

SERVO MOTOR 089LDA30XFGCJC100620-SGV1

AGV Solution Motor + Gearbox + Wheel + Brake



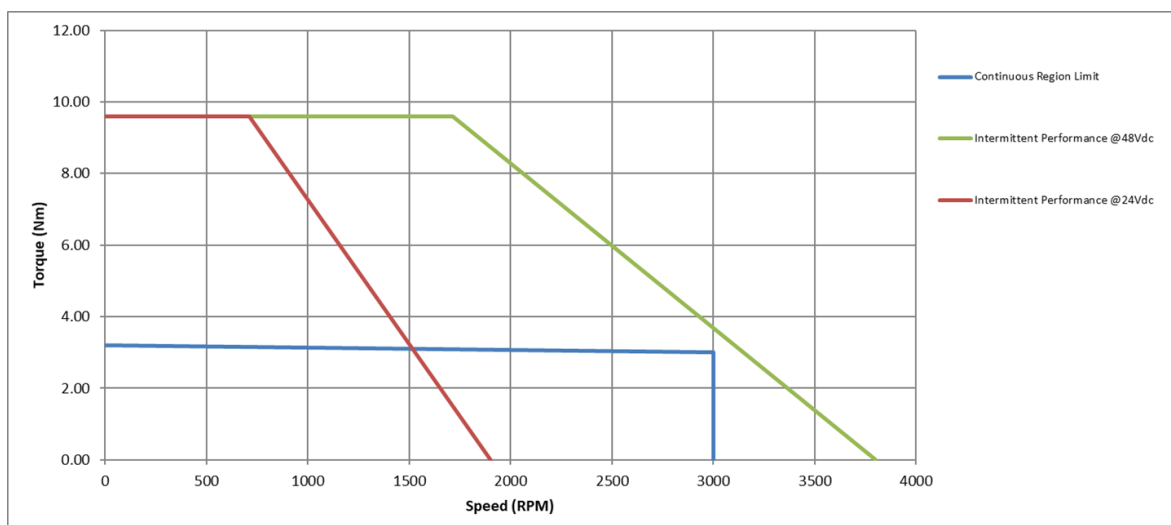
Definition

Type	Unimotor HD	
Frame Size (mm)	089	
Voltage	L	40-50V DC
Magnet type	D	D - High dynamic
Frame Length	A	
Speed (min-1)	30	3000 @ 48V - 1500 @ 24V
Brake	X	Braked
Connection type	F	Integrated Flying Cable
Output shaft	G	Integrated Gearbox Shaft
Feedback device code	CJ	CJ – Renco R35i encoder 4096 SPP push-pull comms
Inertia & thermistor	C	C – standard inertia + KTY thermistor
PCD (Gbox)	100	100 (Gear box)
Shaft Diameter	620	G BOX output
Insulation class	F	
UL Motor / UL Stator	UL Stator	

Nominal characteristics

Motor Ambient Temperature (°C)	40	Drive Fsw (kHz)	12
Motor Peak Torque (Nm)	9.6	Stall Current	23.0
Motor Stall Torque (Nm)	3.2	Rated Current (A)	21.6
Rated Torque (Nm)	3		
Rated Power (kW) @ 48V	0.94	Rated Power (kW) @ 24V	0.47
Winding Thermal Time Constant (s)	93	Kt (Nm/A)	0.14
Number of Poles	10	Ke (V/kmin-1)	8.5
Maximum Cogging (Nm)	0.1	R (ph-ph) (Ohm)	0.08
Inertia Motor + GBox (kg.cm²)	6.5	L (ph-ph) (mH)	0.43
Ingress Protection Level (IP)	40	Weight (kg) Motor + gearbox	6.5
Intermittent Torque (Nm)	4.8 (S3 Duty)		
Intermittent Power (kW)	0.7 (S3 Duty)	Intermittent Current (A)	34.29 (S3 Duty)
Brake	Braked	Static Torque (N.m)	10.0
Release Time (ms)	72.8	Backlash (°)	0.45
Brake Supply Voltage (V)	24	Brake Coil Power (W)	18.5

Torque / speed graph



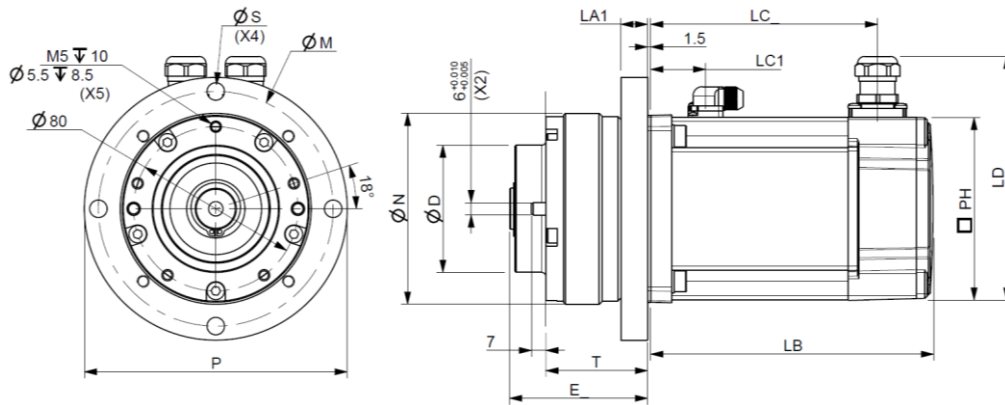
Version V1.0

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Motors (° & mm)

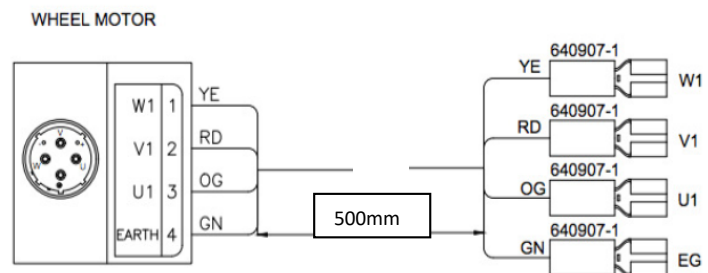
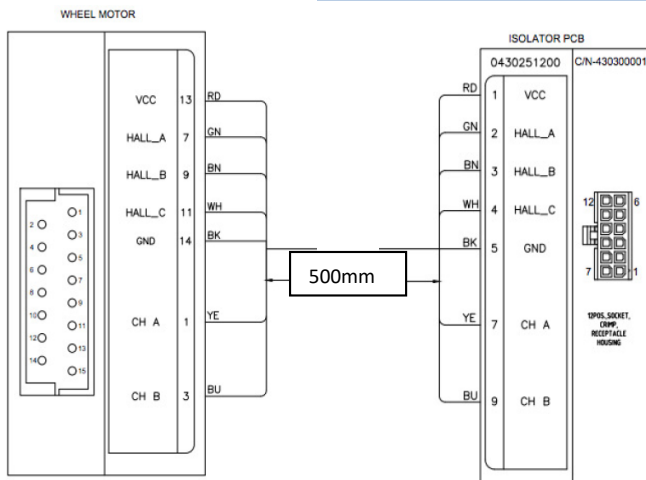


LB	Motor Total length	137.8±1
LC	Gland position	110.5±1
LA1	Flange thickness	13±0.1
T	Register Length	49.5±0.1
N	GBox Clearance Dia	93 h7
LD	Connector overall height	119±1
P	Flange GBox Dia	128
S	Fixing Hole Diameter	8.5
M	Fixing hole PCD	114.3
PH	Motor Housing Width	89±0.3
E	GBox Length	67.2
D	GBox Register Diameter	62±0.07
LC1	Brake Connector position	20.8±0.4
	Motor+Gbox Total Length	206.5
	Mounting Bolt	M8

Motor electrical interface Flying leads option:

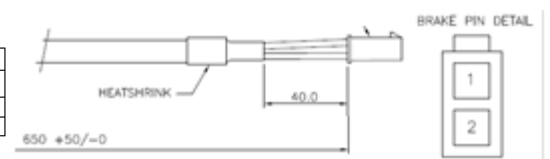
Feedback device code:						Connection type:		
CI – Renco R35i encoder 4096 5PP push-pull comms								
1	Red	Power	7	Yellow	CH A	1	U	Red (x 1)
2	Green	HALL A	8	-	-	2	V	Orange (x 1)
3	Brown	HALL B	9	Blue	CH B	3	W	Yellow (x 1)
4	White	HALL C	10			4	Earth	Green/Yellow (x 1)
5	Black	GND	11					
6	Red		12					

SIG Cable: 500mm (from gland to customer end) 8x2x0.18, PUR Jacket, shielded. http://www.nexans.it/eservice/Italy-en/navigateproduct_540309080/13_MBS_8x2x0_18_C.html#description 12-WAY MOLEX CONNECTOR FEMALE KTY THERMISTOR WIRES (GREEN & BROWN) CABLE TIE WRAPPED TO SIGNAL CABLE						PWR Cable: 500mm (from gland to customer end) 4 cores of 16 Awg UL 1330 wire, with polyolefin heat shrink sleeve SPADE TERMINALS FITTED TO LEAD WIRES		
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BRAKE CONNECTOR DETAIL 2 WAY MOLEX MALE

2W END A	FUNCTION	COLOUR
1	+VE	WHITE
2	-VE	BLACK



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Gearbox

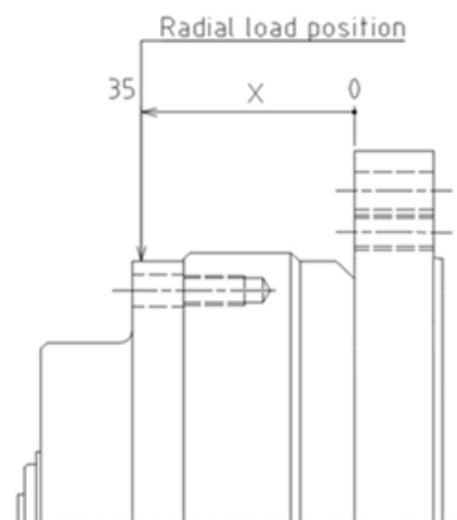
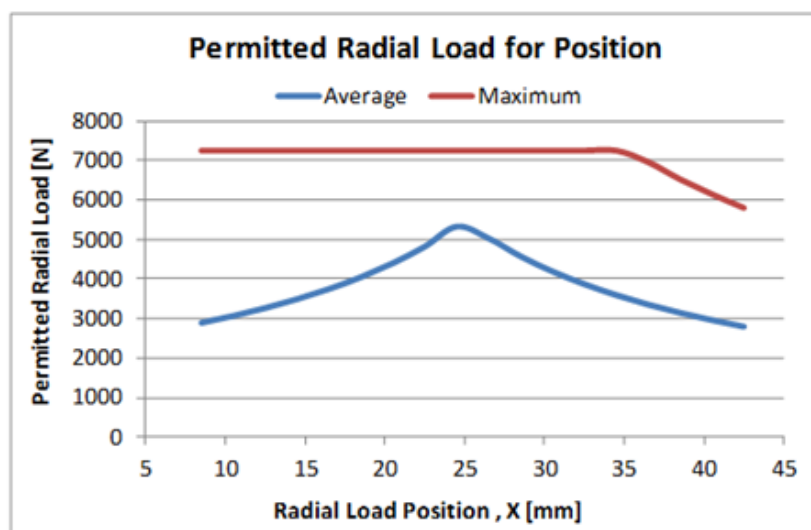
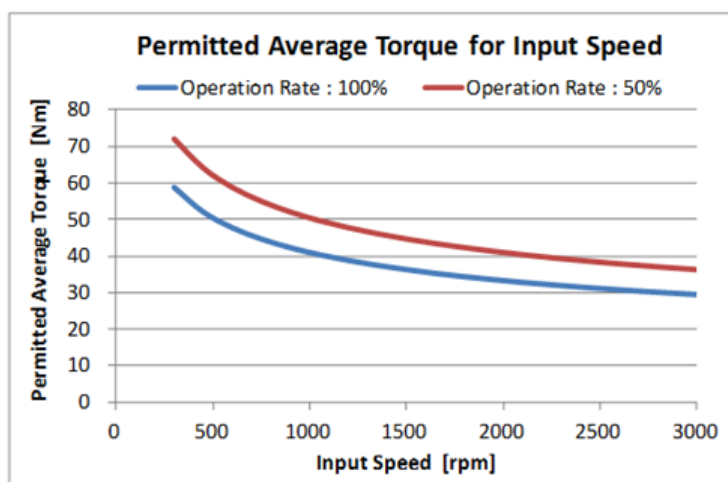
Utilisation : Environment

Ambiance Non- corrosive; Zone Non-specific

Gearbox Specification: Reducer for Servo Motor

Gear Box characteristics

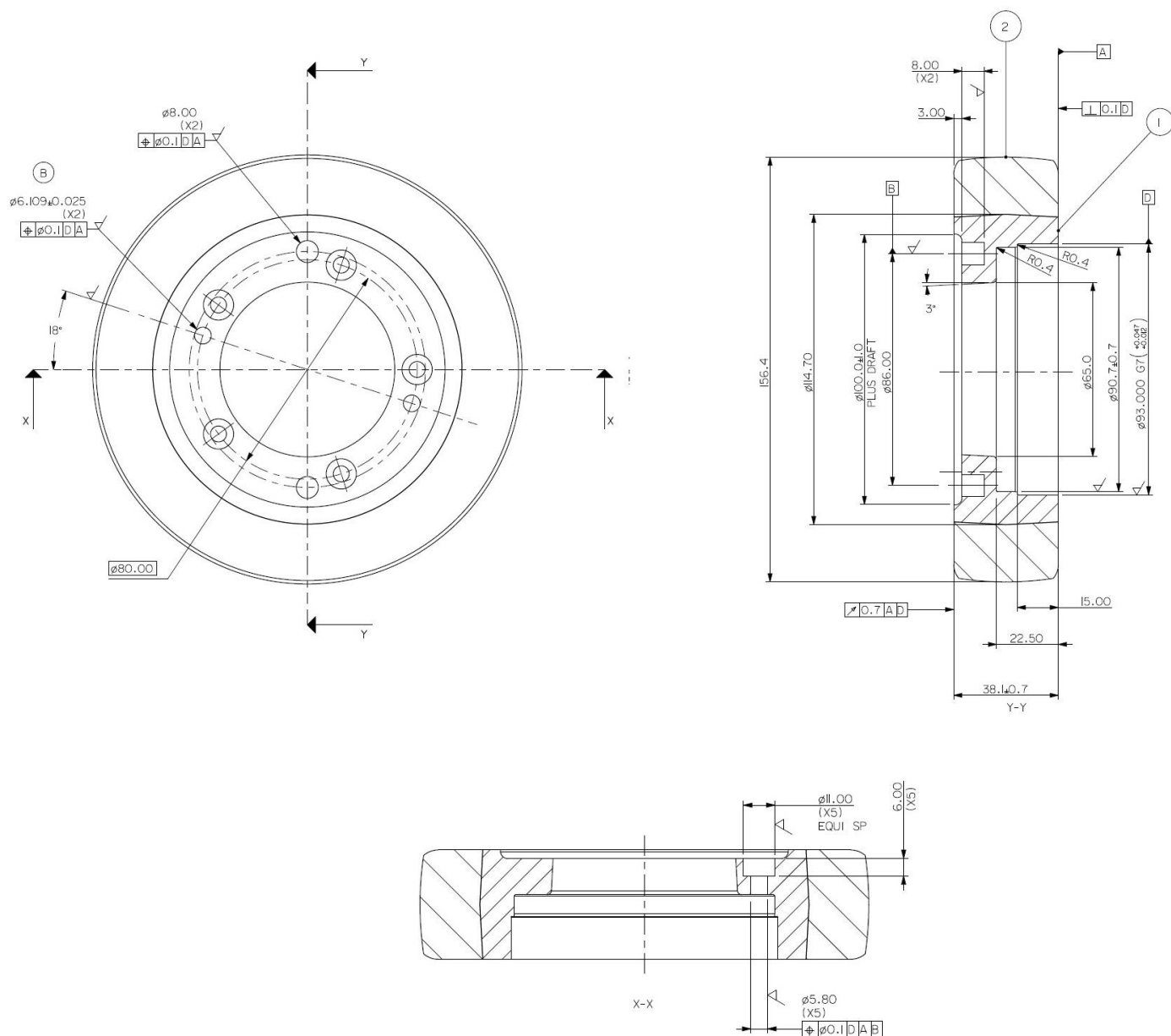
Manufacturer	Nidec	Backlash (arc/min)	≤7
Type	Inline Planetary	Radial Load (Fr, N) @ Fa=0, Input Speed Nom	3500
Part No	VRLZ-090-9-339	Radial Load MAX (Fr, N)	7250
Ratio	9	Axial Load (Fa, N) @ Fr=0, Input Speed Nom	2200
Stages	1	Output Torque Nominal (Nm)	36
Inertia (kg.cm ²)	~0.2	Output Torque Max (Nm)	72
Weight (kg)	2.7	Input Speed Nom (rpm)	1500
Efficiency	95%	Input Speed Max (rpm)	3000



Enquiry N°: 880
Created by: d.smith

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Wheel Specifications



Material: HT200 Cast Iron/Rubber
Type: Thermoset Castable Polyester Based MDI Polyurethane
Finish: Black, adhesion to meet ASTM D-3359 3B.