DMC544 - High Power Inverter

The solid, powerful basis for electric motors

Safety features

- Control of three - phase motors
- Passive interlock
- Galvanic separation between HV and LV (ex. voltage measurement)

Advanced technology

- 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
- User software CVI in delivery

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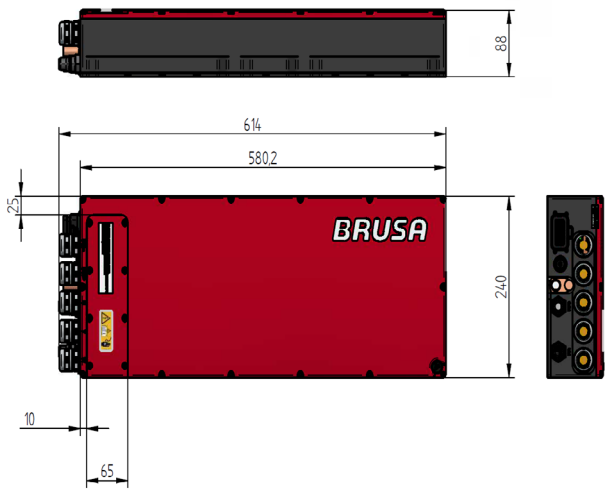
Specifications DMC544-C02

Power supply HV and LV	Value	Unit
Low voltage (LV) input voltage for operating (acc. ISO16750)	12	V
Range HV - input voltage for full current output	250- 450	V
Max. HV input voltage without damage	500	V
Recommended conductor size U, V, W, HV+, HV-	70	mm^2
HVDC power connector cont. current	360	A
HVDC power connector max current	600	A

Three phase output U, V, W (R, S, T)		
Continuous RMS current (I_{ACcont})	350	A
Max. RMS (I_{ACmax})	600	A
Typ. efficiency	0.97	

Thermal & mechanical data		
Weight (without cooling water)	15.3	kg
IP - protection	IP67	
Coolant quantity in device	0.4	l
Outside diameter of cooling water connection pieces	16	mm
Coolant temperature range at input	-20 to +60	°C
Coolant pressure loss @ 8l/min, $T_{coolant}$ = 25 °C (at mixing ratio water/glycol = 50/50)	321	mbar
Max. coolant pressure	2	bar
Ambient temperature range for operation	-40 to +85	°C

Dimensions [mm]



Efficiency map

DMC544-C02 efficiency map @ 400 VDC (measured with HSM1-10.18.22-B02)

Torque [Nm]	1000	2000	3000	4000	4600	5000	6000	7000	8000	9000	10000	10800
440	89.6	93.8	95.5	96.3	96.8							
420	89.6	93.9	95.5	96.3	96.8							
400	89.8	94.0	95.6	96.4	96.9	97.0						
380	90.0	94.1	95.7	96.5	96.9	97.1						
360	90.1	94.2	95.8	96.6	97.0	97.2						
340	90.2	94.3	95.9	96.6	97.0	97.2	97.2					
320	90.3	94.3	95.9	96.7	97.1	97.3	97.2					
300	90.4	94.4	96.0	96.7	97.1	97.4	97.4					
280	90.5	94.4	96.1	96.8	97.1	97.4	97.5	97.2				
260	90.5	94.5	96.0	96.8	97.2	97.5	97.6	97.4	97.1			
240	90.6	94.5	96.0	96.9	97.2	97.5	97.6	97.5	97.2			
220	90.3	94.5	96.1	96.9	97.2	97.5	97.7	97.6	97.4	97.1		
200	90.1	94.5	96.0	96.9	97.2	97.5	97.8	97.7	97.6	97.3	96.9	
180	90.2	94.5	96.0	96.9	97.2	97.4	97.8	97.8	97.7	97.5	97.2	97.0
160	89.9	94.4	96.0	96.9	97.1	97.4	97.9	97.9	97.8	97.7	97.4	97.3
140	89.7	94.3	95.9	96.8	97.0	97.3	97.9	97.9	97.8	97.8	97.6	97.5
120	89.5	93.9	95.7	96.6	96.9	97.2	97.9	98.0	97.9	97.8	97.7	97.7
100	88.6	93.5	95.5	96.4	96.7	97.1	97.7	98.0	97.9	97.9	97.7	97.7
80	87.8	92.8	95.0	96.2	96.5	96.8	97.5	97.9	97.9	97.8	97.7	97.8
60	86.5	92.1	94.1	95.5	96.0	96.4	97.2	97.6	97.7	97.7	97.6	97.7
40	83.2	90.2	92.9	94.1	95.1	95.2	96.6	97.0	97.4	97.5	97.3	97.4
20	77.2	85.4	89.4	91.3	92.7	92.7	94.5	95.1	95.8	96.2	95.9	96.2
Q1	Speed [rpm]											

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