

### SERVO MOTOR – 142UDC405JACAA165240-JSHJ

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##### HIGH INERTIA

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



NOTE : SIZE 1 POWER CONNECTOR SHOWN

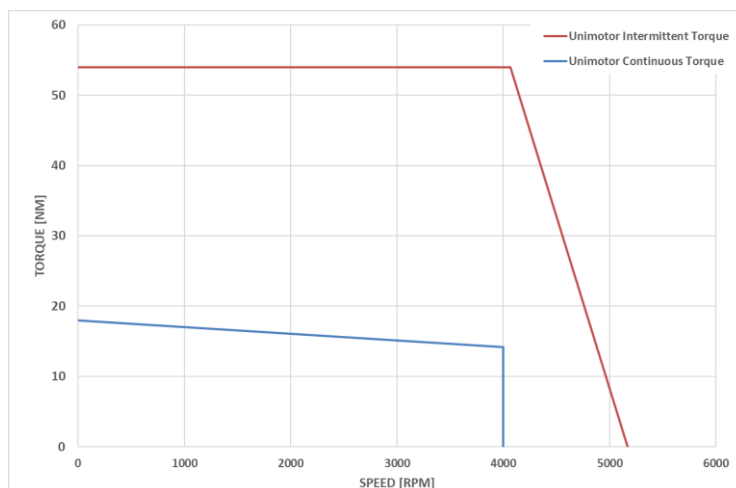
#### Definition

Type	Unimotor HD	
Motor frame size (mm)	142	
Voltage (Vdc)	U	400V
Magnet type	D	High Dynamic
Frame Length	C	
Speed (min <sup>-1</sup> )	40	4000
Brake	5	Braked
Connection type	J	Power (Size 1.5) and Signal (Size 1) 90° rotatable
Output shaft	A	With output key
Feedback device code	CA	Incremental encoder 4096 ppr (CFS50)
Inertia & thermistor	A - JSHJ	PTC thermistor + High inertia
PCD	165	165 (FF 165/130)
Shaft Diameter	240	24j6 x 50 (torque output from motor limited by output shaft dia.)
Fan Box	-	
Insulation class	F	
UL Motor / UL Stator	UL Motor / UL Stator	

#### Motor Characteristics

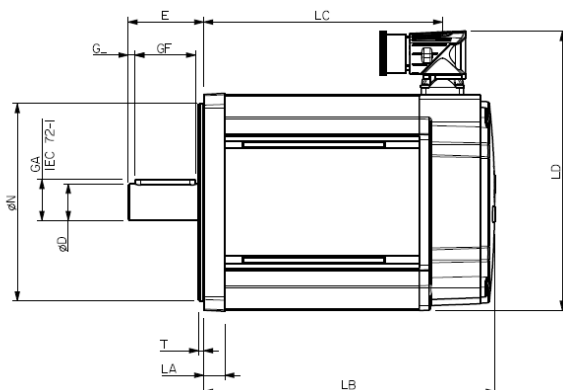
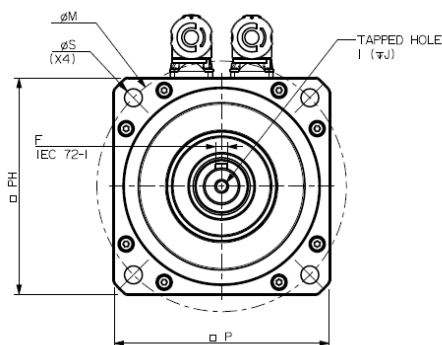
Motor Ambient Temperature (°C)	40	Drive Fsw (kHz)	12
Continuous Stall Torque (Nm)	18.0	Stall Current (A)	15.0
Rated Torque (Nm)	14.2	Nominal Current (A)	11.8
Motor Peak Torque (Nm)	54.0	Kt (Nm/A) @cold	1.2
Rated Power (kW)	5.95	Ke (V/kmin-1) @cold	73.5
Winding Thermal Time Constant (s)	245	R (ph-ph) (Ohm) @ambient	0.20
Number of Poles	10	L (ph-ph) (mH)	3.04
Typical Cogging (Nm)	0.38		
Inertia (kg.cm <sup>2</sup> )	41.95	Weight (kg)	19.9
Ingress Protection Level (IP)	IP65		
Brake	Type 5	Static Torque (Nm)	42.0
Release Time (ms)	TBA	Backlash (°)	0.75
Brake Supply Voltage (V)	24	Brake Coil Power (W)	30

#### Torque / Speed Graph



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#### Motor Dimensions (mm)



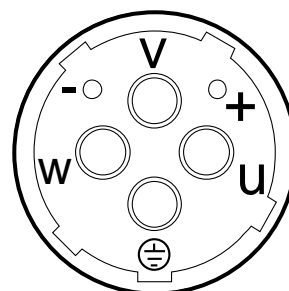
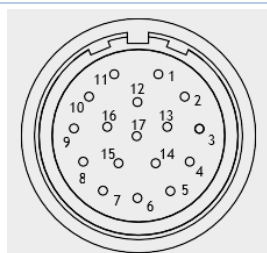
LB	Total length	312.5
LC	Power connector position	278.0
LA	Flange thickness	14
T	Register Length	3.4
N	Register Diameter	130
LD	Overall height	204.5
P	Flange Square	142
S	Fixing Hole Diameter	12
M	Fixing hole PCD	165
PH	Motor Housing Width	142
D	Shaft Diameter	24j6
E	Flange to Shaft End	50
GA	Key Height	27
GF	Key Length	40
G	Key to Shaft End	3
F	Key Width	8
I	Tapped Hole Thread Size	M8 x 1.25
J	Tapped Hole Depth	20
	Mounting Bolt	M10

NOTE : SIZE 1 POWER CONNECTOR SHOWN

#### Connectors

Signal connection: CA - Incremental encoder (SICK) - 4096 ppr (CFS50)

Power connection: J - Power (Size 1.5) and Signal (Size 1) 90° rotatable



Pin	Function	Pin	Function
1	Thermistor -	10	CHANNEL A
2	Thermistor +	11	INDEX
3	-	12	INDEX REVERSE
4	S1	13	CHANNEL A INVERSE
5	S1 INVERSE	14	CHANNEL B
6	S2	15	CHANNEL B INVERSE
7	S2 INVERSE	16	+ V
8	S3	17	0 Volts
9	S3 INVERSE	Body	Screen

Pin	Colour	Function
U	ORANGE	PHASE U
V	RED	PHASE V
	GREEN/YELLOW	EARTH
W	YELLOW	PHASE W
+		Brake +
-		Brake -
	Body	Screen