

Motor Characteristics



- ◆ Step Angle: 1.8°
- ◆ Frame Size: 28mm
- ◆ Holding Torque: 7.0-12.0N.cm
- ◆ Built-in 1000-line encoder
- ◆ Low heat, High torque
- ◆ High stability, High consistency

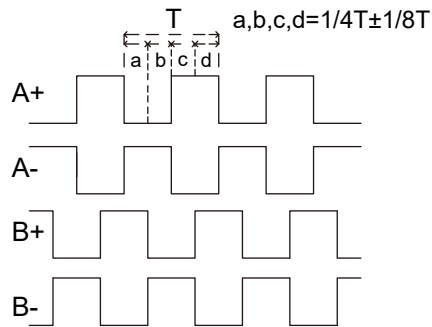
Motor Specifications

Model	Phase Current	Phase Resistance	Phase Resistance	Holding Torque	Rotor Inertia	Bi/Unipolar	Weight	Length (L)
	A/∅	Ω/∅	mH/∅	N.cm	g.cm ²	# of Leads	g	mm
PHSM28S33-410-210EC	1.0	2.5	1.8	7.0	8.5	Bi(4)	120	33
PHSM28S50-410-210EC	1.0	3.3	4.0	12.0	18.5	Bi(4)	200	50

Encoder Specifications

Resolution	1000CPR	
Supply voltage	4.5~5.5V	
Supply current(Max)	100mA	
Signal	A+,A-,B+,B-	
Rise/fall time(Max)	100ns	
Frequency	300kHz	
Output voltage	"H"	2.4V min
	"L"	0.4V Max
Max.output current	20mA	

Encoder Waveform



Outline Drawing

