

SERVO MOTOR – 142UDC305BACAA165240-JSHJ

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HIGH INERTIA

(motor derated - torque output from motor limited by output shaft diameter)



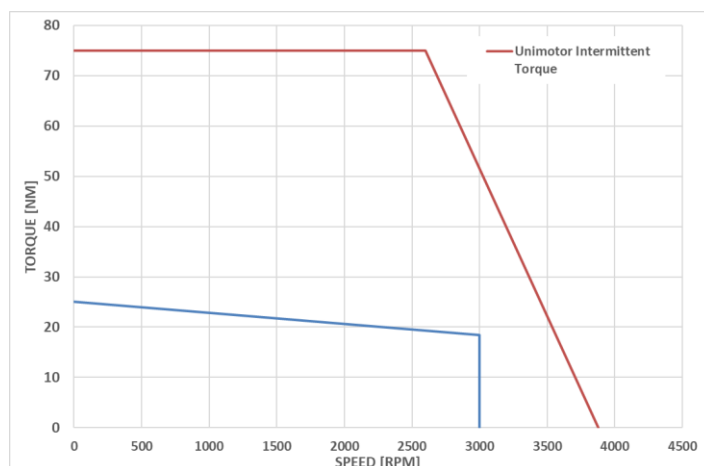
Definition

Type	Unimotor HD	
Motor frame size (mm)	142	
Voltage (Vdc)	U	430V
Magnet type	D	High Dynamic
Frame Length	C	
Speed (min ⁻¹)	30	3000
Brake	5	Braked
Connection type	B	PWR RA Rotatable T1 & SIG RA Rotatable T1
Output shaft	A	With output key
Feedback device code	CA	4096 ppr Incremental encoder (CF550)
Inertia & thermistor	A - JSHJ	PTC thermistor + High inertia
PCD	165	165 (FF 165/130) (torque output from motor limited by output shaft dia)
Shaft Diameter	240	24j6 x 50
Fan Box	-	
Insulation class	F	
UL Motor / UL Stator	UL Motor / UL Stator	

Motor Characteristics

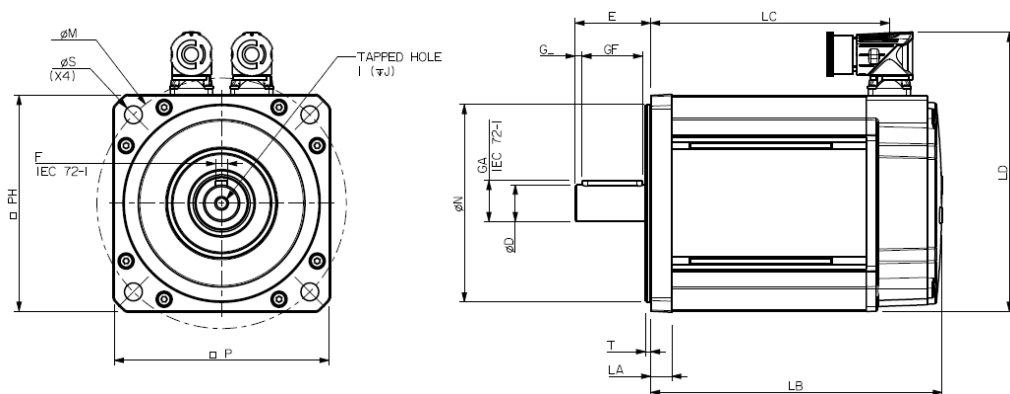
Motor Ambient Temperature (°C)	40	Drive Fsw (kHz)	12
Continuous Stall Torque (Nm)	25.0	Stall Current (A)	16
Rated Torque (Nm)	18.4	Nominal Current (A)	11.5
Motor Peak Torque (Nm)	75.0	Kt (Nm/A) @cold	1.6
Rated Power (kW)	5.8	Ke (V/kmin-1) @cold	98
Winding Thermal Time Constant (s)	245	R (ph-ph) (Ohm) @ambient	0.3
Number of Poles	10	L (ph-ph) (mH)	5.3
Typical Cogging (Nm)	0.38		
Inertia (kg.cm ²)	41.95	Weight (kg)	19.9
Ingress Protection Level (IP)	IP65		
Brake	Type 5	Static Torque (Nm)	42.0
Release Time (ms)	105	Backlash (°)	0.75
Brake Supply Voltage (V)	24	Brake Coil Power (W)	30

Torque / Speed Graph



Motor Dimensions (mm)

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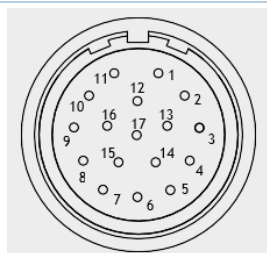


LB	Total length	312.5
LC	Power connector position	278.0
LA	Flange thickness	14
T	Register Length	3.4
N	Register Diameter	130
LD	Overall height	183.5
P	Flange Square	142
S	Fixing Hole Diameter	12
M	Fixing hole PCD	165
PH	Motor Housing Width	142
D	Shaft Diameter	24j6
E	Flange to Shaft End	50
GA	Key Height	27
GF	Key Length	40
G	Key to Shaft End	4.6
F	Key Width	8
I	Tapped Hole Thread Size	M8 x 1.25
J	Tapped Hole Depth	20
	Mounting Bolt	M10

Connectors

Signal connection: CA - 4096 ppr Incremental encoder (CF550)

Power connection: Size 1 – Type B



Pin	Function	Pin	Function
1	Thermistor	10	A
2	Thermistor	11	Z
3		12	Z/
4	U	13	A/
5	U/	14	B
6	V	15	B/
7	V/	16	Power + 5 VDC
8	W	17	0 V
9	W/	Body	Screen

Pin	Colour	Function
1	ORANGE	PHASE U (R)
2	RED	PHASE V (S)
3	GREEN/YELLOW	EARTH
4	YELLOW	PHASE W (T)
5		Brake +
6		Brake -
7	Body	Screen