Life (1500 hours @ +65 °C @ 16.2 Vdc) | ≤ 20% | ≤ 200% |
| Storage life- (Uncharged, non-condensing atmosphere, 1 year @ -40 °C to +70 °C) | ≤ 5% | ≤ 10% |

Safety and certifications

| | |
|-------------------------|---------------------------------|
| Regulatory | UL810A recognized file: MH46887 |
| Environmental | IP54, RoHS, Halogen free |
| Vibration specification | IEC 60068-2-6 |
| Shock specification | IEC 60068-2-27, -29 |
| Cooling | Natural convection |

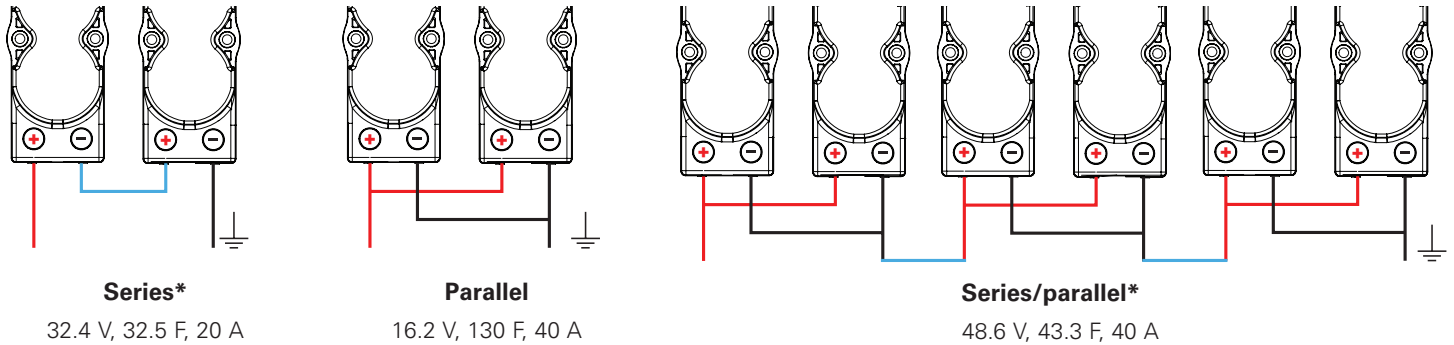
Dimensions- mm



Mechanical specifications

- Terminal Screws: M5 Philslot,
Nickel-Plated Brass
Max Torque 4N•m
- Mounting Points: Six, Brass Reinforced,
Accommodate M4 Screws,
Min Length 27.5 mm
Max Torque 4N•m
- Mounting Orientation: No Restriction

Wiring configuration examples



* Maximum operating voltage 640 V.

Part numbering system

| XVM | -16R2 | 65 | 6 | -R |
|-------------------|----------------------------|---|------------|------------------|
| Family Code | Voltage (V) R = decimal | Capacitance (μF) | | Standard product |
| | | Value | Multiplier | |
| XVM = Family code | 16R2 = 16.2 V | Example 656 = 65 x 10 ⁶ (μF) or 65 F | | |

Packaging information

- Standard packaging: Bulk, 1 part per box
10 boxes per carton

Part marking

- Manufacturer
- Capacitance (F)
- Working voltage (V)
- Family code (or part number)
- Polarity

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