

SERVO MOTOR – 142UDC205BAECA165240

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



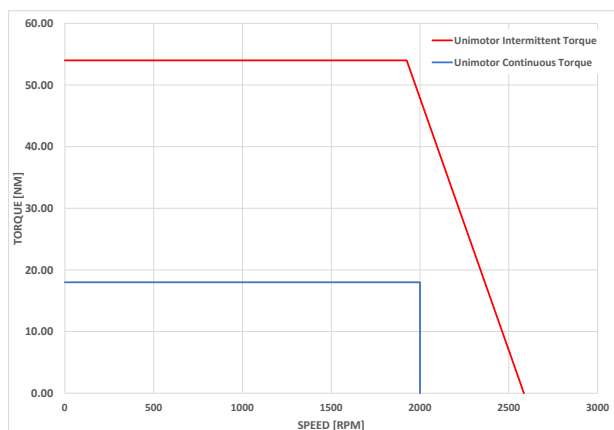
Definition

Type	Unimotor HD	
Motor frame size (mm)	142	
Voltage (Vdc)	U	400V
Magnet type	D	High Dynamic
Frame Length	C	
Speed (min ⁻¹)	20	2000
Brake	5	Braked
Connection type	B	Power and Signal size 1 90° rotatable
Output shaft	A	With output key
Feedback device code	EC	Inductive EnDat SinCos Multi-Turn (EQI 1331)
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

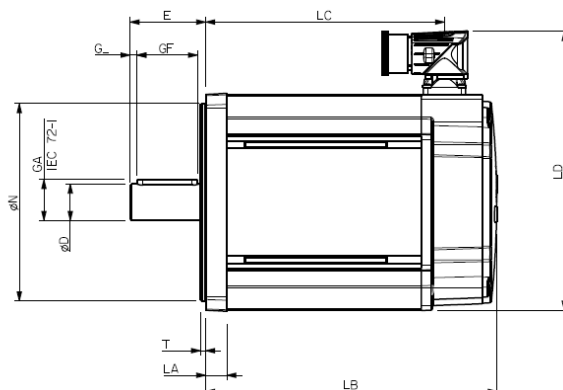
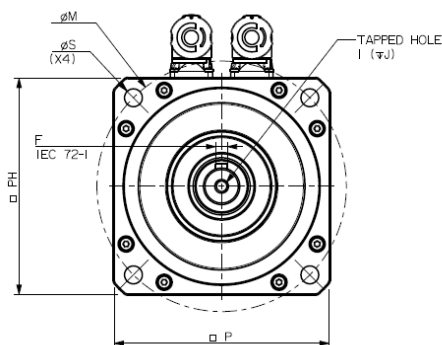
Motor Ambient Temperature (°C)	40	Drive Fsw (kHz)	12
Continuous Stall Torque (Nm)	18.0	Stall Current (A)	7.5
Rated Torque (Nm)	18.0	Nominal Current (A)	7.5
Motor Peak Torque (Nm)	54.0	Kt (Nm/A) @cold	2.4
Rated Power (kW)	3.8	Ke (V/kmin-1) @cold	147
Winding Thermal Time Constant (s)	245	R (ph-ph) (Ohm) @ambient	0.8
Number of Poles	10	L (ph-ph) (mH)	12.2
Typical Cogging (Nm)	0.38		
Inertia (kg.cm ²)	18.85	Weight (kg)	16.6
Ingress Protection Level (IP)	IP65		
Brake	Type 5	Static Torque (N.m)	42
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)

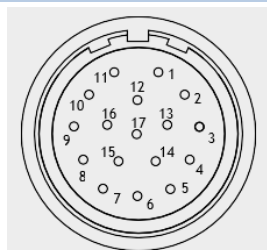


LB	Total length	282.5
LC	Power connector position	248.0
LA	Flange thickness	14
T	Register Length	3.4
N	Register Diameter	130
LD	Overall height	183.5
P	Flange Square	142
S	Fixing Hole Diameter	12
M	Fixing hole PCD	165
PH	Motor Housing Width	142
D	Shaft Diameter	24j6
E	Flange to Shaft End	50
GA	Key Height	27
GF	Key Length	40
G	Key to Shaft End	4.6
F	Key Width	8
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: B - Power and Signal size 1 90° rotatable



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