

P60SH86-Txx

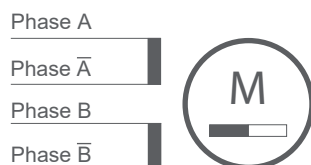
HIGH TORQUE IP65 Bipolar Stepping motor - 1,8°



IP65

Introduction

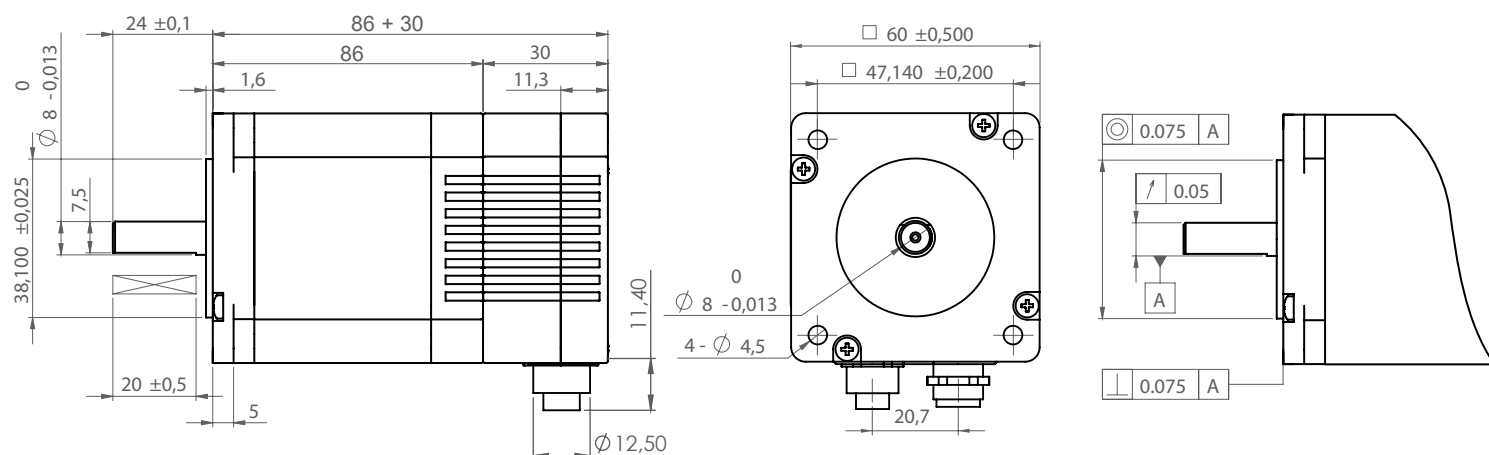
The P60SH86-Txx is a bipolar stepper motor with terminal-box with IP65 protection, optionally equipped with a Push-Pull or Line-Driver incremental encoder. The connection of the motor and the ecoder is made through M12 circular connectors.



Specifications

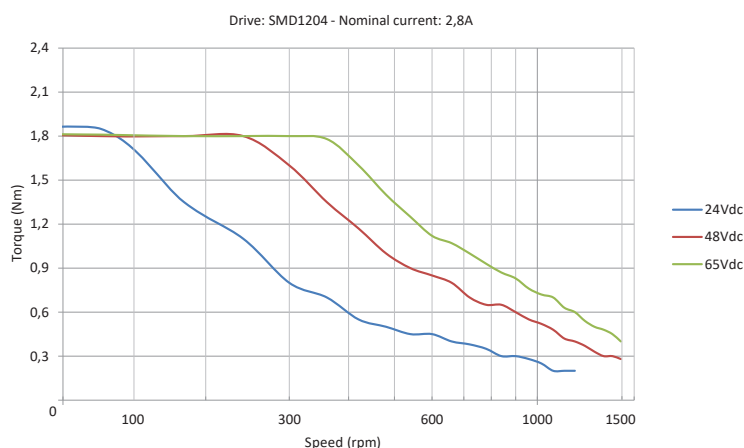
Model	Current/phase	Resistance/phase	Inductance/phase	Detent torque	Holding torque	Rotor inertia	Encoder	Weight
P60SH86-T-C	2,8 A	1,5 Ω	6,8 mH	75 mNm	3,1 Nm	840 gcm ²	-	1,4 Kg
P60SH86-TO0512P24C	2,8 A	1,5 Ω	6,8 mH	75 mNm	3,1 Nm	840 gcm ²	Push-pull	1,4 Kg
P60SH86-TO0512L05C	2,8 A	1,5 Ω	6,8 mH	75 mNm	3,1 Nm	840 gcm ²	Line-driver	1,4 Kg

Mechanical dimensions



IP65 motor housing, except output flange

Speed vs Torque curve



The torque curves are made with AEP torque transducer mod. MRT250NM

Motor characteristics

Step Angle	1,8° ± 5%
Insulation Class	B
Protection degree	IP65 (except output flange)
Ambient Temperature	-20 °C .. +50 °C
Temperature Rise	80°C max (2 phase ON)
Insulation Resistance	100 M Ω min 500Vdc
Dielectric Strength	500 VAC FOR ONE MINUTE
Shaft Radial Play	0,02mm (with 450g load)
Shaft Axial Play	0,08mm (with 450g load)
Max Radial Force	75N (20mm FROM FRONT FLANGE)
Max Axial Force	15 N max

Caution

Insert and tighten firmly the connectors before powering the motor. **Never disconnect any connector when powered.** Installation and maintenance must be carried out by qualified technicians only. The operator must have detailed information to be able to carry out this work.

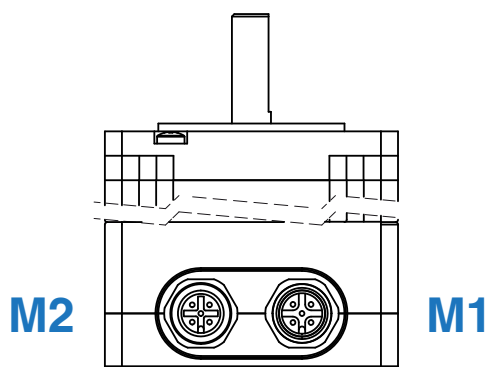
- Unexpected dangers may be encountered
- An incorrect use may destroy this product and the connected equipments.

P60SH86-Txx

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Connectors layout



Encoder characteristics

	PUSH-PULL	LINE DRIVER
V _{SUPPLY}	+24 VDC	+5 VDC
I _{MAX} (NO LOAD)	80 mA	
I _{MAX}	60 mA each channel	
F _{OUT} MAX	300 KHz	
COUNT/REV	512	
PROTECTION DEGREE	IP54	
WORKING TEMPERATURE	-20 .. +80 °C	

Motor connector

M1	M12 5 Pin male		PIN	Description	Cable color matching	
			1	Phase A -	BROWN	
			2	Phase A	WHITE	
			3	Phase B -	BLUE	
			4	Phase B	BLACK	
			5	Shield	GREY	

Push-Pull encoder connector

M2	M12 5 Pin female		PIN	Description	Cable color matching	
			1	V _{IN} (+24VDC)	BROWN	
			2	Channel A	WHITE	
			3	Common	BLUE	
			4	Channel B	BLACK	
			5	Channel Z	GREY	

Line-Driver encoder connector

M2	M12 8 Pin male		PIN	Description	Cable color matching	
			1	Channel Z +	WHITE	
			2	V _{IN} (+5VDC)	BROWN	
			3	Channel A +	GREEN	
			4	Channel A -	YELLOW	
			5	Channel B +	GREY	
			6	Channel B -	PINK	
			7	Common	BLUE	
			8	Channel Z -	RED	

Ordering code

