

# CASCADIA MOTION

## RM100 Propulsion Inverter



Controller Model	RM100DX	RM100DY	RM100DZ	
DC Voltage – operating	50–420	100–620	200–820	$V_{DC}$
DC Overvoltage Trip	450	650	850	$V_{DC}$
Maximum DC Voltage – non-operating	500	700	900	$V_{DC}$
Motor Current Continuous	300	200	150	A
Motor Current Peak*	400	250	220	$A_{rms}$
Output Power Peak (elect)*	120	130	140	kW
DC Bus Capacitance	500	350	250	$\mu F$
Size and Volume	268 x 331 x 85 / 7.6			mm / L
Weight	8.0			kg
Active Discharge via motor winding to <50V	< 1			sec
Passive Discharge (internal resistor) to <50V	< 120			sec
Vehicle System Power	9 .. 32 (12V / 24V Systems)			$V_{DC}$
Inverter PWM Frequency	12 (6..16 adjustable pending)			kHz
Operating Temperature Range – coolant water	- 40 .. +80, (derate to zero 80 .. 100)			$^{\circ}C$
Coolant Flow Rate	8 .. 10 (2 GPM min)			LPM
Coolant Pressure Drop (60 $^{\circ}C$ coolant / 10 LPM)	0.35 (35kPa / 5psi)			bar
Maximum Coolant Pressure (absolute)	2 (200kPa / 30psia)			bar
Operating Shock (ISO 16750-3, Test 4.2.2.2)	500 (50g), <i>pending</i>			$m/s^2$
Operating Vibration (ISO 16750-3, 4.1.2.4 Test IV)	27.8 (3 $g_{rms}$ ), <i>pending</i>			$m/s^2$
EMC compatibility	IEC61000 / CISPR-25, <i>pending</i>			
Conductor Size min .. max recommended	#2/35 .. #000/95			AWG/mm $^2$

\* peak is 10seconds

Ratings subject to change without notice—consult factory

These Propulsion Inverter products use 100% Automotive qualified components, IPC Class 3 fab and assembly, and are designed and manufactured to comply with the following international standards:

ISO6469, ISO6493-3, ISO16750, ISO20653, IEC60950, <IEC61000 pending>



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power electronics, motors and propulsion controls

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FUNCTIONAL SAFETY