

# powerMELA C140

Drives and Generators

## KEY FEATURES

- Hybrid synchronous motor technology for optimal use of active materials
- Specially developed for mobile machines
- The reference values for torque, voltage and speed are adjustable via CAN-bus
- With integrated motor controller

## TECHNICAL DATA

- 140 kW nominal power
- 650 V nominal voltage
- 450 Nm nominal torque
- Protection class IP6K9K

## ACCESSORIES

- Communication cable
- HV connector

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## TECHNICAL DATA

Size (rotor height/power)	132 mm / 140 kW
Phases	2 x 3
Earthing System	IT, Stand-alone operation only, not connected to the grid
Protection class	IP6K9K Unmounted: drive shaft / flange IP65. Communication Connector IP67
Construction	flange

### Operation Data

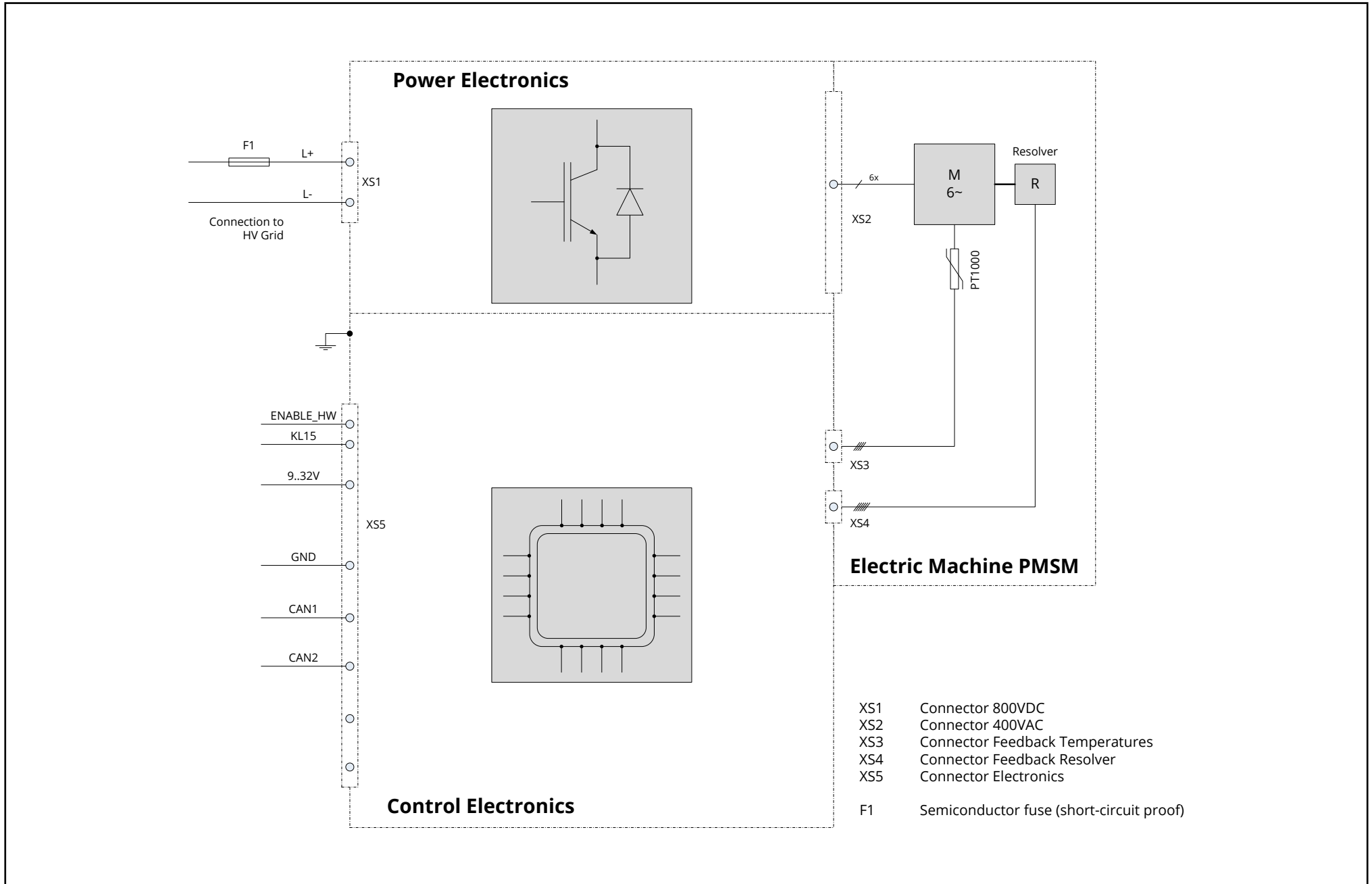
Nominal power (motor shaft)	140 kW	@ 3000 rpm S1 Mode
Maximum power	154 kW	for max. 15 seconds
Nominal voltage DC	650 V	other voltages on request
Operating voltage range DC	400 ... 800 V	
Temporary overvoltage DC	< 880 V	for max. 5 seconds, according to DIN EN 60664
Nominal current DC	235 A	while engine operating as a motor
Nominal torque	446 Nm	
Maximum torque	608 Nm	for max. 15 seconds
Nominal speed	3000 min <sup>-1</sup>	
Maximum speed	6000 min <sup>-1</sup>	
Voltage supply DC	9 ... 32 V	

### Mechanical Data

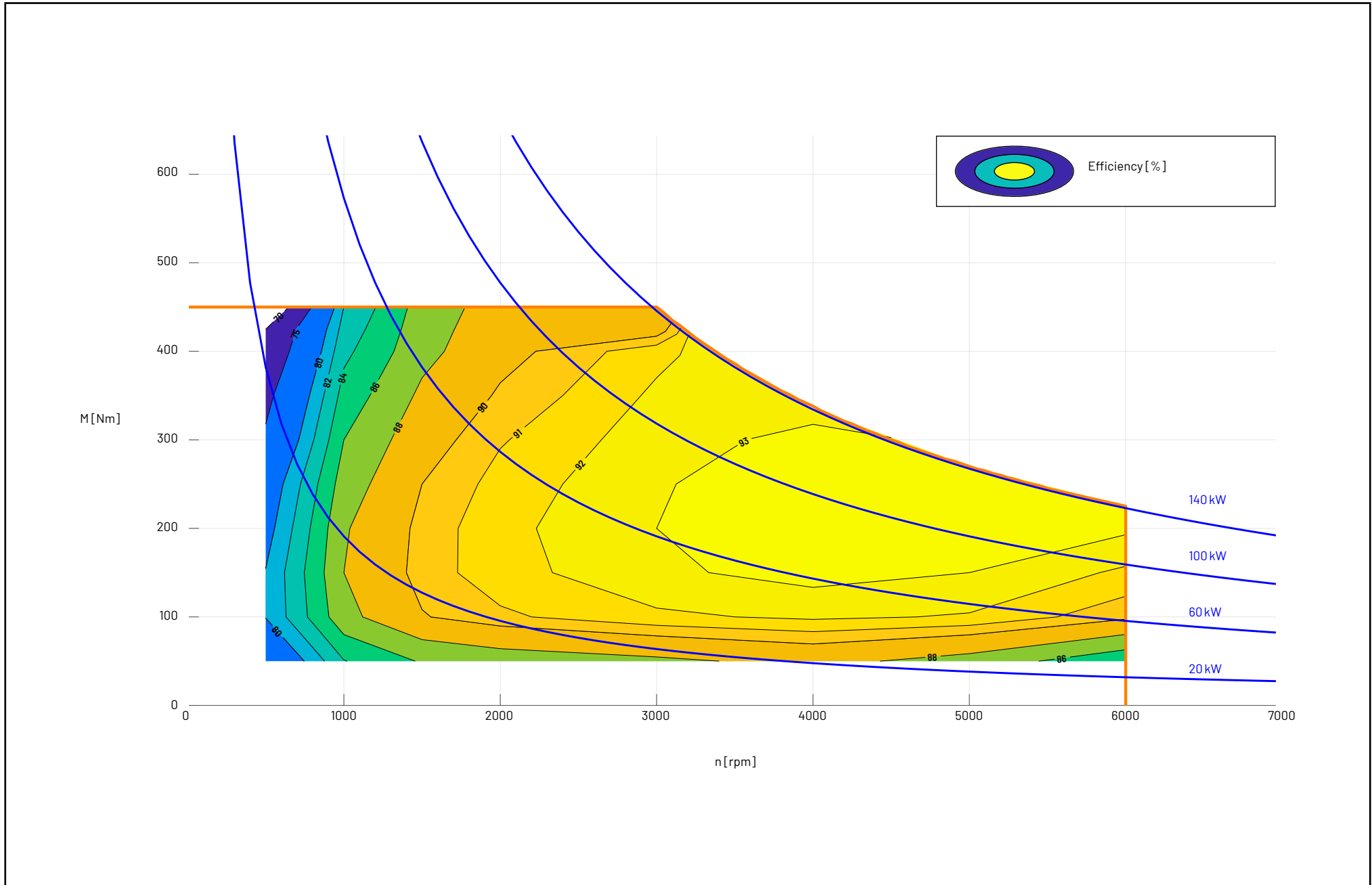
Length without shaft	513 mm	
Length with shaft	584 mm	other dimensions on request
Shaft diameter	35 mm	DIN5480-W35 x 2 x 30 x 16 x 9 g other dimensions on request
Weight	147 kg	
Rotor inertia	0,08 kgm <sup>2</sup>	
Maximum Cooling fluid temperature	60 °C / 140 °F	Transformer oil 50 l/min
Cooling connector	2 x M26 x 1,5	
Power connector	2 x 70 mm <sup>2</sup>	with 8 mm cable lug
Communication connector	2 x 19 pole CAN	I/O
Maximum impulse withstand voltage	4000 V	
Maximum altitude of use	5000 m.a.s.l.	

Please note: Isolation monitoring is required. DC link discharge time is maximum 60 seconds.

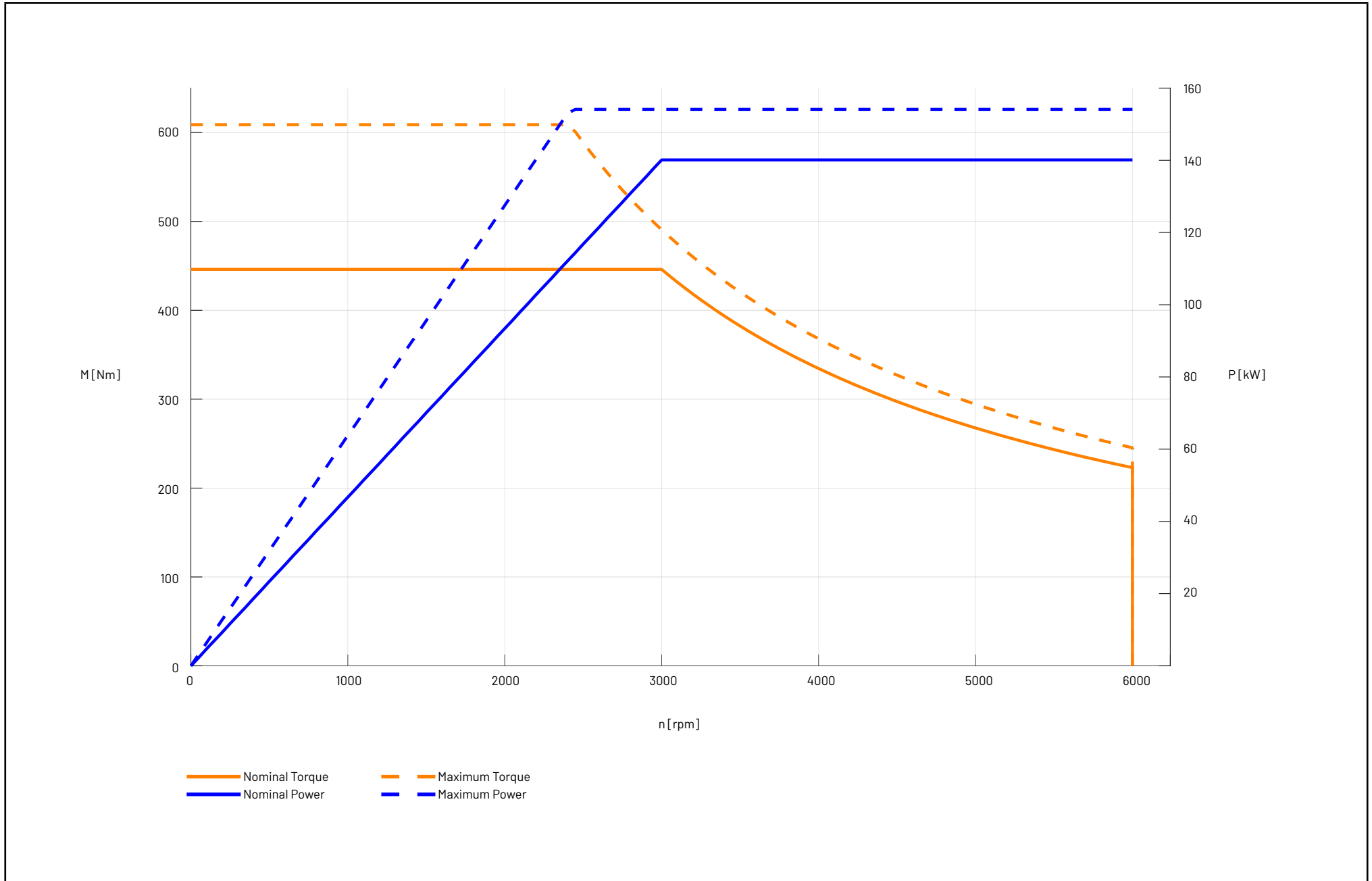
# BLOCK DIAGRAM



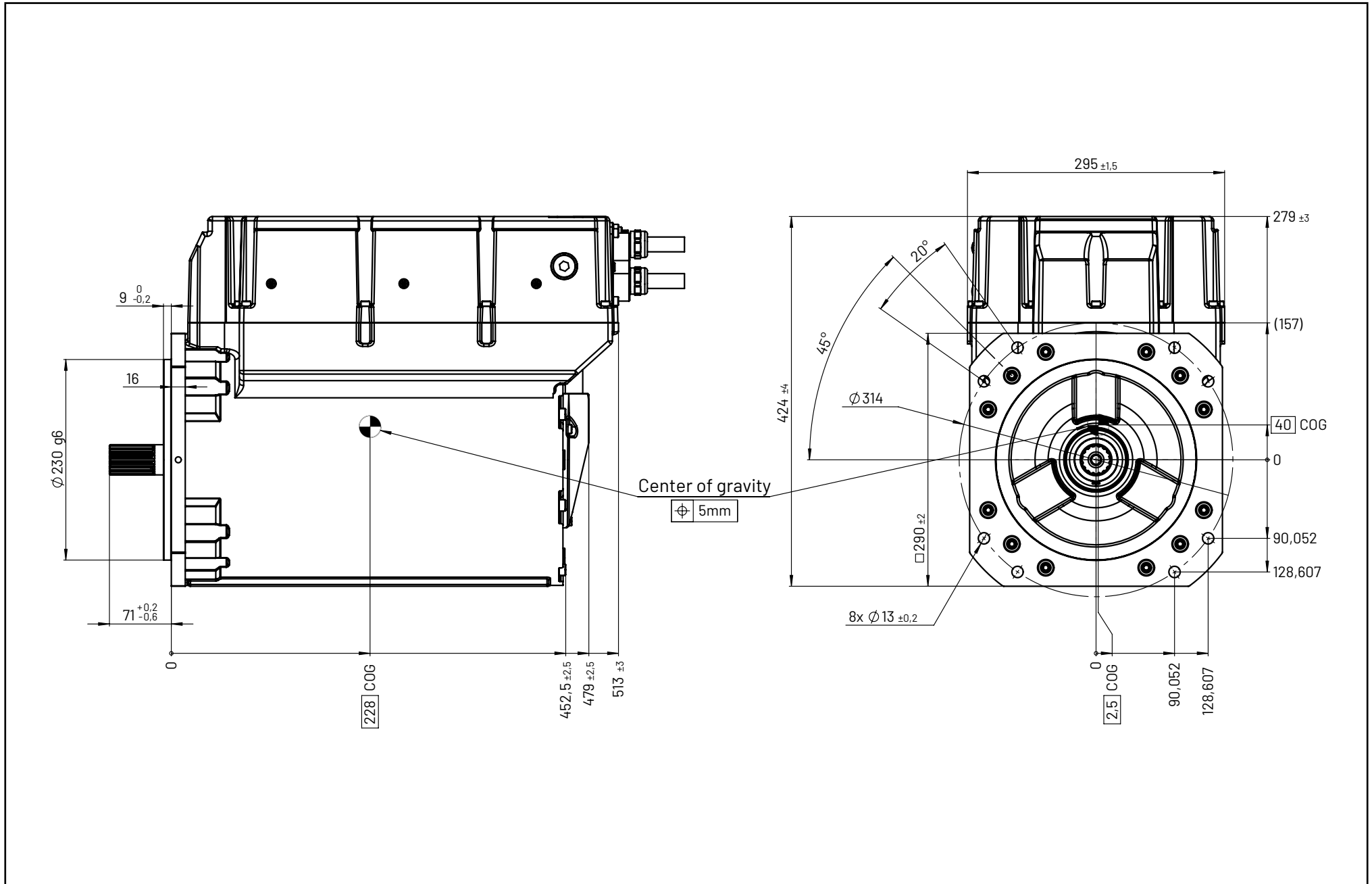
# EFFICIENCY MAP



# TORQUE SPEED DIAGRAM




# TECHNICAL DRAWING



## QUALIFICATIONS

### Compliance information

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Norm	Description
ISO/IEC 17050-1	 Conformity
RoHS	Restriction of hazardous substances

### Environmental qualification

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Norm	Description
ISO 20659	IP6k9k
DIN EN 60259	IP67
DIN EN 61800-5-1 DIN EN 60068-2-6	Sine vibration test

### Electromagnetic compatibility

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Norm	Description
IEC 61000-4	Interference immunity
DIN EN 61800-3	Interference immunity

### Electrical tests

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Norm	Description
DIN 60664-1	Overvoltage Category III for TN-C up to 2000 m. a. s. l. Overvoltage Category I for IT up to 5000 m. a. s. l.