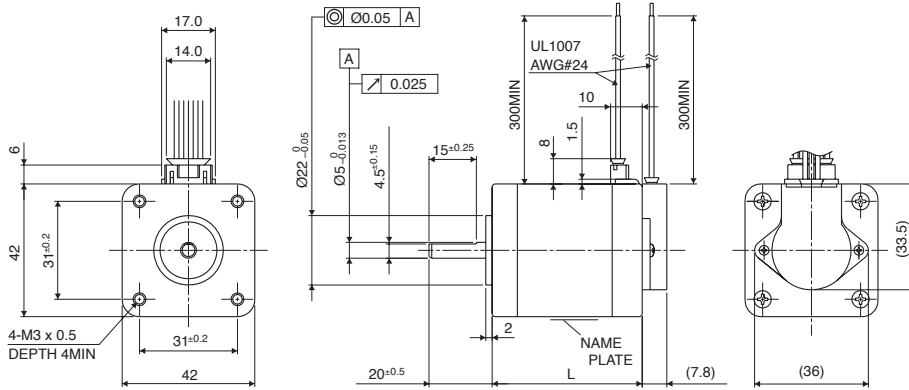


## Outline

### Hybrid Stepping Motor with Hall Sensor



HYBRID



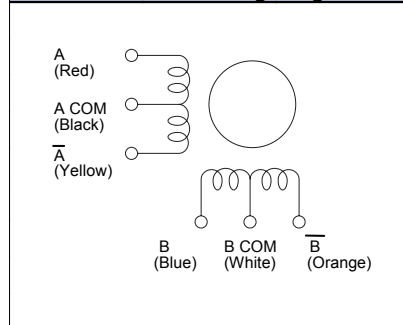
	"L"
S17PMK049x	34 (1.34)
S17PMK442x	48 (1.89)

#### General Specifications

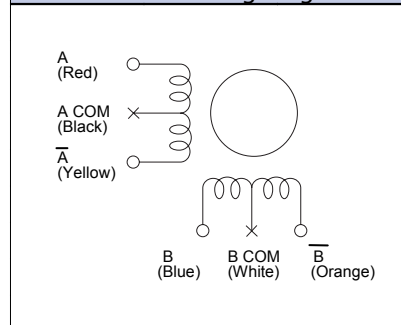
**Step Accuracy:** ±5%  
**Temperature Rise:** 80°C MAX  
**Ambient Temperature Range:** -10 °C ~ +50 °C  
**Insulation Resistance:** 100M.Ω MIN. DC500V  
**Dielectric Strength:** AC 500V 1min  
**Radial Play:** 20μm MAX. (at 4.4N {450gf} [Load])  
**End Play:** 80μm MAX. (at 4.4N {450gf} [Load])

PIN NO.	SENSOR TERMINAL NO.	SIGNAL	L/W COLOR
1	2	GND	BLK
2	3	OUT	YEL
3	1	Vcc	RED

#### UNI POLAR Wiring Diagram



#### BI POLAR Wiring Diagram



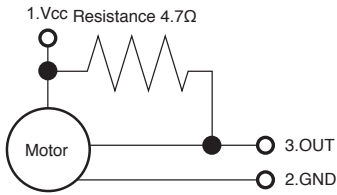
\* No need to connect A COM and B COM.  
 Please insulate individually.  
 \* Apply 70% of Unipolar rated current.

## Specifications

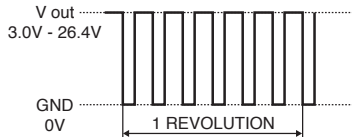
Model	Motor Size (mm)	Step Angle (deg)	Drive Sequence	Rated Current (A)	Resistance (Ohms)	Holding Torque (mNm)	Inductance (mH)	Rotor Inertia (g·cm <sup>2</sup> )	Detent Torque (mNm)	Mass (g)
S17PMK049USTDCN	□ 42 x 34	1.8	UNI-POLAR	1.0	3.2	200	3.2	37	11.0	200
S17PMK442USTDCN	□ 42 x 48	1.8	UNI-POLAR	1.4	2.8	400	3.4	75	16.7	350
S17PMK049BSTDCN	□ 42 x 34	1.8	BI-POLAR	0.7	6.4	270	13.6	37	11.0	200
S17PMK442BSTDCN	□ 42 x 48	1.8	BI-POLAR	0.9	5.6	500	12.8	75	16.7	350

## Hall Sensor Specifications

### Circuit configuration



### 6 pulse output signal



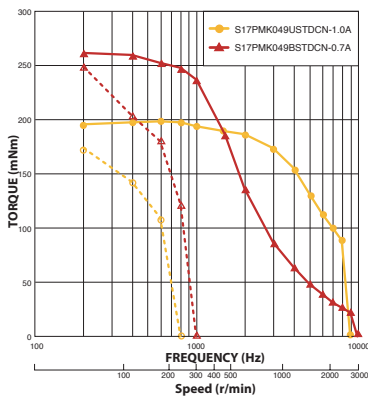
Maximum Rating (Ta = 25°C)			
Item	Symbol	Rating	Unit
Supply Voltage	Vcc	18	V
Output H Voltage	Vo(off)	Vcc	V
Output L Current	Isink	15	mA
Operating Ambient Temperature	Topr	-20 ~ 115	°C
Storage Temperature	Tstg	-40 ~ 125	°C

Electrical Specifications (Ta = 25°C)						
Item	Symbol	Measuring Condition	Min.	Typ.	Max.	Unit
Operating Voltage Range	Vcc		4.5	12	18	H
Output H → L Magnetic Flux Density	Bop	Vcc = 12V			20	mT
Output L → H Magnetic Flux Density	Brp	Vcc = 12V	5			mT
Hysteresis Error	Bh	Vcc = 12V	1.5			mT
Saturated Output Voltage	Vsat	Vcc = 12V, OUT "L", Isink = 10mA			0.4	V
Output Leakage Current	Ileak	Vcc = 12V, OUT "H", Vout = 12V			1	μA
Power Current	Icc	Vcc = 12V, OUT "H"			8	μA

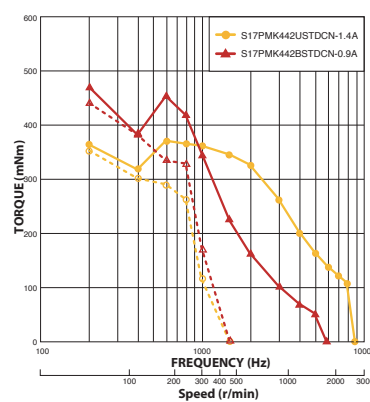
1 [mT] = 10 [Gauss]

## Torque/Speed Characteristics

Model No: S17PMK049USTDCN / BSTDCN  
Driver: Chopper Dual  
Supply Voltage: 24.0 (volt)



Model No: S17PMK442USTDCN / BSTDCN  
Driver: Chopper Dual  
Supply Voltage: 24.0 (volt)



— : PULL OUT  
- - - : PULL IN