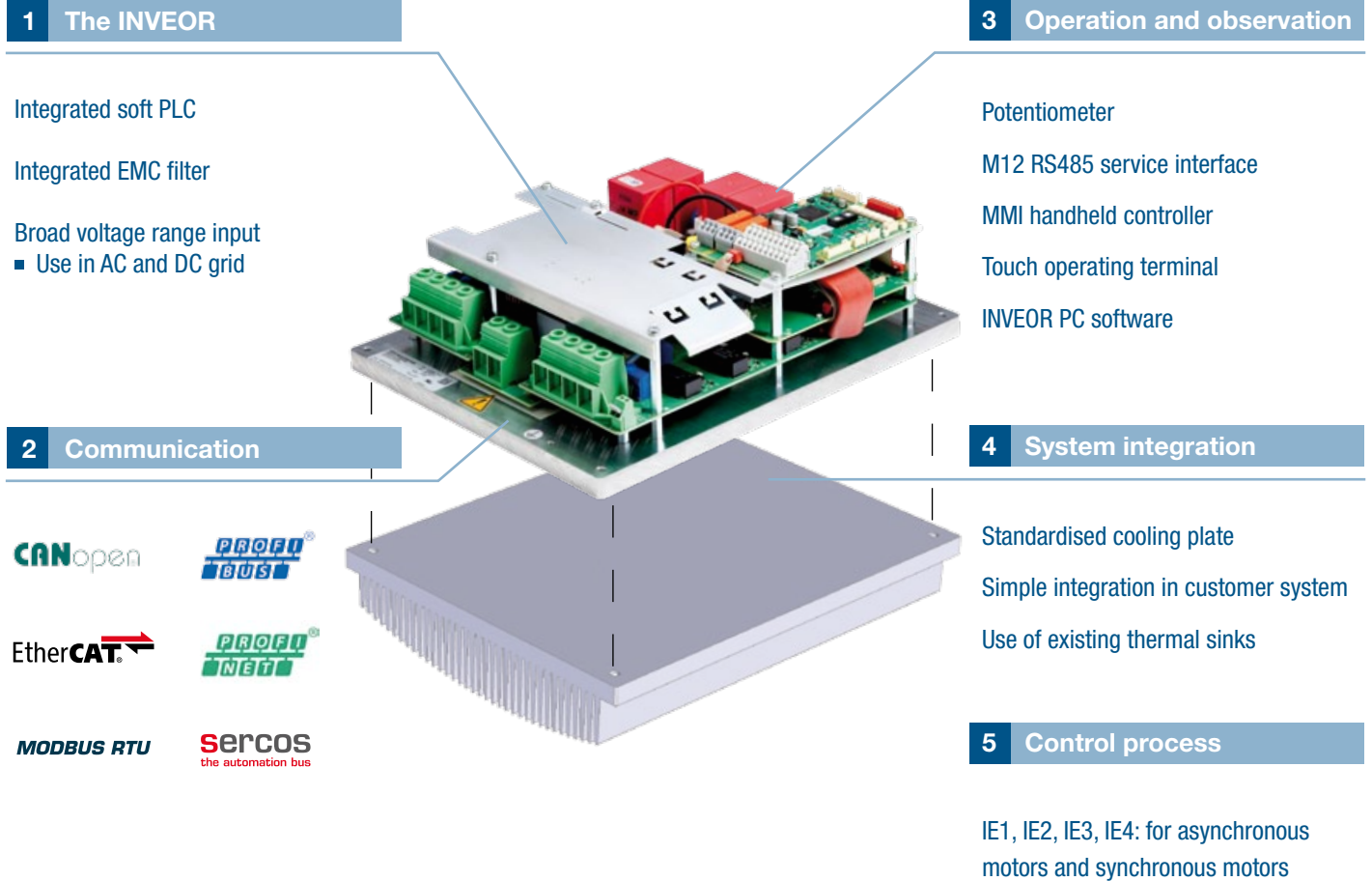


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Data sheet

INVEOR P

INVEOR – "Smart connections." on five levels

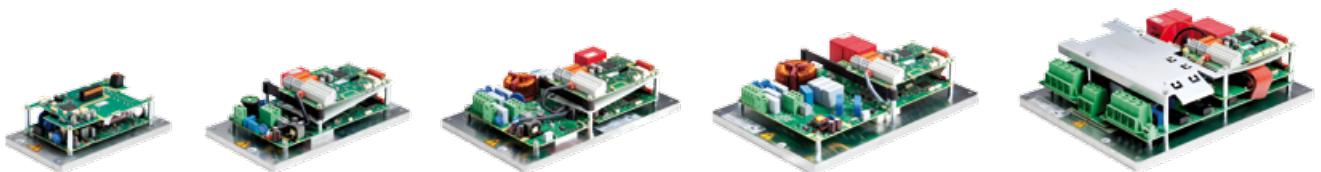


Requirements of the customer's cooling elements



Size	α	A (1 AC)	A (3 AC)	B	C	D (3 AC)	
Recommended motor rating* [KW]	0.75	1.1	1.5	4.0	7.5	15.0	22.0
Rth [k/W]	0.688	0.186	0.431	0.280	0.117	0.087 ¹⁾	0.037 ¹⁾
Smoothness of contact surface	0.05 mm						
Maximum roughness of contact surface	RZ 6						
Maximum temperature, IGBT	95°C						
Maximum temperature, interior	85°C						

¹⁾ Active cooling of size D is recommended to reduce the size of the cooling element.

Overview of INVEOR P sizes



400 V and 230 V devices, technical data for INVEOR P

	Size	230 V		400 V				
		α	A	A	B	C	D	
Electrical data	Recommended motor rating ¹⁾ [kW]	0.75	1.1	1.5	4.0	7.5	15.0	22.0
	Supply voltage [V]	1 x 100 VAC -15 % ... 230 VAC +10 % 140 VDC -15 % ... 220 VDC +10 %		3 x 200 VAC -10 %...480 VAC +10 % 280 VDC -10 %...680 VDC +10 %				
	Grid frequency [Hz]	50 Hz / 60 Hz \pm 6 %						
	Mains configurations	TN / TT, IT (option)			TN / TT			
	Line current [A]	7.3	9.2	3.3	7.9	14.8	28.2	39.8
	Rated current output eff. [IN at 8 kHz]	3.3	5.2	4.0	9.5	17.8	34.0	48.0
	Min. brake resistance [Ω]	-	50	100	50	50	30	
	Overload for 60 sec	150 %						130 %
	Switching frequency	4 kHz, 8 kHz, 16 kHz, (factory setting 8 kHz)						
	Output frequency	0 Hz – 400 Hz						
	Mains cycles of operation / restart	Every 2 min.			Unlimited		Every 2 min.	
	DIN EN 61800-5 touch current	< 10 mA ²⁾			< 3.5 mA ²⁾			
Functions	Protective function	Overvoltage and undervoltage, I ² t restriction, short-circuit, ground leak, motor and drive controller temperature, stall prevention, blocking detection, PID dry run protection						
	Software functions	Process control (PID controller), fixed frequencies, data record changeover, flying restart, motor current limit						
	Soft PLC	IEC61131-3, FBD, ST, AWL						
Mech. data	Dimensions [L x W x H] mm	210x120x71	261.5x150x82.9	261.5x150x82.9	300x185x83.3	330x220x91	343x270x113	
	Weight including cooling plate [kg]	1.6	2.2	2.2	2.9	4.2	6.5	
	Protection class [IPxy]	IP 00 (type of protection is determined by the final application)						
Environmental conditions	Ambient temperature [°C]	-10 °C (non-condensing) to +40 °C (50 °C with derating)		-25 °C (non-condensing) to +50 °C (without derating)		-25 °C (non-condensing) to +40 °C (without derating)		
	Storage temperature	-25 °C...+85 °C						
	Altitude of the installation location	Up to 1000 m above sea level / over 1000 m with reduced performance (1 % per 100 m) / above 2000 m see operating manual						
	Relative air humidity	\leq 96 %, condensation not permitted.						
	Vibration resistance (DIN EN 60068-2-6)	10 m/s ² ; 5...200 Hz ³⁾						
	Shock resistance (DIN EN 60068-2-27)	300 m/s ²						
	EMC (DIN-EN-61800-3) prepared for	C2	C1	C2				
Certificates and conformity	 							
Interfaces	Size			A, B, C		A, B, C, D		
	Application circuit board model	α		Basic		Standard		
	I/O interfaces	2 DI / 1 DO / 1 AI / - AO / 1 relay		2 DI / 1 DO / 1 AI / - AO / - relay		4 DI / 2 DO / 2 AI / 1 AO / 2 relays		
	Potentiometer on device	1		1		1		
	Foil keypad	1		1		1		
	Internal power supply	24 VDC, 100 mA / 10 VDC, 30 mA / short-circuit proof						
	External feed-in 24 VDC	-		-		24 VDC +/-15 %		
	Fieldbus integrated	Modbus RTU						
	Fieldbus option	CANopen		-		CANopen / PROFIBUS / PROFINET / EtherCAT / Sercos III		

Technical data for 230 V and 400 V devices INVEOR P (subject to technical changes)

¹⁾ Recommended motor rating (4-pole asynchron. motor) for single-phase and three-phase devices is given based on the 230 VAC and 400 VAC supply voltage.

²⁾ With 1LA7 asynchronous motor, motor-mounted

³⁾ Combined vibration test, part 4, severity 2 in accordance with FN942017

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