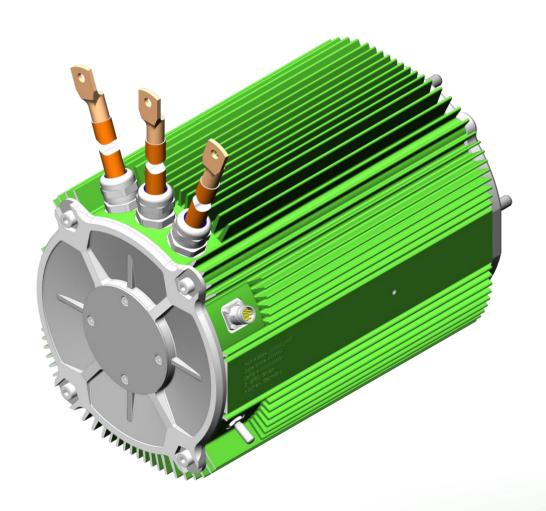


205A-12013-ABC

air-cooled motor / generator with up to 24 kW continuous power



KEY FEATURES

- permanent magnet synchronous machine
- air-cooled
- high peak power for motor applications
- convincing cost-benefit ratio
- recommended voltage range from 48V to 200V
- delivery with controller possible

Hc

205A-12013-ABC

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Technical Data Machine



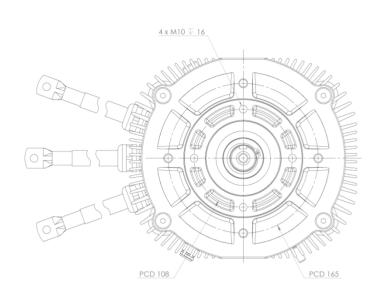
Paris Pari					2.2.1000	
Promit Promit R.2		Nominal Operation (S	61, cooling as spe	ecified below)		
### Preserved	Torque	T_{nom}	6	67	67	Nm
Passe rms-current I_{com} 192	Power	P_{nom}	8.2	2 16	3 24	kW
Sattery voltage (DC)	Speed	n_{nom}	1170	2340	3420	rpm
	Phase rms-current	I _{nom}	192	192	192	А
Maximal Values (S2, 10s, cooling as specified below) Torque	Battery voltage (DC)	U_{nom}	4	96	3 140	V
Maximal Values (S2, 10s, cooling as specified below) Forgue	Electric frequency	$f_{el,nom}$	78	156	228	Hz
	Power factor	$cos(\phi)$	0.7	0.76	0.76	
Para		Maximal Values (S2, 1	0s, cooling as sp	ecified below)		
### Property of the property o	Torque	T_{max}	28	285	285	Nm
Selector Connectors Conne	Power	P_{max}	2	7 56	83	kW
Speed Promise Promis	Phase rms-current	I _{max}	962	962	962	А
Sector Feet max	Battery voltage (DC)	U_{max}			280	V
Sumber of phases 3 3 3 3 3 3 3 3 3	Speed	n_{max}		8000		
Auximale of pole pairs 4 Maximal efficiency >96 % 77 constant (I <i<sub>nom) 0.35 Nm/A_{rms} V/1 constant (AC) rms: 22.2 peak: 31.4 V/(1000r Constant (AC) rms: 0.053 peak: 0.075 V/(rad*s* Additional Data Veight (w/o cables) 37 kg Rotor moment of inertia 0.019 kg*m² Protection category IP65 Maximal motor temperature 120 °C Allowed ambient temperature -20 451° °C Cooling (medium, flow rate, inlet temperature, pressure) air, 5-17 m/s, ≤ 45°C remperature monitoring 1 x KTY84-130 Type approval CE, EN 60034 Customs tariff number 8501 5230 Connectors Power terminals 3 x 50mm² cables with M8 cable lugs Veight power cables 3.3 kg Length power cables 2 m</i<sub>	Electric frequency	f _{el, max}		533		Hz
Aximal efficiency Aximal effic		Ele	ectrical Data			
Maximal efficiency >96 % 77/ constant (I <i<sub>nom) 0.35 Nm/A_{rms} Nm/A_{rms} 22.2 peak: 31.4 V/(1000r V</i<sub>	Number of phases		3			
### Constant (I <inom) ###="" (i<inom)="" (i<inom)<="" constant="" td=""><td colspan="2">Number of pole pairs</td><td></td><td></td><td>4</td><td></td></inom)>	Number of pole pairs				4	
### 22.2 peak: 31.4 V/(1000rms: 0.053 peak: 0.075 V/(rad*s: 0.054 peak: 0.075 V/(rad*s: 0.075 peak: 0.075 V/(rad*s: 0.075 peak: 0.075 V/(rad*s: 0.075 peak: 0.075 V/(rad*s: 0.075 peak: 0.075 peak: 0.075 V/(rad*s: 0.075 peak: 0.075 peak: 0.075 peak: 0.075 V/(rad*s: 0.075 peak: 0.075 pea	Maximal efficiency			>96		
Additional Data Additional Data Weight (w/o cables) 37 kg Rotor moment of inertia 0.019 kg*m² Protection category 120 °C Allowed ambient temperature 120 °C Cooling (medium, flow rate, inlet temperature, pressure) air, 5-17 m/s, ≤ 45°C Temperature monitoring 1 x KTY84-130 Type approval CE, EN 60034 Customs tariff number 8501 5230 Power terminals 3 x 50mm² cables with M8 cable lugs Veight power cables 3.3 kg Length power cables 2 m	T/I constant (I <i<sub>nom)</i<sub>			0.35		
Additional Data Veight (w/o cables) 37 kg Rotor moment of inertia 0.019 kg*m² Protection category IP65 Maximal motor temperature 120 °C Allowed ambient temperature -20 45°° Cooling (medium, flow rate, inlet temperature, pressure) air, 5-17 m/s, ≤ 45°C Femperature monitoring 1 x KTY84-130 Type approval CE, EN 60034 Customs tariff number 8501 5230 Power terminals 3 x 50mm² cables with M8 cable lugs Veight power cables 3.3 kg Length power cables 2 m	U/n constant (AC)		rms:	22.2	peak: 31.4	V/(1000rpm
Weight (w/o cables) 37 kg Rotor moment of inertia 0.019 kg*m² Protection category IP65 Maximal motor temperature 120 °C Allowed ambient temperature -20 45¹¹ °C Cooling (medium, flow rate, inlet temperature, pressure) air, 5-17 m/s, ≤ 45°C Femperature monitoring 1 x KTY84-130 Type approval CE, EN 60034 Customs tariff number 8501 5230 Power terminals 3 x 50mm² cables with M8 cable lugs Veight power cables 3.3 kg Length power cables 2 m	K _e constant (AC)		rms:	0.053	peak: 0.075	V/(rad*s-1)
Rotor moment of inertia 0.019 kg*m² Protection category IP65 Maximal motor temperature 120 °C Molowed ambient temperature -20 451 °C Cooling (medium, flow rate, inlet temperature, pressure) air, 5-17 m/s, \leq 45°C Temperature monitoring 1 x KTY84-130 Type approval CE, EN 60034 Customs tariff number 8501 5230 Connectors Power terminals 3 x 50mm² cables with M8 cable lugs Veight power cables 3.3 kg Length power cables 2 m		Ado	ditional Data			
Protection category Maximal motor temperature Maximal motor temperature Maximal motor temperature Moliowed ambient temperature -20 45¹¹ °C Cooling (medium, flow rate, inlet temperature, pressure) Temperature monitoring 1 x KTY84-130 Type approval CE, EN 60034 Customs tariff number Connectors Connectors Power terminals 3 x 50mm² cables with M8 cable lugs Veight power cables 3.3 kg Length power cables 2 m	Weight (w/o cables)				37	kg
Maximal motor temperature 120 °C Allowed ambient temperature -20 45°) °C Cooling (medium, flow rate, inlet temperature, pressure) air, 5-17 m/s, $\leq 45^{\circ}$ C Temperature monitoring 1 x KTY84-130 Type approval CE, EN 60034 Customs tariff number 8501 5230 Connectors Power terminals 3 x 50mm² cables with M8 cable lugs Veight power cables 3.3 kg Length power cables 2 m	Rotor moment of inertia			0.019		
Allowed ambient temperature $-20 45^{\circ}$ °C Cooling (medium, flow rate, inlet temperature, pressure) air, 5-17 m/s, \leq 45 °C Temperature monitoring $1 \times KTY84-130$ Type approval CE, EN 60034 Customs tariff number $8501 5230$ Connectors Power terminals $3 \times 50 \text{mm}^2$ cables with M8 cable lugs Veight power cables 3.3 kg Length power cables 2 m	Protection category			IP65		
Cooling (medium, flow rate, inlet temperature, pressure) Temperature monitoring 1 x KTY84-130 Type approval Customs tariff number Connectors Connectors Power terminals 3 x 50mm² cables with M8 cable lugs Veight power cables Length power cables 2 m	Maximal motor temperature			120		
Temperature monitoring 1 x KTY84-130 Type approval Customs tariff number 8501 5230 Connectors Connectors Power terminals 3 x 50mm² cables with M8 cable lugs Veight power cables 3.3 kg Length power cables 2 m	Allowed ambient temperature			-20 45 ¹⁾		°C
Type approval CE, EN 60034 Customs tariff number 8501 5230 Connectors Power terminals 3 x 50mm² cables with M8 cable lugs Veight power cables 3.3 kg Length power cables 2 m	Cooling (medium, flow rate, inlet	temperature, pressure)		air, 5-17 m/s, ≤ 45°C		
Connectors Connectors Power terminals Veight power cables Length power cables 2 m	Temperature monitoring		1 x KTY84-130			
Connectors Power terminals Veight power cables Length power cables Connectors 3 x 50mm² cables with M8 cable lugs 3.3 kg m	Type approval		CE, EN 60034			
Power terminals 3 x 50mm² cables with M8 cable lugs Veight power cables 3.3 kg Length power cables 2 m	Customs tariff number				8501 5230	
Veight power cables 3.3 kg ength power cables 2 m		C	onnectors			
ength power cables 2 m	Power terminals			3 x 50mm² cables	with M8 cable lugs	
	Weight power cables		3.3		kg	
Signal connectors M16, 10 Pin	Length power cables		2			m
	Signal connectors				M16, 10 Pin	

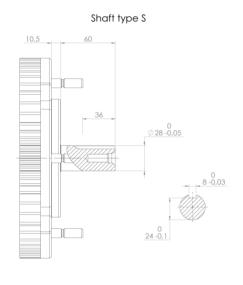
1) other range on request

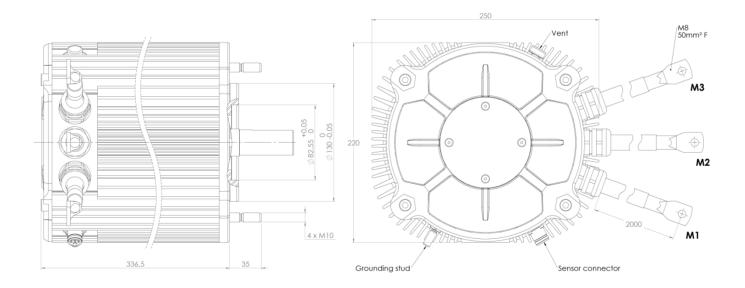
Technical Drawings



Available Type Variants				
type number	A: flange	B: shaft	C: position sensor	
2054 42042	S: standard	S: cylindrical shaft with keyway	E: sin/cos encoder	
205A-12013-			N: none	





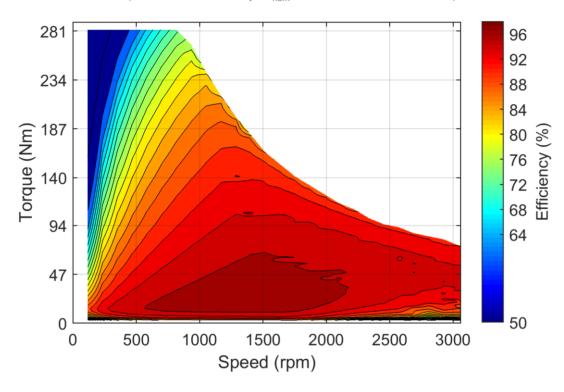


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Characteristics Machine



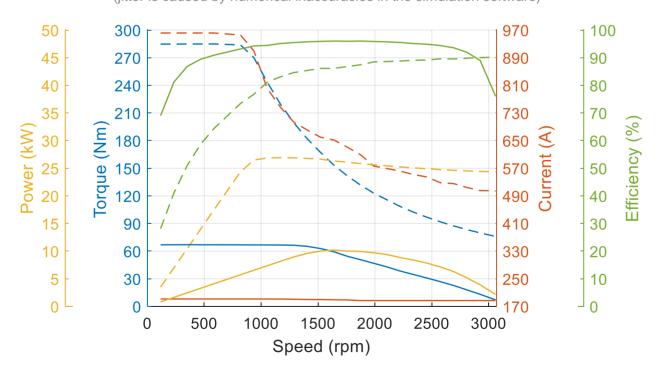
Simulated Efficiency of Motor Application (electric machine only; $U_{nom} = 48 \text{ V}$; machine at 100 °C;)



Simulated Characteristic Motor Parameters

 $U_{\text{nom}} = 48 \text{ V}$

solid lines: continuous; dashed lines: maximum; (jitter is caused by numerical inaccuracies in the simulation software)

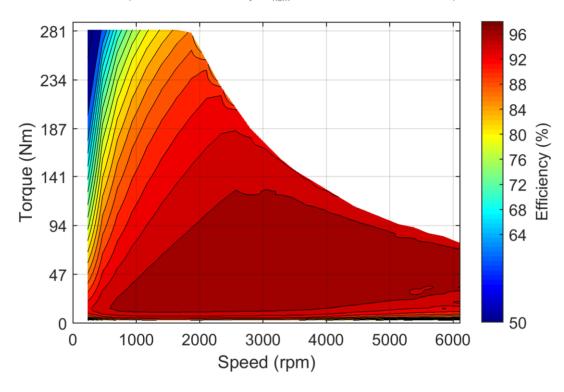


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Characteristics Machine



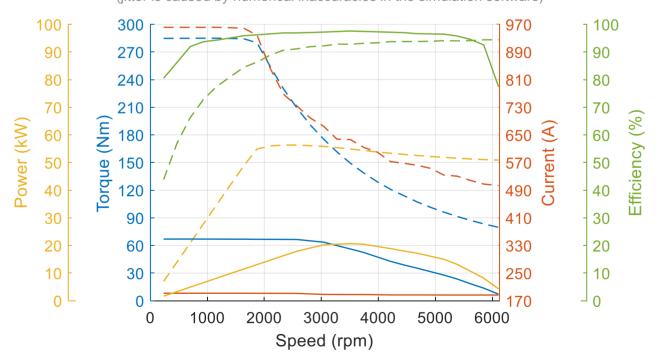
Simulated Efficiency of Motor Application (electric machine only; $U_{nom} = 96 \text{ V}$; machine at 100 °C;)



Simulated Characteristic Motor Parameters

 $U_{\text{nom}} = 96 \text{ V}$

solid lines: continuous; dashed lines: maximum; (jitter is caused by numerical inaccuracies in the simulation software)

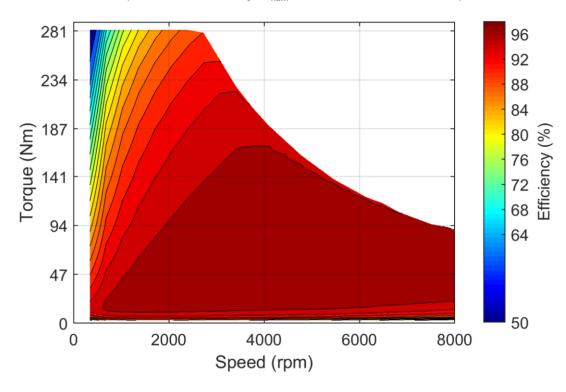


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Characteristics Machine



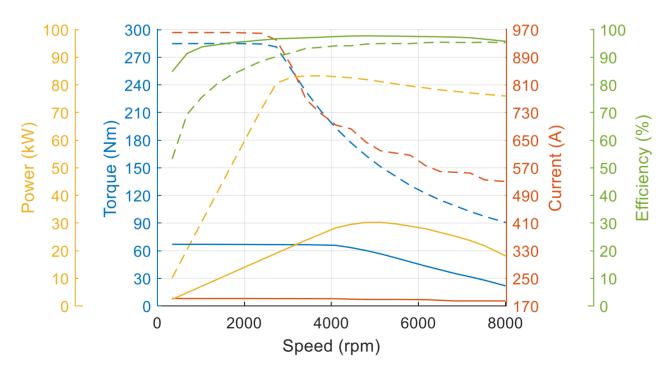
Simulated Efficiency of Motor Application (electric machine only; $U_{\text{nom}} = 140 \text{ V}$; machine at 100 °C;)



Simulated Characteristic Motor Parameters

 $U_{\text{nom}} = 140 \text{ V}$

solid lines: continuous; dashed lines: maximum; (jitter is caused by numerical inaccuracies in the simulation software)



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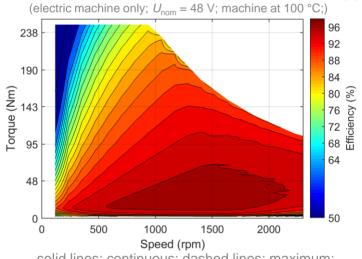
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Technical Data Inverter Set



	Nominal Oper	ration Drive Set (S1)	
Torque	T_{nom}	67	Nm
Power	P_{nom}	8.2	kW
Speed	n_{nom}	1170	rpm
Phase rms-current	I_{nom}	192	А
Battery voltage (DC)	U_{nom}	48	V
Electric frequency	$f_{el,nom}$	78	Hz
Power factor	$cos(\phi)$	0.77	
	Maximal Values	Drive Set (S2, 1-10s)	
Torque	T_{max}	250	Nm
Power	P_{max}	26	kW
Phase rms-current	I _{max}	780	А
Battery voltage (DC)	U_{max}	48	V
Speed	n_{\max}	2300	rpm
Electric frequency	f _{el, max}	153	Hz

Simulated Efficiency and Motor Characteristic of Motor Application



solid lines: continuous; dashed lines: maximum; (jitter is caused by numerical inaccuracies in the simulation software) Efficiency (%) Power (kW Speed (rpm)

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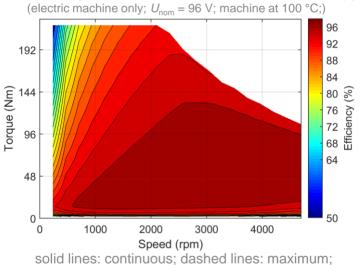
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Technical Data Inverter Set



	Nominal Ope	eration Drive Set (S1)		
Torque	T_{nom}	67	Nm	
Power	P_{nom}	16	kW	
Speed	n_{nom}	2340	rpm	
Phase rms-current	I_{nom}	192	Α	
Battery voltage (DC)	U_{nom}	96	V	
Electric frequency	$f_{el,\mathrm{nom}}$	156	Hz	
Power factor	$cos(\phi)$	0.76		
	Maximal Values Drive Set (S2, 1-10s)			
Torque	T_{max}	222	Nm	
Power	P_{max}	54	kW	
Phase rms-current	I _{max}	660	А	
Battery voltage (DC)	U_{max}	96	V	
Speed	n_{max}	4700	rpm	
Electric frequency	f _{el, max}	313	Hz	

Simulated Efficiency and Motor Characteristic of Motor Application



(jitter is caused by numerical inaccuracies in the simulation software)

