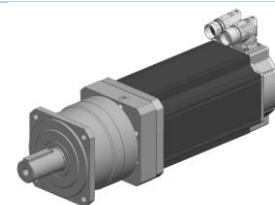


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SERVO GEARBOX MOTOR

089UDB300BAXXA080220-GSAI
CTD MOTOR + SHIMPO GEARBOX



Note: the actual appearance might be different

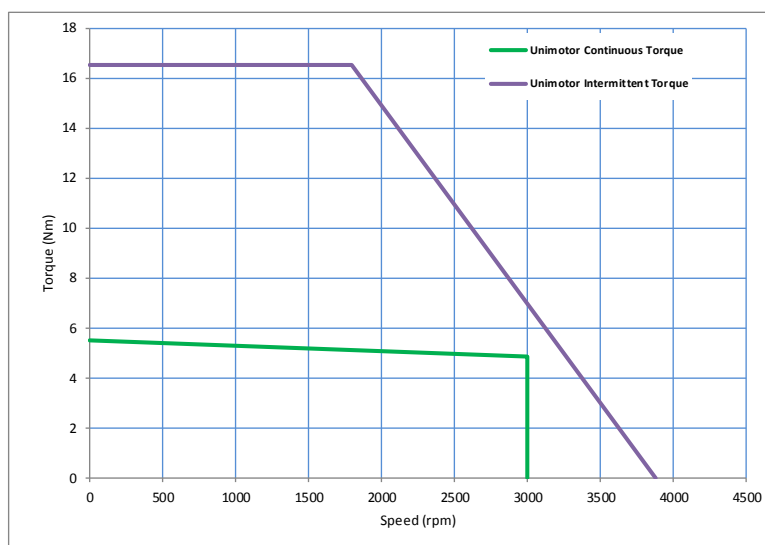
Definition

Type	Unimotor HD	
Frame Size (mm)	089	
Voltage	U	400 V
Magnet type	D	High Dynamic
Frame Length	B	
Speed (min ⁻¹)	30	3000
Brake	0	Unbraked
Connection type	B	Power and Signal 90° rotatable (Size 1)
Output shaft (Gearbox)	A	with output key
Feedback device code	XX	Generic feedback – customer choice
Inertia & thermistor	A	Standard inertia + PTC thermistor
PCD (Gearbox)	080	080 (FF 90 / 68)
Shaft Diameter (Gearbox)	220	22j6 x 36.0
Fan Box	-	
Insulation class	F	
UL Motor / UL Stator	UL Stator	

Nominal characteristics

Motor Ambient Temperature (°C)	40	Drive Fsw (kHz)	12
Motor Stall Torque (Nm)	5.5	Stall Current (A)	3.44
Rated Torque (Nm)	4.85	Nominal Current (A)	3.03
Motor Peak Torque (Nm)	16.5	Kt (Nm/A)	1.6
Rated Power (kW)	1.52	Ke (V/kmin ⁻¹)	98.0
Winding Thermal Time Constant (s)	93	R (ph-ph) (Ohm)	5.05
Number of Poles	10	L (ph-ph) (mH)	38.40
Maximum Cogging (Nm)	0.08		
Inertia (kg.cm ²)	1.61	Motor / Gearbox weight (kg)	4.4 + 3.5 = 7.9
Ingress Protection Level (IP)	IP65		

Motor torque / speed graph



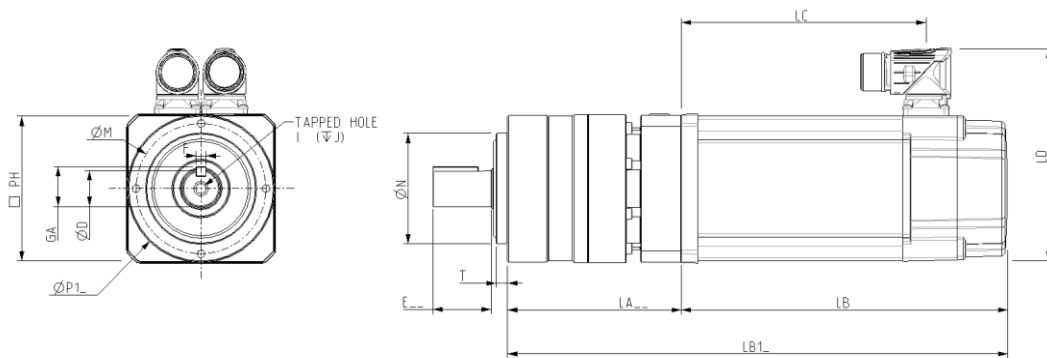
The torque shown in the above graph is for motor only

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SERVO GEARBOX MOTOR

Motors (° & mm)



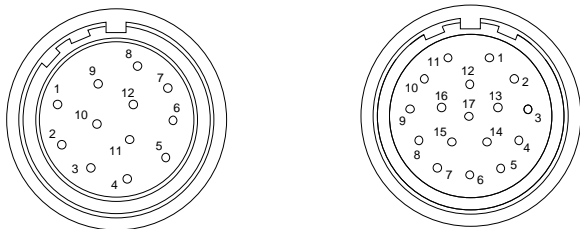
* Additional feedback lengths	
Feedback Code	Additional Length
EB, CA, RA	+13.0
AE	-10.0

LB	Motor length* (EC / FC)	177.8
LB1	Total length* + Gearbox	284.8
LC	Power connector position	140.5
LA	Flange to Flange (Gearbox)	107.0
T	Register Length (Gearbox)	7.0
N	Register Dia (Gearbox)	68g6
LD	Connector overall height	130.5
	Flange Square (Gearbox)	90.0
	Fixing Hole Dia (Gearbox)	M6
M	Fixing hole PCD (Gearbox)	80.0
PH	Motor Housing Width	89.0
D	Shaft Dia (Gearbox)	22j6
E	Shaft Length (Gearbox)	36.0
GA	Key Height	24.5
	Key Length	28.0
	Key to Shaft End	n/a
F	Key Width	6 (h9/P9)
I	Tapped Hole Thread Size	M8 x 1.25
J	Tapped Hole Depth	19.0
	Mounting Bolt	M6

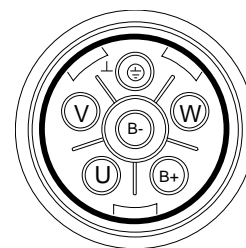
Graphic is for dimensional reference; see left for motor dimensions, and page 3 for gearbox representation

Motor electrical interface Connectors option:

Feedback device code: **XX** - Generic feedback – customer choice
Using **12-way** or **17-way** connectors (dependant on feedback choice)



Connection type: **B** – Power and Signal 90° rotatable (Size 1)



Pin	SI	SE	SR	SS	
	Incremental encoder (CA, CR)	Heidenhain SinCos EnDat 2.1 absolute encoders (EM, FM, EC, FC, EB, FB)	Heidenhain EnDat 2.2 only absolute encoders (EF, FF, EG, FG, GB, HB, EN, FN)	Resolver (AE, AR)	SICK SinCos Hiperface encoders (RA, TL, UL, SA)
Function	Function	Function	Function	Function	
1	Thermistor	Thermistor	Thermistor	Excitation High	REF Cos
2	Thermistor	Thermistor	Thermistor	Excitation Low	+ Data
3		Screen (Optical only)	Screen (Optical only)	Cos High	- Data
4	S1			Cos Low	+ Cos
5	S1 Inverse			Sin High	+ Sin
6	S2			Sin Low	REF Sin
7	S2 Inverse			Thermistor	Thermistor
8	S3	+ Clock	+ Clock	Thermistor	Thermistor
9	S3 Inverse	- Clock	- Clock		Screen
10	Channel A	+ Cos			0 Volts
11	Index	+ Data	+ Data		-
12	Index Inverse	- Data	- Data		+ V
13	Channel A Inverse	- Cos			
14	Channel B	+ Sin			
15	Channel B Inverse	- Sin			
16	+ V	+ V	+ V		
17	0 Volts	0 Volts	0 Volts		
Body	Screen	Screen	Screen		Screen

Version V1.0

The information contained in this data-sheet is for guidance only and does not form part of any contract. The accuracy cannot be guaranteed as our company have an ongoing process of development and reserve the right to change the specification of their products without notice.

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SERVO GEARBOX MOTOR

Gearbox characteristics

Type	Inline planetary	Axial Load Max (Fa, N) @ Fr=0	1600
Shimpo part no.	VRL-090C-10-K5-19EB19	Radial Load Max (Fr, N) @ E/2 and Fa=0	1200
Ratio	10:1	Output Torque Nominal (Nm)	50
Stages	1	Output Torque Max (Nm)	80
Gearbox colour	Silver	Input Speed Nominal (rpm)	3000
Weight (kg)	3.5	Input Speed Max (rpm)	6000
		Gearbox Inertia (kg.cm ²)	0.70
Gearbox Backlash (arc/min)	>5	Gearbox Efficiency	95%

