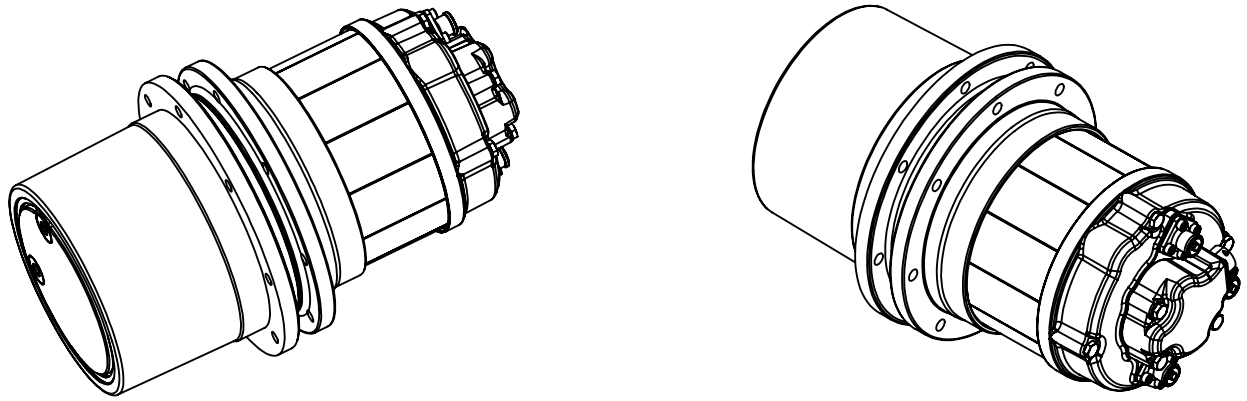
M160i3-SERIES

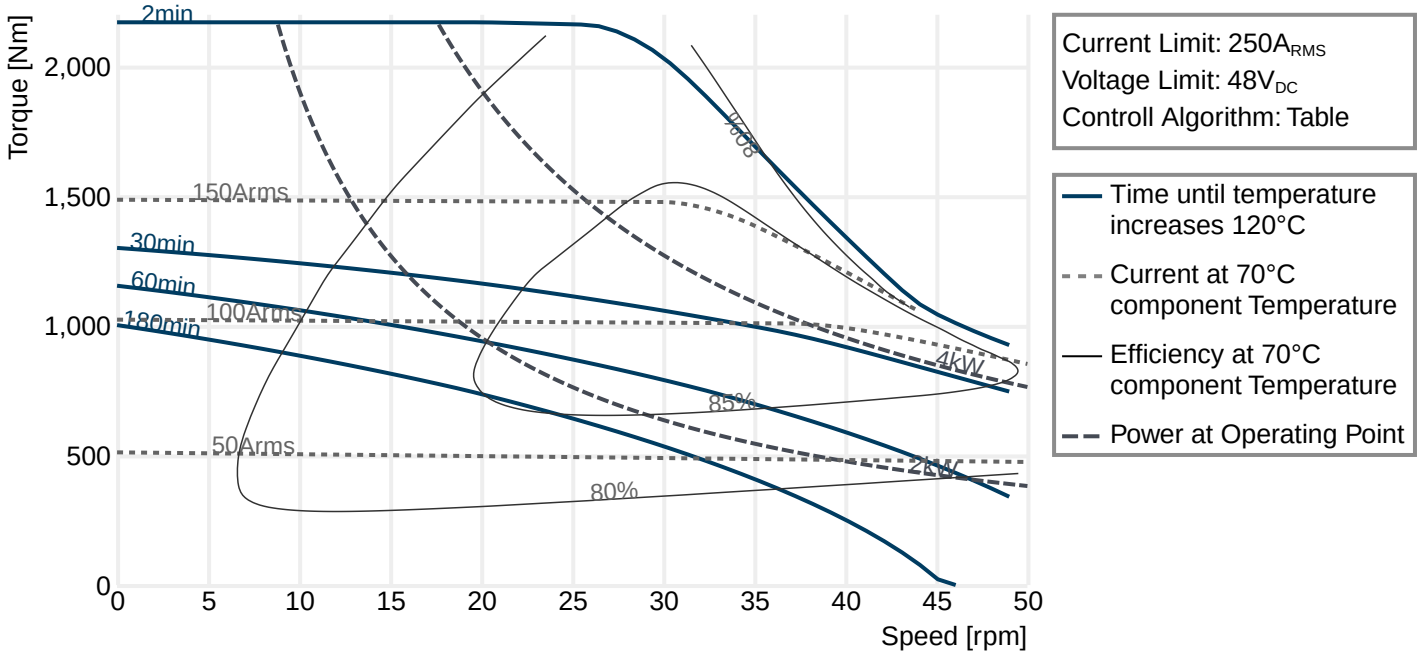
JUL 2024

MODEL: M160i3-72-18-i83.5-B48V-AC96_EC8

SUPPLY: $48V_{DC}$ / $250A_{RMS}$



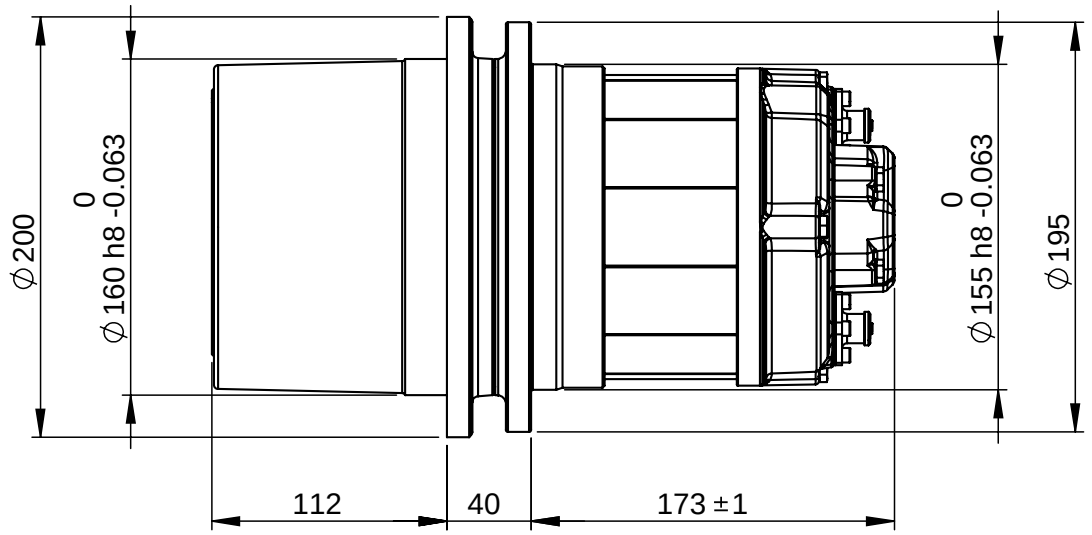
DRIVE PERFORMANCE



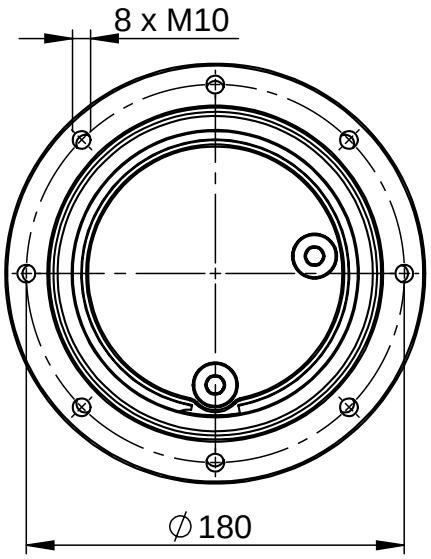
Engine Type	IPM	
Number of Poles	8	
Reducer Ratio	83.50	
Peak Torque (Flange)	2171 Nm	
Peak Current	225 Arms	
Torque Constant (Shaft / Flange)	0.11 Nm/Arms	9.3 Nm/Arms
Back EMF Const. (Line to Line @ motor shaft)	PEAK: 9.5 V/1000min-1	RMS: 6.7 V/1000min-1
Electrical Resistance @ 25°C	5 mOHM	
Electrical Inductance	Lq: 142 µH	Ld: 122 µH

DIMENSIONS

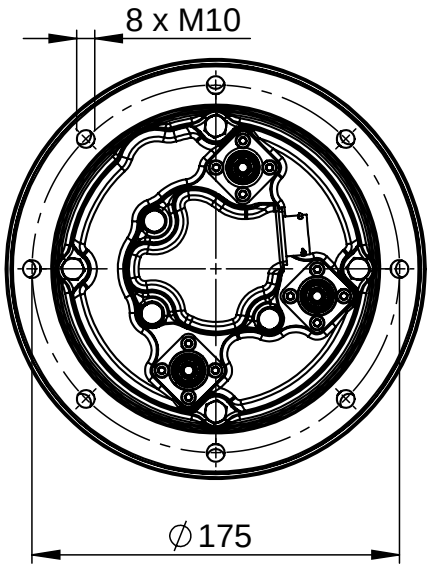
SIDE VIEW



ROTATING FLANGE



FIXED FLANGE

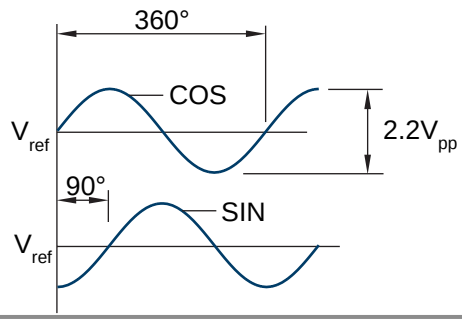


SENSOR

Analogue sinusoidal Output

Power supply	Vdd = 5 V ±5 %
Current consumption	Max. 30 mA
Internal serial impedance	100 OHM
Signal amplitude	2.2 ±0.2 Vpp
Signal offset	2.5 V ±1 %

Timing Diagram



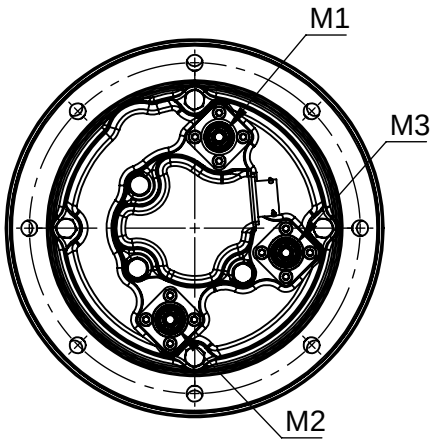
TEMPERATURE SENSOR

Sensor Type	PT1000
Number of Sensors	1x
Position of Temperature Sensor	Encapsulated between stator winding

Table of the Resistance values:

-40 °C	843 OHM	60 °C	1232 OHM
-30 °C	882 OHM	70 °C	1271 OHM
-20 °C	922 OHM	80 °C	1309 OHM
-10 °C	961 OHM	90 °C	1347 OHM
0 °C	1000 OHM	100 °C	1385 OHM
10 °C	1039 OHM	110 °C	1423 OHM
20 °C	1078 OHM	120 °C	1461 OHM
30 °C	1117 OHM	130 °C	1498 OHM
40 °C	1155 OHM	140 °C	1536 OHM
50 °C	1194 OHM	150 °C	1573 OHM
60 °C	1232 OHM	160 °C	1611 OHM

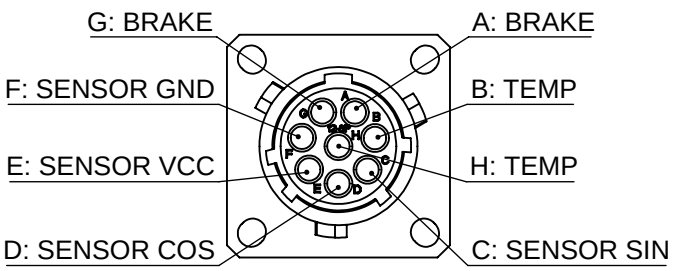
CONNECTIONS



Mating Power Connectors

Part	Surlock Plus 5.7mm (16mm2)
Mfg #	SLPPA16BSO
I&W #	P0052_0013
Mfg	Amphenol

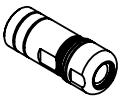
Part	Surlock Plus 5.7mm (25mm2)
Mfg #	SLPPA25BSO
I&W #	P0052_0014
Mfg	Amphenol



Mating Signal Connectors

Part	Ecomate RM Plug
Mfg #	RT06128SNH
I&W #	P0052_0008
Mfg	Amphenol

Part	Socket Contact
Mfg #	SS20W1F or SS20W2F
I&W #	-
Mfg	Amphenol



Part	Backshell
Mfg #	RT0L-12CG-S1
I&W #	P0052_0010
Mfg	Amphenol