

### SERVO MOTOR – 142UDC305BAECA165240

#### 142UDC305BAECA165240

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



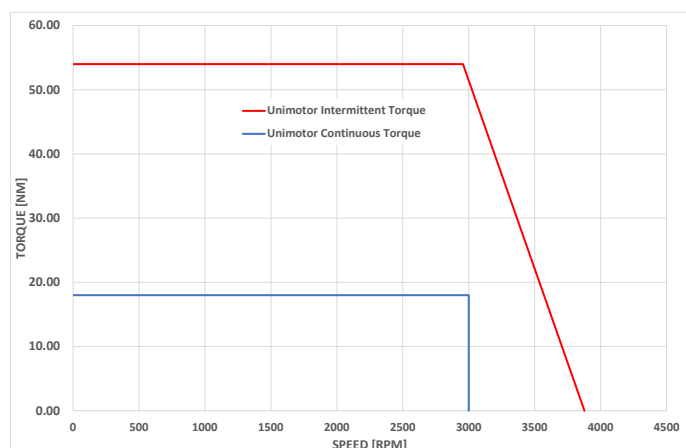
#### Definition

Type	<b>Unimotor HD</b>	
Motor frame size (mm)	<b>142</b>	
Voltage (Vdc)	<b>U</b>	400V
Magnet type	<b>D</b>	High Dynamic
Frame Length	<b>C</b>	
Speed (min <sup>-1</sup> )	<b>30</b>	3000
Brake	<b>5</b>	Braked
Connection type	<b>B</b>	Power and Signal size 1 90° rotatable
Output shaft	<b>A</b>	With output key
Feedback device code	<b>EC</b>	Inductive EnDat SinCos Multi-Turn (EQI 1331)
Inertia & thermistor	<b>A</b>	Standard inertia + PTC thermistor
PCD	<b>165</b>	165 (FF 165/130)
Shaft Diameter	<b>240</b>	24j6 x 50 (torque output from motor limited by output shaft dia)
Fan Box	-	
Insulation class	<b>F</b>	
UL Motor / UL Stator	<b>UL Motor / UL Stator</b>	

#### Motor Characteristics

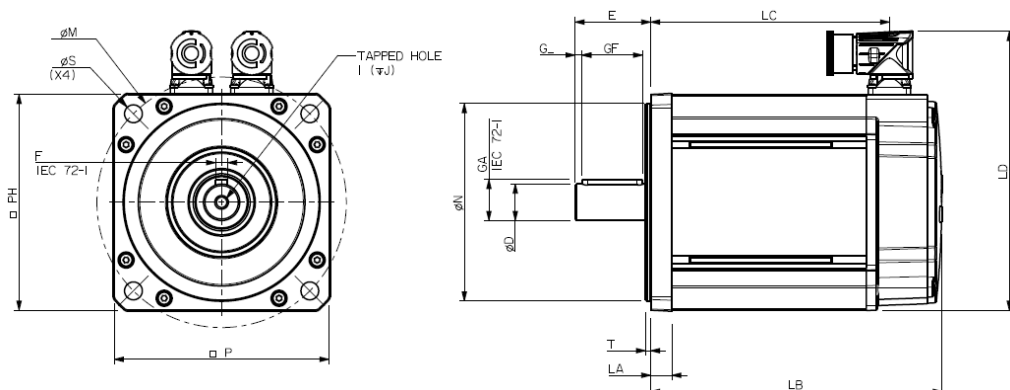
Motor Ambient Temperature (°C)	40	Drive Fsw (kHz)	12
Continuous Stall Torque (Nm)	18.0	Stall Current (A)	11.3
Rated Torque (Nm)	18.0	Nominal Current (A)	11.3
Motor Peak Torque (Nm)	54	Kt (Nm/A) @cold	1.6
Rated Power (kW)	5.7	Ke (V/kmin-1) @cold	98
Winding Thermal Time Constant (s)	245	R (ph-ph) (Ohm) @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)

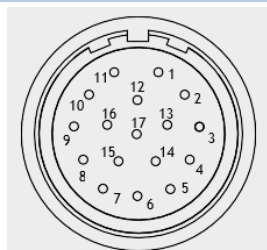


LB	Total length	282.5
LC	Power connector position	248.0
LA	Flange thickness	14
T	Register Length	3.4
N	Register Diameter	130
LD	Overall height	183.5
P	Flange Square	142
S	Fixing Hole Diameter	12
M	Fixing hole PCD	165
PH	Motor Housing Width	142
D	Shaft Diameter	24j6
E	Flange to Shaft End	50
GA	Key Height	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:** EC - Inductive EnDat SinCos Multi-Turn (EQI 1331)

**Power connection:** Size 1 – Type B



Pin	Function	Pin	Function
1	Thermistor	10	COS
2	Thermistor	11	DATA
3	Screen	12	DATA/
4		13	COS/
5		14	SIN
6		15	SIN/
7		16	+ V
8	CLOCK	17	0 Volts
9	CLOCK/	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