

iMR 100

Double encoder, No Brake

Order number:
1L057X055NXXXD-RT01

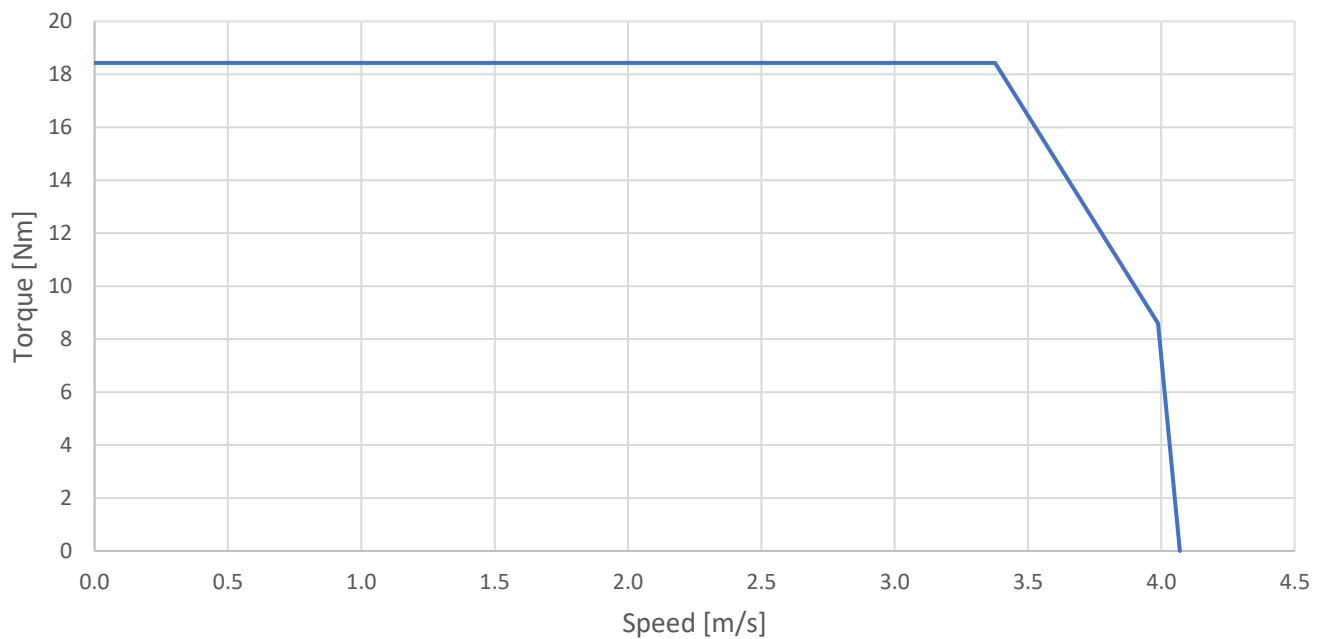


Characteristic	Unit	Value
Wheel Diameter	mm	135
Gearbox Type		Planetary Helical
Gearbox Ratio		10:1
Rated Voltage	V _{DC}	48
Max Torque	Nm	18.4
Max Speed	Rpm	576
	m/s	4.07
	km/h	14.6
Peak Power	W	920
Max Radial Load per Wheel	kg	1000
Unit Weight	kg	5

Specification	Detail
Wheel Material	PU-Rad: 90°±3° Shore A
Brake	N/A
Thermal Protection	KTY-84

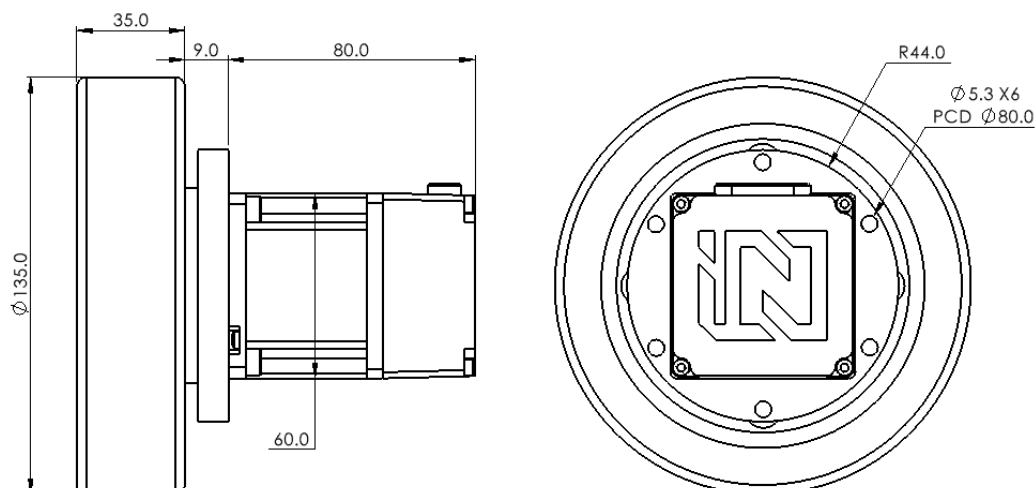
Solution Peak Performance Diagram
Output at the Wheel

Wheel Output - Speed-Torque Diagram





Dimensions

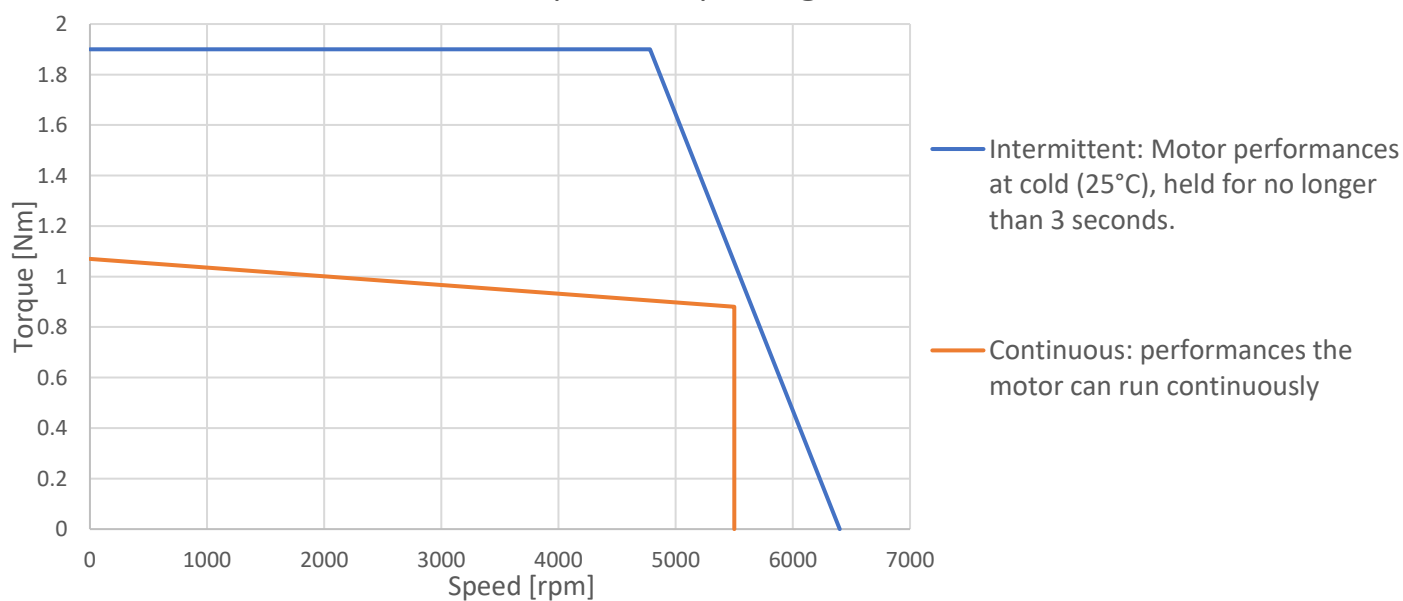


Motor specs

Characteristic	Abbr.	Unit	Value
Motor technology			SPM
No of poles			10
Rated Voltage	U_{mot}	V_{rms}	48
S1 Rated speed	n_n	rpm	5500
Maximum speed	n_{max}	rpm	6400
Rated power	P_n	W	507
Stall torque	M_0	Nm	1.07
S1 Rated torque	M_n	Nm	0.88
Peak torque	M_{max}	Nm	1.9
Stall current	I_0	A_{rms}	17
S1 Rated current	I_n	A_{rms}	15
Peak current	I_{max}	A_{rms}	27

Characteristic	Abbr.	Unit	Value
Torque constant (hot)	kt_{hot}	Nm/A_{rms}	0.059
Torque constant (cold)	kt_{cold}	Nm/A_{rms}	0.070
Voltage constant	ke	$V/krpm$	4.9
Winding resistance	R_{p-p}	Ω	0.21
Winding inductance	L_{p-p}	mH	0.33
Max ambient operating temperature			40°C
Insulation class			F – 155°C

Motor Speed-Torque diagram - 48VDC





Feedback specifications

Characteristic	Value
Manufacturer	Renishaw RLS
Type	Double incremental encoder with Commutation signals
Resolution	12 bit; 4096 ppr
Hysteresis	0.18°
Accuracy	±0.5°
Supply voltage	5 V _{DC}
Current Consumption	13 mA to 50 mA

Connector guide

No connectors, Cable leads only

Power:

Phase	Cable
U	Black, AWG14
V	Blue, AWG14
W	White, AWG14

Cable length: 0.5 m

Thermistor:

Black and white AWG26 cables

Signal - Feedback 1

Signal	Colour
U	Black
V	Violet
W	Grey/Pink
A+	Pink
A-	Grey
B+	Green
B-	Yellow
Z+	White
Z-	Brown
V _{dd} (+5 V)	Red
GND	Blue

Cable length: 0.3 m

Signal - Feedback 2

Signal	Colour
A+	Pink
A-	Grey
B+	Green
B-	Yellow
Z+	White
Z-	Brown
V _{dd} (+5 V)	Red
GND	Blue

NOTE: 1) The data provided in this datasheet is for guidance only and does not form part of any contract. 2) Motor, drive, gearbox and brake should undergo application testing to validate performance.

iN Motion is part of iNetic www.inetic.com

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