

BMOD0063 P125 B14/B24/B04 BMOD0063 P125 B33



FEATURES AND BENEFITS

- CAN Bus digital monitoring and communications
- Highest power performance available
- Over 1,000,000 duty cycles
- Temperature and voltage monitoring
- Ultra-low internal resistance
- Shock and vibration immunity (ISO16750:T14, EN61373)

TYPICAL APPLICATIONS

- Buses
- Electric trains and trolleys
- Heavy duty transportation
- Cranes, RTGS
- Utility vehicles
- Mining Equipment

PRODUCT SPECIFICATIONS

CAPACITANCE	B04/B14/B24/B33
Nominal capacitance	63 F
Tolerance capacitance	+20% / -0%
VOLTAGE	
Rated voltage	125 V DC
Surge voltage	135 V DC
Maximum operating voltage	130 V DC
Isolation voltage 50Hz, 1 min. Maximum string operating voltage 1,500 V DC	4,000 V DC
RESISTANCE	
ESR, DC Max., room temperature	18 mΩ
Resistance tolerance	Max.
Thermal resistance (Rth)	0.032°C/W
TEMPERATURE	
Operating temperature range	-40°C to +65°C
Max. ambient operating temp.	+50°C
Storage temperature range	-40°C to +70°C
Temperature characteristics	
Capacitance change	± 5% at 25° C
Internal resistance change	± 150% at 25° C
POWER	
Pd	1,750 W/kg
Pmax	4,700 W/kg
ENERGY	
Emax	2.53 Wh/kg
Energy available Energy Available equals 1/2C (Vnom ² - 1/2Vnom ²) /3600	101.7 Wh
CYCLES	
Cycles 125 V to 62.5 V DC, RT	1,000,000
Capacitance change Within % of initial specified value.	20% decrease
Internal resistance Within % of initial specified value.	100% increase

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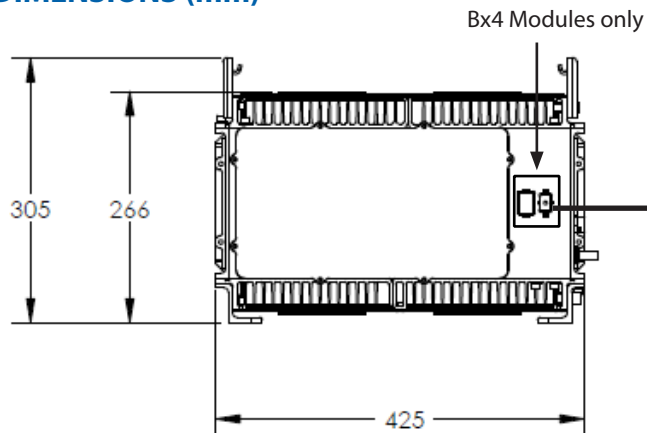
PRODUCT SPECIFICATIONS (cont.)

LIFESPAN	B04/B14/B24/B33
Lifetime 125 V DC, RT End of life characterized as -20% C from nominal C, or increase of 100% in ESR	100,000 hours
Endurance After 1,500 hours application of rated voltage at 65°C. Within % of initial specified value.	
Capacitance change	<20% decrease
Internal resistance change	<60% increase
Life test After 10 years at rated voltage and 25°C. Within % of initial specified value.	
Capacitance change	20% decrease
Internal resistance	100% increase
CURRENT	
Leakage current After 72 hours at 25°C. Initial leakage current can be higher.	5.2 mA
Maximum continuous current	150 A
Maximum peak current, 1 sec 1 second, 10% duty cycle	750 A
Maximum continuous current with fan cooling Assuming 15°C temperature rise above ambient temperature	150 A
Maximum continuous current with passive cooling Assuming 15°C temperature rise above ambient temperature	55 A
Self discharge % of initial V, 30 days RT 100V; 12 hours charge and hold	50%
CONNECTION	
Power terminal	Radsok®
Communications	See page 3
MONITORING	
Cell balancing	VMS (Maxwell Technologies® Voltage Management System)
Voltage and Temperature Monitoring	CANBus SAE J1939 (B14/B24/B04) Analog (B33)
SIZE	
Dimensions (L x W x H) (mm) (±0.5mm)	762 x 425 x 265 (B14/B24/B33) 619 x 425 x 265 (B04)
Weight	59.5 kg
RATINGS	
Fan power Max. each fan	12V / 42W (B14) 24V / 55W (B24/B33) No Fan (B04)
Environmental Protection	IP65; IP55 (fans)
Shock resistance	SAE J2464
Vibration resistance	EN 61373; ISO16750 Table 14

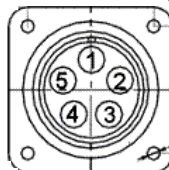
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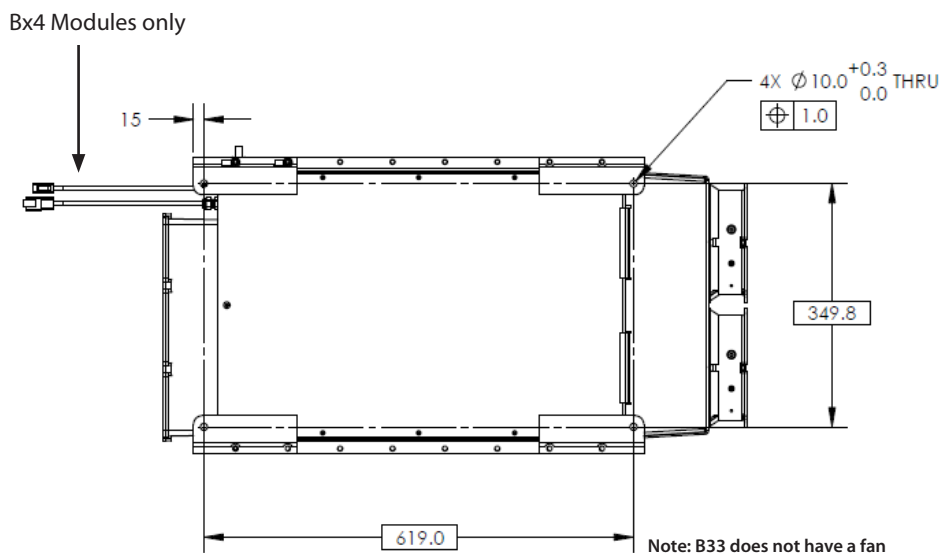
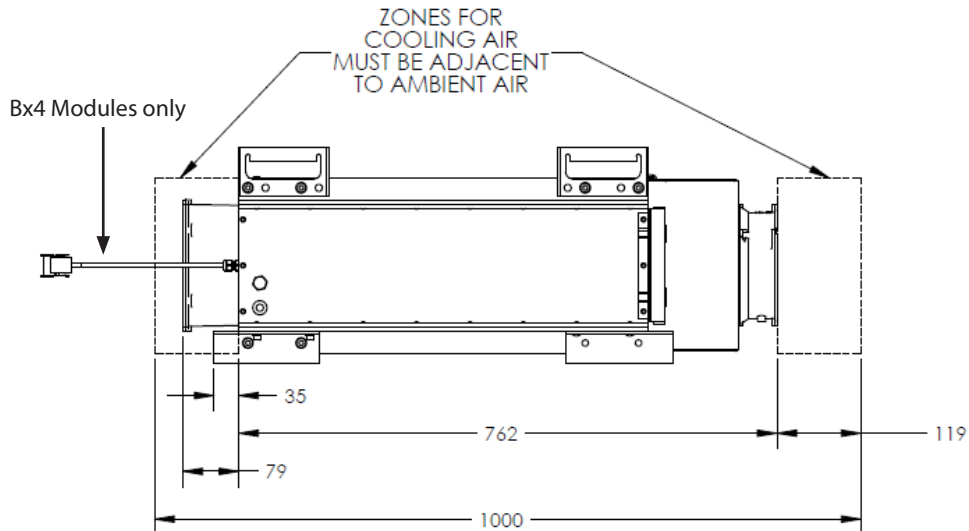
DIMENSIONS (mm)



B33 Module only



Pin	Pin Assignment
1	Center Tap Voltage
2	Positive Tap Voltage
3	Temperature Sensor Lead 1 or 2
4	Temperature Sensor Lead 2 or 1
5	Negative Tap Voltage



Note: B33 does not have a fan

Product dimensions are for reference only unless otherwise identified. Product dimensions and specifications may change without notice. Please contact Maxwell Technologies directly for any technical specifications critical to application. *Drawing no. 1014553*

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INCLUDED IN BMOD0063 P125

2 Power connectors:

- Mounting adapters with isolation and mating lug connectors
- Adapters for normal or perpendicular mounting of power cables (AWG 1/0)

1 CAN bus serial communications connector, male, Deutsch DTM04-08PA with WM-8D and 0462-201-20141 (B04/B14/B24)

1 CAN bus serial communications connector, female, Deutsch DTM06-08SA with WM-8S and 0460-201-20141 (B04/B14/B24)

1 ANALOG, 5 pin connector (B33)

MOUNTING RECOMMENDATIONS

The module should be mounted to a strong chassis surface with four M8 screws of appropriate length for the application. The mounting screws should have a mechanical locking method that is appropriate for the vibration levels. To provide the best possible EMI protection, the mounting surface should be electrically grounded. Do not reverse polarize.

The use of alternate module mounting orientations or custom feet other than those provided by Maxwell Technologies will result in voiding the warranty unless such uses have been disclosed to Maxwell and approved by Maxwell by express written consent prior to implementation.

MARKINGS

Modules are marked with the following information: Rated capacitance, rated voltage, product number, name of manufacturer, positive and negative terminal, warning marking, serial number.

