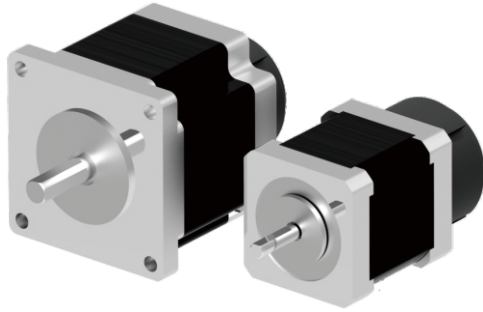


5-phase □ 42/60/86 0.72 degrees stepper motor with encoder model



Features :

- The position is fed back through the encoder to achieve closed-loop control, which prevents the stepping motor from stepping out of step and improves the positioning reliability of the stepping motor °
- The integrated design of the encoder and the motor body saves space °
- The stepping motor is combined with the encoder, and the DS driver is used to obtain a 1-to-1 feedback signal for monitoring through the counter of the host controller, so as to achieve the purpose of closed-loop control of the system

Motor name view: MS5 4 5 H - AO 5 L

1 2 3 4 5 6 7

- 1 : Ms5: 5-phase stepping motor
- 2 : 4: 42*42 Mounting surface 6: 60*60 Mounting surface 9: 86*86 Mounting surface
- 3 : 5: motor length 48mm
- 4 : H: rated current 1.4A / Phase
- 5 : AO: Single shaft with encoder model
- 6 : 5: resolution 1000 PPR
- 7 : L: A / B / Z Phase LINE-DRIVER output none : open collector output

Motor Electrical Characteristics :

Motor model	step angle	Rated voltage	Rated current	Coil impedance	holding torque	motor length	Rotor inertia	Encoder input voltage	with drive	
	Deg	V/Phase	A/Phase	Ω/Phase	Kg-cm	mm	g-cm			kg
MS545H-AO5 <u>L</u>	0.72	1.05	1.4	0.75	2.4	48	68	DC24V DC 5V (LINE-DRIVER)	DS507MD	
MS566D-AO5 <u>L</u>	0.72	1.01	2.0	0.57	8.3	54	450		0.9	DS514MD
MS569D-AO5 <u>L</u>	0.72	1.6	2.0	0.8	16.6	84	840		1.4	DS514F
MS596-AO5 <u>L</u>	0.72	2.1	1.4	1.5	21	66	1400		2.1	DS514F
MS599-AO5 <u>L</u>	0.72	3.2	1.4	2.3	41	98	2700		3.1	DS514F

※ Green is the LINE-DRIVER encoder output model specification

Encoder Electrical Characteristics :

Signal output mode	Open collector output	LINE-DRIVER
Resolution	1000 P/R	
Input voltage	DC24V	DC5V
Maximum supply current	80 mA	100 mA
Signal output	A、B、Z	A+、A-、B+、B-、Z+、Z-
Rise/fall time (Max)	250 ns	100 ns
Frequency	500 kHz	
Output voltage	H	Vcc-2V
	L	0.5V Max
Output current	120 mA	
Operating temperature	-20~+80°C	
Degree of protection	IP 40	

Encoder wiring :

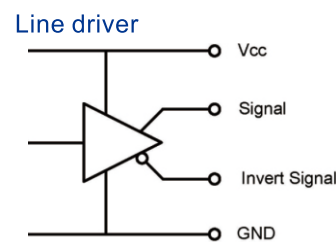
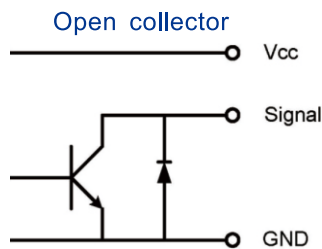
Encoder wiring (open collector) : A、B、Z (U12517、AWG26、5Pin)

Red	Black	White	Green	yellow
Vcc	Gnd	A	B	Z

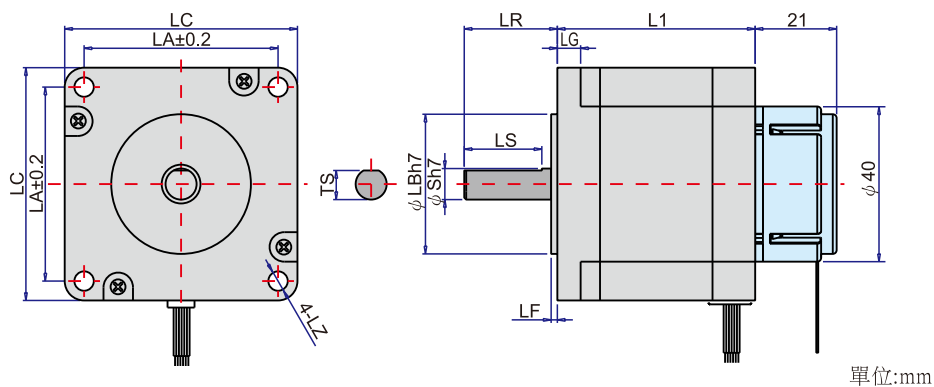
Encoder wiring (Line driver) : A+、A-、B+、B-、Z+、Z- (U12517、AWG28、8Pin)

Red	Black	White	White/Black	Green	Green/Black	yellow	yellow/Black
Vcc	Gnd	A+	A-	B+	B-	Z+	Z-

Encoder output circuit :



Motor Dimensions :



Motor Specifications	□LC	L1	φS	LR	TS	LS	φLB	LF	LZ	LA	LG
MS545H-AO5 L	42	48	5	20	4.5	15	22	2.0	M3	31	
MS566D-AO5 L	60	54	8	24	7.5	20	36	1.6	φ 4.5	50	6
MS569D-AO5 L		84									
MS596-AO5 L	86	66	14	37	13	25	60	1.6	φ 6.5	70	10
MS599-AO5 L		98									

* Green is the LINE-DRIVER encoder output model specification