Machine Translated by Google

YPF

series

Product Introduction

ÿWe have developed torque motors for various application requirements: F series framed torque motors based on optical encoders, frameless BI series torque motors, framed torque motors based on independently developed time-grid encoders, and YPF series specific torque motors, with a continuous torque range of 0.062Nm to 3300Nm and a peak thrust range of 0.46Nm to 5500Nm, suitable for various application scenarios.

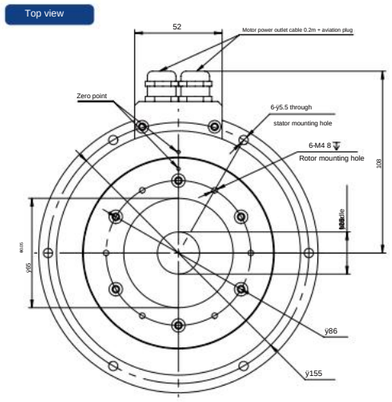
Product Parameters

Rated performance					
Motor Model	symbol	unit	5Nm	10Nm	15Nm
Outside diameter	D1	mm	145		
Hollow	D2	mm	25		
high	H	mm	62	78	94
Continuous torque (at temperature Tmax)	Tc	Nm	5	10	15
Peak torque	City	Nm	15	30	45
Maximum speed (310Vdc, Tc)	Nmax	Rpm	300		
Encoder		Positions/rev	23bit		
Positioning accuracy		arc sec	15th		
Repeatability		arc sec	Soldier 2		
Electrical specifications					
Continuous current (at temperature Tmax)	lc	Arms	2.1		
Peak current (duration 1s)	Ip	Arms	6.3		
Torque constant (at 25C ± 5%)	Tf	N/Arms	2.4	4.76	7.14
Potential constant (at 25C ± 5%)	The	Vrms/rad/s	0.8	1.59	2.38
Resistance (at 25C ±5%)	R	Oh(pp)	7.9	11.8	15.6
Inductance (at 25C ± 20%)	L	mH (pp)	16.5	26.4	38
Pole pairs	P		8		
Maximum allowable temperature of line graph	Tmax	ÿ	120		
Mechanical specifications					
Motor weight		KG	3.9	5.5	6.8
Mover weight	Mc	KG	0.95	1.4	1.9
Rotor inertia	Jm	kg*m2	0.00166	0.00262	0.00363
Axial runout		mm	0.03		
Radial runout		mm	0.03		

Product Dimensions

YPF-D145-Hxx-XXX

Top view



Front view

Motor Model	H
YPF-D145-H62-050	62
YPF-D145-H78-100	78
YPF-D145-H94-150	94



Servo drive wiring



D3 only

AC Servo Drive

Product Parameters

Basic Specifications		
Control method		IGBTSVPWM control, sinusoidal current drive mode 220V: Single phase full wave
Conditions of Use	Operating/Storage Temperature Note 1	rectifier 0~+40°C/-20~+70°C
	Use/Storage Humidity	Below 90%RH (no condensation)
	Vibration/Impact Strength	4.9m/s2/19.6m/s2
	Protection Grade	IP20
	Pollution degree	PD level 2
	Altitude	The maximum altitude is 5000m, and no derating is required for use at 1000m or below. Above 1000m, the rating will be derated by 1% for every 100m increase in altitude. Above 2000m in altitude, the rating will be derated by 1% for every 100m increase in altitude. Please contact the manufacturer
Position control mode		
performance	Feedforward compensation	Support speed seat feedforward (0~100.096) setting, eliminate the follow-up deviation
	Instruction Shaping	position command low-pass filtering and mean filtering
Frequency division output	Output form	Differential output: A phase, B phase, Z phase
	Crossover range	The motor runs one pole pitch and can generate any pulse in the range of 140 to P0105.
Speed torque control mode		
performance	Current loop dynamic characteristics	Step response: 125us (0-10096) Frequency response: -3db amplitude attenuation bandwidth, 4000Hz (command signal: 15%6)-90*phase shift bandwidth, 8000Hz (command signal Signal: ±15%6)
	Speed loop dynamic characteristics	Step response: 10ms (0-1000mm/s); Frequency response: -3dB amplitude attenuation bandwidth, 1500Hz (command signal: ±50mm/s); -90° phase shift bandwidth, 800Hz (command signal: ±50mm/s)
	Torque control accuracy	Scholar 2%
Input and Output		
Digital input signal		Configurable functions: forward overtravel switch, reverse overtravel switch, origin switch, etc.
Digital output signal		Configurable functions: servo ready, zero speed signal, speed reached, position reached, Positioning proximity signal, torque limit, warning, servo fault, etc.
Support functions		
Electronic gear ratio		Built-in two sets of electronic gear ratios, supporting gear ratio switching function
Limit protection		Stop immediately when the forward overtravel switch or reverse overtravel switch is activated
Fault Detection		Overcurrent, overvoltage, undervoltage, overload, main circuit detection abnormality, radiator overheating,
Display functions		Overspeed, encoder abnormality, parameter abnormality, etc.
		5-digit LED display, power indicator CHARGE
Vibration Suppression		With 4 notch filters, 50HZ~5000Hz, 4 notch filters are available
		Adaptive settings
Ease of use		Auto-tuning, speed observer, model tracking
Debug interface		USB
other		Status display, report recording, J0G operation, etc.

Note 1: Please install or store the servo drive within this temperature range.

4008-160-502