

HB-type Linear Step Product Overview

Wiring diagram

Unipolar



bipolar



How to pronounce model names

1. PJPL28 / PJPL42 (Sliding screw specification)

PJPL 28 32 E 6 (□□□)

(1)

(2)

(3)

(4)

(5)

(6)

(1) Series name	
(2) Motor size	Unit: mm
(3) Motor length	□28 → 32: 31.5mm □42 → 33: 33mm
(4) Coil specifications	D: 1.2A E: 0.95A
(5) Number of lead wires	4: 4 bipolar tubes 6: 6 unipolar tubes
(6) Screw lead	100: 1mm pitch

2. PJPL28T / PJPL42T (Rolled ball screw specification)

PJPL 42 T 73 D 4 A (□□□) R

(1)

(2)

(3)

(4)

(5)

(6)

(7)

(8)

(1) Series name	
(2) Motor size	Unit: mm
(3) Motor length	69: 69mm 73: 73mm
(4) Coil specifications	□28 → E: 0.67A □42 → D: 1.2A
(5) Number of lead wires	4: Only 4 bipolar tubes available.
(6) Fully threaded	A: Fully threaded only
(7) Screw lead	100: 1.0mm pitch, 200: 2.0mm pitch
(8) Rolled screws	R: Rolled ball screw specification only

PJPL2832E6(100)

□28 type, sliding screw specification, HB type linear step

□28-Type HB Linear Stepper
Sliding screw specification (unipolar)
Screw lead 1 mm (resolution 0.005 mm/step)
Shaft length 96 mm (standard specification)
Convenient when you want to move a linear motion mechanism in a small space.
Convenient when more thrust is required than PFL/PFCL type.

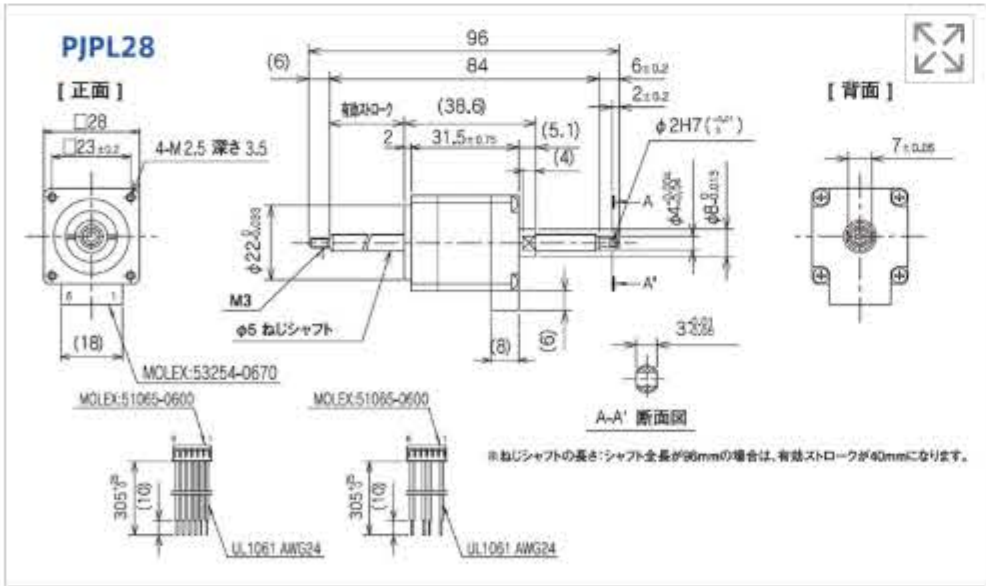
- Easy control because it is a stepping motor
- Simple structure with a female screw inside a rotor supported by ball bearings on both sides, allowing the male screw to move in and out
- High screw efficiency and high thrust achieved by using sliding screws
- Long lifespan achieved by ball bearing support and low friction screws



specification

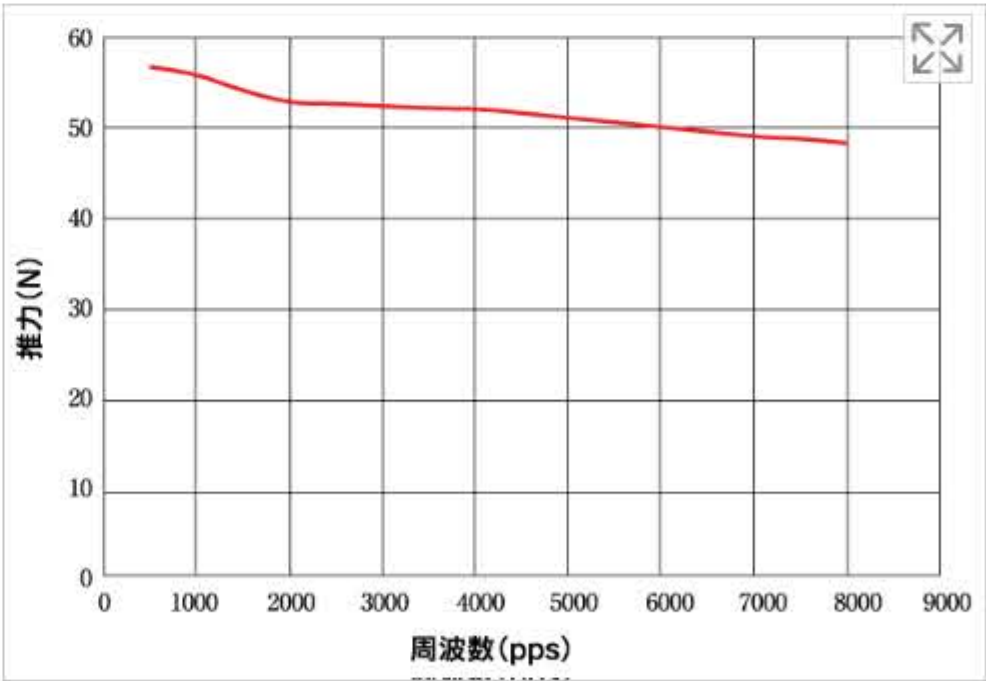
Number of phases		2
Step angle	°	1.8
Number of steps		200
Screw lead	mm	1
Movement per step	mm	0.005
Effective stroke	mm	40
Shaft length	mm	96
Excitation method		2-2
Winding specifications		Unipolar
Rated winding voltage	V	2.66
Rated winding current	A/φ	0.95
Wirewinding resistance	Ω/φ	2.8
Operating temperature range	°C	-10 to +50
Motor outer diameter	mm	28
mass	g	110
Insulation Classification		Type B (Coil allowable temperature)

Outline drawing



*Click to enlarge.

Thrust characteristics (pull-out thrust)



Driving conditions
: 1. Unipolar constant current, 2-2 phase drive;
2. Set current, 0.95A/φ;
3. Power supply voltage, 24V.

*Thrust characteristics are for reference only. Not guaranteed values.
*Click to enlarge.

PJPL2832E4(100)

□28 type, sliding screw specification, HB type linear step

□28-Type HB Linear Stepper
Sliding screw specification (bipolar)
Screw lead 1 mm (resolution 0.005 mm/step)
Shaft length 96 mm (standard specification)
Convenient when you want to move a linear motion mechanism in a small space.
Convenient when more thrust is required than PFL/PFCL type.

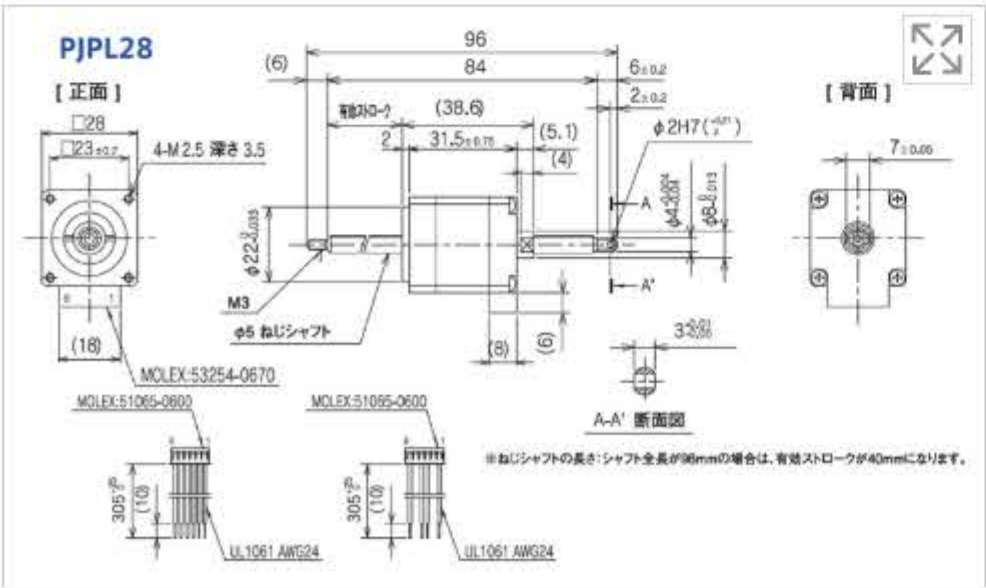
- Easy control because it is a stepping motor
- Simple structure with a female screw inside the rotor supported by ball bearings on both sides, allowing the male screw to move in and out
- High screw efficiency and high thrust achieved by using sliding screws
- Long lifespan achieved by ball bearing support and low friction screws



specification

Number of phases		2
Step angle	°	1.8
Number of steps		200
Screw lead	mm	1
Movement per step	mm	0.005
Effective stroke	mm	40
Shaft length	mm	96
Excitation method		2-2
Winding specifications		bipolar
Rated winding voltage	V	2.57
Rated winding current	A/φ	0.95
Wirewinding resistance	Ω/φ	2.7
Operating temperature range	°C	-10 to +50
Motor outer diameter	mm	28
mass	g	110
Insulation Classification		Type B (Coil allowable temperature)

Outline drawing



*Click to enlarge.

PJPL4233D6(100)

□42 type, sliding screw specification, HB type linear step

□42-type HB Linear Stepper
Sliding screw specification (unipolar)
Screw lead 1 mm (resolution 0.005 mm/step)
Shaft length 96 mm (standard specification)
Convenient when you want to move a linear motion mechanism in a small space.
Convenient when more thrust is required than PFL/PFCL type.

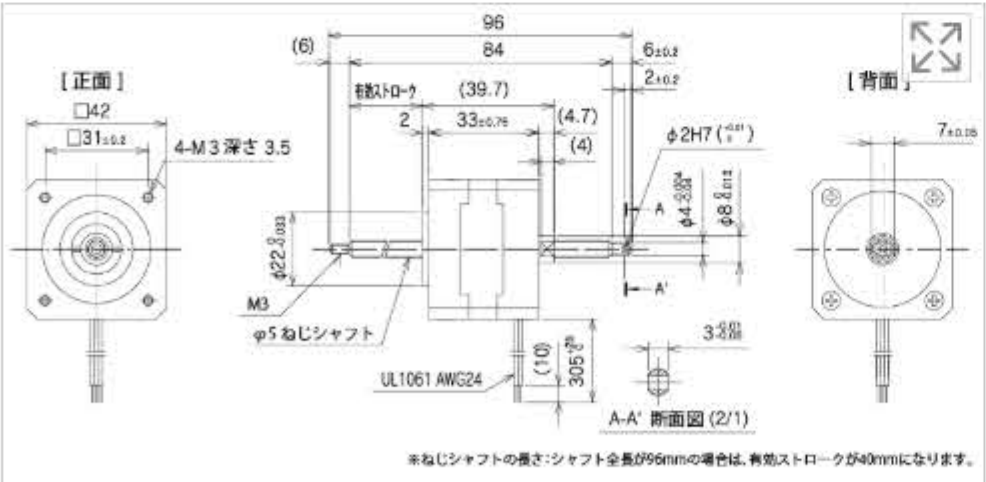
- Easy control because it is a stepping motor
- Simple structure with a female screw inside the rotor supported by ball bearings, allowing the male screw to move in and out
- High screw efficiency and high thrust achieved by using sliding screws
- Long lifespan achieved by ball bearing support and low friction screws



specification

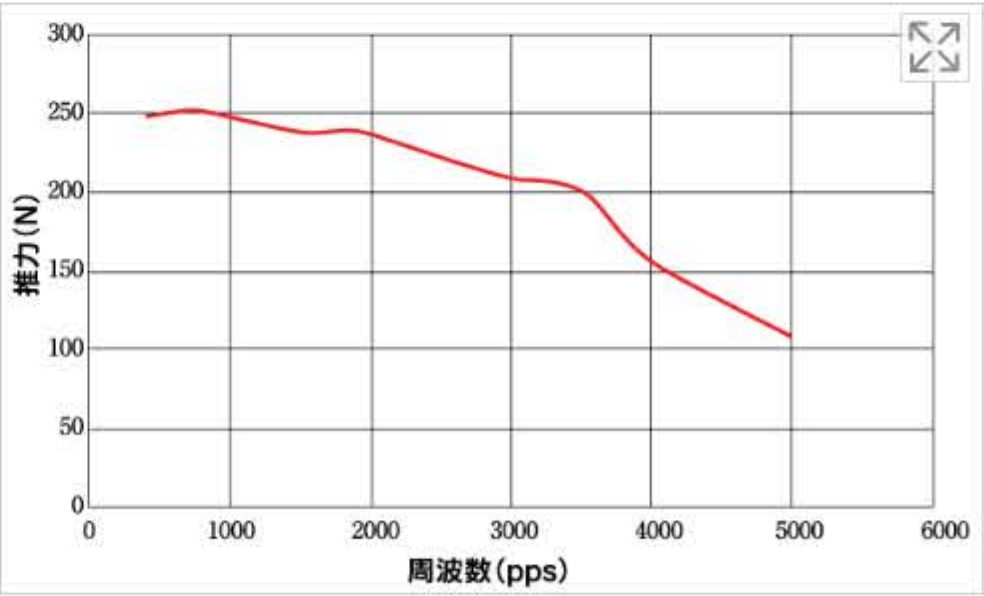
Number of phases		2
Step angle	°	1.8
Number of steps		200
Screw lead	mm	1
Movement per step	mm	0.005
Effective stroke	mm	40
Shaft length	mm	96
Excitation method		2-2
Winding specifications		Unipolar
Rated winding voltage	V	2.8
Rated winding current	A/φ	1.2
Wirewinding resistance	Ω/φ	2.3
Operating temperature range	°C	-10 to +50
Motor outer diameter	mm	42
mass	g	200
Insulation Classification		Type B (Coil allowable temperature)

Outline drawing



*Click to enlarge.

Thrust characteristics (pull-out thrust)



- Driving conditions
- : 1. Unipolar constant current, 2-2 phase drive;
 - 2. Set current, 1.2A/φ;
 - 3. Power supply voltage, 24V.

*Thrust characteristics are for reference only. Not guaranteed values.
*Click to enlarge.

PJPL4233D4(100)

□42 type, sliding screw specification, HB type linear step

□42-type HB Linear Stepper
Sliding screw specification (bipolar)
Screw lead 1 mm (resolution 0.005 mm/step)
Shaft length 96 mm (standard specification)
Convenient when you want to move a linear motion mechanism in a small space.
Convenient when more thrust is required than PFL/PFCL type.

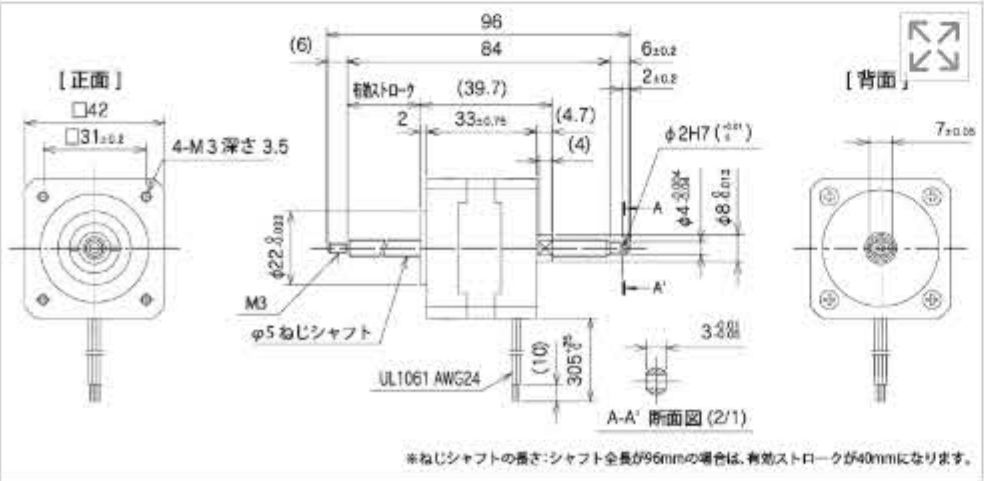
- Easy control because it is a stepping motor
- Simple structure with a female screw inside the rotor supported by ball bearings on both sides, allowing the male screw to move in and out
- High screw efficiency and high thrust achieved by using sliding screws
- Long lifespan achieved by ball bearing support and low friction screws



specification

Number of phases		2
Step angle	°	1.8
Number of steps		200
Screw lead	mm	1
Movement per step	mm	0.005
Effective stroke	mm	40
Shaft length	mm	96
Excitation method		2-2
Winding specifications		bipolar
Rated winding voltage	V	2.5
Rated winding current	A/φ	1.2
Wirewinding resistance	Ω/φ	2.1
Operating temperature range	°C	-10 to +50
Motor outer diameter	mm	42
mass	g	200
Insulation Classification		Type B (Coil allowable temperature)

Outline drawing



*Click to enlarge.

PJPL28T69E4A(100)R

□28 type ball screw specification HB type linear step

□ This is a 28-type linear hybrid stepping motor.
It is convenient when you want to move a linear motion mechanism in a small space.
It is useful when more thrust is required than PFL/PFCL types.

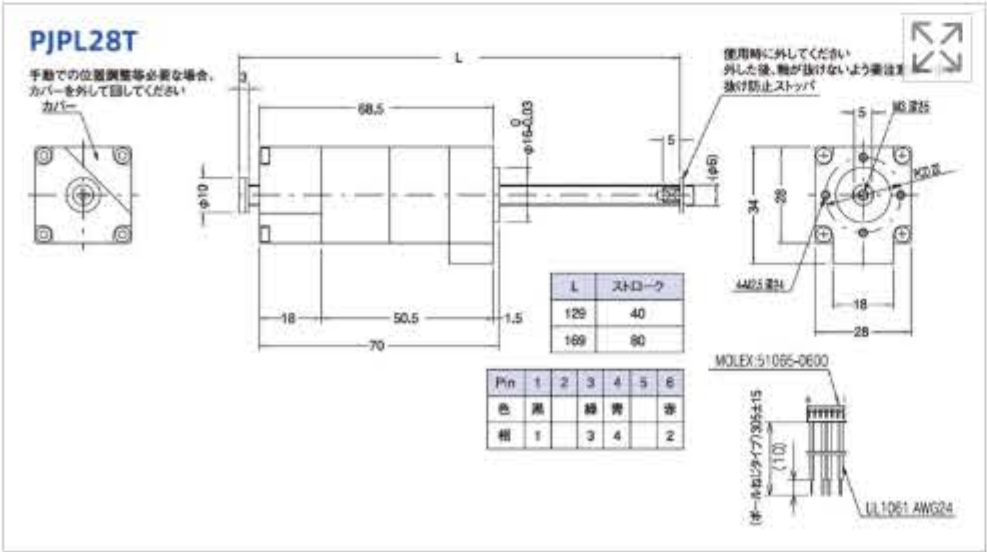
- ・ Screw lead of 1 mm (resolution 0.005 mm/step)
- ・ High efficiency achieved by using a rolled ball screw
- ・ Easy control because it is a stepping motor
- ・ Simple structure with a female thread inside the rotor supported by ball bearings, allowing the male thread to move in and out
- ・ Long lifespan achieved by ball bearing support and ball screw



specification

Number of phases		2
Step angle	°	1.8
Number of steps		200
Screw lead	mm	1
Movement per step	mm	0.005
Effective stroke	mm	40 / 80
Shaft length	mm	129 / 169
Excitation method		2-2
Winding specifications		bipolar
Rated winding voltage	V	3.8
Rated winding current	A/φ	0.67
Wirewinding resistance	Ω/φ	5.6
thrust	N	50
Operating temperature range	°C	-10 to +50
Motor Outer Dimensions	mm	28
mass	g	150
Insulation Classification		Type B (Coil allowable temperature)

Outline drawing



*Click to enlarge.

PJPL28T series



HB-type linear step lineup



PJPL28T69E4A(200)R

□28 type ball screw specification HB type linear step

- This is a 28-type linear hybrid stepping motor.

It is convenient when you want to move a linear motion mechanism in a small space.

It is useful when more thrust is required than PFL/PFCL types.

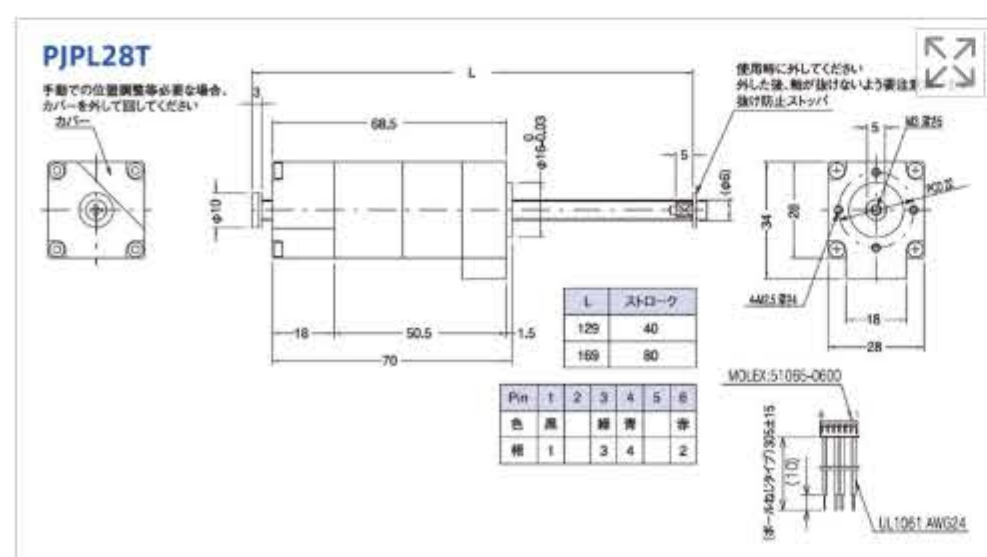
- 2mm screw lead (resolution 0.01mm/step)
- High efficiency achieved by using a rolled ball screw
- Easy control because it is a stepping motor
- Simple structure with a female thread inside the rotor supported by ball bearings, allowing the male thread to move in and out
- Long lifespan achieved by ball bearing support and ball screw



specification

Number of phases		2
Step angle	°	1.8
Number of steps		200
Screw lead	mm	2
Movement per step	mm	0.01
Effective stroke	mm	40 / 80
Shaft length	mm	129 / 169
Excitation method		2-2
Winding specifications		bipolar
Rated winding voltage	V	3.8
Rated winding current	A/φ	0.67
Wirewinding resistance	Ω/φ	5.6
thrust	N	twenty five
Operating temperature range	°C	-10 to +50
Motor Outer Dimensions	mm	28
mass	g	150
Insulation Classification		Type B (Coil allowable temperature)

Outline drawing



*Click to enlarge.

PJPL42T73D4A(100)R

42 type ball screw specification HB type linear step

This is a 42-type linear hybrid stepping motor.
It is convenient when you want to move a linear motion mechanism in a small space.
It is useful when more thrust is required than PFL/PFCL types.

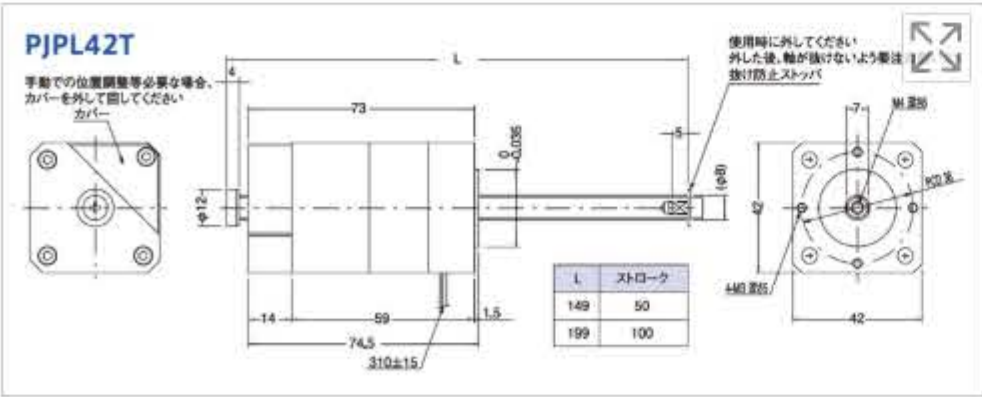
- Screw lead of 1 mm (resolution 0.005 mm/step)
- High efficiency achieved by using a rolled ball screw
- Easy control because it is a stepping motor
- Simple structure with a female thread inside the rotor supported by ball bearings, allowing the male thread to move in and out
- Long lifespan achieved by ball bearing support and ball screw



specification

Number of phases		2
Step angle	°	1.8
Number of steps		200
Screw lead	mm	1
Movement per step	mm	0.005
Effective stroke	mm	50 / 100
Shaft length	mm	149 / 199
Excitation method		2-2
Winding specifications		bipolar
Rated winding voltage	V	2.5
Rated winding current	A/φ	1.2
Wirewinding resistance	Ω/φ	2.1
thrust	N	80
Operating temperature range	°C	-10 to +50
Motor Outer Dimensions	mm	42
mass	g	400
Insulation Classification		Type B (Coil allowable temperature)

Outline drawing



*Click to enlarge.

PJPL42T73D4A(200)R

42 type ball screw specification HB type linear step

This is a 42-type linear hybrid stepping motor.
It is convenient when you want to move a linear motion mechanism in a small space.
It is useful when more thrust is required than PFL/PFCL types.

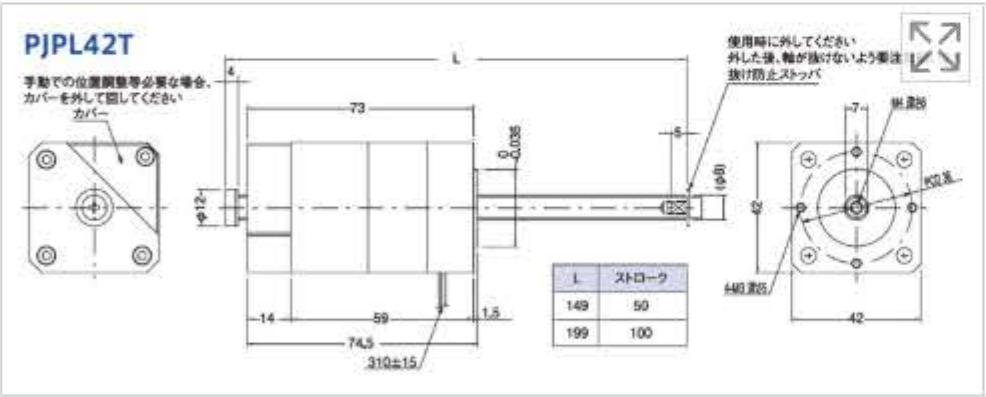
- 2mm screw lead (resolution 0.01mm/step)
- High efficiency achieved by using a rolled ball screw
- Easy control because it is a stepping motor
- Simple structure with a female thread inside the rotor supported by ball bearings, allowing the male thread to move in and out
- Long lifespan achieved by ball bearing support and ball screw



specification

Number of phases		2
Step angle	°	1.8
Number of steps		200
Screw lead	mm	2
Movement per step	mm	0.01
Effective stroke	mm	50 / 100
Shaft length	mm	149 / 199
Excitation method		2-2
Winding specifications		bipolar
Rated winding voltage	V	2.5
Rated winding current	A/φ	1.2
Wirewinding resistance	Ω/φ	2.1
thrust	N	80
Operating temperature range	°C	-10 to +50
Motor Outer Dimensions	mm	42
mass	g	400
Insulation Classification		Type B (Coil allowable temperature)

Outline drawing



*Click to enlarge.