

### SERVO MOTOR – 142UDC305BFCAA165240

#### 142UDC305BFCAA165240

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



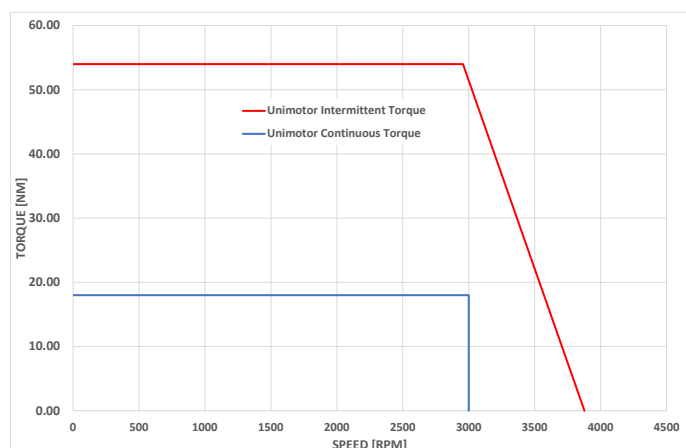
#### Definition

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> )	30	3000
Brake	5	Braked
Connection type	B	Power and Signal size 1 90° rotatable
Output shaft	F	Output key and half key supplied in bag
Feedback device code	CA	4096 ppr Incremental encoder (CF550)
Inertia & thermistor	A	Standard inertia + PTC thermistor
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

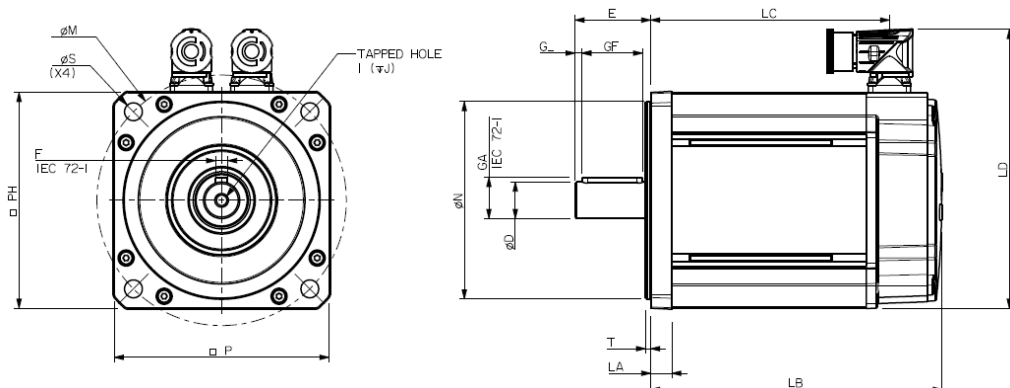
Motor Ambient Temperature (°C)	40	Drive Fsw (kHz)	12
Continuous Stall Torque (Nm)	18.0	Stall Current (A)	11.3
Rated Torque (Nm)	18.0	Nominal Current (A)	11.3
Motor Peak Torque (Nm)	54	Kt (Nm/A) @cold	1.6
Rated Power (kW)	5.7	Ke (V/kmin-1) @cold	98
Winding Thermal Time Constant (s)	245	R (ph-ph) (Ohm) @ambient	0.3
Number of Poles	10	L (ph-ph) (mH)	5.3
Typical Cogging (Nm)	0.38		
Inertia (kg.cm <sup>2</sup> )	18.85	Weight (kg)	16.6
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



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#### Motor Dimensions (mm)

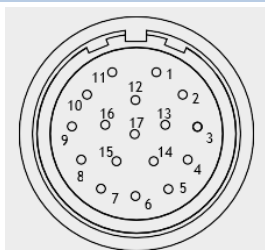


LB	Total length	282.5
LC	Power connector position	248.0
LA	Flange thickness	14
T	Register Length	3.4
N	Register Diameter	130
LD	Overall height	183.5
P	Flange Square	142
S	Fixing Hole Diameter	12
M	Fixing hole PCD	165
PH	Motor Housing Width	142
D	Shaft Diameter	24j6
E	Flange to Shaft End	50
GA	Key Height	27
GF	Key Length	40
G	Key to Shaft End	4.6
F	Key Width	8.0
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
2	RED	PHASE V
3	GREEN/YELLOW	EARTH
4	YELLOW	PHASE W
5		Brake +
6		Brake -
	Body	Screen