

Enquiry N°: Created by: SB / Approved by: DB

Data sheet Date: 24 Oct 24 (v1)

SERVO MOTOR 089LDB100FFCTC

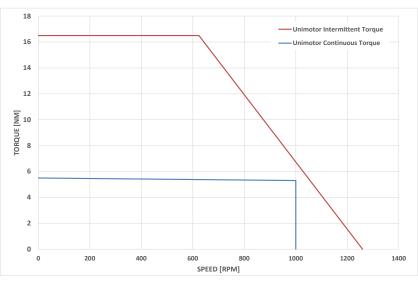
089LDB100FFCTC



Definition		
Туре	Unimotor HD	
Frame Size (mm)	089	
Voltage	L	48 Vdc
Magnet type	D	High Dynamic
Frame Length	В	
Speed (min ⁻¹)	10	1000
Brake	0	Unbraked
Connection type	F	Flying leads 0.5m Power cut ends, Signal 16-way Molex connector
Output shaft	F	Half key and full key supplied in bag
Feedback device code	СТ	4096 ppr Incremental encoder (TDK)
Inertia & thermistor	С	Standard inertia + KTY84-130 thermistor
PCD	100	100 (FF 100 / 80)
Shaft Diameter	190	19j6 x 40.0
Fan Box	-	
Insulation class	F	
UL Motor / UL Stator	UL Stator	

Nominal characteristics			
Motor Ambient Temperature (°C)	40	Drive Fsw (kHz)	12
Motor Stall Torque (Nm)	5.5	Stall Current (A)	13.1
Rated Torque (Nm)	5.25	Nominal Current (A)	13.1
Motor Peak Torque (Nm)	16.5	Kt (Nm/A)	0.4
Rated Power (kW)	0.5	Ke (V/kmin ⁻¹)	25.6
Winding Thermal Time Constant (s)	93	R (ph-ph) (Ohm)	0.22
Number of Poles	10	L (ph-ph) (mH)	1.7
Typical Cogging (Nm)	0.08		
Inertia (kg.cm ²)	1.61	Weight (kg)	~4.3
Ingress Protection Level (IP)	IP54		

Torque / speed graph



Page 1 of 3

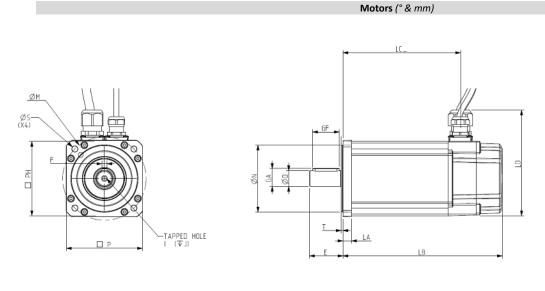
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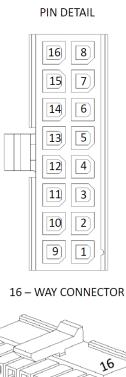


LB	Total length	167.8
LC	Signal connector position	140.5
LA	Flange thickness	10.3
Т	Register Length	2.2
Ν	Register Diameter	80.0
LD	Connector overall height	~119
Р	Flange Square	91.0
S	Fixing Hole Diameter	7.0
М	Fixing hole PCD	100.0
PH	Motor Housing Width	89.0
D	Shaft Diameter	19j6
E	Shaft Length	40.0
GA	Key Height	21.5
GF	Key Length	32.0
G	Key to Shaft End	3.7
F	Key Width	6.0
1	Tapped Hole Thread Size	M6 x 1.0
J	Tapped Hole Depth	17.0
	Mounting Bolt	M6

Motor electrical interface Connectors option:

Feedback device code: CT - 4096 ppr Incremental encoder (TDK), 43025-1600 Molex 16-way female signal connector (0.5m lead)

SIGNAL FUNCTION	PIN END B
Thermistor	1
Thermistor	2
CH S1	3
CH S2	4
CH S3	5
СН А	6
СН В	7
CH Z	8
GND	9
VCC	10
CH S1-	11
CH S2-	12
СН 53-	13
CH A-	14
СН В-	15
CH Z-	16



Connection type: Flying leads 0.5m Power cut ends, Signal 16-way Molex connector

POWER FLYING LEADS: 500mm from M16 gland to cable end 4 cores of 16 AWG UL 1330 wire, with polyolefin heat-shrink sleeve	
ORANGE (x 1)	U
RED (x 1)	V
YELLOW (x 1)	w
GREEN / YELLOW (x 1)	Earth

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Page 2 of 3

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CT	Encoder	
	LIICOUEI	

Manufacturer:	CTD / Motion TDK
Model:	Magnetic
Signal periods:	4096
Output interface:	Differential
Supply voltage:	5V +/- 10%
Accuracy	±0.2 Deg

Page **3** of **3**