

The image shows a close-up of a black printed circuit board (PCB) with various components. A blue rounded rectangle is overlaid on the left side, containing the white text 'CMZ'. The PCB features several silver screws, a large rectangular component with horizontal lines, and various connectors and markings. The background is slightly blurred, focusing attention on the logo and the text on the right.

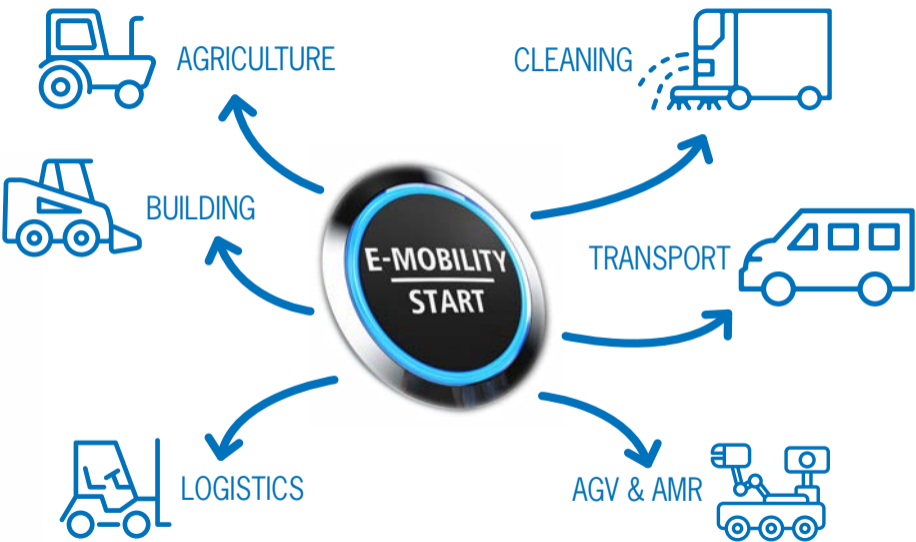
**CMZ**

**BRUSHLESS  
DRIVE 48V  
FOR E-MOBILITY**

# CMZ FOR E-MOBILITY

## THE NEW DRIVE FOR ELECTRIC VEHICLES





# EPULSE30 EPULSE50

**EPULSE30** and **EPULSE50** are low voltage servodrives for E-MOBILITY battery powered applications.

**EPULSE30** servodrive is able to provide a current up to 50 A with a maximum installed power of 1.8 kW using a 36 VDC battery.

**EPULSE50** servodrive is able to provide a current up to 100 A with a maximum installed power of 3.6 kW using a 36 VDC battery.

Thanks to compact design, these servodrives can be integrated also in smallest spaces without performance loss.

Through **EPULSE30** and **EPULSE50** drives, you'll get the best price-performance-ratio. They are particularly suitable for battery powered vehicles.

## MAIN FEATURES

- Intelligent and flexible control of the motors, thanks to their compatibility with different types of encoder
- Feedback: ABZ + hallsensor, SIN/COS, Resolver (EPULSE50)
- Different control options: analogic, CANopen
- Compact sizes for applications with vibrations and shocks
- Regenerative hardware / software
- Power supply from 20 to 75 VDC
- EPULSE30 Nominal current of 30 A, EPULSE50 Nominal current of 50 A
- PWN frequency 10 kHz
- 2 programmable digital inputs and outputs
- 1 CAN interface
- 1 serial interface for programming and diagnostics
- EPULSE30: Accelerometer, Gyroscope  
EPULSE50: Accelerometer only
- Dimensions:  
EPULSE30 (110 x 65 x 40 mm),  
EPULSE50 (130 x 85 x 35 mm)
- Board version only without cover available.

SELECTION GUIDE

# E-PULSE DRIVE + BRUSHLESS MOTOR

EPULSE



MMD



# MOTORS TECHNICAL DATA

			MMD 65							
			0,85				1,70			
Standstill torque	$M_0$	[Nm]								
Rated torque	$M_n$	[Nm]	0,83	0,80	0,76	0,73	1,65	1,60	1,52	1,45
Rated speed	$n$	[min <sup>-1</sup> ]	1600	3000	4500	6000	1600	3000	4500	6000
Rated frequency	$f_n$	[Hz]	107	200	300	400	107	200	300	400
Rated power	$P_n$	[kW]	0,14	0,25	0,36	0,46	0,28	0,50	0,72	0,91
Max torque	$M_{max}$	[Nm]	2,55				4,90			
Number of poles	2p	[-]	8				8			
Motor moment of inertia	J	[Kg cm <sup>2</sup> ]	0,2				0,4			
Electric time constant	$\tau_{el}$	[ms]	3				3			
Thermal time constant	$\tau_{therm}$	[min]	14				20			
Motor mass without bake / flywheel	$M_M$	[kg]	1,3				1,9			

			MMD 82		MMD 102		MMD 118	
2,20			3,20		4,40	4,00		5,60
2,12	2,05	1,95	3,15	3,00	4,20	3,70	3,40	5,50
1600	3000	4500	1600	3000	1600	1600	3000	1600
107	200	300	107	200	107	107	200	107
0,36	0,64	0,92	0,53	0,94	0,70	0,62	1,01	0,92
6,20			8,50		11,5	11,0		15,0
8			8		8	8		8
0,6			1,4		1,7	1,9		4,5
3			5,7		5,7	8,4		13
26			26		33	25		28
2,6			3,5		4,6	4,2		7,7

Rated Voltage  $V_n$  [V<sub>AC</sub>]

Stall RMS current  $I_0$  [A]

Rated RMS current  $I_n$  [A]

Max RMS current  $I_{max}$  [A]

Back EMF constant phase-phase  $K_e$  [ $\frac{mV}{min^{-1}}$ ]

Torque constant  $K_r$  [Nm/A]

Stator phase-phase resistance at 20°C  $R_{pp}$  [ $\Omega_{20^\circ}$ ]

Stator phase-phase inductance  $L_{pp}$  [mH]



48 Vdc

MMD 65

MMD 82

MMD 102

MMD 118

31	30	32	32	31	30	31	31	31	31	31	31	32	30	31	32	31
4,04	6,85	9,20	12,0	7,8	13,0	18,0	23,5	10,3	16,6	24,1	15,9	24,8	22,5	19,1	30,0	24,0
3,89	6,46	8,30	10,5	7,75	12,8	17,0	21,0	9,98	15,6	21,2	15,0	23,7	21,1	16,4	26,6	21,7
13,1	21,7	29,6	38,5	26,7	44,4	61,0	79,5	32,7	52,8	76,0	52,7	85,3	66,8	58,5	96,3	78,7
14,3	8,44	6,29	4,80	14,4	8,64	6,22	4,80	14,9	9,26	6,45	14,5	8,91	13,7	14,9	9,13	16,1
0,21	0,12	0,09	0,07	0,22	0,13	0,09	0,07	0,21	0,13	0,09	0,20	0,13	0,20	0,21	0,13	0,23
1,76	0,62	0,34	0,20	0,79	0,28	0,15	0,09	0,51	0,20	0,09	0,28	0,11	0,15	0,21	0,08	0,12
5,26	1,85	1,02	0,60	2,39	0,86	0,45	0,26	1,56	0,60	0,29	1,59	0,60	0,84	1,78	0,67	1,60

cmz.it



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Hardware  
Software  
Service



SINCE 1976