

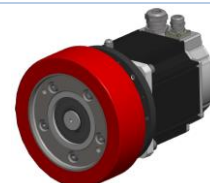
Enquiry N°:

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SERVO MOTOR 142LDA206GGCJG165127-SGV2

142LDA206GGCJG165127-SGV2

AGV SOLUTION MOTOR + GEARBOX + WHEEL + BRAKE



Definition

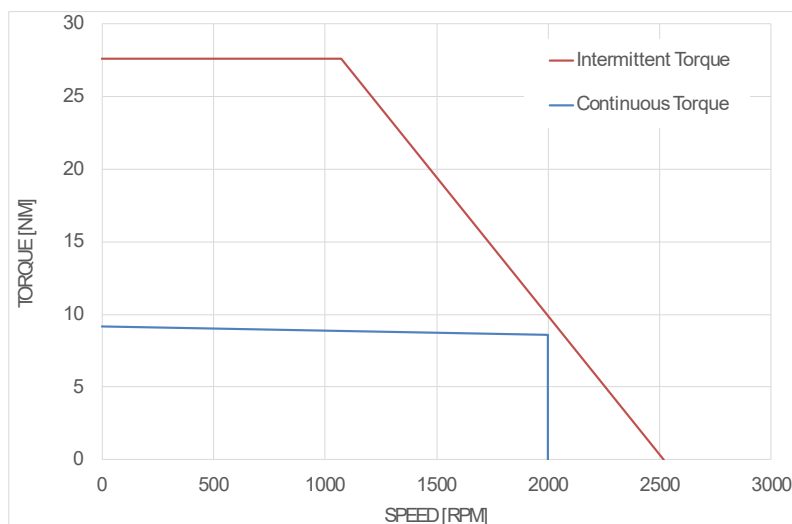
Type	Unimotor HD	
Frame Size (mm)	142	
Voltage	L	40-50 Vdc
Magnet type	D	High Dynamic
Frame Length	A	
Speed (min ⁻¹)	20	2000
Brake	6	Braked
Connection type	G	Power M6 ring tags and Signal flying leads (0.5m)
Output shaft	G	Gearbox output
Feedback device code	CJ	Renco R35i encoder 4096 5PP push-pull comms
Inertia & thermistor	G	Standard Inertia + no thermistor
PCD (Gearbox)	165	165mm (Gearbox mounting)
Shaft Diameter (Gearbox)	127	127mm (Gearbox clearance)
Insulation class	F	
UL Motor / UL Stator	UL Stator	

Nominal characteristics

Motor Ambient Temperature (°C)	40	Drive Fsw (kHz)	12
Motor Peak Torque (Nm)	27.6	Stall Current (A)	44.0
Motor Stall Torque (Nm)	9.2	Rated Current (A)	43.0
Rated Torque (Nm)	8.6	Kt (Nm/A)	0.2
Rated Power (kW)	1.8	Ke (V/kmin ⁻¹)	12.8
Winding Thermal Time Constant (s)	235	R (ph-ph) (Ohm)	0.03
Number of Poles	10	L (ph-ph) (mH)	0.42
Typical Cogging (Nm)	0.14		
Inertia (kg.cm ²) (Motor + Gearbox)	8.76	Weight (kg) (Motor + Gearbox)	~15.05
Ingress Protection Level (IP)	IP54		

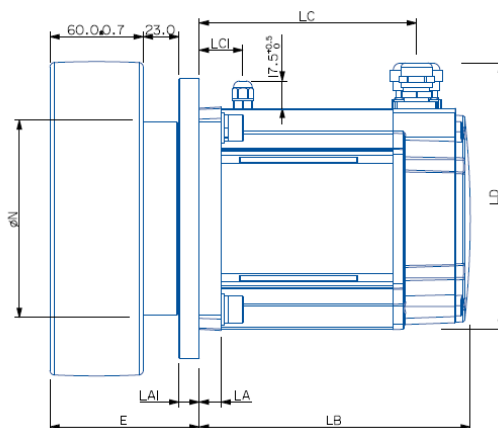
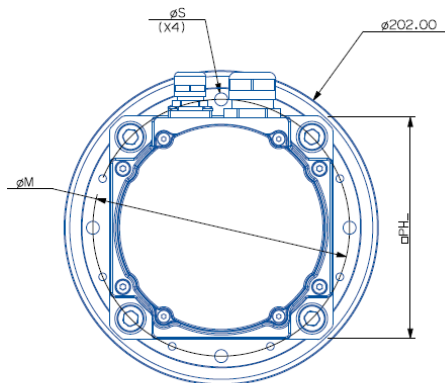
Brake	Type 6	Static Torque (Nm)	16.0
Release Time (ms)	105	Backlash (°)	TBA
Brake Supply Voltage (V)	24	Brake Coil Power (W)	17.5

Torque / speed graph



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Motors (° & mm)



	Total length	270.6
LB	Motor length	174.6
E	Gearbox & Wheel length	96.0
LC	Gland position	139.7
LC1	Brake gland position	28.0
LA	Flange thickness (Motor)	14.0
LA1	Flange thickness (Gearbox)	13.0
N	Clearance Dia (Gearbox)	127h7
LD	Motor height	171.0
	Flange Diameter (Gearbox)	180.0
S	Fixing Hole Diameter	8.3
M	Fixing hole PCD	165.0
PH	Motor Housing Width	142.0
	Mounting Bolt	M8

Motor electrical interface 0.5m flying leads option:

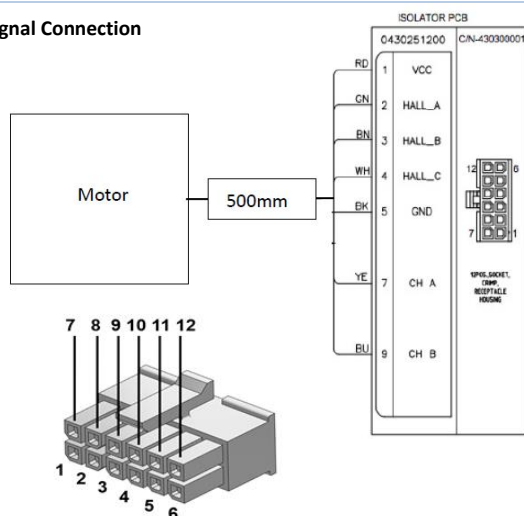
Feedback device code:						Connection type:		
CJ – Renco R35i encoder 4096 5PP push-pull comms						G – Power and Signal flying leads (0.5m)		
1	Red	+ V	7	Yellow	CH A	1	U	Orange (x 2)
2	Green	HALL A	8	-	-	2	V	Red (x 2)
3	Brown	HALL B	9	Blue	CH B	3	W	Yellow (x 2)
4	White	HALL C	10	-	-	4	Earth	Green/Yellow (x 2)
5	Black	0 V	11	-	-			
6	-	-	12	-	-			

SIG Cable (28 AWG): 500mm (from M16 gland to customer end)
7 cores of 28 AWG PVC wire, insulated in UL AWM 2725 PVC jacket, screened;
12-Way Molex connector 43025-1200

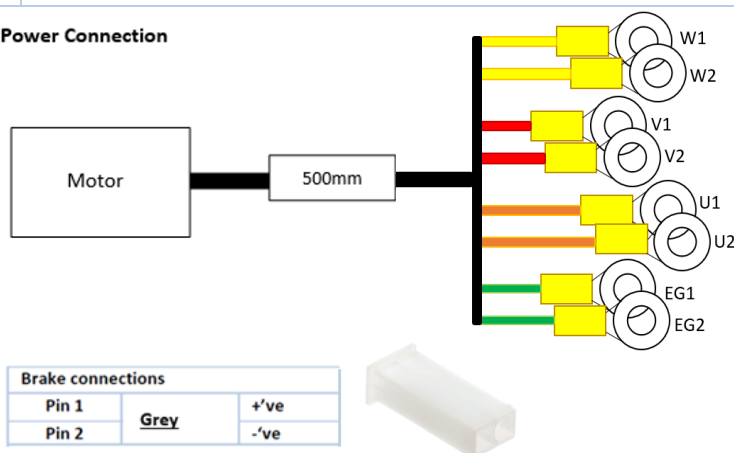
Power connection: 0.5m flying lead (from PG21 gland to customer end)
8 cores of 12 AWG UL 1330 wire, with polyolefin heat-shrink sleeve;
8 x M6 Ring terminals fitted to lead wires

Brake connection: 0.5 m flying lead
2 cores of 22 AWG PVC wire, insulated;
2-Way Molex connector 39-01-3023

Signal Connection



Power Connection



Brake connections

Pin 1		+ve
Pin 2	Grey	-ve

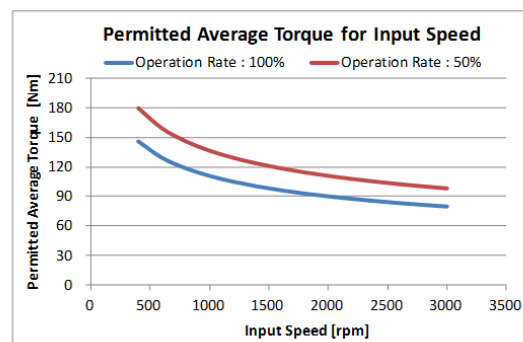
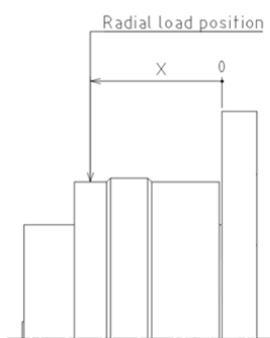
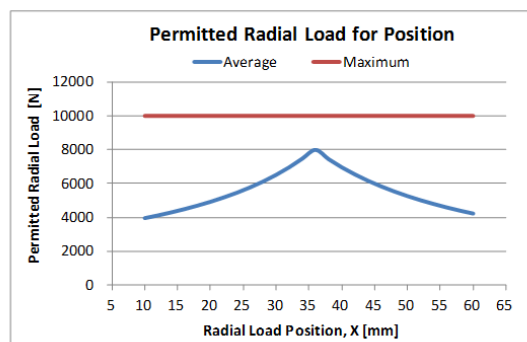
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Gearbox characteristics

Manufacturer	Shimpo	Backlash (arc/min)	≤ 8
Type	Inline Planetary	Radial Load (Fr, N) @ Fa=0, Input Speed Nom	6900
Part No.	VRLZ-120-9-340	Radial Load MAX (Fr, N)	10000
Ratio	9	Axial Load (Fa, N) @ Fr=0, Input Speed Nom	3800
Stages	1	Output Torque Nominal (Nm)	90
Inertia (kg.cm ²)	0.27	Output Torque Max (Nm)	225
Weight (kg)	6.6	Input Speed Nom (rpm)	2000
Efficiency	95%	Input Speed Max (rpm)	3000



Wheel Specification

Wheel material	Polyurethane
Shore hardness	78 A
Wheel hub material	Aluminium
Mounting bolts	Cap head hex - M8 x 40mm
No of bolts	5
Bolt tightening torque (Nm)	26
Weight (kg)	2.1