

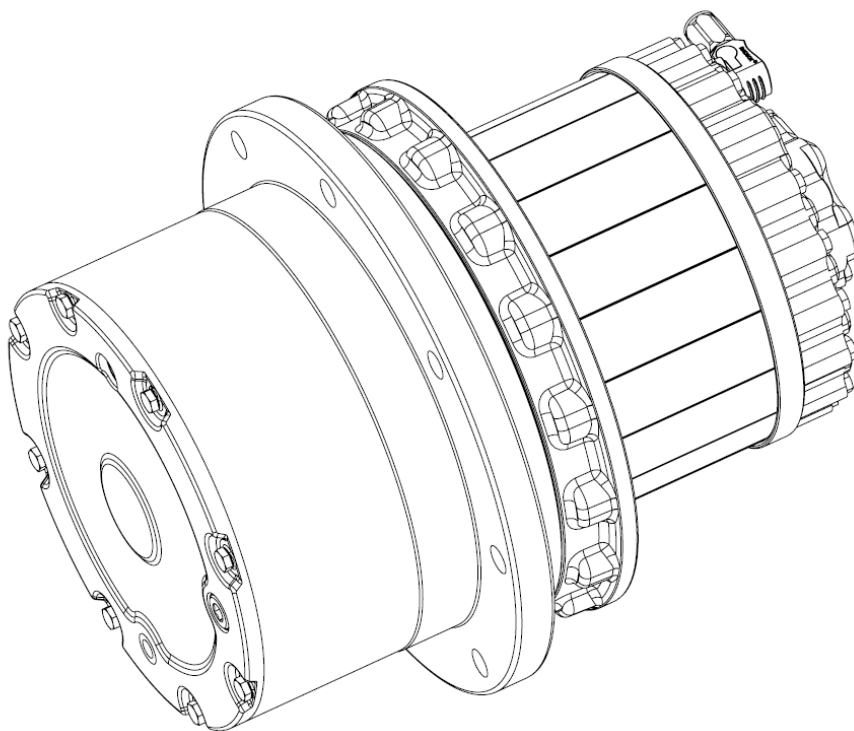


# Electric Final Drive

## M3i50 (96V)

Type: M3\_105\_16\_i5.2

Datasheet  
v2020.04



## Performance Characteristics

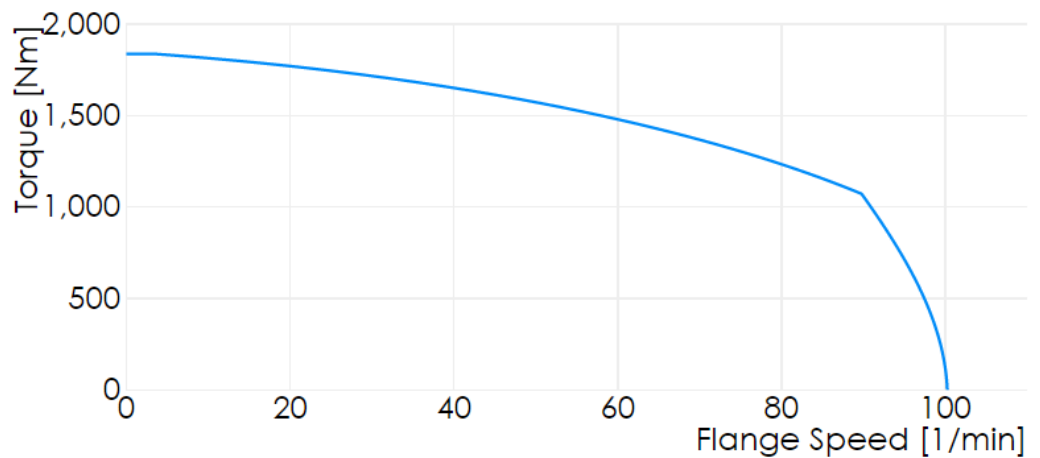
<b>General Information</b>	Ambient Temperature	-20°C to 25°C*
	Insulation Class EN 60034-1	F(155°C)
	Enclosure Type DIN EN 60529	IP68

\*Derating for higher Temperatures

<b>Drive</b>	Engine Type	Permanentmagnet-Synchronous
	Number of Poles	12
	Reducer Ratio	50.2
	Weight	62kg
	Peak Torque(flange)	3190 Nm
	Peak Current (rms)	320 Arms
	Continuous Torque @ 30 1/min (flange)	1716 Nm
	Continuous Current @ 30 1/min (rms, flange)	161 Arms
	Maximum Speed @ 96VDC	100 1/min
	Torque Constant @ motor shaft	0.22 Nm / Arms
	Back EMF Constant (Line to Line, peak, rpm @ motor shaft)	19.1 V / 1000 min <sup>-1</sup>
	Electrical Resistance (Rs) @ 25°C	2.5 mΩ
	Electrical Inductance @ 1kHz (Lq/Ld)	71 μH/58 μH

<b>Mechanical Brake</b>	Type	Currentless Brake
	Function Principle	Braked Engine Shaft
	Typ. Braking Torque	2550 Nm
	Typ. Activation Current	1.05A
	Typ. Hold Current	0.25A
	Typ. Resistance	14Ω

**Performance @ 96VDC,  
Ambient 25°C  
Flange 0.3m<sup>2</sup>**



## Feedback

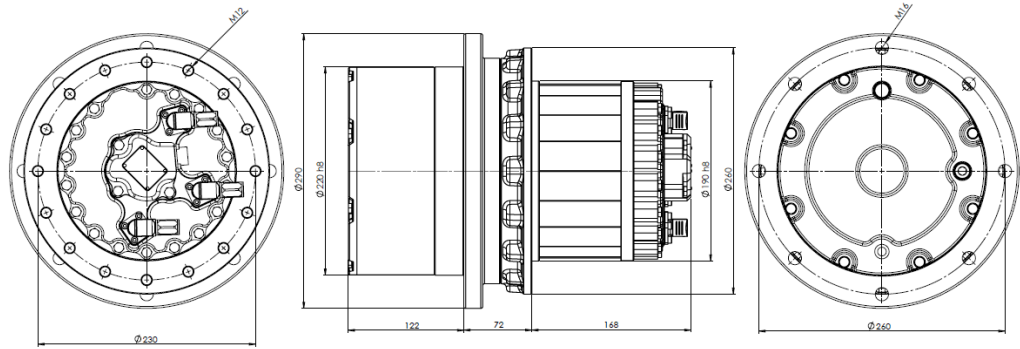
### Temperature Sensor

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

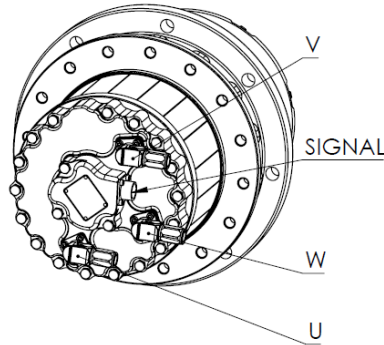


### Bearing Capacity

C	2x57500N
C <sub>0</sub>	2x78000N

## Connections

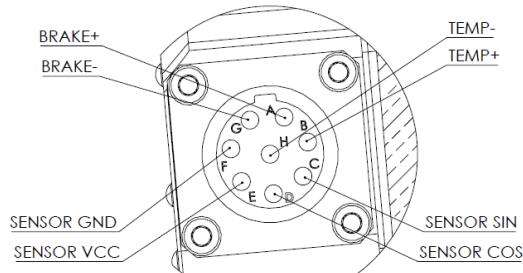
### Power connections



Mating Connector	AMPHENOL SURLOCK PLUS
Part number	SLPPA25BSO
Included	No

Cable-size	25mm <sup>2</sup>
Cable Dia.	
Included	No

### Signal Connections (SIN/COS)



Mating Connector	Amphenol Ecomate RM
Part number (PLUG)	RT06128SNH
Included	No