

# 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 <sup>1</sup> (F)	Part number	Maximum initial dc ESR <sup>1</sup> (mΩ) (Equivalent Series Resistance)	Max continuous current (A)	Max leakage current <sup>1</sup> (mA)	Max power <sup>2</sup> (kW)	Stored energy <sup>3</sup> (Wh)	Typical mass (kg)	Typical thermal resistance <sup>4</sup> (°C/W)	Pulse current <sup>5</sup> (A)
65	XVM-16R2656-R	22	20	23	3.0	24	0.75	1.5	217

1. Capacitance, ESR and Leakage current are all measured according to IEC 62391-1 at +20 °C
2. Max. Power = Working Voltage<sup>2</sup> / 4 / DC ESR
3. Stored energy = ½ Capacitance x Working Voltage<sup>2</sup> / 3600
4. Thermal resistance (Rth) cell body temperature to ambient in open air in degrees C per Watt (°C/W)
5. Pulse current for 1 second from full rate voltage to half voltage. (A) =  $\frac{0.5 \times V \times C}{(1 + ESR \times C)}$

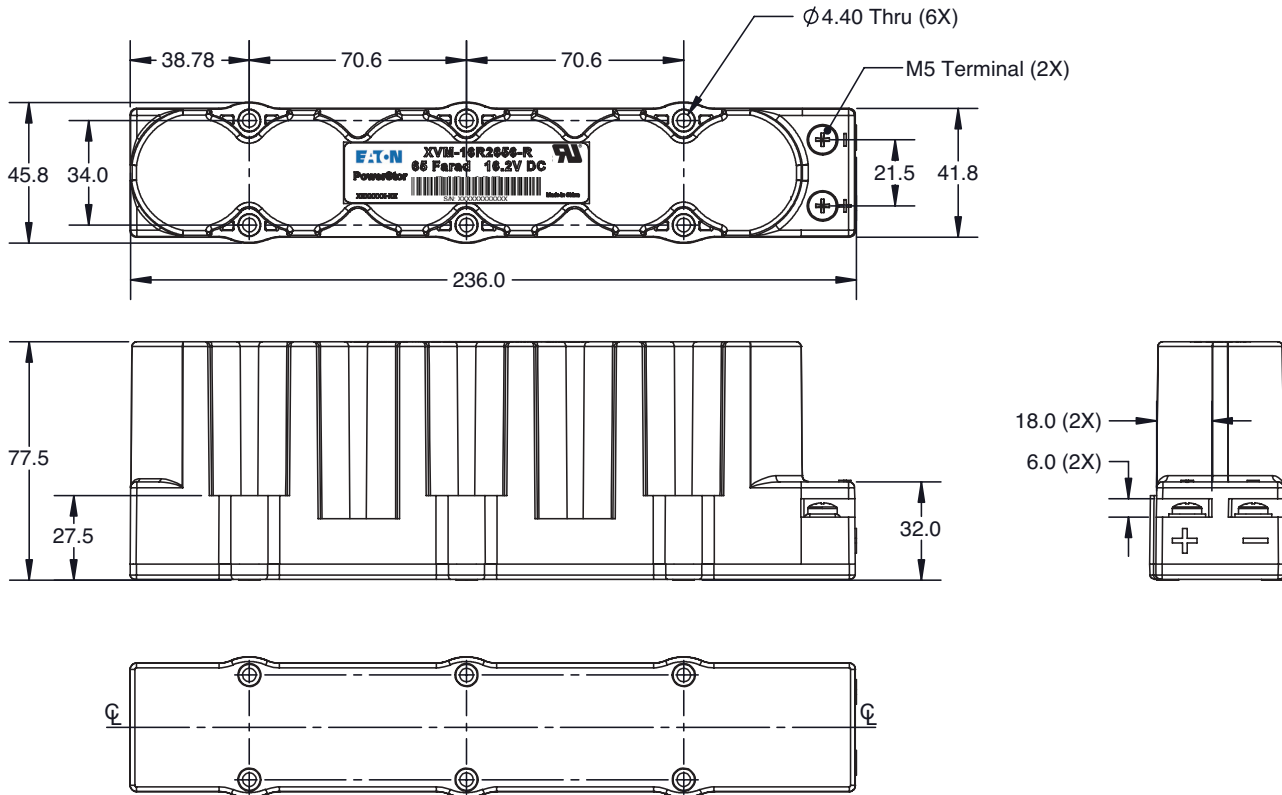
## Performance

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