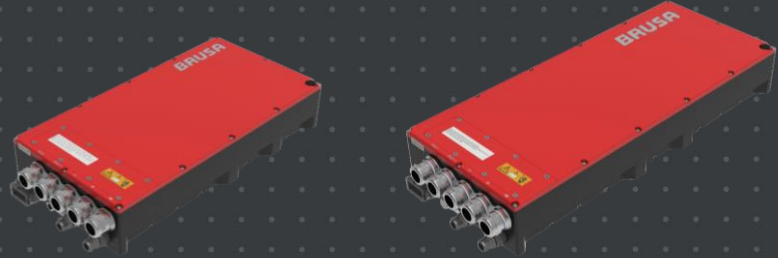




**DMC5X4**  
Drivetrain  
Inverter  
Family



**High-performance drivetrain solutions –  
designed, assembled and tested in Switzerland**

**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

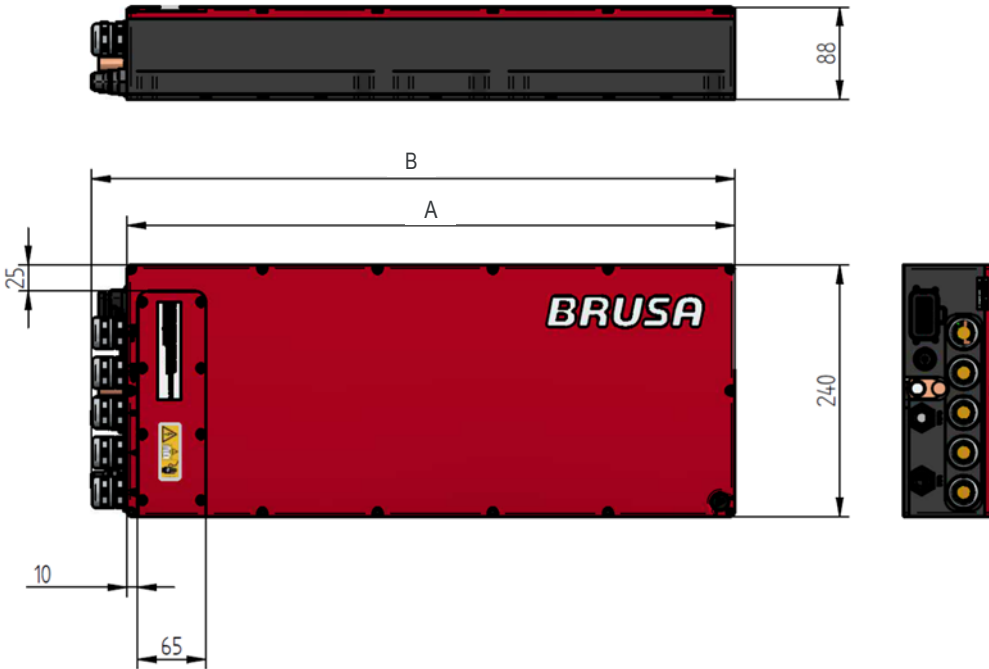
Very high continuous and maximal output power

Dynamic torque control through high PWM frequency

User software CVI in scope of delivery

Power supply HV and LV	DMC	514	524	534	544	
Low voltage (LV) input operating range			6 - 32			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	100	200	300	360		A
Max. cont. HVDC current with corresponding cross section	150	260 <sup>1</sup>	360 <sup>1</sup>	360		A
Maximum input current HVDC interface	150	300	450	600		A
<b>Three phase output</b>						
Continuous output current	100	200	300	350		A <sub>RMS</sub>
Max. continuous output current with corresponding cross section	150	250 <sup>1</sup>	350 <sup>1</sup>	350		A <sub>RMS</sub>
Maximum output current	150	300	450	600		A <sub>RMS</sub>
Typical efficiency			97			%
<b>Mechanical data / Cooling system / Environment</b>						
Length	284	394	504	614		mm
Width			240			mm
Height			88			mm
Weight (dry)	6.7	9.5	12.5	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	0.16	0.24	0.32	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
Max. pressure drop (8 L/min, T <sub>coolant</sub> = 25°C)	211	261	291	321		mbar
Maximum coolant pressure			2			bar
Maximum altitude			4000			m
<b>Connections</b>						
DC & AC: M8 cable lugs, recommended Cu cable cross section	25 (35)	35 (50)	70	70		mm <sup>2</sup>
Ground GND: M8 cable lug, recommended Cu cross section	25 (35)	35 (50)	70	70		mm <sup>2</sup>
<b>Key reference standards</b>						
Certifications and type approval (pre-tests)			ECE-R10 <sup>2</sup>			
EMC			CISPR25 <sup>2</sup>			
Environmental			ISO 16750 <sup>3</sup> ISO 20653 LV124			
Electrical Safety			IEC 60664-1 LV123			
<sup>1</sup> To be verified						
<sup>2</sup> Verified with DMC544-C02						
<sup>3</sup> LV input voltage according to ISO 16750, tested for 12 V systems						

Dimensions [mm]



Type	A	B	Unit
DMC514	250.2	284	mm
DMC524	360.2	394	mm
DMC534	470.2	504	mm
DMC544	580.2	614	mm

Efficiency [%] (example DMC544)

DMC544-C02 efficiency @ 400 V <sub>DC</sub> (measured with HSM1-10.18.22-B03)												
	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	97.7	
	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	97.2	
	20	77.6	86.2	89.8	91.8	93.3	94.3	95.2	95.8	96.2	96.1	
<b>Q1</b>		1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	10800
		Speed [rpm]										

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