www.aktuator.ru 8 (499) 703-13-84 aktuator-mail@mail.ru

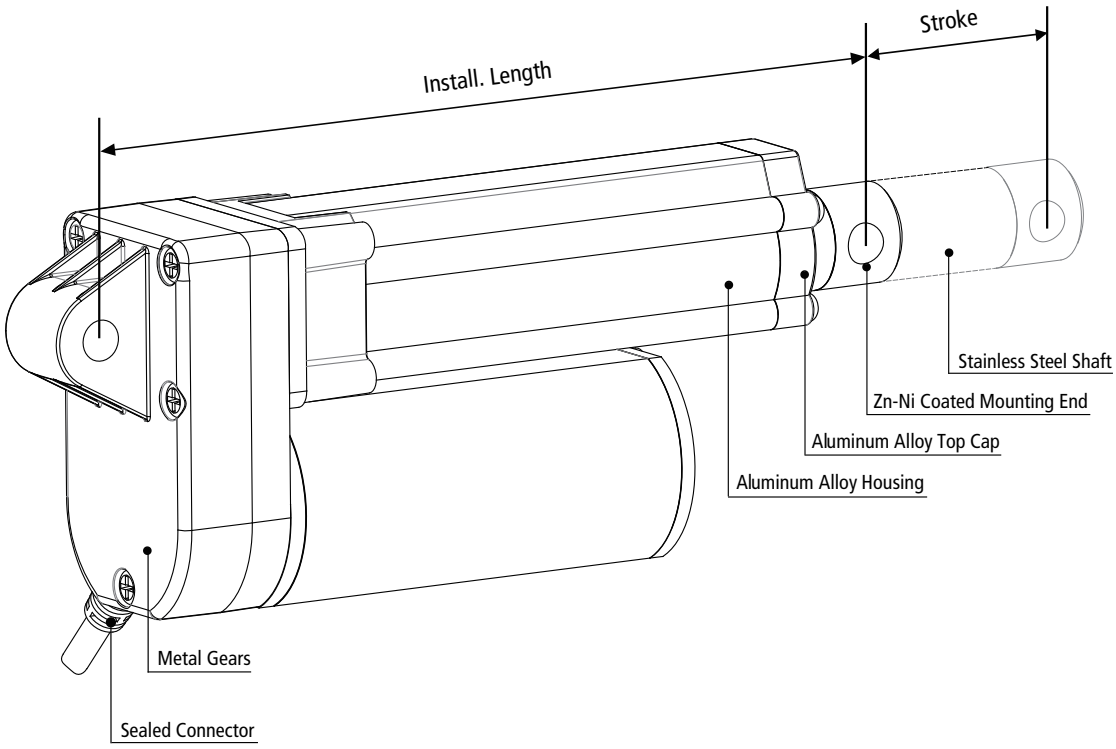
17SH809

Data Sheet

Contents

13 Other Models
12 Inquiry Table
10-11 Position Feedback
08-09 Overall Dimension
07 Rear Mount. End
06 Front Mount. End
05 Chart of Load, Speed and Current
04 Configs. Load & Speed
03 Definition of Terms

Definition of Terms



Stroke	How far the rod extends outwards from the body. The difference between fully extended length and fully retracted length. [Customizable]
Install. Length	The fully closed size. [Customizable]
Front Mount. End	Optional.
Rear Mount. End	Optional.
Mount. Holes	Can be rotated by 90°.
Dynamic Force	The max force that actuator is able to carry when it is moving.
Selflocking	The max force that linear actuator is able to hold when it stops.
Weather Protection	IP XX. The first digit: dust protection. The second digit: liquid protection. Please refer to [Table 1].
Duty Cycle	Continous working time 'a', rest time 'b'. Duty cycle is a/(a+b)x100%. Please refer to [Table 1].
Speed	Include free-load speed and full-load speed.
Hall Sensor	Provide pulse signals. Displacement measurement is achieved through pulse counting, and the phase difference of the waveform can be used to identify the rotation direction of motor. Check [Table 1] to see if it is available.
Potentiometer	Potentiometer is a three-terminal variable resistor with a rotating contact which is used to measure the displacement of actuators. Check [Table 1] to see if it is available.
Manual Override	Can be used to extend or retract the actuator without power for emergency. Check [Table 1] to see if it is available.

Configs.

Color	■ Sliver	□ Black	□ Customized			
Lead Screw	■ Acme Screw	□ Ball Screw				
Operation Mode	■ Electrical	□ Electrical + Manual				
Application	■ Industrial	□ Furniture	□ Medical			
Operational Temp.	□ 5 to 40℃	■ -10 to 65℃	■ -40 to 65℃			
Operating Noise	□ ≤45 dB	□ ≤50 dB	■ ≤65 dB			
Stroke Range	■ 50-600mm	■ 600-1,000mm				
Dynamic Load	□ ≤1,200N	■ ≤2,000N	□ ≤4,000N	□ ≤7,000N	□ ≤12,000N	□ ≤20,000N
Duty Cycle	□ 10%	□ 20%	■ 25%*	□ 50%	□ 100%	
Motor Type	■ Brushed DC	□ Stepper Motor	□ Brushless	□ Servo Motor		
Overload Protection	■ None	□ Clutch	□ Electronic	□ Thermistor		
Weather Protection	□ IP20	□ IP43	□ IP54	□ IP65	■ IP66	
Position Feedback	■ None	■ Endstop Signal	■ Hall Sensor	■ Potentiometer	□ Encoder	■ Reed Switches
Input Voltage	■ 12VDC	■ 24VDC	■ 36VDC	■ 48VDC	□ 110VAC	□ 220VAC

*Don't exceed four minutes continuous working at full load with 20℃.

■ Options for 17SH809 □ Other Models

[Table 1]

Parameters

Fill in code:

Code	Max. Dynamic Load ②	Max. Self-locking	Reduction Ratio	Pitch	Speed±10% (mm/s) ①		Max. Stroke w/o Pot. ③	Max. Stroke with Pot. ③
	(N)	(N)	-	(mm)	Free Load	Full Load	(mm)	(mm)
A	2,000	3,000	40:1	3.17	5	4	1,000	200
B	1,600	2,200	30:1	3.17	7	5.5	1,000	200
C	1,200	1,600	20:1	3.17	10	8	1,000	200
D	700	900	10:1	3.17	20	14	1,000	200
E	300	400	5:1	3.17	40	30	1,000	200
F	1,200	1,600	40:1	5	8	6	1,000	300
G	800	1,100	30:1	5	10.5	8	1,000	300
H	600	800	20:1	5	15	11	1,000	300
I	400	600	10:1	5	30	22	1,000	300
J	200	300	5:1	5	55	45	1,000	300

[Table 2]

① Measurements are made with actuators in connection with stable power supplies and ambient temperature at 20°C.

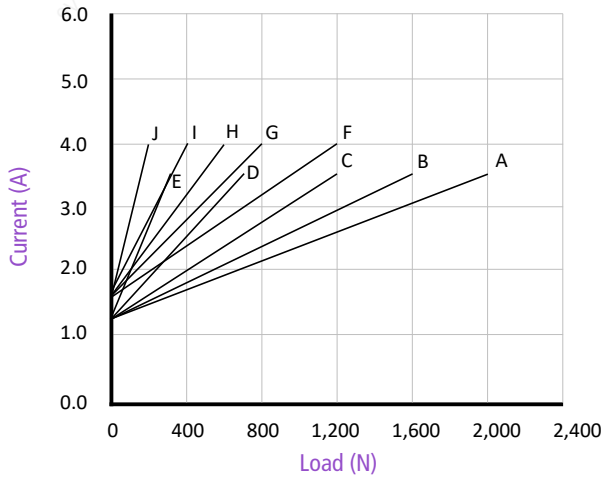
② For example, when real load is 1200N, choosing code (C) is fine. Of course, you can also choose (F) (B) or even (A) which come with more load buffer, higher safety factor and longer product service time.

③ There are many factors affecting the "customizable maximum stroke", such as load, speed, force direction, etc., so the real application scenarios should be considered. If the parameters you required are not listed, please contact our sales engineers.

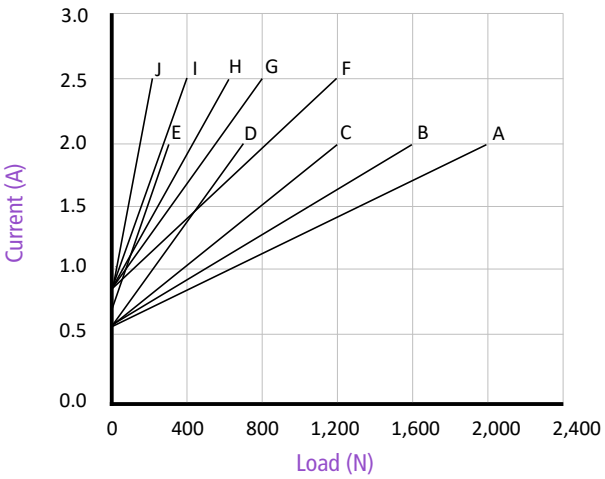
Charts

Fill in code:

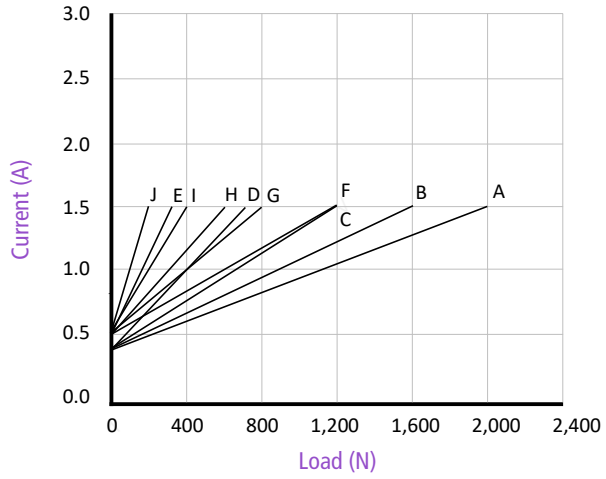
1 = 12v



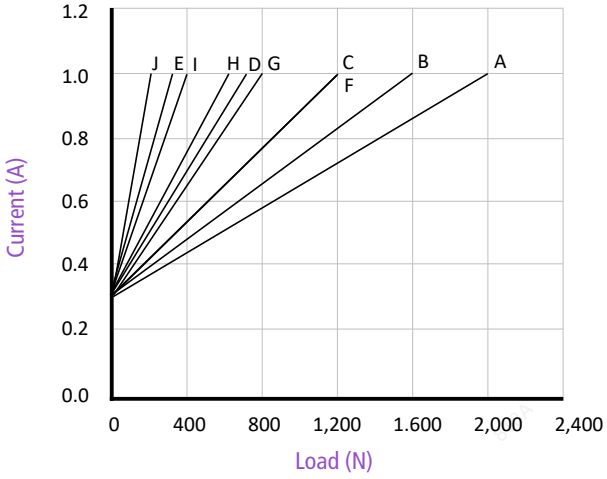
2 = 24v

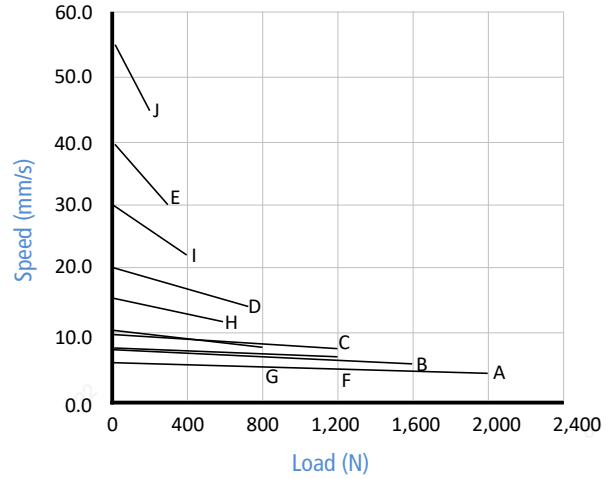


3 = 36v



4 = 48v



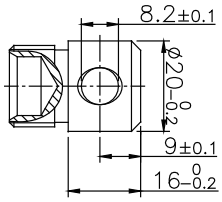


* Measurements are made with actuators in connection with stable power supplies and ambient temperature at 20°C.

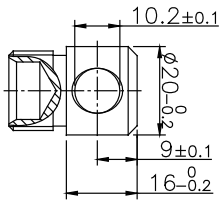
Front Mounting End

1. Please contact our sales team if none of the options below meet your requirements.

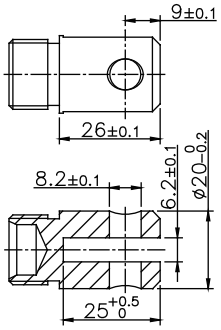
Fill in code:



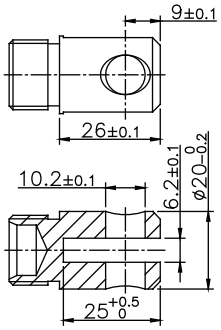
F01



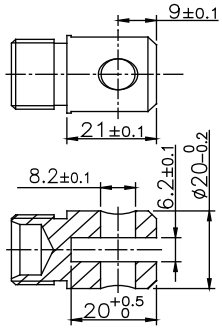
F02



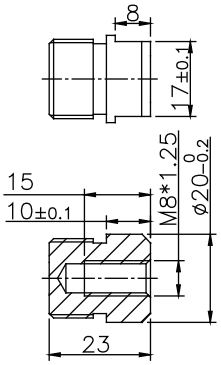
F03



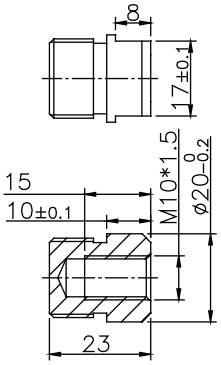
F04



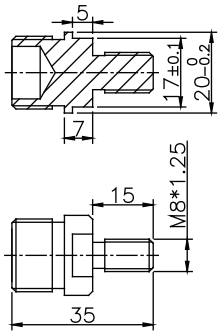
F05



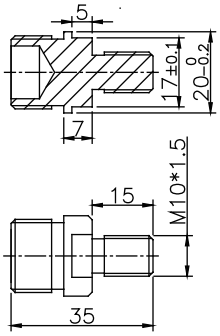
F06



F07

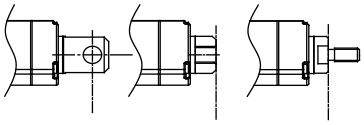


F08



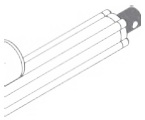
F09

2. Start of Installation Length

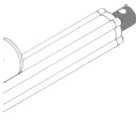


3. Hole Directions

Fill in code:



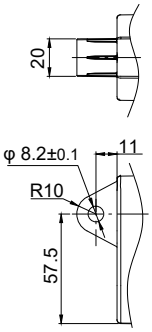
1 = 90°



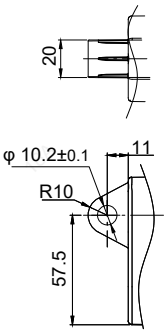
2 = 0°

Rear Mounting End

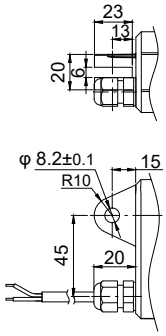
1. Please contact our sales team if none of the options below meet your requirements. Fill in code:



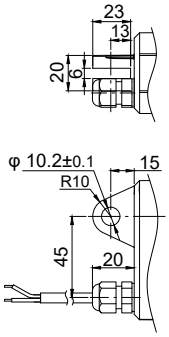
R01



R02

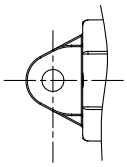


R03

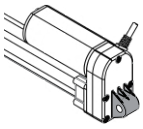


R04

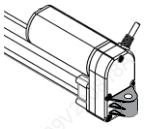
2. End of Installation Length



3. Hole Directions Fill in code:



1 = 90°



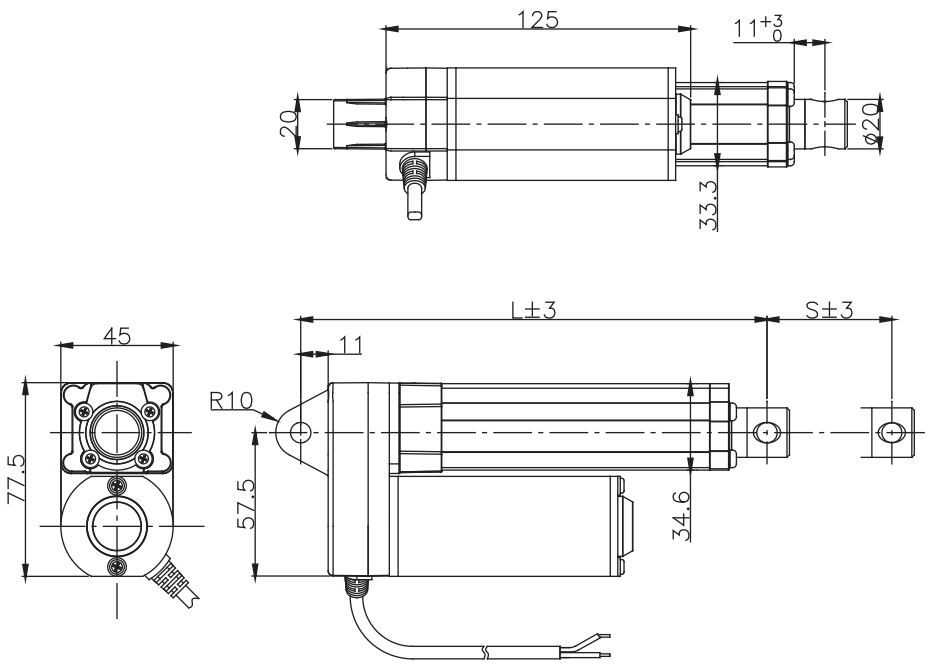
2 = 0°
* not applied to R03 & R04

www.aktuator.ru 8 (499) 703-13-84 aktuator-mail@mail.ru

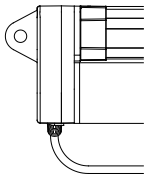
Dimension

S = mm, L = mm

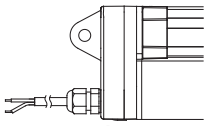
1. Overall Size [w/o Potentiometer]



Fill in code:



A: sideway cable outlet
*not applied to R03 & R04



B: bottom cable outlet

2. Installation Size (L≥A+B+C)

A. Mounting Ends	Rear Ends	
Front Ends	R01, R02	R03, R04
F01, F02, F05-F09	S+108	S+112
F03, F04	S+115	S+119

[Table 3]

B. Stroke Range	mm
30 - 299	+ 0
300 - 399	+ 12
⩾ 400	+ 22

[Table 4]

C. Reed Switch	mm
Optional	+ 10

[Table 5]

Example

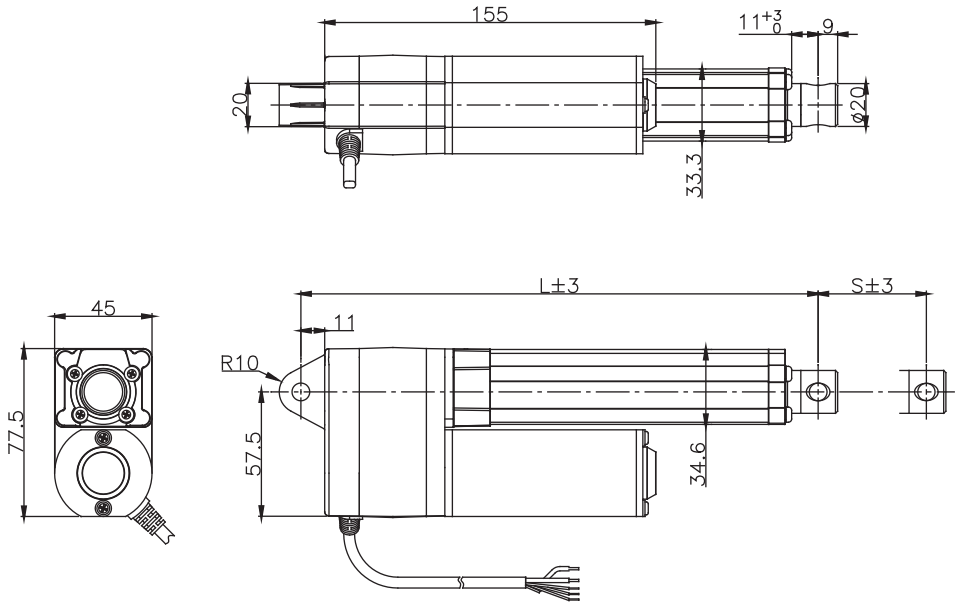
Front Mount. End	Rear Mount. End	Stroke	A	B	w/o Reed Switch	L⩾A+B+C
F04	R01	300	300+115	+12	C = 0	⩾ 427

[Table 6]

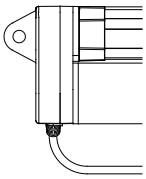
Dimension

S = mm, L = mm

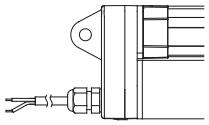
1. Overall Size [with Potentiometer]



Fill in code:



A: sideway cable outlet
*not applied to R03 & R04



B: bottom cable outlet

2. Installation Size (L≥A+B+C)

A. Mounting Ends	Rear Ends	
Front Ends	R01, R02	R03, R04
F01, F02, F05-F09	S+140	S+144
F03, F04	S+147	S+151

[Table 7]

B. Stroke Range	mm
30 - 300	+ 0

[Table 8]

C. Reed Switch	mm
Optional	+ 10

[Table 9]

Example

Front Mount. End	Rear Mount. End	Stroke	A	B	w/o Reed Switch	L≥A+B+C
F04	R01	300	300+147	+0	C = 0	≥ 447

[Table 10]

www.aktuator.ru 8 (499) 703-13-84 aktuator-mail@mail.ru

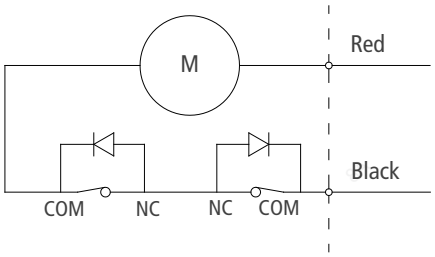
Signal Feedback

Fill in code:

0 = None
1 = Endstop Signal
2 = Potentiometer
3 = Hall Effect Sensor
4 = Reed Switches

0. Standard Limit Switches without Signal feedback

Standard 17SH809 comes with limit switches that shut off the motor automatically at the end of its travel.

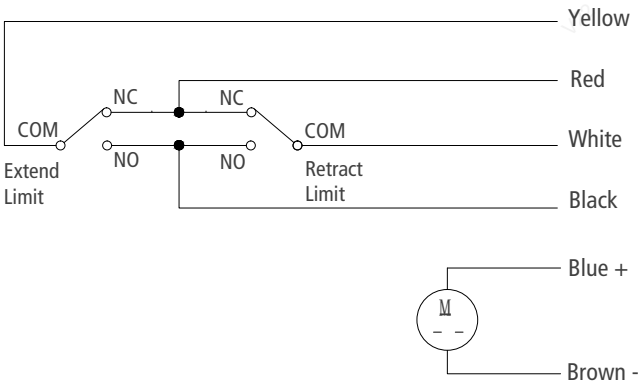


Wiring		
	Black	Red
Extend	-	+
Retract	+	-

[Table 11]

1. Endstop Signal

The actuator can be equipped with endstop signals output, but it will not auto-stop at neither end of the travel.



Power Wire Coding		
	Brown	Blue
Extend	-	+
Retract	+	-
Signal Wire Coding		
Black	Extend / Retract limit, N.O.	
Red	Extend / Retract limit, N.C.	
Yellow	Extend limit. COM.	
White	Retract limit. COM.	

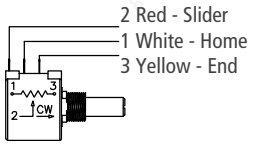
[Table 12]

2. Potentiometer

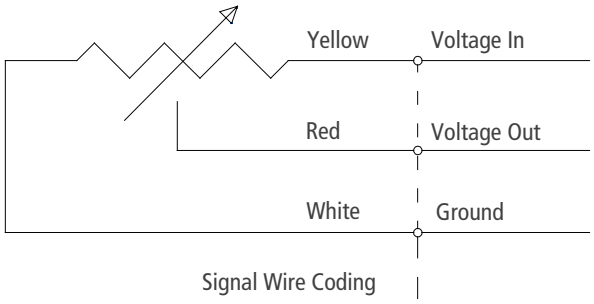
Code	Max. Stroke	Resistance Value per mm
A, B, C, D, E	200 mm	0.047K Ω
F, G, H, I, J	300 mm	0.030K Ω

* Start value 0K Ω

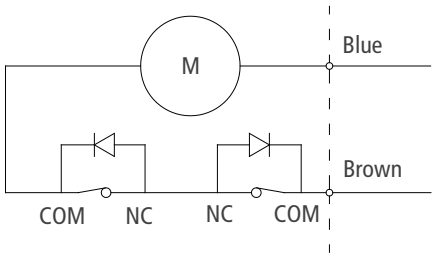
[Table 13]



Connect 1+2, resistance value increase, actuator extend.



Signal Wire Coding



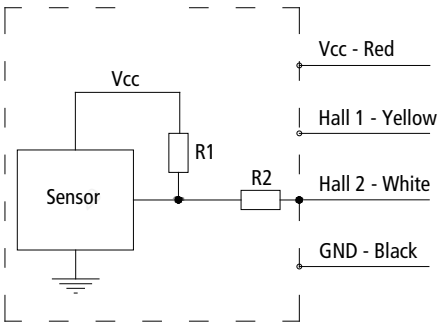
Internal Motor Wiring

3. Hall Sensor (standard dual-sensor)

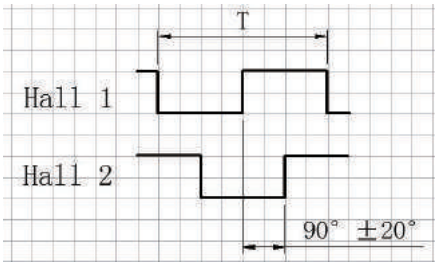
	Pulse Equivalent Per Sensor (pulse/mm)	
	1 pole pair	**4 pole pairs (standard)**
A	12.60	50.40
B	9.45	37.80
C	6.30	25.20
D	3.15	12.60
E	1.57	6.30
F	8.00	32.00
G	6.00	24.00
H	4.00	16.00
I	2.00	8.00
J	1.00	4.00

[Table 14]

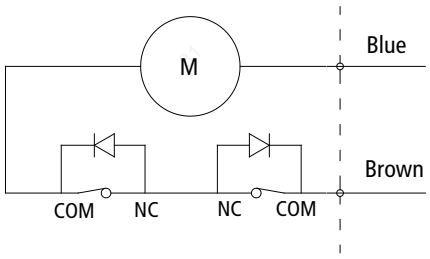
Wire Coding



* Power supply (V)= 5~15V



Oscillogram



Internal Motor Wiring

4. Reed switch

Standard N.O. contact. Optional N.C. contact.

Inquiry Table

RESET

	Voltage	1 = 12VDC 2 = 24VDC 3 = 36VDC 4 = 48VDC
	Load & Speed	See [Table 2]
	Stroke (mm)	Please contact us if the stroke you required is out of range.
	Install. Length (mm)	See Table [3] - [10]
	Front Mount. End	F01 - F09 FX = Custom
	Rear Mount. End	R01 - R04 RX = Custom
	Mount. Hole Direction	Front 1 = 90° 2 = 0 Rear 1 = 90° 2 = 0°
	Signal Feedback	0 = None 1 = Endstop Signal 2 = Potentiometer 3 = Hall Sensor 4 = Reed Switches
	Cable Length	1 = 500 mm 2 = 1,000 mm 3 = 2,000 mm X = Custom
	Connector	A = Sideway Cable Outlet B = Bottom Cable Outlet 0 = Tinned Bared Wires 1 = Match with KZ-series Controller X = Custom
	Working Temperature	1 = -10℃ to 65℃ 2 = -40℃ to 65℃
Application	Working Frequency	Estimated cycles work per day
	End Use	Indoor or outdoor, and please descirbe your end use.
	Your contact	Company Name Tel. Email

You may also be interested in...

Model	Load (N)	Stroke (mm)	Speed (mm/s)	Install.Length (mm)	Overall Size (mm)	IP rate	Application
17SH803 (Track)	1,500	50-600	16-32	155	155 x 77.4 x L	IP20	Furniture
17SH823	3,000	50-600	5.0-15	S+155	148.5 x 80 x L	IP54	Furniture Medical Care
17SH810	4,000	50-600	5.0-32	S+150	156 x 83 x L	IP43	Furniture Medical Care
17SH801	6,000	50-600	4.7-28	S+175	156 x 83 x L	IP43	Furniture Medical Care
17SH822	6,000	50-600	5.0-16	S+175	166 x 91 x L	IP54	Furniture Medical Care
17SH806	1,200	50-600	5.5-80	S+105	40 x 75 x L	IP66	Industrial
* 17SH809	2,000	50-600	5.0-55	S+108	45 x 77.5 x L	IP66	Industrial
17SH825	2,000	50-600	6-15	S+115	43 x 84.5 x L	IP66	Furniture Medical Care Industrial
17SH820	2,500	50-600	2.5-22	S+120	64.5 x 102 x L	IP66	Furniture Medical Care Industrial
17SH820O	1,000	50-600	25-50	S+140	64.5 x 102 x L	IP66	Industrial
17SH830	4,000	50-600	5.5-35	S+200	76 x 151 x L	IP65	Industrial
17SH830O	7,000	50-600	5.5-35	S+200	76 x 151 x L	IP65	Industrial
17SH808	7,000	50-600	5.5-35	S+250	77 x 151 x L	IP65	Industrial
17SH805F	12,000	50-1,000	6.5-37	S+200	102 x 154 x L	IP66	Industrial

* You are now reading...