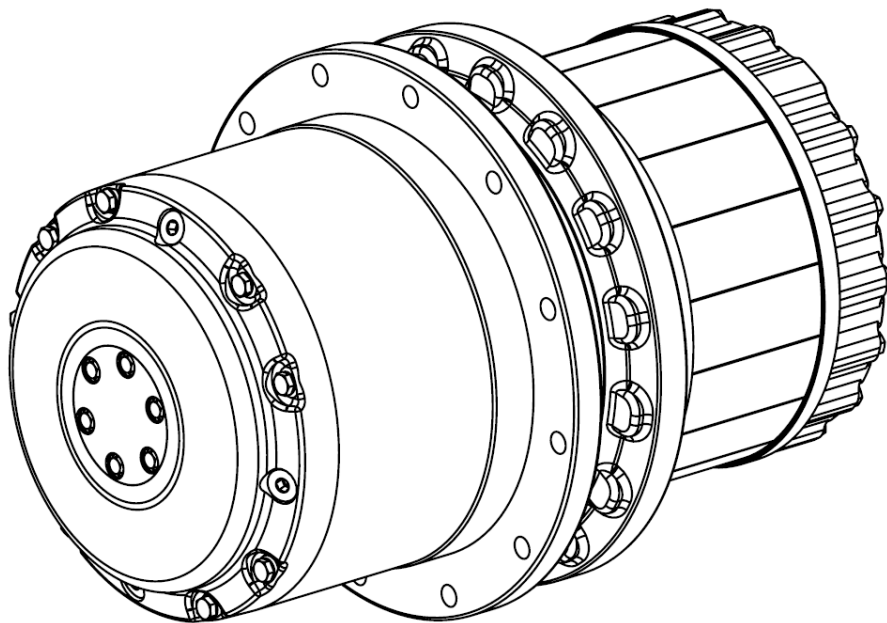


# I&W

## Electric Final Drive M280i3

Datasheet  
v2021.09\_A



## Performance Characteristics

### General Information

Ambient Temperature	-20°C to 25°C*
Insulation Class EN 60034-1	F(155°C)
Enclosure Type DIN EN 60529	IP67

\*Derating for higher Temperatures

### Drive

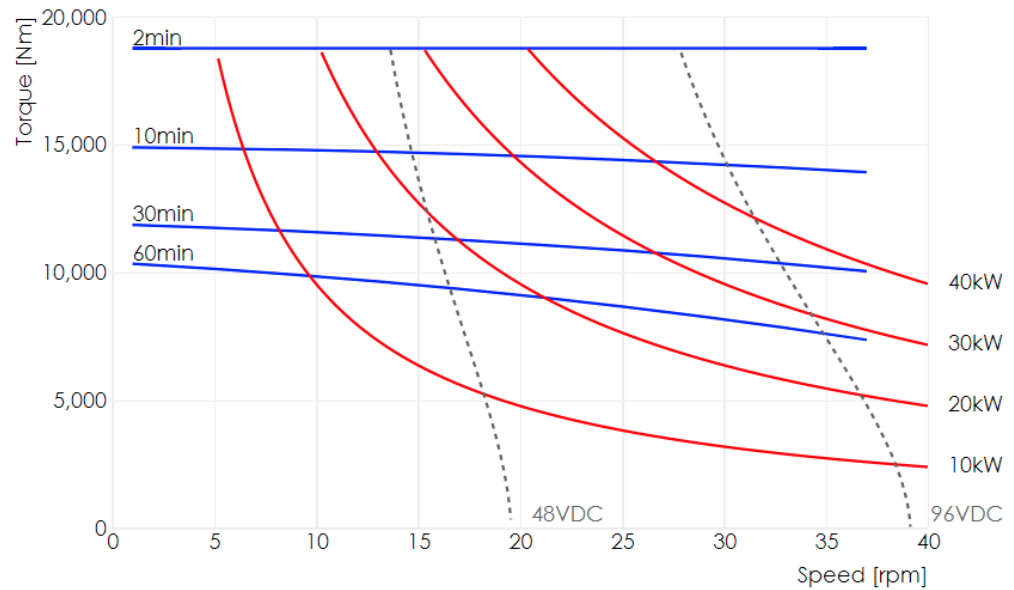
Engine Type	Permanentmagnet-Synchronous
Number of Poles	12
Reducer Ratio	81.5
Weight	167kg
Peak Torque (flange)	19100 Nm
Peak Current (rms)	660 Arms
S2 Rated Speed	20 rpm
S2 60min. Torque (flange)	8780 Nm
S2 60min. Current (rms, flange)	336 Arms
Torque Constant @ motor shaft	0.35 Nm / Arms
Back EMF Constant (Line to Line, peak, rpm @ motor shaft)	30.4 V / 1000 min <sup>-1</sup>
Electrical Resistance (Rs) @ 25°C	1.5 mΩ
Electrical Inductance @ 1kHz (Lq/Ld)	40 μH/34 μH

### Mechanical Brake

Type	Currentless Brake
Function Principle	Braked Engine Shaft
Activation Voltage	80VDC
Hold Voltage	40VDC
Typ. Braking Torque	19100 Nm

### Performance

- ■ ■ Speed limit at DC-link Voltage without field weakening



## Feedback

### Temperature Sensor

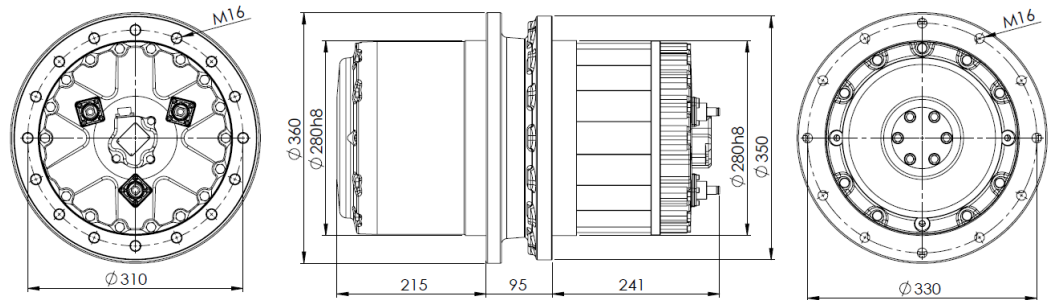
Sensor-Type	PT 1000
-------------	---------

### Angle Sensor

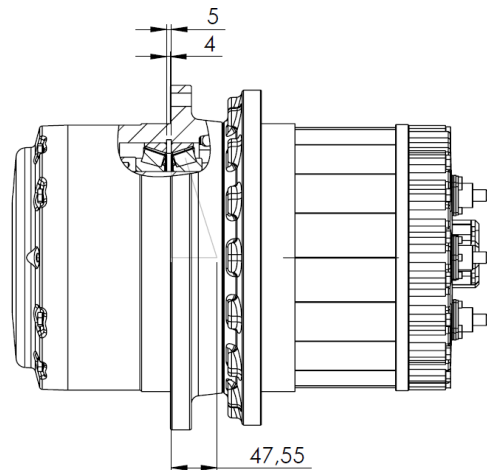
Sensor-Type	SIN/COS-Encoder
Power Supply ( $V_{dd}$ )	5V +/-5%
Power Consumption	20mA
Output Amplitude	1.1 +/-0.2V <sub>pp</sub>
Output Offset	$V_{dd}/2$ +/- 5mV
Internal serial Impedance	720Ω

## Dimensions and Load

### Dimensions



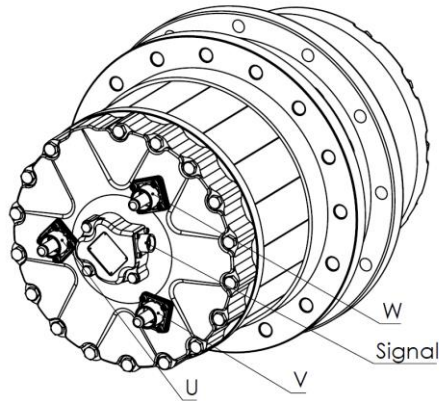
### Bearing Capacity




C	2 x 309kN
C <sub>0</sub>	2 x 450kN

## Connections

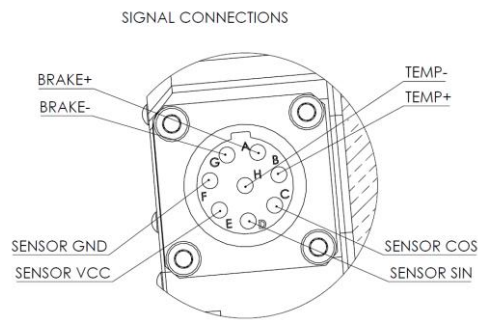
### Power connections



Mating Connector	AMPHENOL Radlock
Part number	RL01201-120BK
Appearance	
Included	No

Cable-size	120mm <sup>2</sup>
Included	No

### Signal Connections (SIN/COS)



Mating Connector	Amphenol Ecomate RM
Connector	RT06128SNH
Backshell	RT0L-12CG-S1 (6-10.5mm cable)
Socket (8x)	SS20M1F (0.34-0.5 mm <sup>2</sup> )
Included	No