



## **DMC544** DriveTrain Inverter

**The solid, powerful inverter  
for electric motors**

### **Safety first**

Passive interlock

Galvanic separation between HV and LV (excl. voltage measurement)

Excellent EMC behavior

Resonant SoftSwing® topology for minimal switching losses

Compact and lightweight design

Patented Liquid Pin® cooling system for optimal temperature behavior and best performance

Various predefined motor tables to control different electric motors

CAN interface

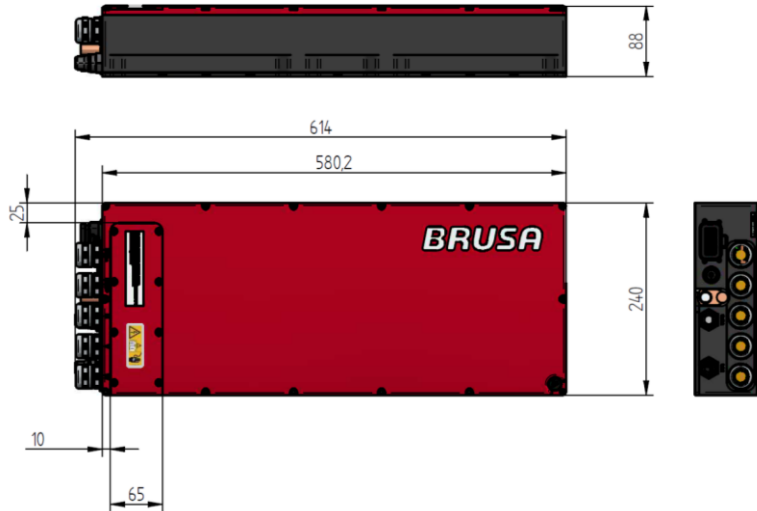
Very high continuous and maximal output power

Dynamic torque control through high PWM frequency

User software CVI in scope of delivery

Power supply HV and LV		DMC544
Low voltage (LV) input voltage for operating (acc. ISO 16750)	12	V
HV input voltage range for full output current	250 - 450	V
Maximum HV input voltage without damage	500	V
Continuous input current HVDC interface	360	A
Maximum input current HVDC interface	600	A
Three phase output		
Continuous output current	350	A <sub>RMS</sub>
Maximum output current	600	A <sub>RMS</sub>
Typical efficiency	97	%
Mechanical data / Cooling system / Environment		
Length	614	mm
Width	240	mm
Height	88	mm
Weight (dry)	15.3	kg
Ingress protection	IP67	
Ambient temperature range (operation)	-40 to +85	°C
Ambient temperature range (storage)	-40 to +85	°C
Amount of coolant in device	0.4	L
Coolant water mixture water/glycol	50/50	%
Coolant input temperature range	-20 to +60	°C
Coolant flow rate	6 to 10	L/min
Coolant pressure drop (8 L/min, T <sub>coolant</sub> = 25 °C)	321	mbar
Maximum coolant pressure	2	bar
Maximum altitude	4000	m
Connections		
DC & AC: M8 cable lugs, recommended cross section (Cu)	70	mm <sup>2</sup>
Ground GND: M8 cable lug, recommended cross section (Cu)	70	mm <sup>2</sup>
Key reference standards		
Certifications and type approval (pre-tests)	ECE-R10	
EMC	CISPR25	
Environmental	ISO 16750 ISO 20653 LV124	
Electrical Safety	IEC 60664-1 LV123	

**Dimensions [mm]**



**Efficiency [%]**

DMC544-C02 efficiency @ 400 V <sub>DC</sub> (measured with HSM1-10.18.22-B03)											
Torque [Nm]	440	89.5	93.8	95.5	96.4						
	420	89.6	93.9	95.6	96.4						
	400	89.8	94.0	95.6	96.5	97.0					
	380	89.9	94.1	95.7	96.6	97.0					
	360	90.1	94.2	95.8	96.6	97.1					
	340	90.2	94.3	95.9	96.7	97.2	97.2				
	320	90.3	94.3	95.9	96.7	97.3	97.2				
	300	90.3	94.4	96.0	96.8	97.4	97.3	97.2			
	280	90.4	94.4	96.0	96.8	97.4	97.4	97.2			
	260	90.4	94.5	96.0	96.8	97.5	97.5	97.4	97.2		
	240	90.5	94.5	96.0	96.9	97.5	97.6	97.5	97.2		
	220	90.5	94.5	96.0	96.9	97.4	97.7	97.6	97.4	97.1	
	200	90.4	94.4	96.0	96.9	97.4	97.7	97.7	97.6	97.3	97.0
	180	90.3	94.4	95.9	96.7	97.4	97.8	97.8	97.7	97.5	97.3
	160	90.1	94.3	95.8	96.7	97.4	97.8	97.9	97.8	97.6	97.5
	140	89.9	94.2	95.7	96.6	97.2	97.8	97.9	97.8	97.7	97.6
	120	89.5	93.9	95.6	96.5	97.1	97.7	97.9	97.9	97.8	97.7
	100	89.0	93.6	95.3	96.3	97.0	97.4	97.8	97.9	97.8	97.8
80	88.2	93.1	95.0	96.0	96.8	97.3	97.7	97.7	97.8	97.7	
60	86.8	92.2	94.3	95.5	96.3	96.9	97.4	97.6	97.6	97.5	
40	84.2	90.6	93.1	94.5	95.5	96.2	96.8	97.2	97.3	97.3	
20	77.6	86.2	89.8	91.8	93.3	94.3	95.2	95.8	96.2	96.2	
<b>Q1</b>	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	10800
	Speed [rpm]										