CHBG®
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Encoder Product Selection Manual

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12Years Strong Support Of Manufacture

Zhejiang Bojia Industrial Automation Co., Ltd. is a compreh ensive high-tech enterprise integrating R&D, production, and sales. The company's core products include automation products such as sensors, controllers, and mechanical transmission parts.

The company's products are adopted and trusted by various industrial application engineers, and the company's technology is widely used in daily automation equipment. At the same time, the company has gathered many senior engineers and industrial technicians, with independent innovation and research and development capabilities, constantly improving the production process and multi-functional production lines, equipped with experimental equipment and quality control equipment.

The company has various invention patents and utility modelpatentsandhaspassedtheIS09001system certification.

The products have passed CCC, CE, ROHS, and other related testing certifications, and are sold well at home and abroad.

The company provides comprehensive automation solutions for global customers by continuously improving product quality and service. Bojia hopes to complete our mission, create self-value and serve the industry.

Encoder
CATALONG

ZSP2504 Series 01
ZSP3004 Series 03
ZSP3806 Series 04
ZSP5008 Series 05
ZSP5810 Series 07
ZSF5815 Series 09
ZBP3808 Series 11
ZKT3808 Series 13
ZKT5812 Series 15
ZKT8030 Series 17
ZKT10030 Series 19
ZSC2504 Series 21
ZSC3806 Series 23
ZBC3808 Series 24
ZSM3806 Series 23
JSP5606 Series 24
JSA/JSP3806 Series 24
E6B2 Series 24
E6C2 Series 24
OVW2 Series 24
E50S8 Series 24
Hand wheel Series 24
Handheld box Series 24
Stretch box series Series 24
meter counting wheel Series 24
L-shaped bracket 24

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Encoder Selection Guide

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Principle

Rotary encoder is speed and moved sensor which integrate optical,me chaincal and electrical technology. When the encoder shaft drives the lightWhen rotating shed plate, the light emitted from the light emitting element is cut to shed the light plate, slit into the intermittent light and accepted element receives,The production of the initial signal, the signal through the following circuit and output pulse (or code) signal (see Figure 1, figure 2)

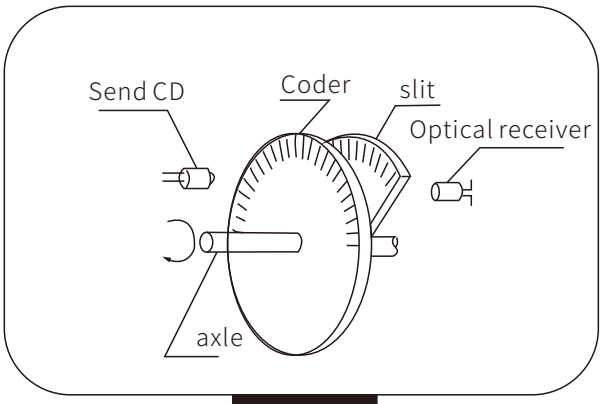


Figure 1

Characteristic

It has the advantages of small volume, light weight, variety, complete function, high frequency response, high resolving power, strong bearing capacity, small torque, low energy consumption; performance is stable, reliable, long life and other characteristics.

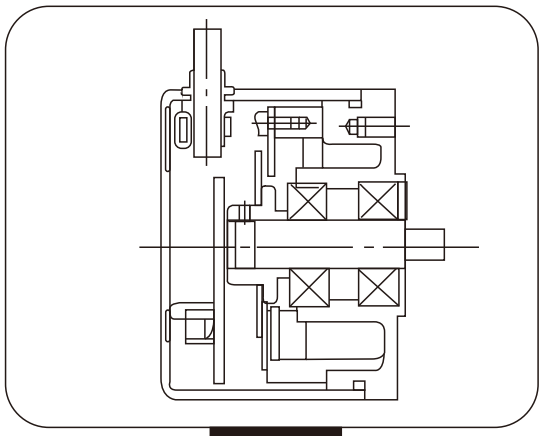


Figure 2

Incremental encoder

incremental encoder shaft rotates, a corresponding pulse output,judge the direction of'rotation'And the pulse number increase or decrease needed judgment circuit and counter to achievethe rear.

the counting point can be set arbitrarily, and can realize the unlimited accumulation andmeasurement of multi ring. Can also beTake no forwarding a Z pulse signal, as a reference for mechanical zero.

when the number of pulses has been fixed, and the needto improve the resolution, canuse the phase difference of 90 DEG A,BThe two signals, the original number of pulse frequency.

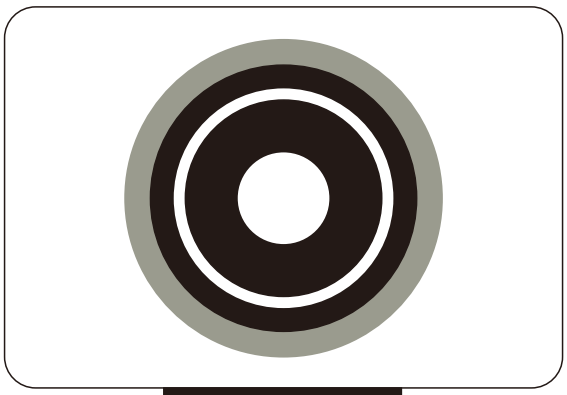
Absolute encoder

absolute encoder shaft rotates, one one corresponding with the position code (binary BCD code, etc.)

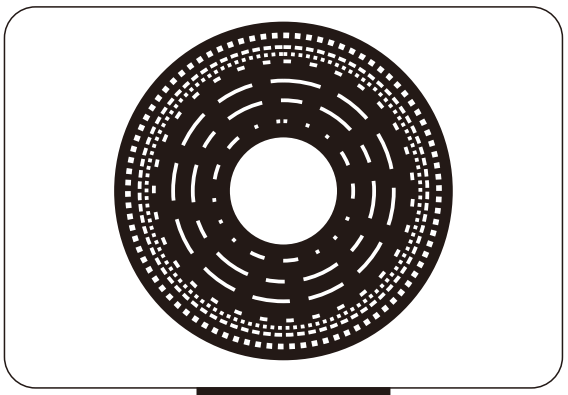
The output from the code,. Small change, can judge the positive and negative direction and displacement position, without judgment to the circuit.

It has an absolute zero code, when power failure or shutdown, and then boot re measure-ment, can accurate read the power failure or shutdown position code, and accurately find the zero code.

in general, the measurement range of absolute encoder is 0 degrees ~360 degrees, but the special models also can be real.Now the multi circle measurement.



Incremental coder



Absolute coder

CoderSelection Guide

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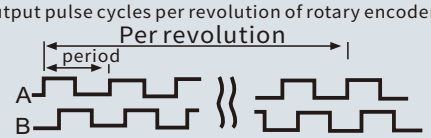
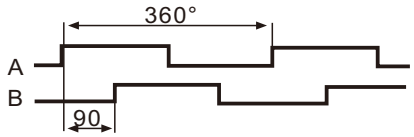
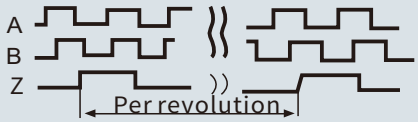
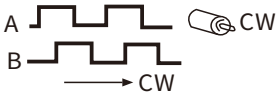
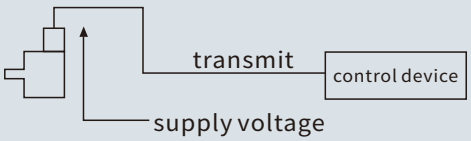
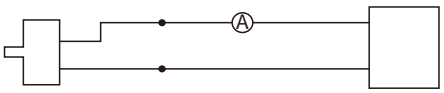
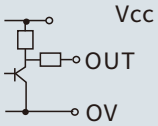
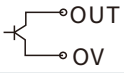
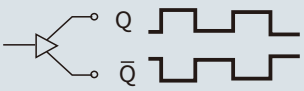
Term	character	unit	explain	remarks
pulse	—	—	A square wave is also called a rectangular wave. 	
Number of output pulses per revolution	N	P/R	Number of output pulse cycles per revolution of rotary encoder 	
90 ° phase difference two signal	A,B	—	Two-way signal with electric angle difference of 90 ° 	
Zero position signal	Z	—	Only one absolute position signal is output per revolution 	
Clockwise direction	CW	—	The direction of rotation is the same as that of clockwise rotation from the encoder shaft headTo. When the rotary encoder of our factory rotates clockwise, A is the sameFor phase B, it is relatively advanced.	
supply voltage	Vcc	V		supply voltage / Allowable range of power supply voltage: 5V ± 5V±0.25V; 12V ± 12V±1.2V; 15V ± 15V±1.5V; 24V ± 24V±2.4V
Consumption current	Icc	mA	Provide power to encoder as specified in the standard Press the measured coding maximum working current 	
Voltage output	E	—	Transistor emitter grounded, collector with load resistance output circuit	
Open collector output	C	—	A circuit that outputs directly from the collector of a transistor.	
Long-line driver output	H.D L.P		The integrated block is used for long-distance output, and the signal is output in positive and negative directions. speed It is fast and has strong anti-interference ability. It can also detect cable breakage.	
Line receiver	—	—	A special IC that receives the signal output by the driver. When using, please Note: The long line driver and line receiver must match. If selected Output with 75113 long line driver, and receive with 75115 line If the receiver does not match, it will affect the use.	Matching table of long line driver and line receiver: code name D: Long line drive 75113, Line receiver 75115; L: 26LS31, 56L32; P: 75183, 75182; M: 88C30, 88C20; H: 3487, 3486

ZSP2504 Series

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- Outer diameter 25mm, shaft diameter 4mm.
  Using ASIC photoelectric devices, solid and reliable.
  Long service life, strong anti-interference ability, and wide temperature use range.

ZSP	25	04	E	C	PULSE	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental S:Solid shaft P:Universal	25mm	4mm	E: Cable rear outlet	C: Open collector output E: voltage output	100, 200, 360, 500 special specifications can be customized	3=A、B、Z	M=12-24v blank space:5-12V	Blank: positive zero position F: Anti-zero position	Standard 0.5M Other sizes can be customized

Product size

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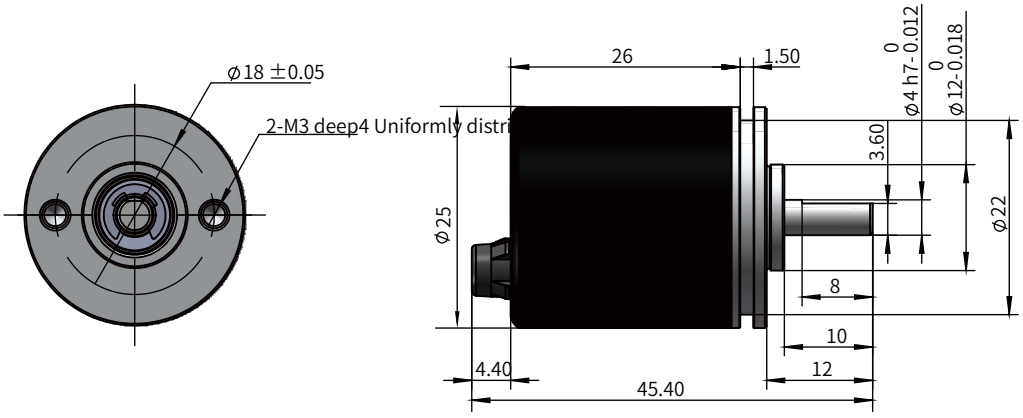


Technical parameter

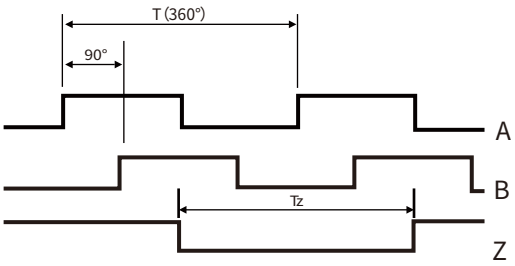
CHBG

Electrical parameters		Mechanical parameters	
Pulse number	maximum500P/R	Starting torque	$2*10^{-3}$N·m (+25°C)
Consumption current	⩽100mA	Allowable load of shaft	axial9.8N, radial9.8N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-8}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP54
Output Item	A,B,Z	Anti-vibration	50m/S (10~200Hz x,y,z2 hours in three directions)
output voltageVH	⩾Vcc-2.5V	shock resistance	980m/S²(x,y,zTwo times in three directions, each lasting for 6ms)
output voltageVL	⩽0.5V	material	Shaft: stainless steel
	⩽1.0V		End face: aluminum alloy
supply voltage	DC5V~12V		Shell: aluminum alloy plastic powder
	DC12V~24V	weight	50g
Rise/fall time	5V drive⩽0.1us		
	24V<1us		

Export waveform and signal position accuracy

CHBG

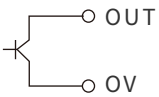
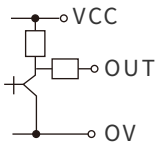
Axial clockwise



(C、E) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output
Export circuit		

Wiring list

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Signal	VCC	OV	SIG A	SIG B	SIG Z	N.C
Cable wire color	brown	blue	black	white	orange	Copper mesh

ZSP3004 Series

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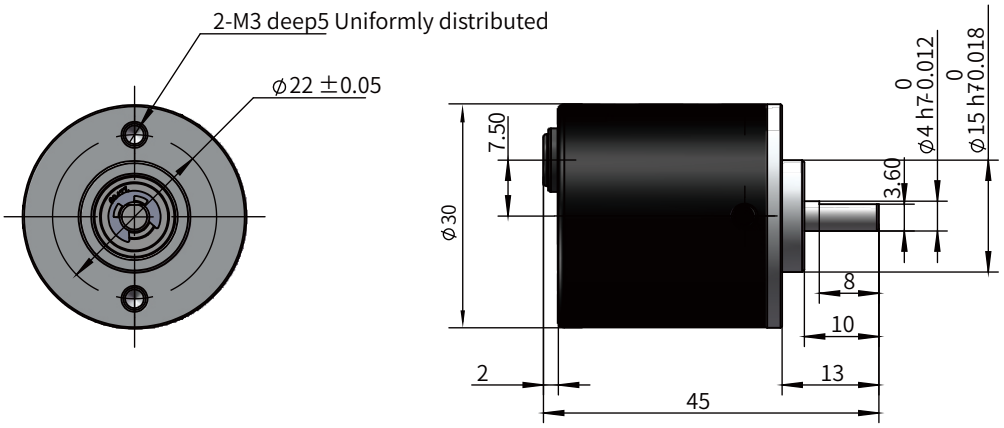
- Outer diameter 30mm, shaft diameter 4mm.
  Using ASIC photoelectric devices, solid and reliable.
  Long service life, strong anti-interference ability, and wide temperature use range.

ZSP	30	04	E	C	PULSE	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental S:Hollow shaft P:Universal	30mm	4mm	E: Cable rear outlet	C: Open collector output E: voltage output F: Push-pull output 50: Driver output	36,50, 60, 100, 200, 250, 300, 360, 500, 600 special specifications can be customized	3=A、B、Z 6=AĀ、BB̄、ZZ̄	M=12-24v blank space:5-12V	Blank: positive zero position F: Anti-zero position	Standard 0.5M Other sizes can be customized

Product size

CHBG



Technical parameter

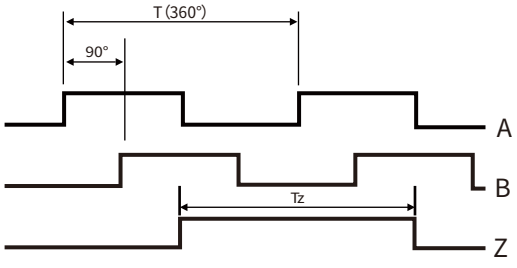
CHBG

Electrical parameters		Mechanical parameters	
Pulse number	maximum600P/R	Starting torque	$2*10^{-3}$N · m (+25°C)
Consumption current	⩽100mA	Allowable load of shaft	axial9.8N, radial9.8N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-7}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP 54
Output Item	A,B,Z	Anti-vibration	50m/S (10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	⩾Vcc-2.5V	shock resistance	980m/S²(x,y,zTwo times in three directions, each lasting for 6ms)
output voltageVL	⩽0.5V	material	Shaft: stainless steel
	⩽1.0V		End face: aluminum alloy
supply voltage	DC5V~12V		Shell: aluminum alloy plastic powder
	DC12V~24V	weight	70g
Rise/fall time	5V drive⩽0.1us		
	24V<1us		

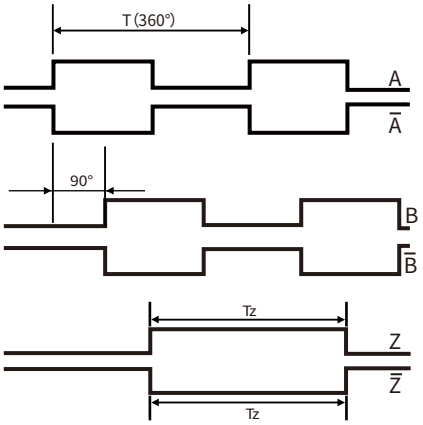
Export waveform and signal position accuracy

CHBG

Axial clockwise



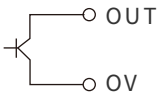
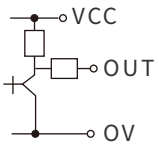
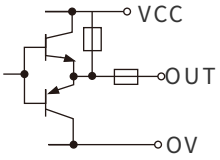
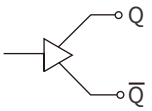
(C、E、F) export



(L) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)
Export circuit				

Wiring list

CHBG

Signal	VCC	OV	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh

ZSP3806 Series

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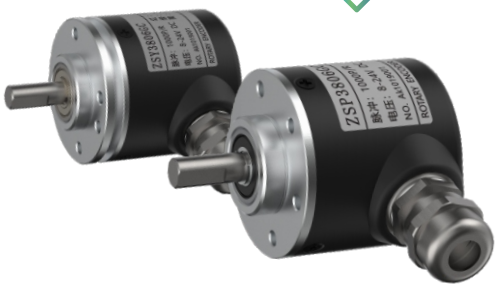
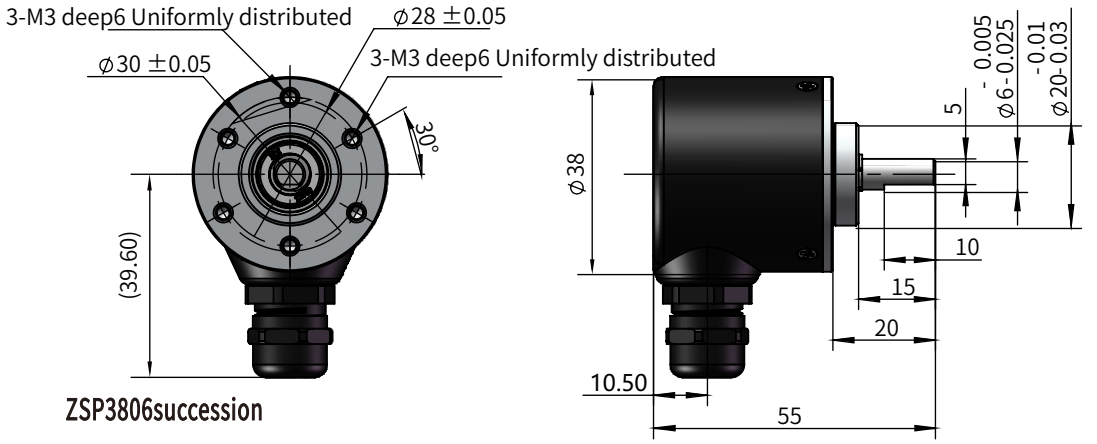
- Outer diameter 38mm, shaft diameter 6mm.
  Using ASIC photoelectric devices, solid and reliable.
  Long service life, strong anti-interference ability, and wide temperature use range.



ZSP	38	06	G	C	— PULSE —	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental S:Solid shaft P:Universal Ordinary type	38mm	6mm	G: Cable side out E: Cable rear outlet	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (5-30V)	20,25,30,40,50,60,80,90, 100,200,240,250,256, 300,360,400,500,600, 720,800,1000, 1024,1200,1500,1800, 2000,2048,2500,3000 ,3600(special specifications can be customized)	3＝A、B、Z 6＝AA̅、BB̅、ZZ̅	M＝8-24v blank space：5V	Blank: positive zero position F: Anti-zero position	Standard 2M Other sizes can be customized

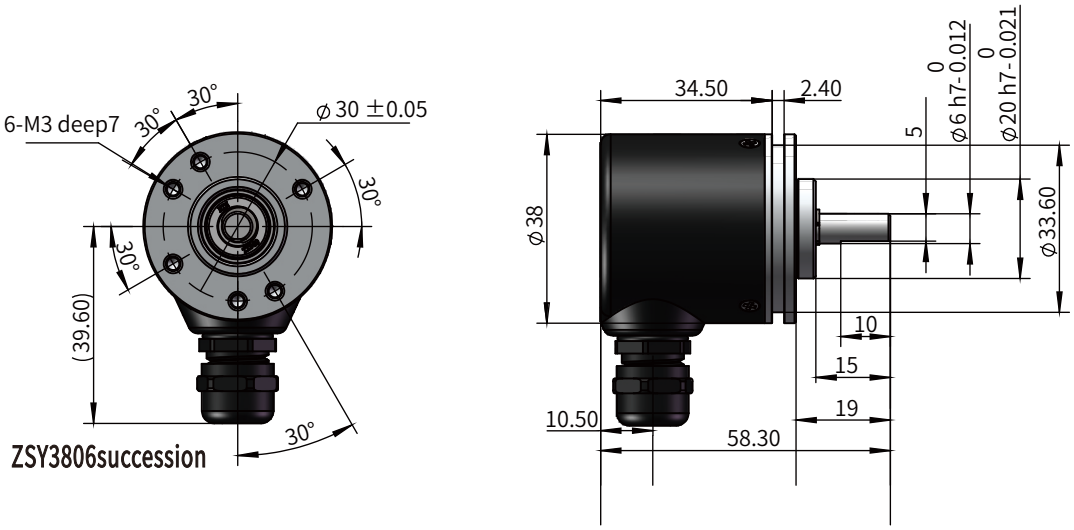
Product size

CHBG



Technical parameter

CHBG



ZSP3806 Series

Technical parameter

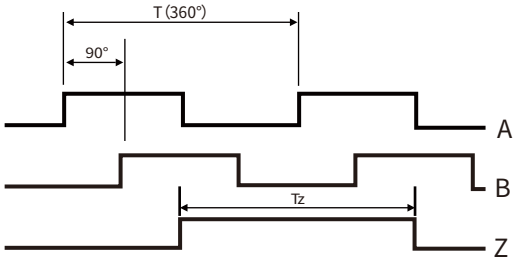
CHBG

Electrical parameters		Mechanical parameters	
Pulse number	maximum3600P/R	Starting torque	$2*10^{-3}$N·m (+25°C)
Consumption current	≤100mA	Allowable load of shaft	axial10N, radial20N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-7}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP 65
Output Item	A,B,Z,$\overline{A}$,$\overline{B}$,$\overline{Z}$	Anti-vibration	50m/S^2(10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	≥Vcc-2.5V	shock resistance	980m/S^2(x,y,zTwo times in three directions, each lasting for 6ms)
output voltageVL	≤0.5V	material	Shaft: stainless steel
	≤1.0V		End face: aluminum alloy
supply voltage	DC5V~12V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	190g
Rise/fall time	5V drive≤0.1us		
	24V<1us		

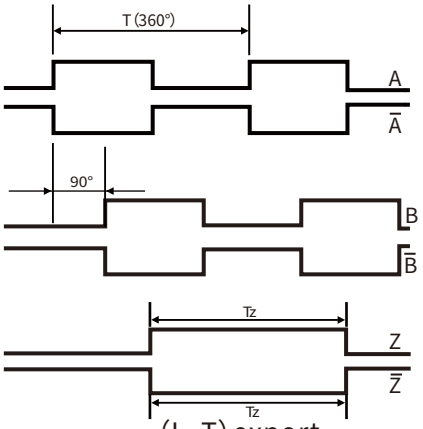
Export waveform and signal position accuracy

CHBG

Axial clockwise



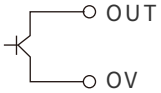
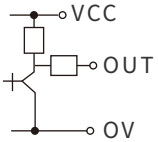
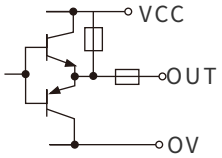
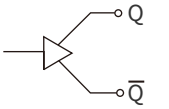
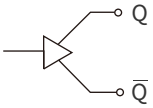
(C、E、F) export



(L、T) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)	T:driveexport(8-24V)
Export circuit					

Wiring list

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Signal	VCC	OV	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh

ZSP5008 Series

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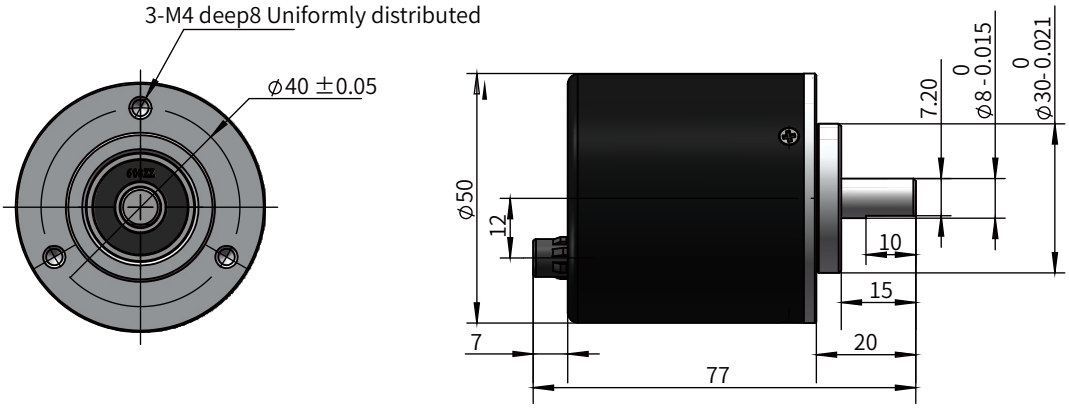
- Outer diameter 50mm, shaft diameter 8mm.
  Using ASIC photoelectric devices, solid and reliable.
  Long service life, strong anti-interference ability, and wide temperature use range.

ZSP	50	08	E	C	— PULSE —	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental S:Solid shaft P:Universal	50mm	8mm	G: Cable side out	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (8-24V)	10,20,25,30,40,50,60,80,90 100,200,240,250,256, 300,360,400,500,600, 720,800,1000, 1024,1200,1500,1800, 2000,2048,2500,3000 ,3600,5000 (Special specifications can be customized)	3=A、B、Z 6=AĀ、BB̄、ZZ̄	M=8-24v blank space:5V	Blank: positive zero position F: Anti-zero position	Standard 2M Other sizes can be customized

Product size

CHBG



Technical parameter

CHBG

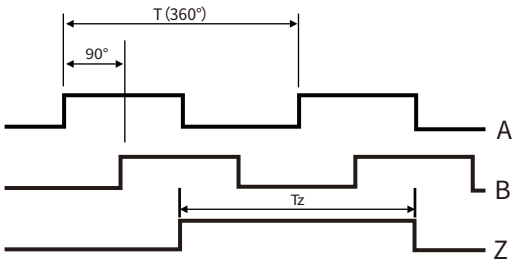
Electrical parameters		Mechanical parameters	
Pulse number	maximum5000P/R	Starting torque	1.5*10⁻³N·m (+25°C)
Consumption current	⩽100mA	Allowable load of shaft	axia20N, radia30N
Response frequency	0~100kHz	Moment of inertia	4x10⁻⁸Kgm²
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP 54
Output Item	A,B,Z,$\overline{A}$,$\overline{B}$,$\overline{Z}$	Anti-vibration	50m/S² (10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	⩾Vcc-2.5V	shock resistance	980m/S²(x,y,zTwo times in three directions, each lasting for 6ms)
output voltageVL	⩽0.5V	material	Shaft: stainless steel
	⩽1.0V		End face: aluminum alloy
supply voltage	DC5V~12V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	250g
Rise/fall time	5V drive⩽0.1us		
	24V<1us		

Page 09

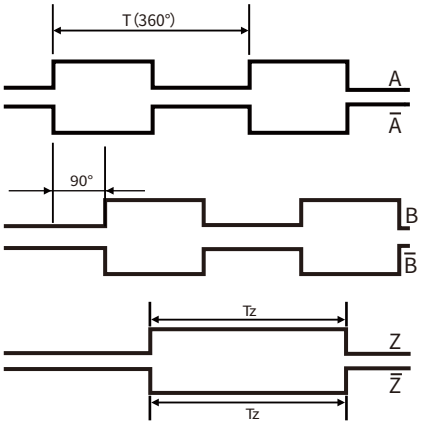
Export waveform and signal position accuracy

CHBG

Axial clockwise



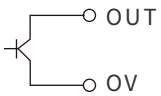
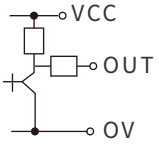
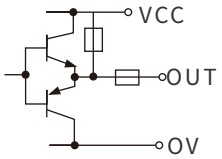
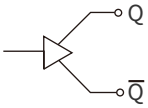
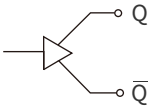
(C、E、F) export



(L、T) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)	T:driveexport(8-24V)
Export circuit					

Wiring list

CHBG

Signal	VCC	OV	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh

ZSP5810 Series

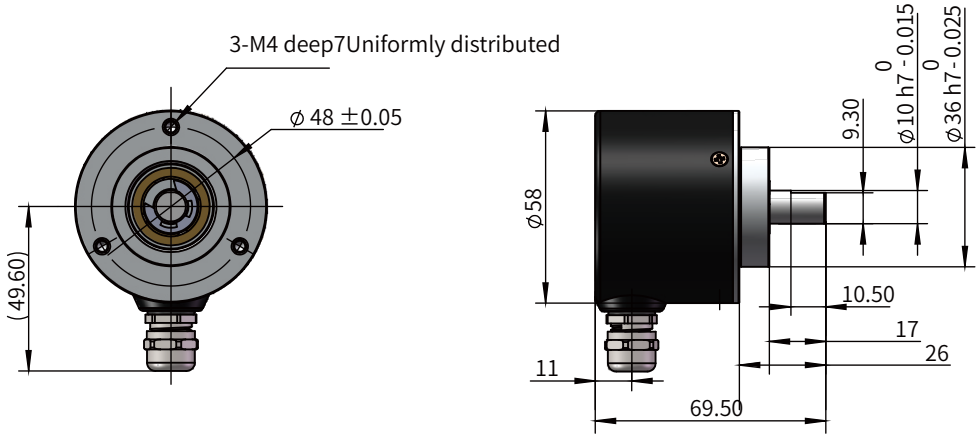
CHBG 勃嘉工控

※ Outer diameter 58mm, shaft diameter 10mm.
Using ASIC photoelectric devices, solid and reliable.
Long service life, strong anti-interference ability, and wide temperature use range.

ZSP	58	10	G	C	— PULSE —	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental S:Solid shaft P:Solid shaft	58mm	10mm	G: Cable side out E: Cable rear outlet	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (8-24V)	10,20,25,30,40,50,60,80,90 100,200,240,250,256, 300,360,400,500,600, 720,800,1000, 1024,1200,1500,1800, 2000,2048,2500,3000 ,3600,5000 (Special specifications can be customized)	3=A、B、Z 6=AĀ、BB̄、ZZ̄	M=8-24v blank space:5V	Blank: positive zero position F: Anti-zero position	Standard 2M Other sizes can be customized

Product size

CHBG



Technical parameter

CHBG

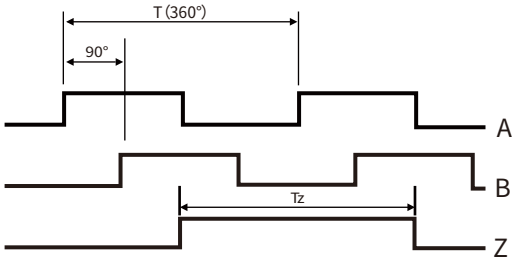
Electrical parameters		Mechanical parameters	
Pulse number	maximum5000P/R	Starting torque	$3*10^{-3}$N · m (+25°C)
Consumption current	⩽100mA	Allowable load of shaft	axia20N, radia40N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-8}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	6000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP65
Output Item	A,B,Z,$\overline{A}$,$\overline{B}$,$\overline{Z}$	Anti-vibration	50m/S^2(10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	⩾Vcc-2.5V	shock resistance	980m/S^2(x,y,zTwo times in three directions, each lasting for 6ms)
output voltageVL	⩽0.5V	material	Shaft: stainless steel
	⩽1.0V		End face: aluminum alloy
supply voltage	DC5V~12V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	310g
Rise/fall time	5V drive⩽0.1us		
	24V<1us		

Page 11

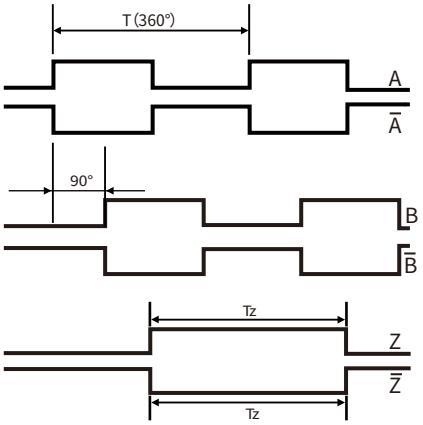
Export waveform and signal position accuracy

CHBG

Axial clockwise



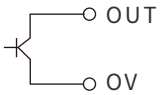
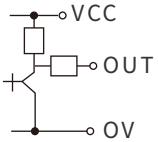
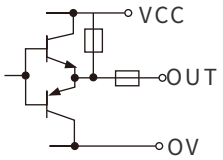
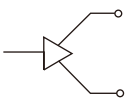
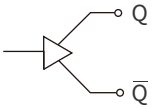
(C、E、F) export



(L、T) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)	T:driveexport(8-24V)
Export circuit					

Wiring list

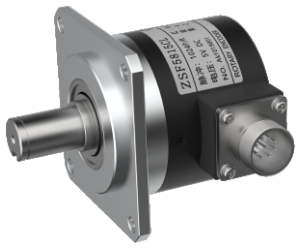
CHBG

Signal	VCC	OV	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh

ZSF5815 Series

CHBG 勃嘉工控

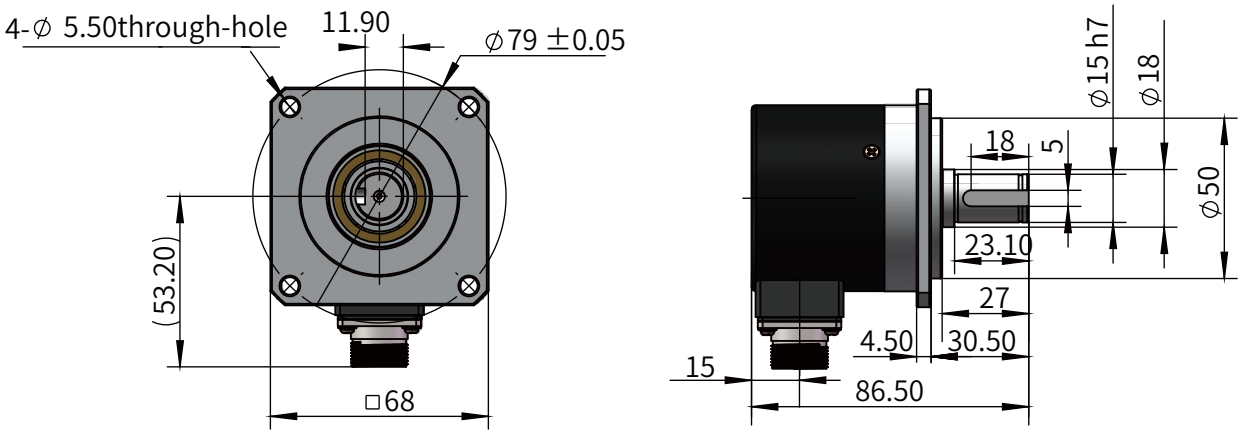
※ Outer diameter 58mm, shaft diameter 15mm.
Using ASIC photoelectric devices, solid and reliable.
Long service life, strong anti-interference ability, and wide temperature use range.



ZSF	58	15	E	C	PULSE	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental S:Solid shaft F:Flange type	58mm	15mm	G: Cable side out C:Plug side out	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (8-24V)	20,25,30,40,50,60,80,90 100,200,240,250,256, 300,360,400,500,600, 720,800,1000, 1024,1200,1500,1800, 2000,2048,2500,3000 ,3600 (Special specifications can be customized)	3=A、B、Z 6=AA̅、BB̅、ZZ̅	M=8-24v blank space:5V	Blank: positive zero position F: Anti-zero position	Standard 2M Other sizes can be customized

Product size

CHBG



Technical parameter

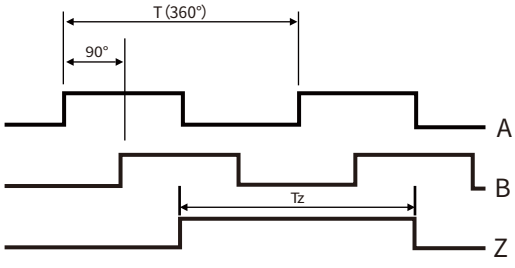
CHBG

Electrical parameters		Mechanical parameters	
Pulse number	maximum3600P/R	Starting torque	$5*10^{-2}$N · m (+25°C)
Consumption current	≤100mA	Allowable load of shaft	axia50N, radia50N
Response frequency	0~100kHz	Moment of inertia	$6.5x10^{-8}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP65
Output Item	A,B,Z,$\overline{A}$,$\overline{B}$,$\overline{Z}$	Anti-vibration	50m/S^2(10~200Hz x,y,z2 hours in three directions)
output voltageVH	≥Vcc-2.5V	shock resistance	980m/S^2(x,y,zTwo times in three directions, each lasting for 6ms)
output voltageVL	≤0.5V	material	Shaft: stainless steel
	≤1.0V		End face: aluminum alloy
supply voltage	DC5V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	490g
Rise/fall time	5V drive≤0.1us		
	24V<1us		

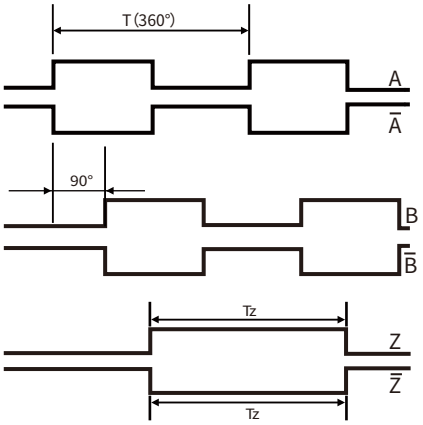
Export waveform and signal position accuracy

CHBG

Axial clockwise



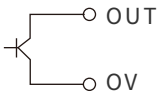
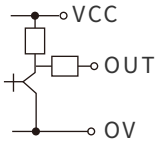
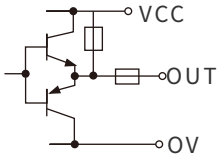
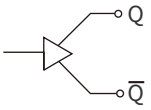
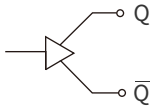
(C、E、F) export



(L、T) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)	T:driveexport(8-24V)
Export circuit					

Wiring list

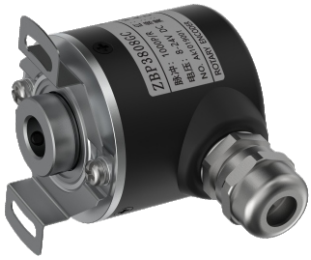
CHBG

Signal	VCC	OV	SIG A	SIG Ā	SIG B	SIG B̄	SIG Z	SIG Z̄	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh
Plug definition (7 cores)	1	4	3		5		3		6
Plug definition (9 cores)	1	4	5	7	3	6	2	8	9

ZBP3808 Series

CHBG 勃嘉工控

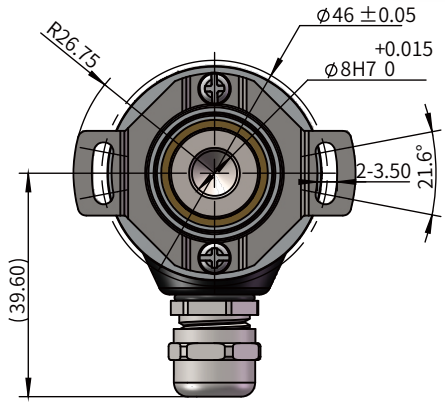
- Outer diameter 38mm, shaft diameter 8mm.
  Using ASIC photoelectric devices, solid and reliable.
  Long service life, strong anti-interference ability, and wide temperature use range.

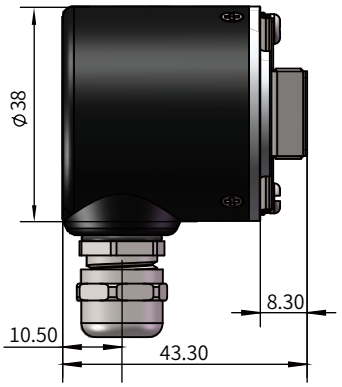


ZBP	38	08	G	C	PULSE	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental B:Half empty mandrel P:Universal	38mm	8mm	G: Cable side out E:Cable rear outlet	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (8-24V)	20,25,30,40,50,60,80,90 100,200,240,250,256, 300,360,400,500,600, 720,800,1000, 1024,1200,1500,1800, 2000,2048,2500,3000 ,3600 (Special specifications can be customized)	3=A、B、Z 6=AĀ、BB̄、ZZ̄	M=8-24v blank space:5V	Blank: positive zero position F: Anti-zero position	Standard 2M Other sizes can be customized

Product size

CHBG





Technical parameter

CHBG

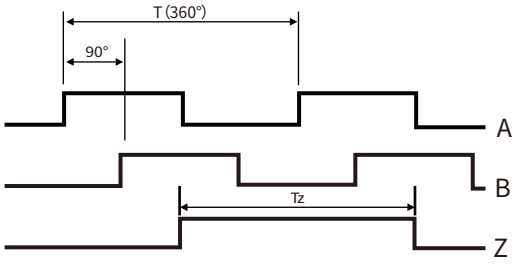
Electrical parameters		Mechanical parameters	
Pulse number	maximum3600P/R	Starting torque	$2*10^{-2}$N · m (+25°C)
Consumption current	≤100mA	Allowable load of shaft	axia9.8N, radia9.8N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-7}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP65
Output Item	A,B,Z,$\overline{A}$,$\overline{B}$,$\overline{Z}$	Anti-vibration	50m/S^2(10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	≥Vcc-2.5V	shock resistance	980m/S^2
output voltageVL	≤0.5V	material	Shaft: stainless steel
	≤1.0V		End face: aluminum alloy
supply voltage	DC5V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	220g
Rise/fall time	5V drive≤0.1us		
	24V<1us		

Page 15

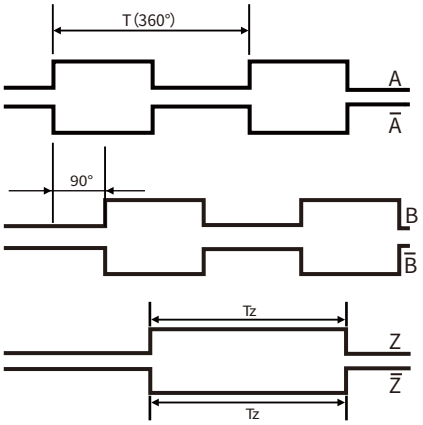
Export waveform and signal position accuracy

CHBG

Axial clockwise



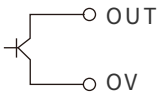
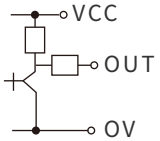
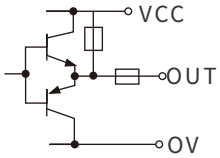
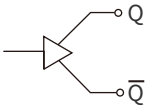
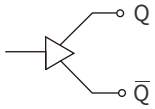
(C、E、F) export



(L、T) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)	T:driveexport(8-24V)
Export circuit					

Wiring list

CHBG

Signal	VCC	OV	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh

ZKT3808 Series

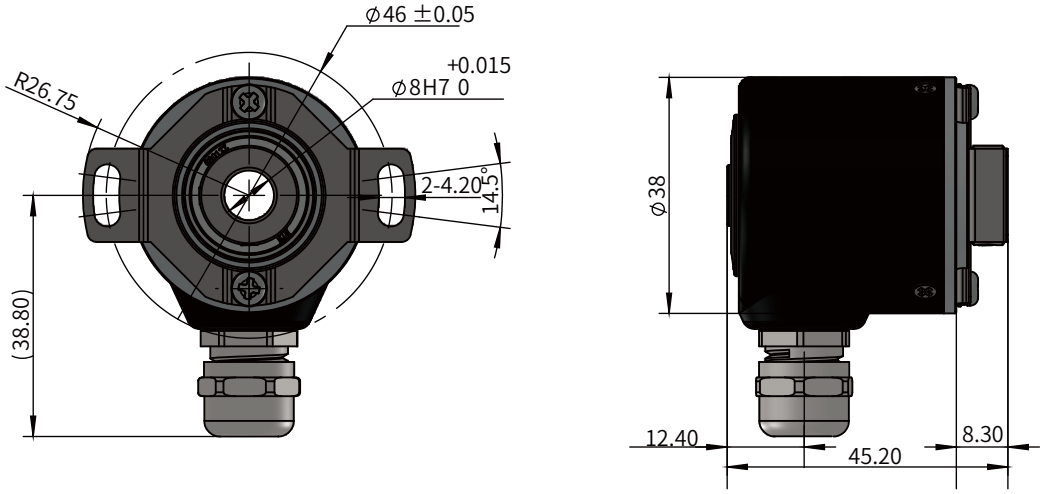
CHBG 勃嘉工控

- Outer diameter 38mm, shaft diameter 8mm.
  Using ASIC photoelectric devices, solid and reliable.
  Long service life, strong anti-interference ability, and wide temperature use range.

ZKT	38	08	G	C	— PULSE —	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental K:hollow shaft T:Universal	38mm	8mm	G: Cable side out E:Cable rear outlet	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (8-24V)	100, 360, 500 ,600 100,1024,2000,2048 2500 special specifications can be customized	3=A、B、Z 6=AĀ、BB̄、ZZ̄	M=8-24v blank space:5V	Blank: positive zero position F: Anti-zero position	Standard 2M Other sizes can be customized

Product size

CHBG



Technical parameter

CHBG

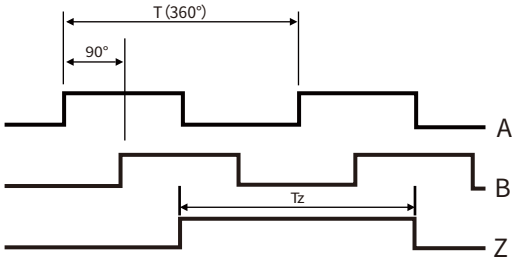
Electrical parameters		Mechanical parameters	
Pulse number	maximum2500P/R	Starting torque	$2*10^{-2}$N · m (+25°C)
Consumption current	≤100mA	Allowable load of shaft	axia9.8N, radia9.8N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-7}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP54
Output Item	A,B,Z,$\overline{A}$,$\overline{B}$,$\overline{Z}$	Anti-vibration	50m/S^2(10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	≥Vcc-2.5V	shock resistance	980m/S^2
output voltageVL	≤0.5V	material	Shaft: yellow metal
	≤1.0V		End face: aluminum alloy
supply voltage	DC5V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	220g
Rise/fall time	5V drive≤0.1us		
	24V<1us		

Page 17

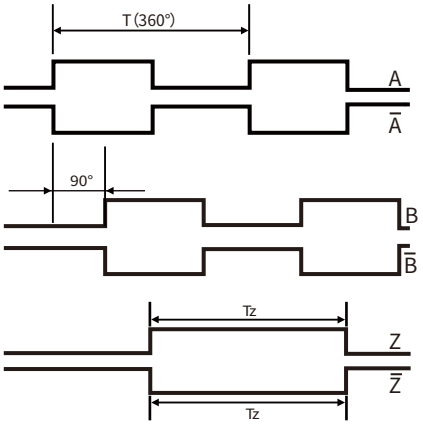
Export waveform and signal position accuracy

CHBG

Axial clockwise



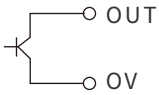
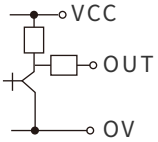
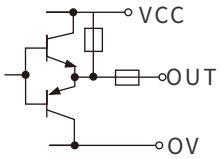
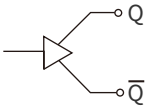
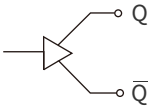
(C、E、F) export



(L、T) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)	T:driveexport(8-24V)
Export circuit					

Wiring list

CHBG

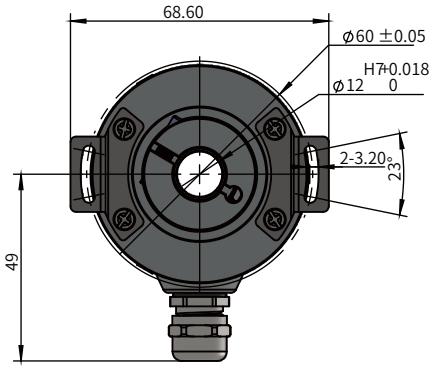
Signal	VCC	OV	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh

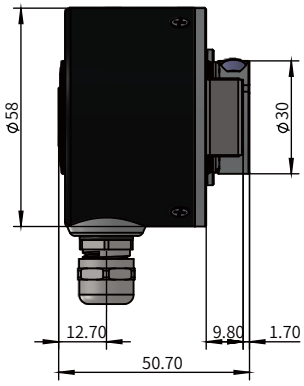
ZKT5812 Series

- Outer diameter 58mm, shaft diameter 12mm, Fully hollow shaft, two installation methods.
  Using ASIC photoelectric devices, solid and reliable.
  Long service life, strong anti-interference ability, and wide temperature use range.

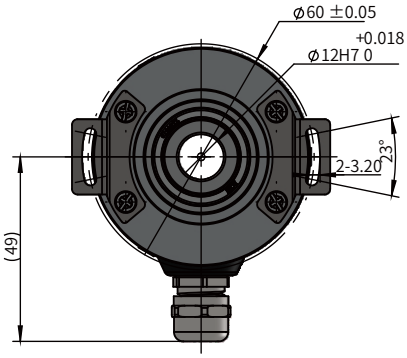
ZKT	58	12	B	G	C	PULSE	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
Model description	Outer diameter	Shaft diameter	Installation method	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental K:hollow shaft T:Universal	58mm	12mm	B: Hugging type D: Thimble type	G: Cable side out E:Cable rear outlet	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (8-24V)	100, 360, 500 ,600 100,1024,2000,2048 2500 special specifications can be customized	3=A、B、Z 6=AĀ、BB̄、ZZ̄	M=8-24v blank space:5V	Blank: positive zero position F: Anti-zero position	Standard 2M Other sizes can be customized

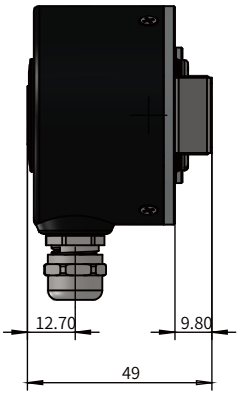
Product size





ZKT5812Bsuccession





ZKT5812Dsuccession

ZKT5812 Series

Technical parameter

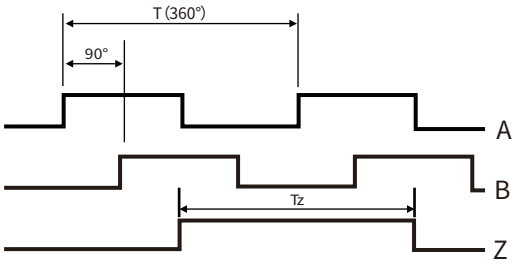
CHBG

Electrical parameters		Mechanical parameters	
Pulse number	maximum5000P/R	Starting torque	$5*10^{-2}$N · m (+25°C)
Consumption current	⩽100mA	Allowable load of shaft	axia20N, radia40N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-7}Kgm^2$
working temperature	-20°C~ +70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~ +80°C	Protection grade	IP54
Output Item	A,B,Z,$\overline{A}$,$\overline{B}$,$\overline{Z}$	Anti-vibration	50m/S^2(10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	⩾Vcc-2.5V	shock resistance	980m/S^2
output voltageVL	⩽0.5V	material	Shaft: stainless steel
	⩽1.0V		End face: aluminum alloy
supply voltage	DC5V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	380g
Rise/fall time	5V drive⩽0.1us		
	24V<1us		

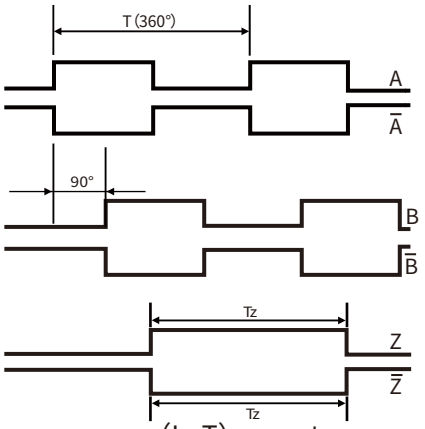
Export waveform and signal position accuracy

CHBG

Axial clockwise



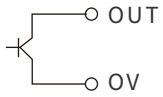
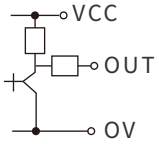
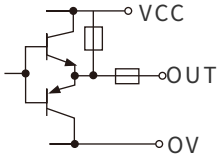
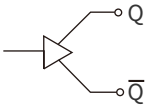
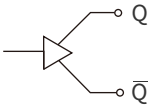
(C、E、F) export



(L、T) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)	T:driveexport(8-24V)
Export circuit					

Wiring list

CHBG

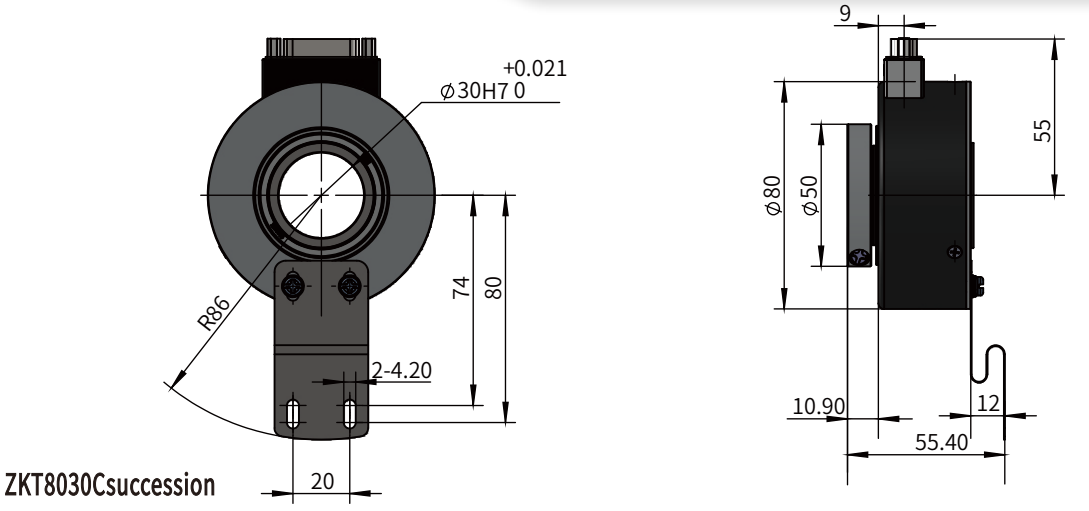
Signal	VCC	OV	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh

ZKT8030 Series

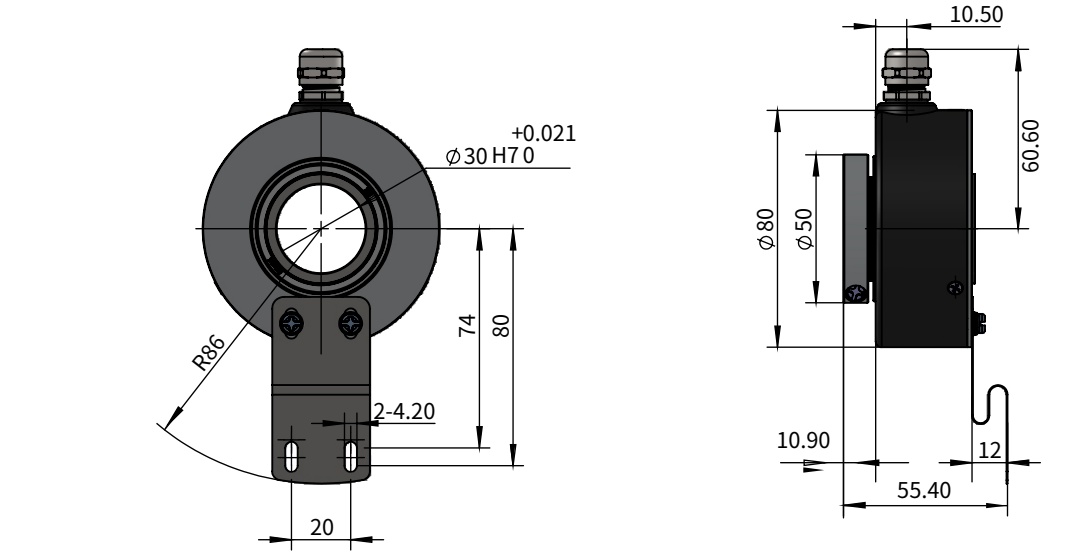
- Outer diameter 80mm, shaft diameter 30mm, Fully hollow shaft.
  Using ASIC photoelectric devices, solid and reliable.
  Long service life, strong anti-interference ability, and wide temperature use range.

ZKT	80	30	G	C	— PULSE —	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental K:hollow shaft T:Universal	80mm	30mm	**G: Cable side out** C:Plug side out	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (8-24V)	100, 360, 500 ,600 100,1024,2000,2048 2500 special specifications can be customized	3=A、B、Z 6=AĀ、BB̄、ZZ̄	M=8-24v blank space:5V	Blank: positive zero position F: Anti-zero position	Standard 5M Other sizes can be customized

Product size



ZKT8030Csuccession



ZKT8030Gsuccession

Technical parameter

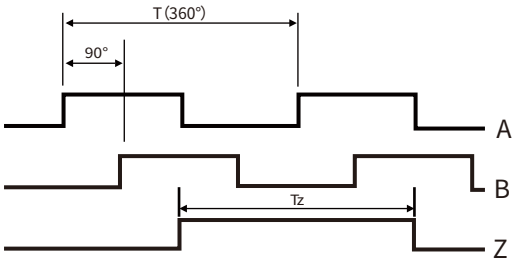
CHBG

Electrical parameters		Mechanical parameters	
Pulse number	maximum5000P/R	Starting torque	$5*10^{-2}$N · m (+25°C)
Consumption current	⩽100mA	Allowable load of shaft	axia20N, radia40N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-7}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP54
Output Item	A,B,Z,$\overline{A}$,$\overline{B}$,$\overline{Z}$	Anti-vibration	50m/S^2(10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	⩾Vcc-2.5V	shock resistance	980m/S^2
output voltageVL	⩽0.5V	material	Shaft: stainless steel
	⩽1.0V		End face: aluminum alloy
supply voltage	DC5V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	380g
Rise/fall time	5V drive⩽0.1us		
	24V<1us		

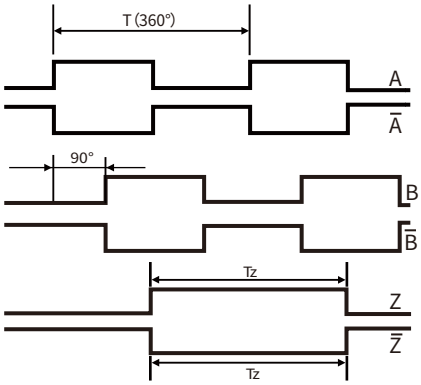
Export waveform and signal position accuracy

CHBG

Axial clockwise



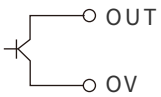
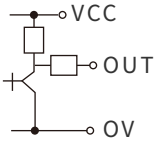
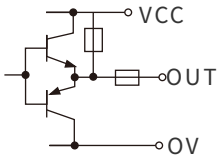
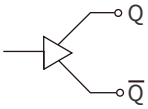
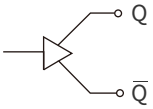
(C、E、F) export



(L、T) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)	T:driveexport(8-24V)
Export circuit					

Wiring list

CHBG

Signal	VCC	OV	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh
Plug definition (7 cores)	6	5	4		2		9		8
Plug definition (9 cores)	6	5	4	3	2	1	9	10	8

ZKT10030 Series

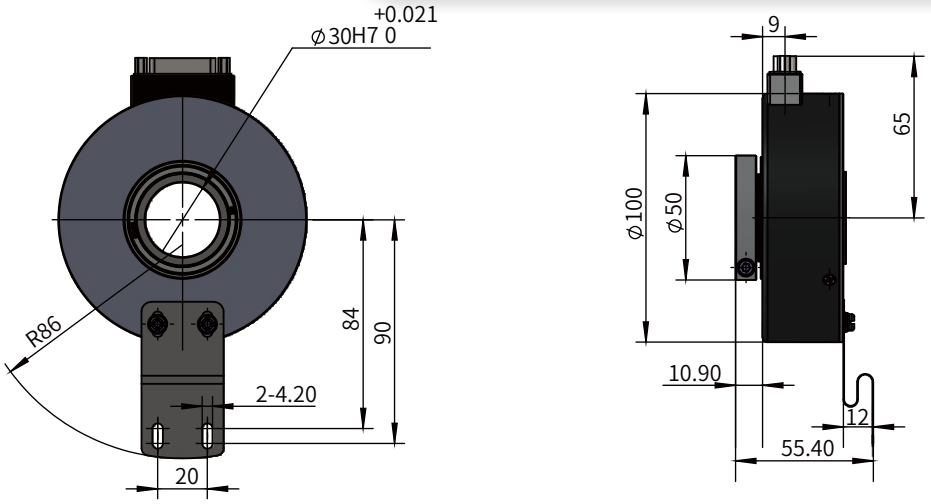
CHBG 勃嘉工控

※ Outer diameter 100mm, shaft diameter 30mm, Fully hollow shaft.
Using ASIC photoelectric devices, solid and reliable.
Long service life, strong anti-interference ability, and wide temperature use range.

ZKT	100	30	G	C	PULSE	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental K:hollow shaft T:Universal	100mm	30mm	G: Cable side out E:Cable rear outlet	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (8-24V)	512,10001,1024,1200 special specifications can be customized	3=A、B、Z 6=AĀ、BB̄、ZZ̄	M=8-24v blank space:5V	Blank: positive zero position F: Anti-zero position	Standard 5M Other sizes can be customized

Product size

CHBG



Technical parameter

CHBG

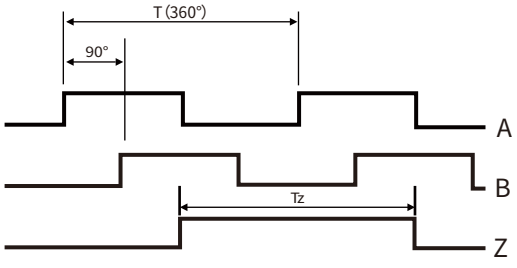
Electrical parameters		Mechanical parameters	
Pulse number	maximum5000P/R	Starting torque	$5*10^{-2}$N · m (+25℃)
Consumption current	⩽100mA	Allowable load of shaft	axia20N, radia40N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-7}Kgm^2$
working temperature	-20℃~+70℃	Maximum revolutions	5000r/min
Storage temperature	-20℃~+80℃	Protection grade	IP65
Output Item	A,B,Z,$\overline{A}$,$\overline{B}$,$\overline{Z}$	Anti-vibration	50m/S^2(10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	⩾Vcc-2.5V	shock resistance	980m/S^2
output voltageVL	⩽0.5V	material	Shaft: stainless steel
	⩽1.0V		End face: aluminum alloy
supply voltage	DC5V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	820g
Rise/fall time	5V drive⩽0.1us		
	24V<1us		

Page 23

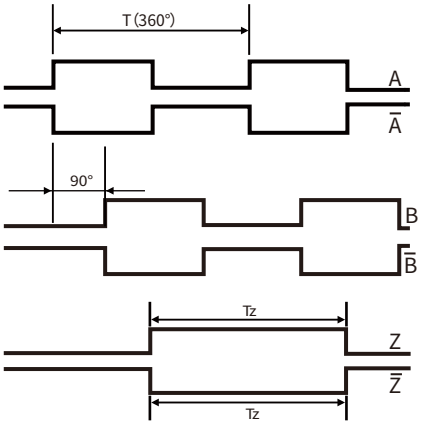
Export waveform and signal position accuracy

CHBG

Axial clockwise



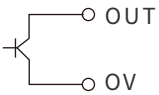
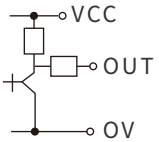
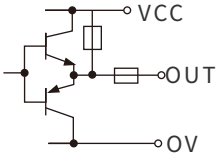
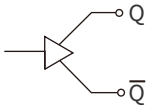
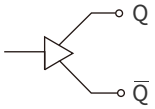
(C、E、F) export



(L、T) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)	T:driveexport(8-24V)
Export circuit					

Wiring list

CHBG

Signal	VCC	OV	SIG A	SIG $\bar{A}$	SIG B	SIG $\bar{B}$	SIG Z	SIG $\bar{Z}$	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh
Plug definition (7 cores)	6	5	4		2		9		8
Plug definition (9 cores)	6	5	4	3	2	1	9	10	8

ZSC2504 Series

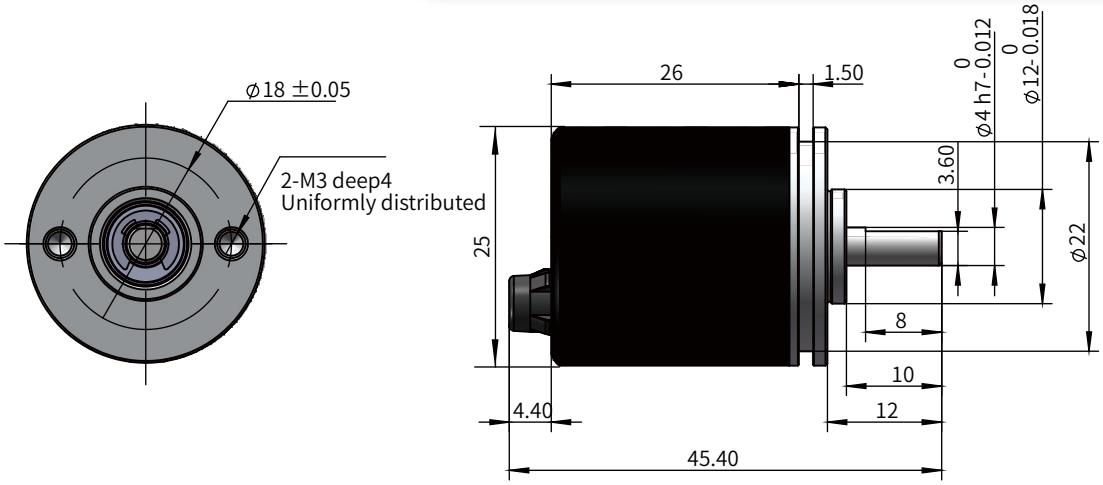
CHBG 勃嘉工控

- Outer diameter 25mm, shaft diameter 4mm, Fully hollow shaft.
  Using magnetic induction.
  Resistant to dirt, vibration, and oil.

ZSC	25	04	G	C	— PULSE —	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental S:Solid shaft C:Magnetic type	25mm	4mm	E:Cable rear outlet	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (8-24V)	1024 special specifications can be customized	3=A、B、Z 6=AĀ、BB̄、ZZ̄	M=12-24v blank space:5-12V	Blank: positive zero position F: Anti-zero position	Standard 5M Other sizes can be customized

Product size

CHBG



Technical parameter

CHBG

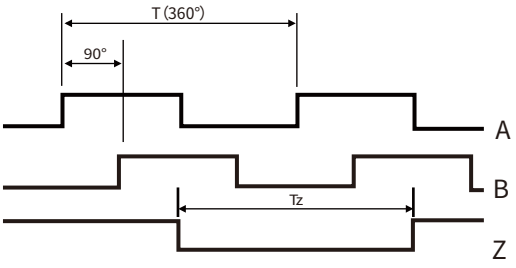
Electrical parameters		Mechanical parameters	
Pulse number	maximum1024P/R	Starting torque	$2*10^{-3}$N · m (+25°C)
Consumption current	⩽100mA	Allowable load of shaft	axia9.8N, radia9.8N
Response frequency	0~50kHz	Moment of inertia	$4x10^{-8}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP54
Output Item	A,B,Z	Anti-vibration	$50m/S^2$ (10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	⩾Vcc-2.5V	shock resistance	$980m/S^2$
output voltageVL	⩽0.5V	material	Shaft: stainless steel
	⩽1.0V		End face: aluminum alloy
supply voltage	DC5V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	50g
Rise/fall time	5V drive⩽0.1us		
	24V<1us		

Page 25

Export waveform and signal position accuracy

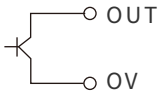
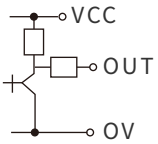
CHBG

Axial clockwise



Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output
Export circuit		

Wiring list

CHBG

Signal	VCC	OV	SIG A	SIG B	SIG Z	N.C
Cable wire color	brown	blue	black	white	orange	Copper mesh

ZSC3806 Series

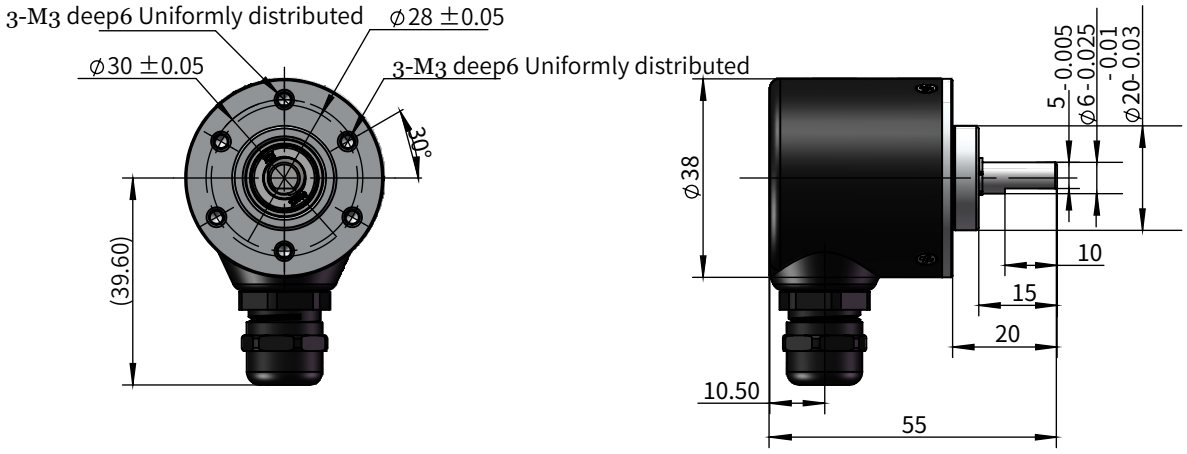
CHBG 勃嘉工控

- Outer diameter 38mm, shaft diameter 6mm, Fully hollow shaft.
  Using magnetic induction.
  Resistant to dirt, vibration, and oil.

ZSC	38	06	G	C	—— PULSE ——	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental S:Solid shaft C:Magnetic type	38mm	6mm	E:Cable rear outlet	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (8-24V)	1024 special specifications can be customized	3=A、B、Z 6=AA̅、BB̅、ZZ̅	M=8-24v blank space:5V	Blank: positive zero position F: Anti-zero position	Standard 2M Other sizes can be customized

Product size

CHBG



Technical parameter

CHBG

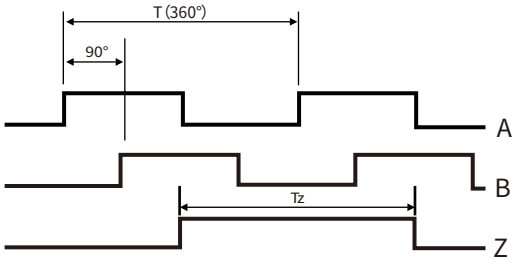
Electrical parameters		Mechanical parameters	
Pulse number	maximum1024P/R	Starting torque	$2*10^{-3}$N · m (+25°C)
Consumption current	⩽100mA	Allowable load of shaft	axia9.8N, radia9.8N
Response frequency	0~50kHz	Moment of inertia	$4x10^{-8}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP67
Output Item	A,B,Z,$\overline{A}$,$\overline{B}$,$\overline{Z}$	Anti-vibration	$50m/S^2$(10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	⩾Vcc-2.5V	shock resistance	$980m/S^2$
output voltageVL	⩽0.5V	material	Shaft: stainless steel
	⩽1.0V		End face: aluminum alloy
supply voltage	DC5V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	1808g
Rise/fall time	5V drive⩽0.1us		
	24V<1us		

Page 27

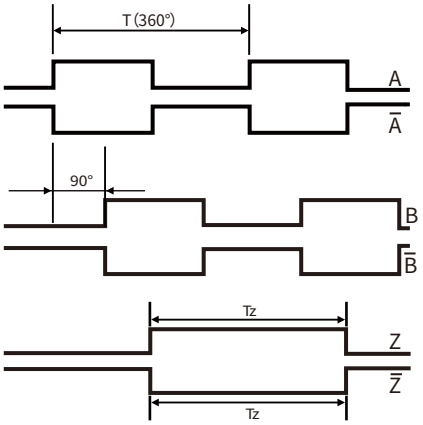
Export waveform and signal position accuracy

CHBG

Axial clockwise



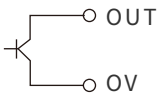
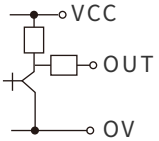
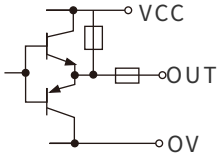
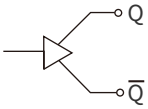
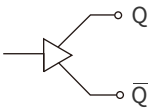
(C、E、F) export



(L、T) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)	T:driveexport(8-24V)
Export circuit					

Wiring list

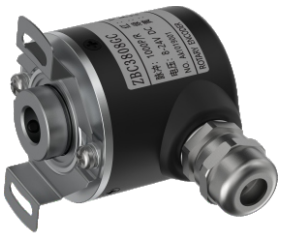
CHBG

Signal	VCC	OV	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh

ZSC3808 Series

CHBG 勃嘉工控

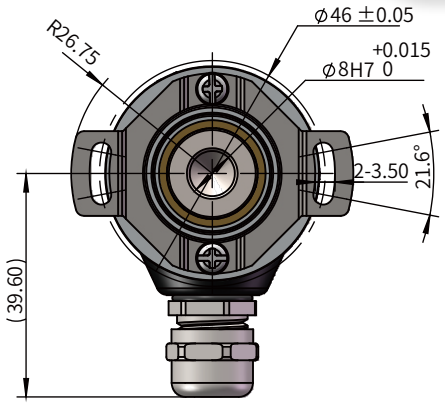
- Outer diameter 38mm, shaft diameter 8mm, Fully hollow shaft.
  Using magnetic induction.
  Resistant to dirt, vibration, and oil.

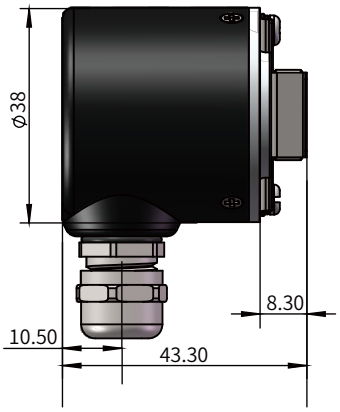


ZBC	38	08	G	C	PULSE	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental B:Half empty mandrel C:Magnetic type	38mm	8mm	G: Cable side out E:Cable rear outlet	C: Open collector output E: voltage output F: Push-pull output L: Driver output(5v) T: Drive output (8-24V)	1024 special specifications can be customized	3=A、B、Z 6=AĀ、BB̄、ZZ̄	M=8-24v blank space:5V	Blank: positive zero position F: Anti-zero position	Standard 2M Other sizes can be customized

Product size

CHBG





Technical parameter

CHBG

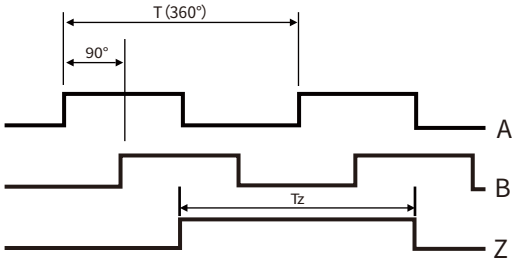
Electrical parameters		Mechanical parameters	
Pulse number	maximum1024P/R	Starting torque	$2*10^{-3}$N · m (+25°C)
Consumption current	≤100mA	Allowable load of shaft	axia9.8N, radia9.8N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-7}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP67
Output Item	A,B,Z,$\overline{A}$,$\overline{B}$,$\overline{Z}$	Anti-vibration	50m/S^2(10~200Hz x,y,z2 hours in three directions)
output voltageVH	≥Vcc-2.5V	shock resistance	980m/S^2
output voltageVL	≤0.5V	material	Shaft: stainless steel
	≤1.0V		End face: aluminum alloy
supply voltage	DC5V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	220g
Rise/fall time	5V drive≤0.1us		
	24V<1us		

Page 29

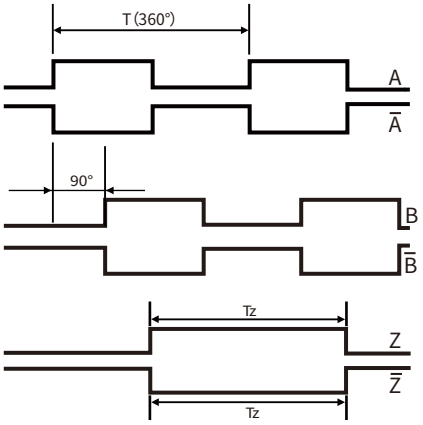
Export waveform and signal position accuracy

CHBG

Axial clockwise



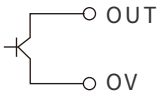
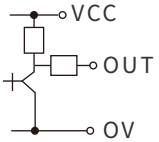
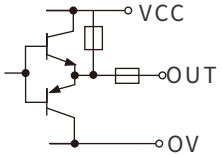
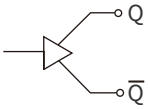
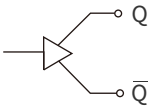
(C、E、F) export



(L、T) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport	L:driveexport(5V)	T:driveexport(8-24V)
Export circuit					

Wiring list

CHBG

Signal	VCC	OV	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	N.C
Cable wire color	red	black	green	brown	white	grey	yellow	orange	Copper mesh

ZSM3806 Series

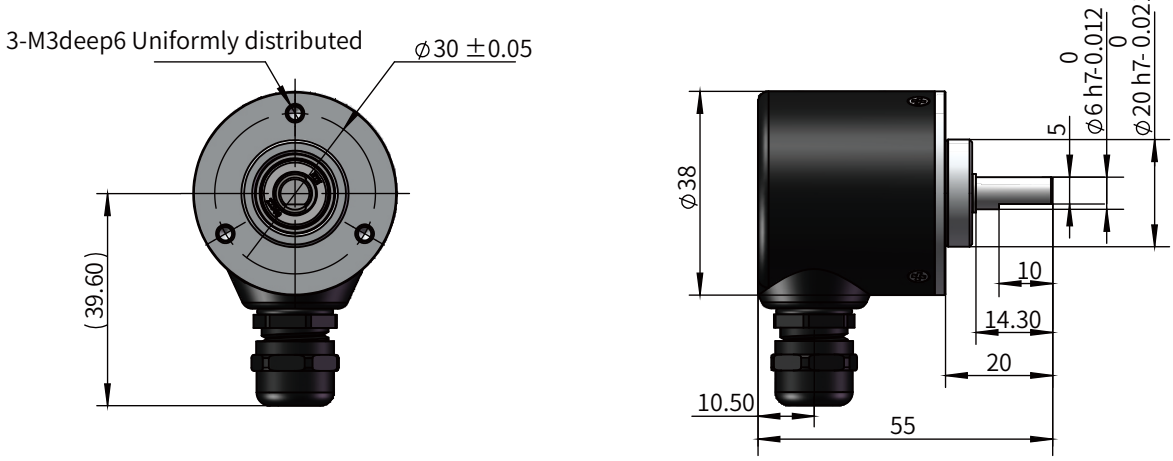
CHBG 勃嘉工控

※ Outer diameter 38mm, shaft diameter 6mm, Economical.
Using ASIC photoelectric devices, it is sturdy and highly reliable.
Resistant to dirt, vibration, and oil.

ZSM	38	06	G	C	PULSE	B	M	□	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Zero position positive and negative	Cable length
Z:Incremental S:Solid shaft M:Easy money	38mm	6mm	G: Cable side out E:Cable rear outlet	C: Open collector output E: voltage output	100,200,360 400,500,600 special specifications can be customized	3=A、B、Z 6=AĀ、BB̄、ZZ̄	M=8-24v blank space:5V	Blank: positive zero position F: Anti-zero position	Standard 2M Other sizes can be customized

Product size

CHBG



Technical parameter

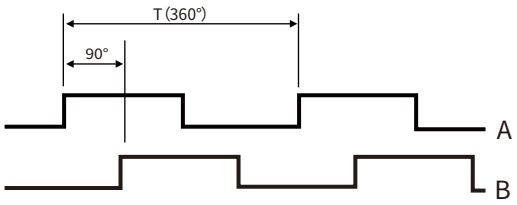
CHBG

Electrical parameters		Mechanical parameters	
Pulse number	100/200/360/400/500/600	Starting torque	$2*10^{-3}$N · m (+25°C)
Consumption current	≤100mA	Allowable load of shaft	axia9.8N, radia9.8N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-7}Kgm^2$
working temperature	-20°C~ +70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~ +80°C	Protection grade	IP65
Output Item	A, B	Anti-vibration	$50m/S^2$(10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	≥Vcc-2.5V	shock resistance	$980m/S^2$
output voltageVL	≤0.5V	material	Shaft: stainless steel
	≤1.0V		End face: aluminum alloy
supply voltage	DC5V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	250g
Rise/fall time	5V drive≤0.1us		
	24V<1us		

Export waveform and signal position accuracy

CHBG

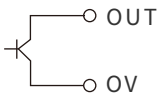
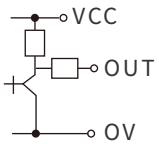
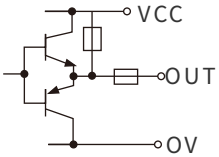
Axial clockwise



(C、E、F) export

Export waveform and signal position accuracy

CHBG

Export mode	C:Open collector output	E:Voltage output	F:Export circuitexport
Export circuit			

Wiring list

CHBG

Signal	VCC	OV	SIG A	SIG B	N.C
Cable wire color	red	black	green	white	Copper mesh

TRD-2T/2TH Series

- Small size, outer diameter 38mm, thickness 34.5mm.
  The rotation axis is divided into solid and hollow.
  The cable outlet method is a horizontal outlet method.

Classify	Model	Supply voltage	Export	Type of output	Pulse count/revolution
Solid axis	TRD-2T□AF	DC4.5-13.2V	Two phase band origin output (Origin reverse action)	Push Pull Output	10,20,30,40,50,60,100, 200,240,250,300,360,400, 500,512,600,800,1000,1024, 1200,2000,2048,2500,3600*,5000*
	TRD2T□BF	DC10.8-26.4V			
	TRD-2T□V/V1	DC4.75-5.25V	Two phase band origin output (Origin positive action)	Line driven output	
	TRD-2T□VH	DC4.75-28V	Two phase band origin output (Origin positive action)	Line driven output	
Hollow shaft	TRD-2TH□AF	DC4.5-13.2V	Two phase band origin output (Origin reverse action)	Push Pull Output	10,20,30,40,50,60,100, 200,240,250,300,360,400, 500,512,600,800,1000,1024, 1200,2000,2048,2500,3600*,5000*
	TRD2TH□BF	DC10.8-26.4V			
	TRD-2TH□V/V1	DC4.75-5.25V	Two phase band origin output (Origin positive action)	Line driven output	
	TRD-2TH□VH	DC4.75-28V	Two phase band origin output (Origin positive action)	Line driven output	

Model composition

CHBG

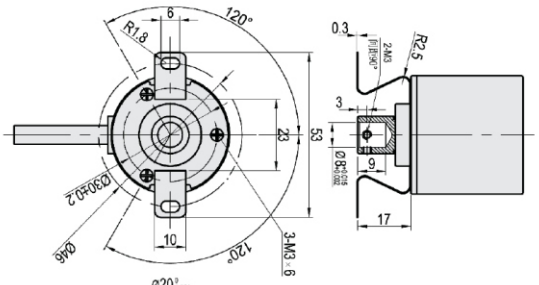
TRD-[2][T][ ][ ][ ]

- Special specifications
- Output method:
  AF: DC5-12V push pull output
  BF:DC12-24V push pull output
  V: DC5V line drive output (26C31 or equivalent)
  V1: DC5V line drive output (26LS31 or equivalent)
  VH: DC5V-28V line driven high voltage output
- Pulse count
- ·System classification; 2T: solid shaft, 2TH: hollow shaft

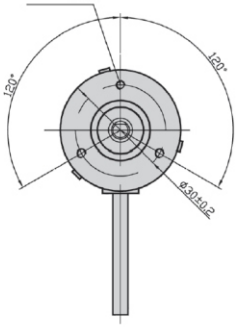
Product size

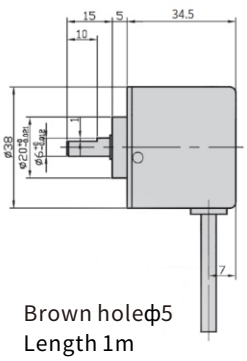
CHBG

TRD-2T□AF/BF/V/V1/VH

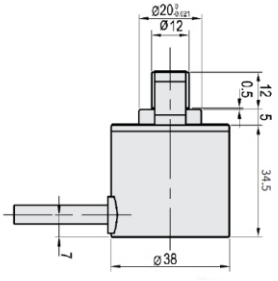


3-M3Brown hole(degree of depth7)





Brown holeϕ5
Length 1m



Also available in the form of rear exit

Page 33

TRD-2T/2TH Series

Electrical specifications

CHBG

Model			TRD-2T□AF/BF TRD-2TH□AF/BF	TRD-2T□V TRD-2TH□V	TRD-2T□V1 TRD-2TH□V1	TRD-2T□VH TRD-2TH□VH
Source	Voltage supply		AF:DC4.5~13.2V BF:DC10.8~26.4V	DC:4.75~5.25V		DC:4.75~28V
	Allowable ripple		⩽3%ms			
	Consumption current		⩽50mA		⩽80mA	
Output waveform	Signal form		Two phase+origin			
	Maximum response efficiency		200kHz			
	Maximum rotational speed		(Maximum response frequency/resolution) ×60			
	Duty cycle		50±25%			
	Phase difference width		25±12.5%			
	Origin signal width		100±50%		100±50% *1	
Export	Rise/Fall Time		⩽3μs (When the cable length is 1m)			
	Type of output		Push Pull Output	Wire driven output (26C31 or equivalent)	Wire driven output (26LS31 or equivalent)	OL7272 equivalent
	Output logic			Positive logic (high electrical efficiency)		
	Output current	Inflow	⩽30mA	⩽20mA		
		Outflow	⩽10mA	⩽20mA		
	Output voltage	“H”	⩾[(supply voltage) -3V]	⩾2.5V		⩾[(supply voltage) -4V]
		“L”	⩽0.4V	⩽0.5V		⩽2V
	Load power supply voltage		⩽DC30V	——		
	Short circuit protection		Between output and power supply	——		

*1:Products with a origin signal width of (50 ± 25%) can be provided, but communication with the manufacturer is required

Mechanical specifications

CHBG

Starting torque	⩽0.01N·m (+20°C)
Axis inertia moment	0.3×10^{-6} kg·m²
Allowable load of the shaft	Radial:30N Axial:20N
Allowable maximum rotation number	5000rpm
Cable	External diameterϕ5mm Oil resistivity PVC, PVC*2 Shielded cable, core cross-sectional area0.14mm²
Weight	Approximately 160g (cable length 1m)

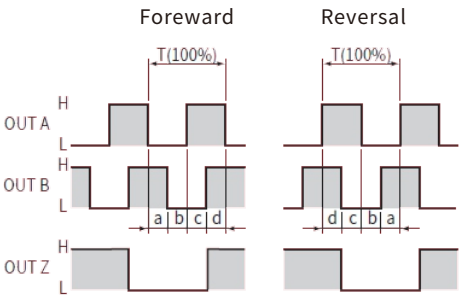
TRD-2T/2TH Series

Environment condition

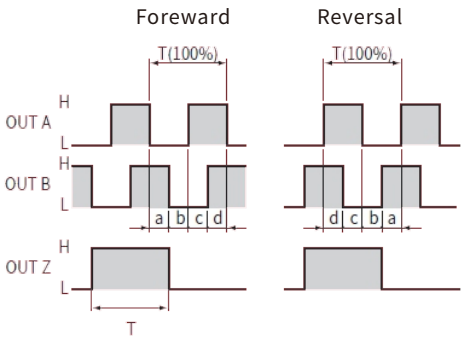
Operating ambient temperature	-10~+70°C
Storage environment temperature	-25~+85°C
Operating environment humidity	35~85%RH(No condensation)
Withstand voltage	AC500V(50/60Hz)1 minute
Insulation impedance	⩾50MΩ
Vibration resistance (durability)	Displacement amplitude0.75mm，10~55Hz[*3]
Impact resistance (durability)	490m/s² 11ms²
Protection level	Dustproof type: IP50 Dustproof, anti drip type: Ip54

Output waveform

TRD-2T/2TH□AF/BF



TRD-2T/2TH□V/V1/VH

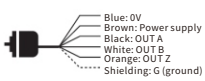


a, b, c, d=1/4T ± 0.125T
e=1T ±0.5T

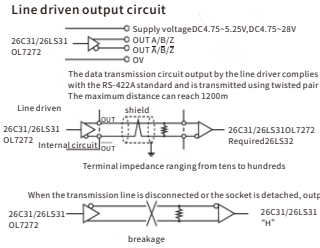
Output circuit

Shield wire (GND) not connected to the body

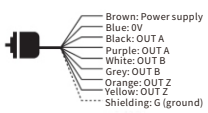
TRD-2T□AF/BF
TRD-2TH□AF/BF



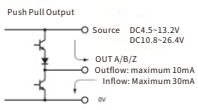
Line driven output circuit



TRD-2T□V/V1/VH
TRD-2TH□V/V1/VH



Output circuit



JSP5606 Series

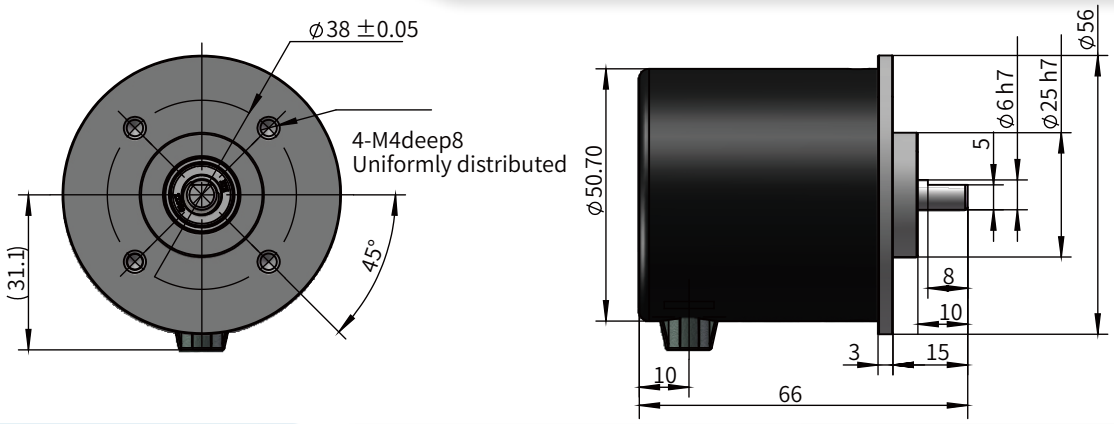
CHBG 勃嘉工控

- Outer diameter 56mm, shaft diameter 6mm, Economical.
  Using ASIC photoelectric devices, it is sturdy and highly reliable.
  Resistant to dirt, vibration, and oil.

JSP	56	06	G	C	— PULSE —	B	M	□
①	②	③	④	⑤	⑥	⑦	⑧	⑨
Model description	Outer diameter	Shaft diameter	Entry cable	Signal output mode	Pulse	Output model	Voltage selection	Cable length
J:absolute value S:Solid shaft P:Universal	56mm	6mm	G: Cable side out	C: Open collector output	256	B: Gray code binary	M=12-24v	Standard 2M Other sizes can be customized

Product size

CHBG



Technical parameter

CHBG

Electrical parameters		Mechanical parameters	
Pulse number	100/200/360/400/500/600	Starting torque	$2*10^{-3}$N·m (+25°C)
Consumption current	≤100mA	Allowable load of shaft	axia9.8N, radia9.8N
Response frequency	0~100kHz	Moment of inertia	$4x10^{-7}Kgm^2$
working temperature	-20°C~+70°C	Maximum revolutions	5000r/min
Storage temperature	-20°C~+80°C	Protection grade	IP65
Output Item	A,B	Anti-vibration	50m/S^2(10 ~200Hz x,y,z2 hours in three directions)
output voltageVH	≥Vcc-2.5V	shock resistance	980m/S^2
output voltageVL	≤0.5V	material	Shaft: stainless steel
	≤1.0V		End face: aluminum alloy
supply voltage	DC5V		Shell: aluminum alloy plastic powder
	DC8V~24V	weight	250g
Rise/fall time	5V drive≤0.1us		
	24V<1us		

Wiring list

CHBG

Signal	5VDC	OV	2^1	2^2	2^3	2^4	2^5	2^6	2^7	2^8
Cable wire color	red	black	brown	orange	yellow	green	blue	purple	grey	white

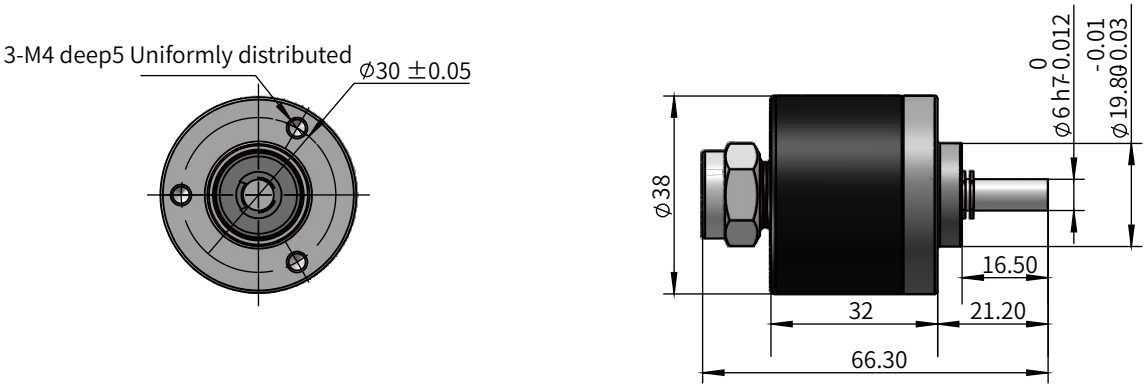
Page 36

JSA/JSP3806 Series

- Outer diameter 38mm, shaft diameter 6mm, Fully hollow shaft.
- Using magnetic induction.
- Resistant to dirt, vibration, and oil.

Product size

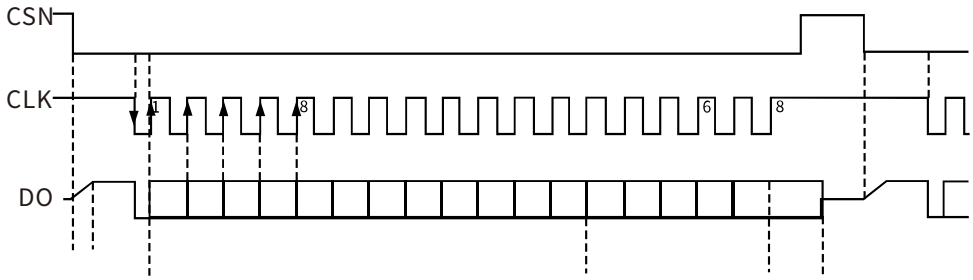
CHBG



Export waveform and signal position accuracy

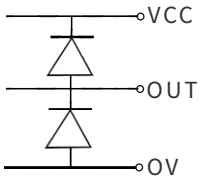
CHBG

Axial clockwise



Export waveform and signal position accuracy

CHBG

Export mode	Voltage output
Export circuit	

Wiring list

CHBG

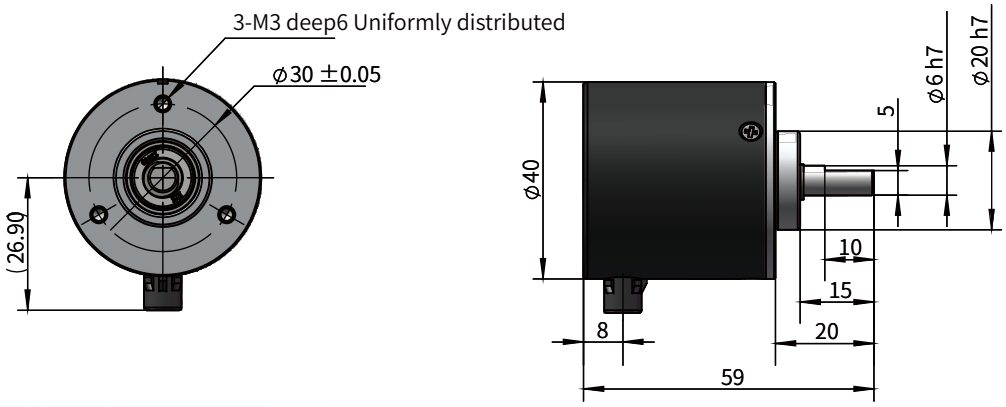
signal	5VDC	OV	CSN	CLK	DO
Cable wire color	red	black	yellow	green	white

E6B2 Series

CHBG 勃嘉工控

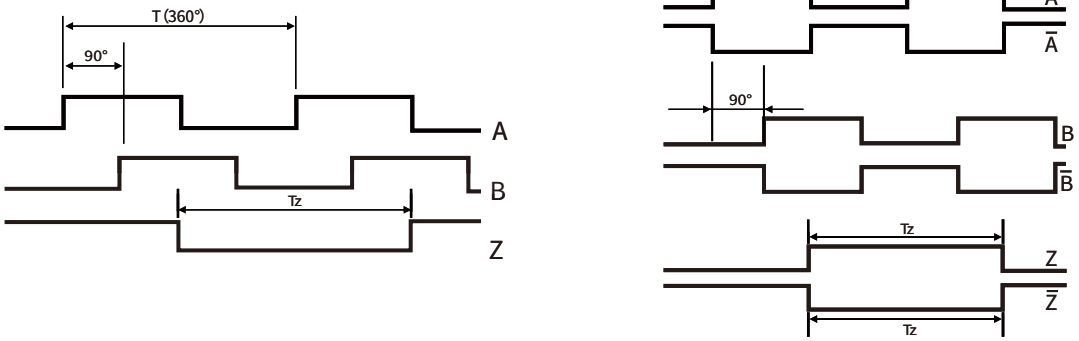
⁘ Outer diameter 40mm, shaft diameter 6mm, Fully hollow shaft.

Product size

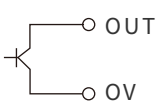
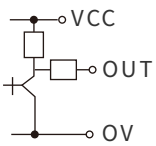
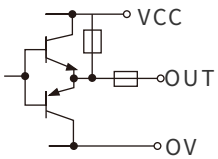
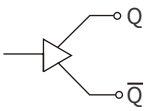
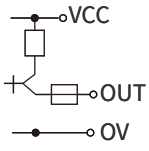


Export waveform and signal position accuracy

Axial clockwise



Export waveform and signal position accuracy

Export mode	CWZ6C: Open collector output	CWZ3E: Voltage output	CWZ5G: Export circuitexport	CWZ1X: driveexport	CWZ5B: PNPexport
Export circuit					

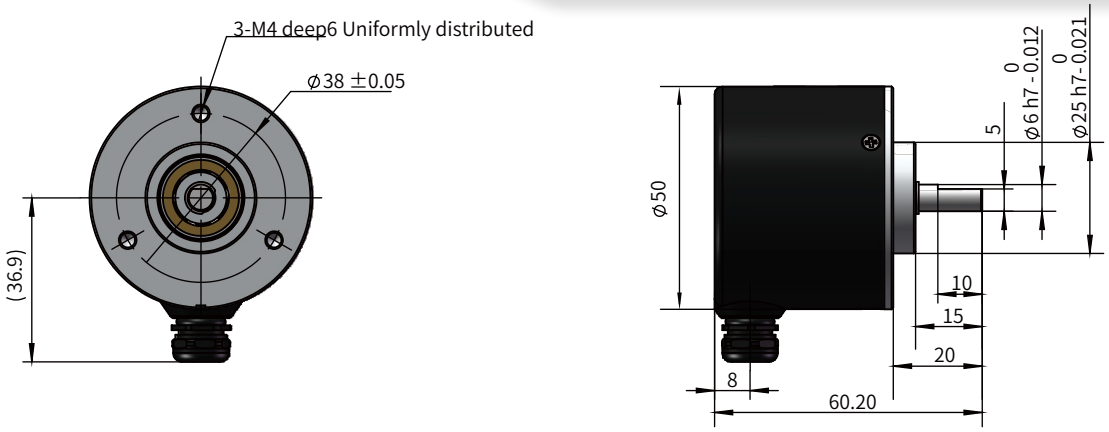
Wiring list

Signal	ACC	OV	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	N.C
Cable wire color	brown	blue	black	black/red	white	white/red	orange	orange/red	Copper mesh

E6C2 Series

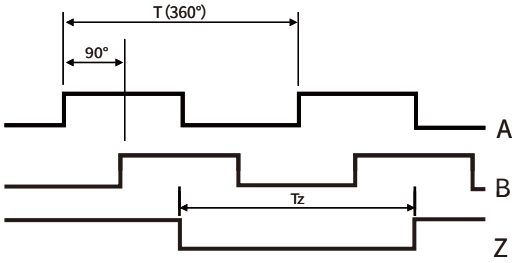
- Outer diameter 50mm, shaft diameter 6mm, Fully hollow shaft.

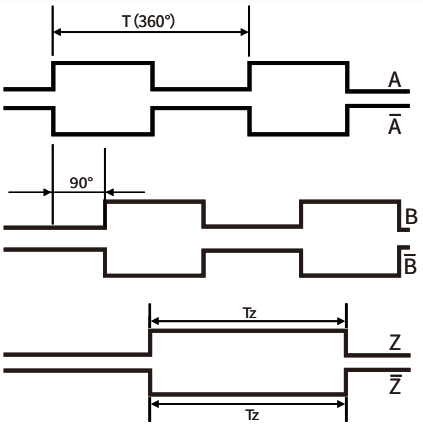
Product size



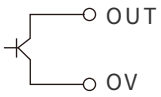
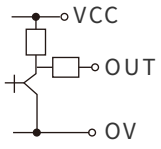
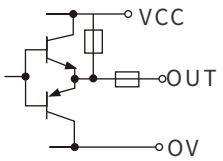
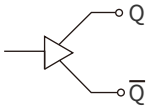
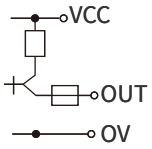
Export waveform and signal position accuracy

Axial clockwise





Export waveform and signal position accuracy

Export mode	CWZ6C: Open collector output	CWZ3E: Voltage output	CWZ5G: Export circuitexport	CWZ1X: driveexport	CWZ5B: PNPexport
Export circuit					

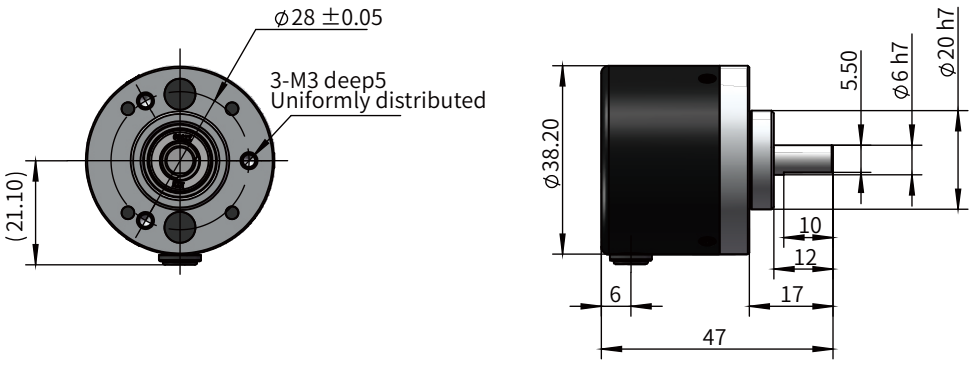
Wiring list

Signal	VCC	OV	SIG A	SIG A	SIG B	SIG B	SIG Z	SIG Z	N.C
Cable wire color	brown	blue	black	black/red	white	white/red	orange	orange/red	Copper mesh

OVW2 Series

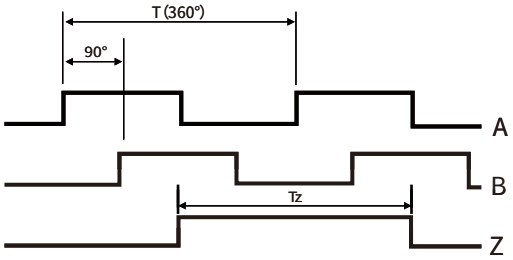
※ Outer diameter 38mm, shaft diameter 4mm, Fully hollow shaft.

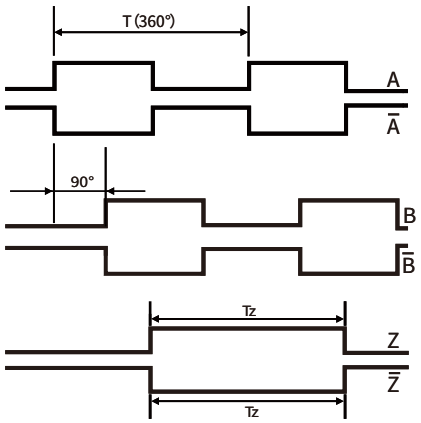
Product size



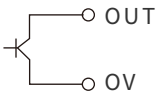
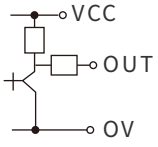
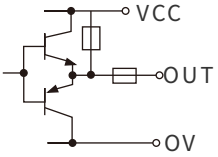
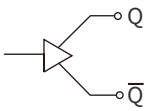
Export waveform and signal position accuracy

Axial clockwise





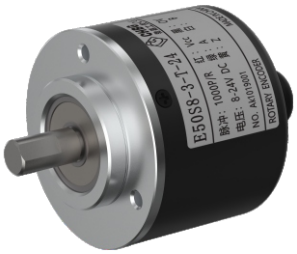
Export waveform and signal position accuracy

Export mode	2MHCOpen collector output	2MVoltage output	2MHTExport circuitexport	2MDdriveexport(5V)
Export circuit				

Wiring list

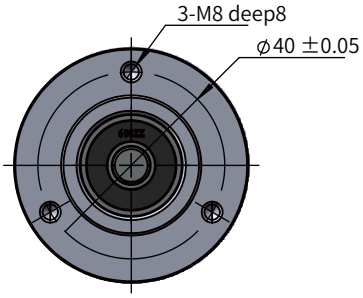
Signal	VCC	OV	SIG A	SIG Ā	SIG B	SIG B̄	SIG Z	SIG Z̄	N.C
Cable wire color	red	black	green	blue	white	grey	yellow	orange	Copper mesh

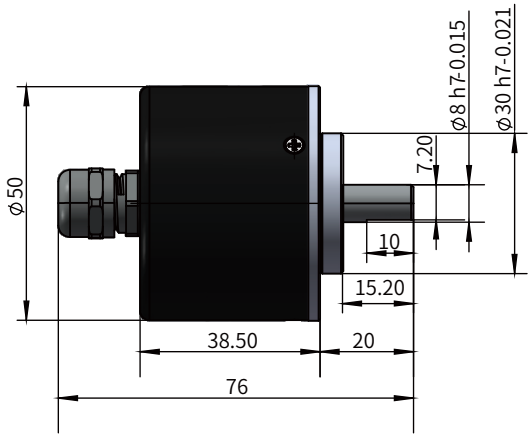
E50S8 Series



- Outer diameter 50mm, shaft diameter 8mm, Fully hollow shaft.

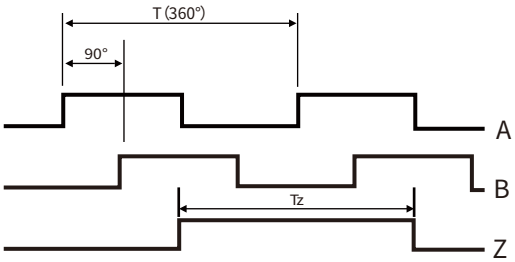
Product size

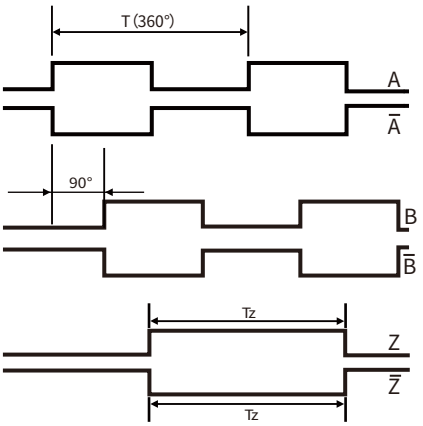




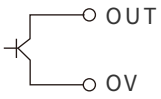
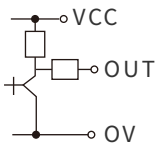
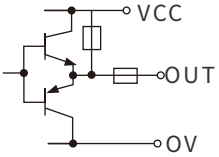
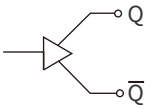
Export waveform and signal position accuracy

Axial clockwise





Export waveform and signal position accuracy

Export mode	3-N-24: Open collector output	3-E-24: Voltage output	3-T-24: Export circuitexport	6-L-5: driveexport(5V)
Export circuit				

Wiring list

Signal	VCC	OV	SIG A	SIG Ā	SIG B	SIG B̄	SIG Z	SIG Z̄	N.C
Cable wire color	brown	blue	black	black/red	white	white/red	orange	orange/red	Copper mesh

ZS61 Series

CHBG 勃嘉工控

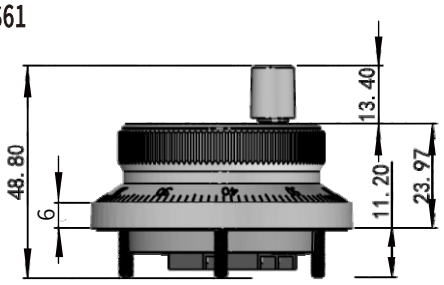
※ Universal hardware upper cover and hardware body, economical type.
The traditional dynamic and static grating structure is simple and practical.
Applicable to the origin correction of CNC machine tools.
Wide voltage protection circuit to prevent misconnection and current breakdown.
Available in black/silver oxide housings.

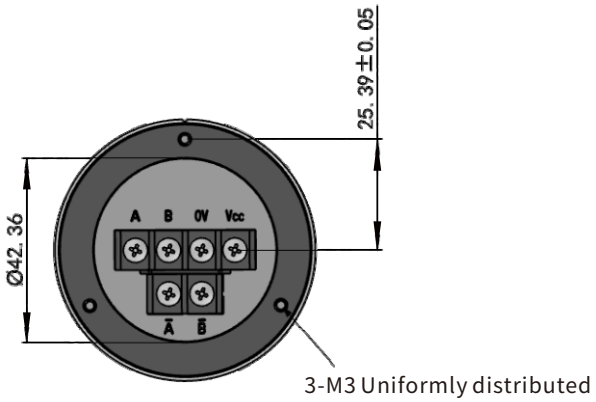
ZS	61	5	E	25	S
①	②	③	④	⑤	⑥
Model description	Outer diameter dimension	voltage	Signal output mode	Pulse	colour
Z:Incremental S:hand wheel	61:60mm 80:80mm	5:DV5V、24 DC12-24V	E: Voltage output L: Drive output	25、100	S: Metal (silver)

Product size

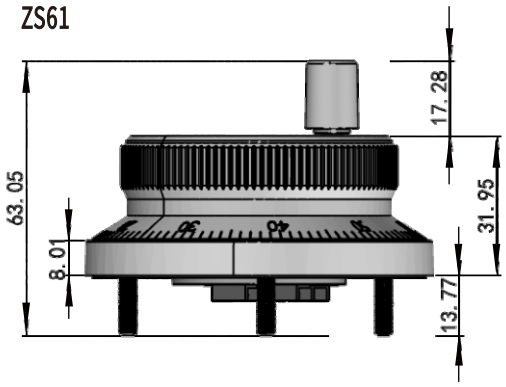
CHBG

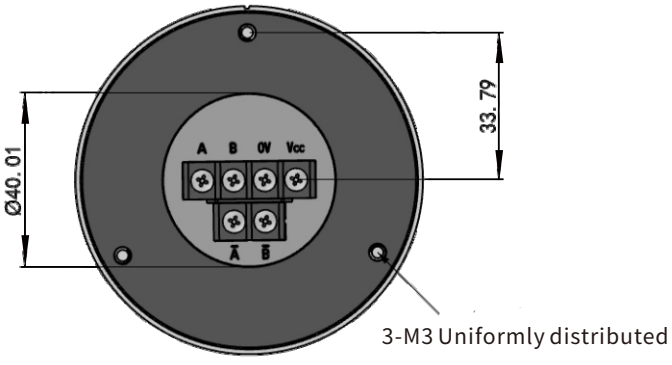
ZS61





ZS61





Handheld box series

CHBG 勃嘉工控

- Economical and practical, with high cost performance, and can be customized according to requirements.
- The axis selection/magnification position can be changed from left to right.
- Custom handwheels are available in plastic/metal versions that meet ROHS standards.
- Customizable logo on handwheel cover.

Model Description	Output mode	Number of pulses	Number of pulses	Axis selection	Emergency stop switch
STK6 YZ9 Dc2 NMK1	E:voltage(DC:5-24V) R:voltage(DC:5V) L:drive(DC:5V)	100:100R/ R25:25P/R	4:4axle 5:5axle 6:6axle	Point to point switch	None: without emergency stop E: With emergency stop

Connector			
Aviation plug	Installation opening	specifications	D-SUBplug
CM:Male plug CF:Female plug CFM:Male and female plug	1:20MM 2:24MM 3:28MM	1:2row15core 2:3row15core 3:2row25core 4:3row26core	CM:Male plug CF:Female plug

Product classification

CHBG


STK6


STK6-E


DC2


YZ9


NMK1


NMK-E

Product characteristics

CHBG

Characteristic

Japanese all-metal code plate with accurate scale, high precision and good texture	Strong anti-interference ability and long-distance transmission
Voltage, differential and single-end exports are available	Support up to 11 axis control and magnification options
Built-in strong magnetic beard installation and bracket fixing method	The wire can be stretched for 200000 times, with a natural length of 2 meters and a stretch of 4 meters
With anti-wear device on the back	With power indicator (LED, DC24V) emergency stop and account opening selection
DC 5/12V input, 25 and 100 pulses optional	
Application: Japan Mitsubishi, Fanuc, Spain Fage, Italy SELCA, Guangzhou CNC CSK, Fanuc FANUC and other CNC systems	

ZSNMK Series

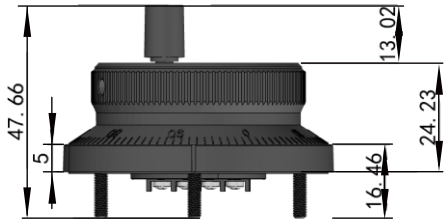
- The traditional dynamic and static grating structure is simple and practical.
- Applicable to the origin correction of CNC machine tools.
- Wide voltage protection circuit, preventing misconnection and current breakdown.

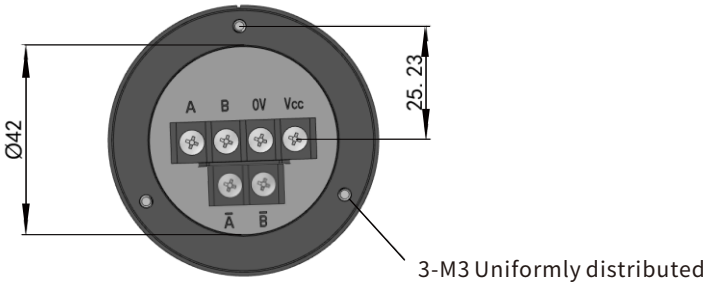
ZSNMK	61	5	E	25	B
①	②	③	④	⑤	⑥
Model description	Outer diameter dimension	voltage	Signal output mode	Pulse	colour
Z:Incremental S:hand wheel NMK: plastic style	61:60mm 80:80mm	5:DV5V、24 DC12-24V	E: Voltage output L: Drive output	25、100	S: plastics (black)

Product size

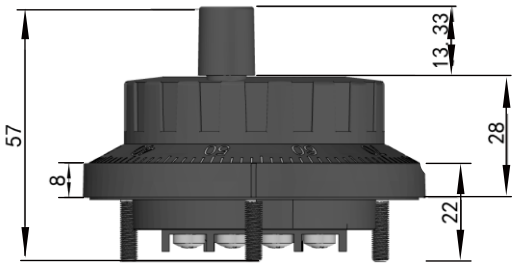
CHBG

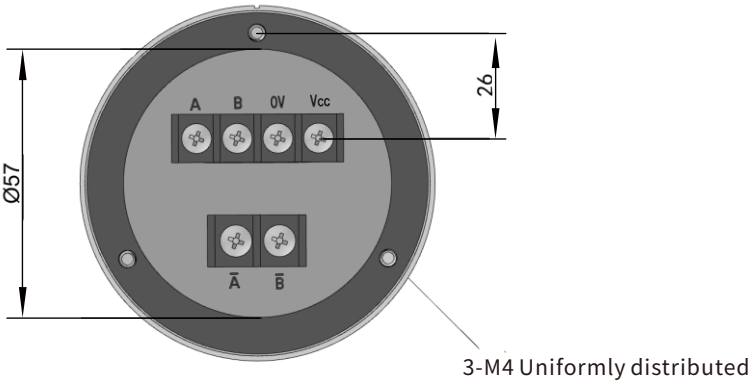
ZSNMK61





ZSNMK80

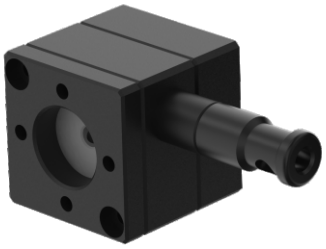




30 independent stretching box

CHBG 勃嘉工控

- Free to match with various encoders.
  The unique internal design ensures that the outgoing line never tangles.
  Exquisite processing highlights every detail.

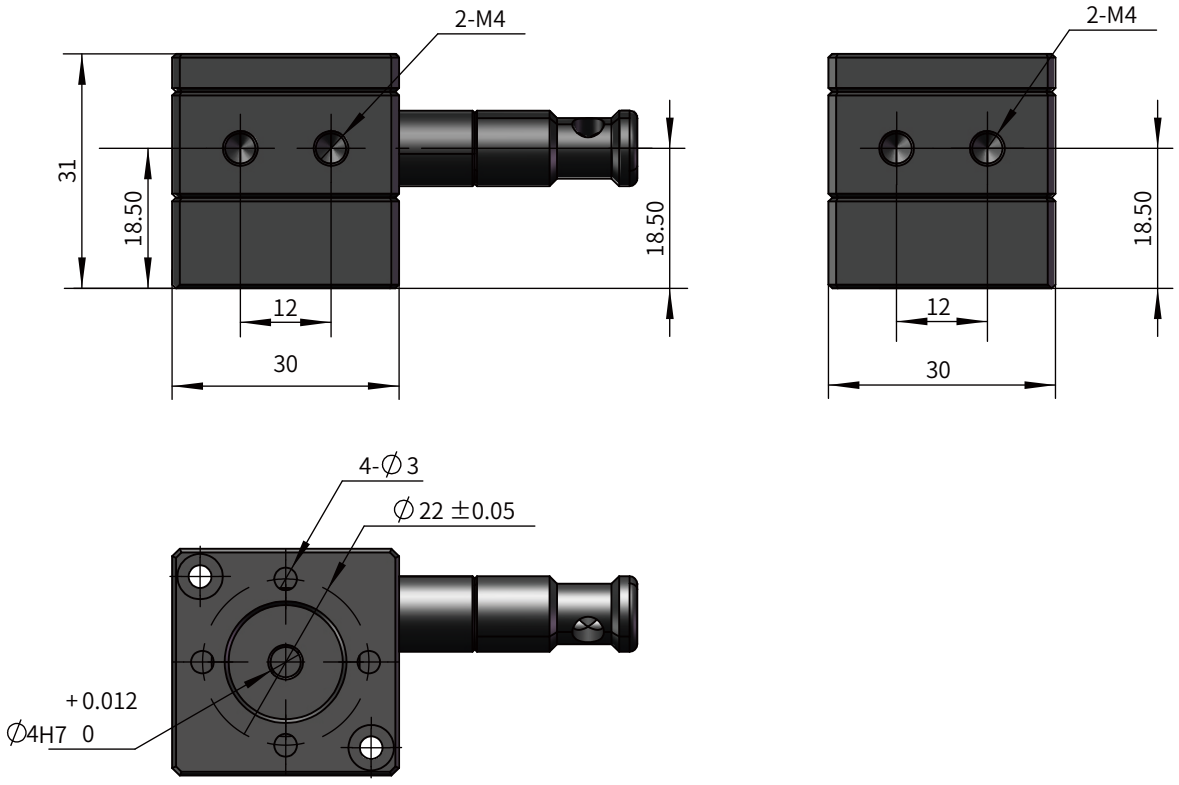


PB	30	40	4
①	②	③	④

①.Model：PB：Drawstring box
②.Mechanical dimensions：30*30
③.Hub circumference：40mm
④.Encoder aperture：4mm

Product size

CHBG

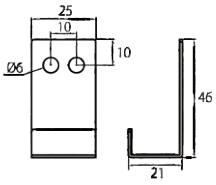


Technical parameter

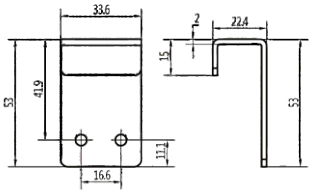
CHBG

Technical parameter			
Measuring stroke	maximum600mm	Outgoing tension	5N
maximumvelocity	600mm/S	life span	2 million to 10 million times
measurement	30*61.5*31	material quality	alufer

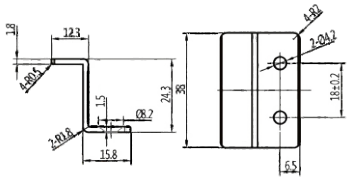
coupleA



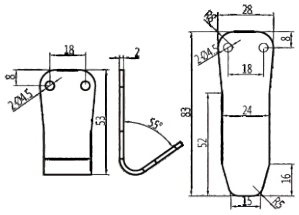
coupleB



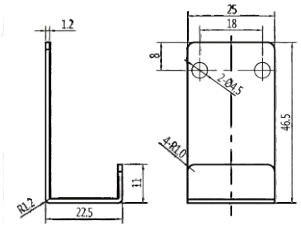
coupleC



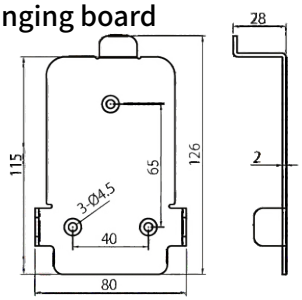
coupleD



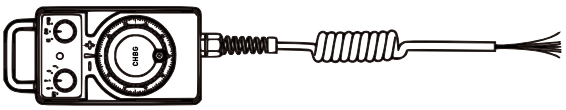
coupleE



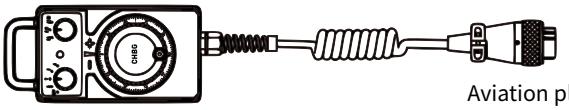
Hanging board



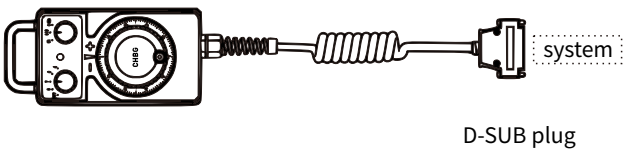
plain conductor



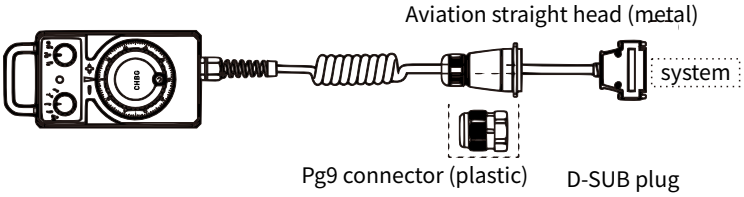
Equipped with aviation plug



Equipped with D-SUB plug

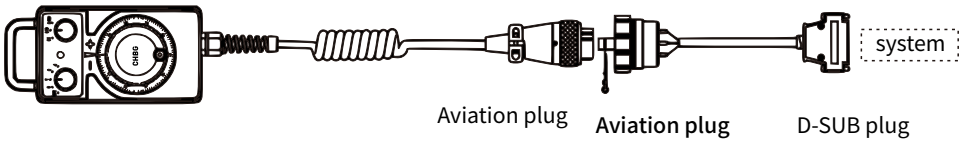


Equipped with PG9 connector/aviation straight connector+D-SUB plug

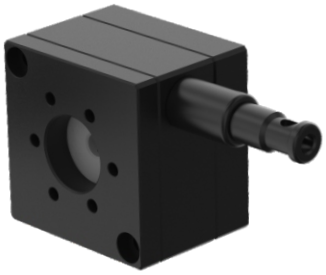


*The installation dimension of aviation straight connector is the same as that of Weipu 16-core/20-core plug

Equipped with aviation plug+D-SUB plug



50 independent stretching box

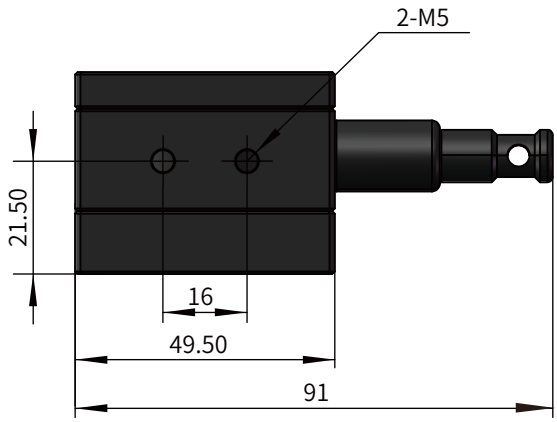


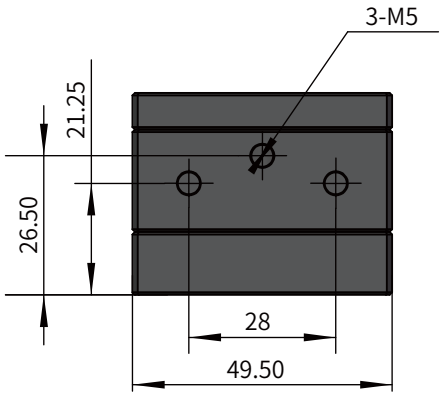
※ Free to match with various encoders.
The unique internal design ensures that the outgoing line never tangles.
Exquisite processing highlights every detail.

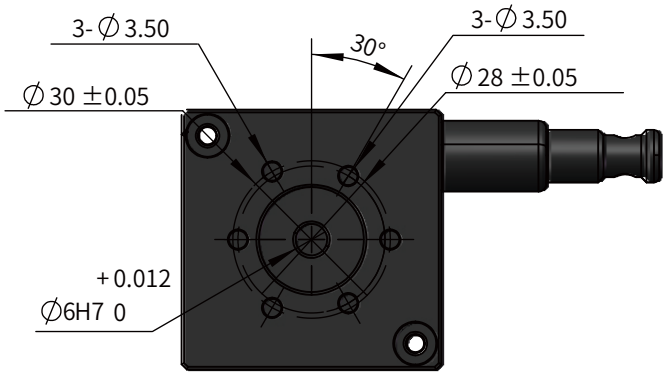
PB	50	80	6
①	②	③	④

①.Model : PB : Drawstring box
②.Mechanical dimensions : 50*50
③.Hub circumference : 80mm、100mm、120mm
④.Encoder aperture：6mm

Product size







Technical parameter

Technical parameter			
Measuring stroke	maximum1500mm	Outgoing tension	4N
maximumvelocity	2000mm/S	life span	2 million to 10 million times
measurement	49.5*91*38.5	material quality	alufer

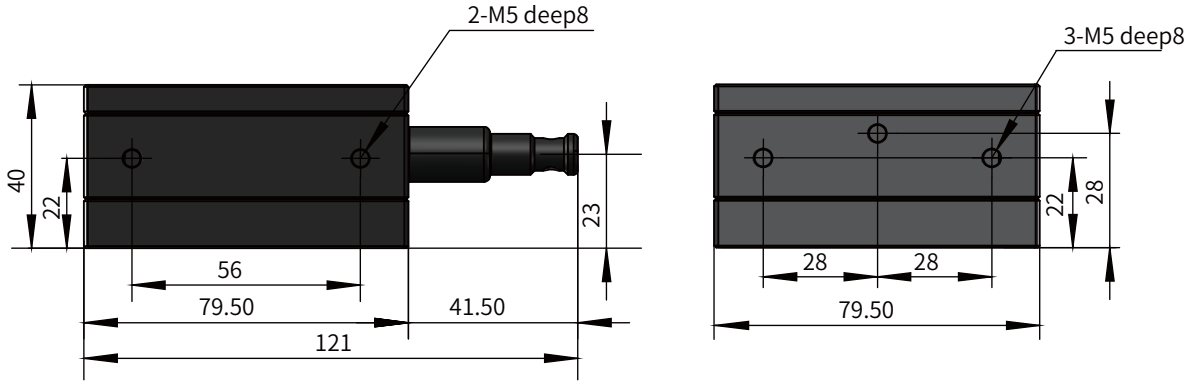
80 independent stretching box

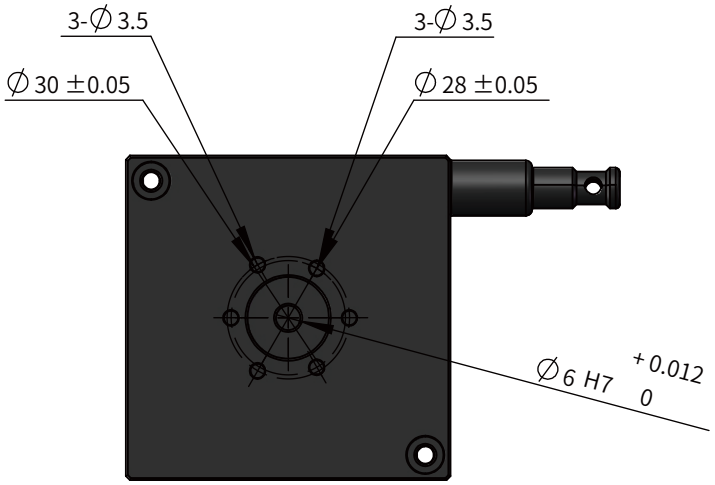
- Free to match with various encoders.
  The unique internal design ensures that the outgoing line never tangles.
  Exquisite processing highlights every detail.

PB	80	200	6
①	②	③	④

①. Model: PB : Drawstring box
②.Mechanical dimensions : 80*80
③.Hub circumference : 200mm
④. Encoder aperture : 6mm

Product size





Technical parameter

Technical parameter			
Measuring stroke	maximum1500mm	Outgoing tension	4 N
maximumvelocity	2000mm/S	life span	2 million to 10 million times
measurement	49.5*91*38.5	material quality	alufer

65 independent stretching box

CHBG 勃嘉工控

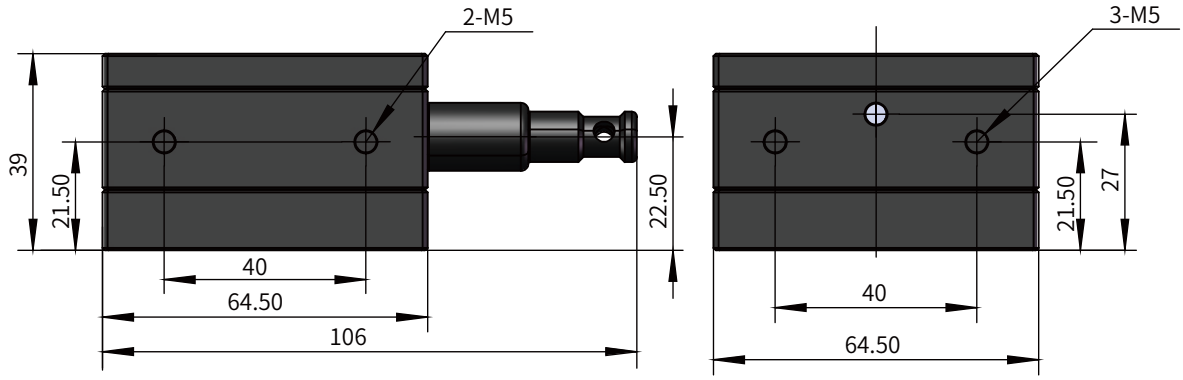
※ Free to match with various encoders.
The unique internal design ensures that the outgoing line never tangles.
Exquisite processing highlights every detail.

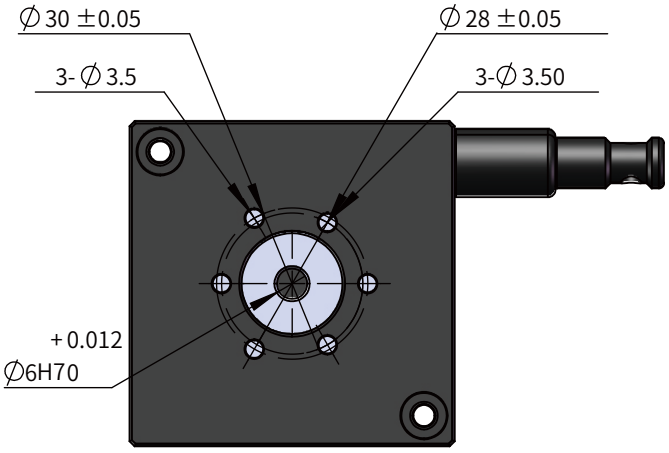
PB	65	150	6
①	②	③	④

①. Model: PB : Drawstring box
②.Mechanical dimensions : 65*65
③.Hub circumference : 150mm
④. Encoder aperture : 6mm

Product size

CHBG





Technical parameter

CHBG

Technical parameter			
Measuring stroke	maximum3000mm	Outgoing tension	5N
maximumvelocity	2500mm/S	life span	2 million to 10 million times
measurement	64.5*106*39	material quality	alufer

30 Stretch box simulation quantity

CHBG 勃嘉工控

- Flexible application from various angles.
  Adopt imported key components to grasp every accuracy.
  The unique internal design ensures that the outgoing line never tangles.
  Exquisite processing, highlighting details.

WPS	30	AO	400	0.01	05K
①	②	③	④	⑤	⑥

①.Model: WPS : Displacement sensor ②.Mechanical dimensions : 30*30

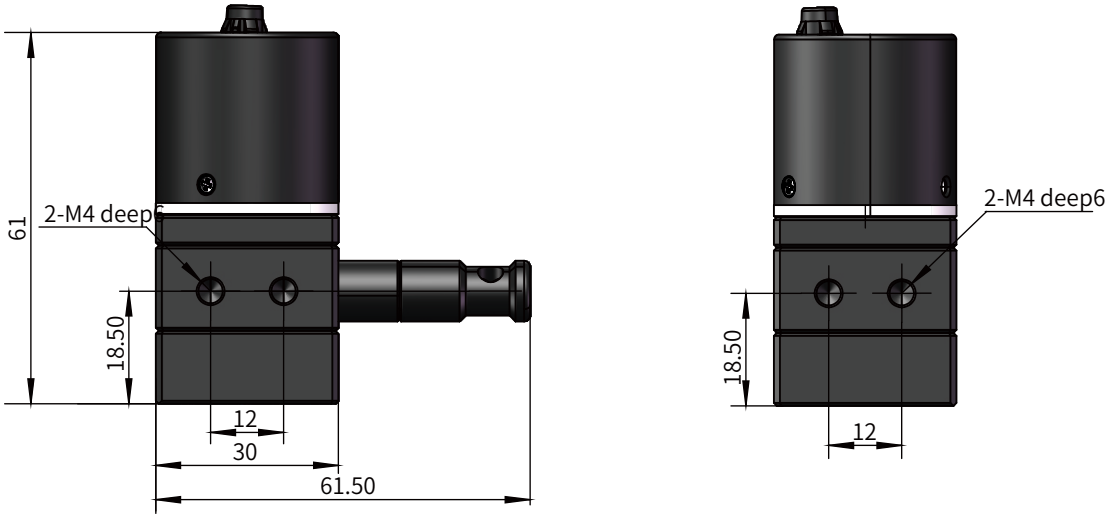
③.Exportmodel：AO:analog quantityexport ④. Measuring stroke ：400MM

⑤.Precision ：0.1%

⑥.Export mode：05K：Resistance output 0-5K 、010K：Resistance output 0-10K 、05V : Voltage output 0-5V 、010V : Voltage output 0-10V，420MA：Current output 4-20MA

Product size

CHBG



Export waveform and signal position accuracy

CHBG

Simulate export

Measuring stroke	maximum400mm	Outgoing tension	4N
senseimplementtype	enter portprecisionelectric potentialimplement	Anti-vibration	10Hz ~1500 Hz, 10G
output signal	0-5K、0-10K、0-5V、0-10V、4-20mA	life span	⩾1 million times
working voltage	12-24V	Maximum reciprocating velocity	600mm/S
linearprecision	0.1%FS	Reciprocating frequency	20HZ(Reciprocating amplitude)
Repetition accuracy	0.01%	resolution ratio	infinitely small
working temperature	-25-70°C	hullmaterial quality	alufer
Cable length	0.5M(standard), Customizable	Protection grade	IP54

50 Stretch box simulation quantity

- Flexible application from various angles.
- Adopt imported key components to grasp every accuracy.
- The unique internal design ensures that the outgoing line never tangles.
- Exquisite processing, highlighting details.

WPS	50	AO	400	0.01	05K
①	②	③	④	⑤	⑥

①.Model：WPS：Displacement sensor

②.Mechanical dimensions：30*30、50*50、65*65、80*80

③.Exportmodel：AO：Analog output

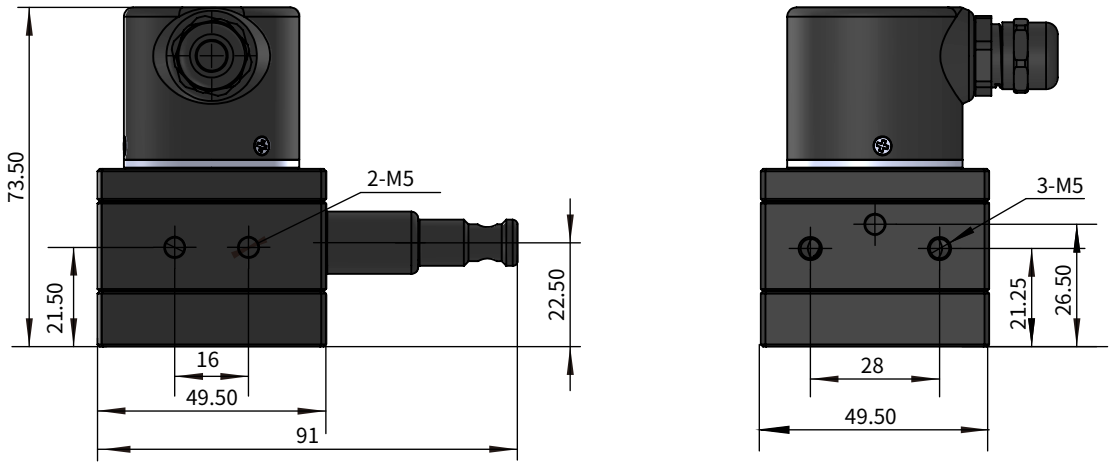
④. Measuring stroke：400MM

⑤.Precision：0.1%

⑥.Export mode：05K：Resistance output 0-5K 、010K：Resistance output 0-10K 、05V：Voltage output 0-5V 、010V：Voltage output 0-10V, 420MA：Current output 4-20MA

Product size

CHBG



Export waveform and signal position accuracy

CHBG

Simulate export

Measuring stroke	maximum1000mm	Outgoing tension	4N
senseimplementtype	enter portprecisionelectric potentialimplement	life span	⩾1 million times
output signal	0-5K、0-10K、0-5V、0-10V、4-20mA	Maximum reciprocating velocity	600mm/S
working voltage	12-24V	Reciprocating frequency	20HZ(Reciprocating frequency)
linearprecision	0.1%FS	resolution ratio	infinitely small
Repetition accuracy	0.01%	hullmaterial quality	alufer
working temperature	-25-70°C	Protection grade	IP54
Cable length	2M(standard), Customizable		

65 Stretch box simulation quantity

CHBG 勃嘉工控

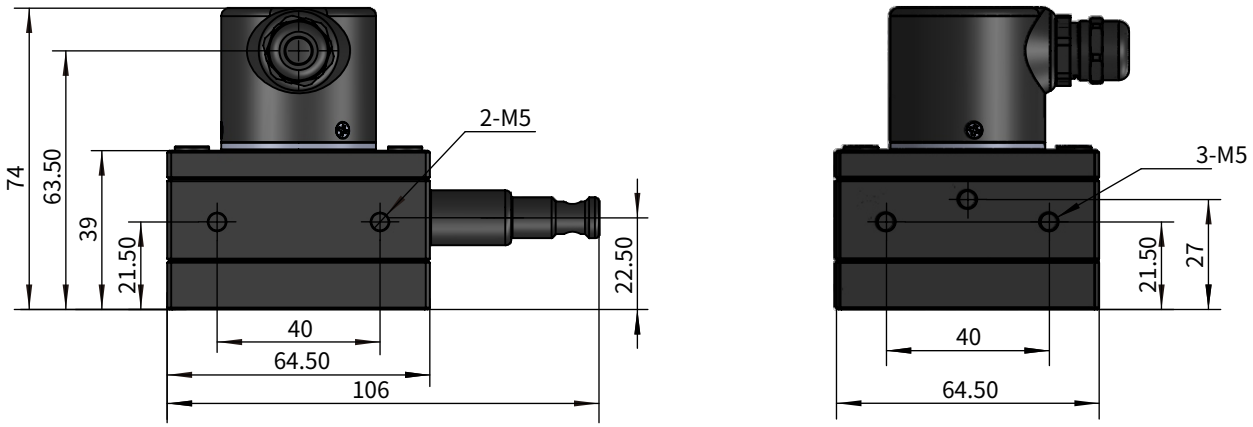
※ Flexible application from various angles.
Adopt imported key components to grasp every accuracy.
The unique internal design ensures that the outgoing line never tangles.
Exquisite processing, highlighting details.

WPS	65	AO	400	0.01	05k
①	②	③	④	⑤	⑥

①.Model：WPS：Displacement sensor　②.Mechanical dimensions：65*65
③.Exportmodel：AO: Analog output　④. Measuring stroke：400MM
⑤.Precision ：0.1%
⑥.Export mode：05K：Resistance output 0-5K 、010K：Resistance output 0-10K 、05V：Voltage output 0-5V 、010V：Voltage output0-10V，420MA：Current output4-20MA

Product size

CHBG



Export waveform and signal position accuracy

CHBG

Simulate export

Measuring stroke	maximum1500mm	Outgoing tension	4N
senseimplementtype	enter portprecisionelectric potentialimplement	life span	⩾1 million times
output signal	0-5K、0-10K、0-5V、0-10V、4-20mA	Maximum reciprocating velocity	600mm/S
working voltage	12-24V	Reciprocating frequency	20HZ(Reciprocating frequency)
linearprecision	0.1%FS	resolution ratio	infinitely small
Repetition accuracy	0.01%	hullmaterial quality	alufer
working temperature	-25-70℃	Protection grade	IP54
Cable length	2M(standard)，Customizable		

80 Stretch box simulation quantity

- Flexible application from various angles.
- Adopt imported key components to grasp every accuracy.
- The unique internal design ensures that the outgoing line never tangles.
- Exquisite processing, highlighting details.

WPS	80	AO	400	0.01	05K
①	②	③	④	⑤	⑥

①.Model:WPS : Displacement sensor ②.Mechanical dimensions : 80*80

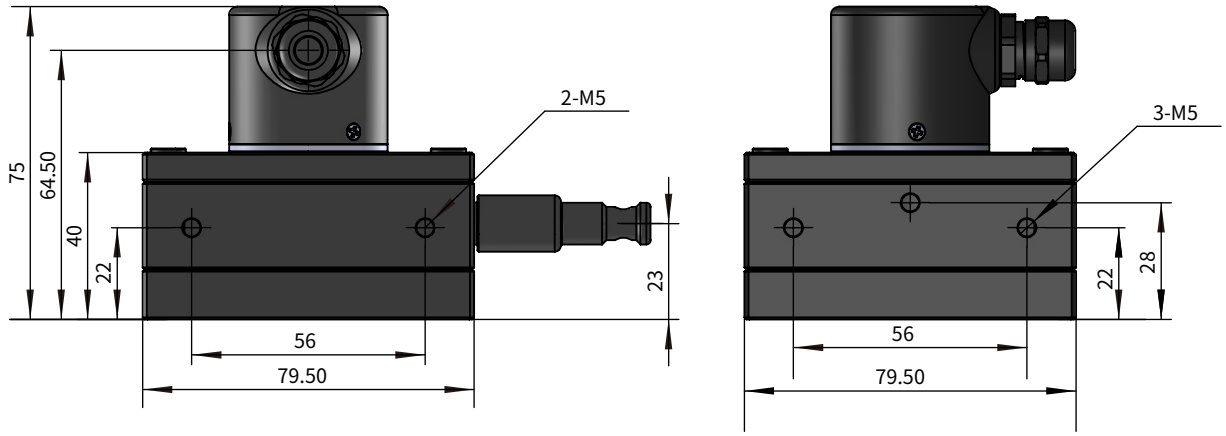
③.Exportmodel：AO:Analog output ④. Measuring stroke：400MM

⑤.Precision：0.1%

⑥.Export mode:05K：Resistance output 0-5K 、010K：Resistance output 0-10K 、05V : Voltage output 0-5V 、010V:Voltage output 0-10V，420MA：Current output 4-20MA

Product size

CHBG



Export waveform and signal position accuracy

CHBG

Simulate export

Measuring stroke	maximum2000mm	Outgoing tension	4N
senseimplementtype	enter portprecisionelectric potentialimplement	life span	⩾1 million times
output signal	0-5K、0-10K、0-5V、0-10V、4-20mA	Maximum reciprocating velocity	600mm/S
working voltage	12-24V	Reciprocating frequency	20HZ(Reciprocating frequency)
linearprecision	0.1%FS	resolution ratio	infinitely small
Repetition accuracy	0.01%	hullmaterial quality	alufer
working temperature	-25-70°C	Protection grade	IP54
Cable length	2M(standard), Customizable		

30 Stretch box digital quantity

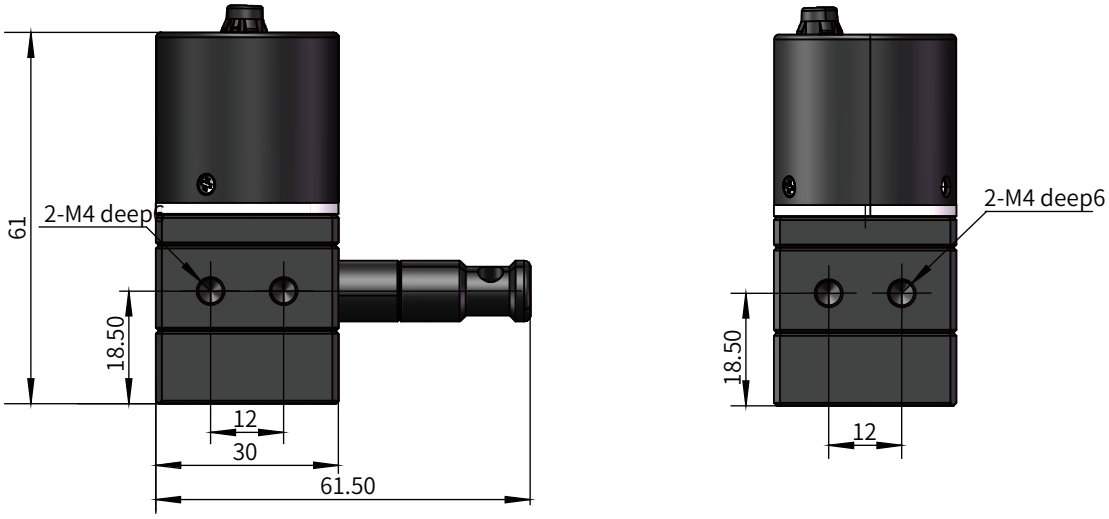
- Flexible application from various angles.
- Adopt imported key components to grasp every accuracy.
- The unique internal design ensures that the outgoing line never tangles.
- Exquisite processing, highlighting details.

WPS	30	DO	400	0.01	05K
①	②	③	④	⑤	⑥

①.Model: WPS : Displacement sensor
②.Mechanical dimensions:30*30
③.Export model : DO : Digital output
④. Measuring stroke :400MM
⑤.Precision :0.039-0.4mm
⑥.Export mode:L:Driver output 、E:Voltage output 、C:Current output 、F:Complementary push pull output 、485:485export 、332:332export

Product size

CHBG



Export waveform and signal position accuracy

CHBG

Figureexport

Measuring stroke	maximum600mm
output signal	Voltage output、Current output
precision	0.039-0.4
Repetition accuracy	0.01%
maximumvelocity	600mm/S
Cable length	0.5M(standard)，Customizable
Outgoing tension	5N
life span	2 million to 10 million times
working voltage	5-12V,12-24V
working temperature	-25-70℃
hullmaterial quality	alufer
Protection grade	IP54

Stretch box precisionoutside

Contour circumference (mm)	encodedimplement Pulse number	Drawstring boxprecision (mm)
40	100	0.400
40	200	0.200
40	360	0.111
40	400	0.100
40	500	0.080
40	600	0.067
40	1000	0.040
40	1024	0.039

50 Stretch box digital quantity

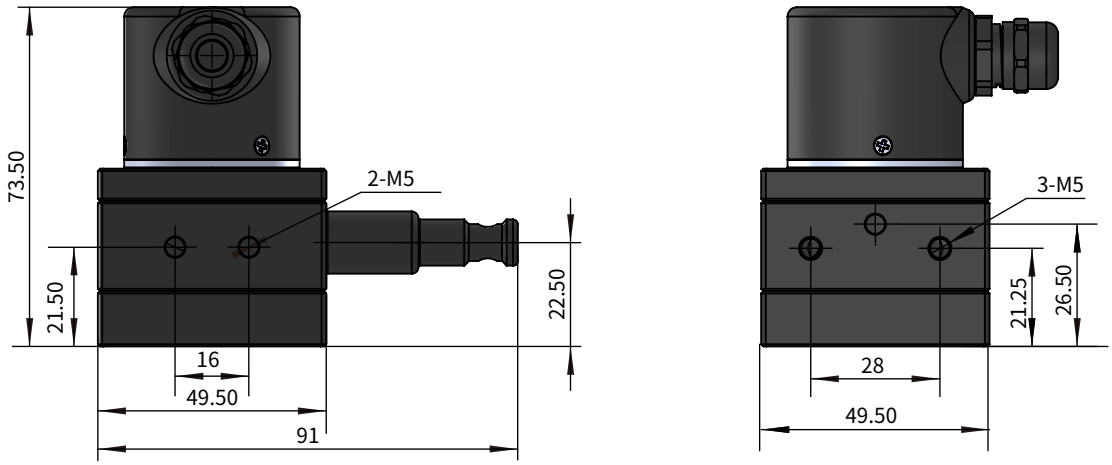
- Flexible application from various angles.
- Adopt imported key components to grasp every accuracy.
- The unique internal design ensures that the outgoing line never tangles.
- Exquisite processing, highlighting details.

WPS	50	DO	400	0.01	05K
①	②	③	④	⑤	⑥

①.Model:WPS:Displacement sensor
②.Mechanical dimensions:50*50
③.Exportmodel：DO:Digital output
④. Measuring stroke ：400MM
⑤.Precision ：0.028-1MM
⑥.Export mode：L：Driver output 、E:Voltage output 、C：Current output 、F：Complementary push pull output 、485：485export 、332：332export

Product size

CHBG



Export waveform and signal position accuracy

CHBG

Figureexport

Measuring stroke	maximum1500mm
output signal	voltage、current、push-pull、
	drive、RS485/232
precision	0.039-0.4
Repetition accuracy	0.01%
maximumvelocity	600mm/S
Cable length	0.5M(standard), Customizable
Outgoing tension	5N
life span	2 million to 10 million times
working voltage	5-12V,12-24V
working temperature	-25-70°C
hullmaterial quality	alufer
Protection grade	IP54

Stretch box precisionoutside

Contour circumference (mm)	encodedimplement Pulse number	Drawstring boxprecision (mm)
100	100	1.000
100	200	0.500
100	360	0.278
100	400	0.250
100	500	0.200
100	600	0.167
100	1000	0.100
100	1024	0.098
100	1500	0.067
100	2000	0.050
100	2500	0.040
100	3000	0.033
100	3600	0.028

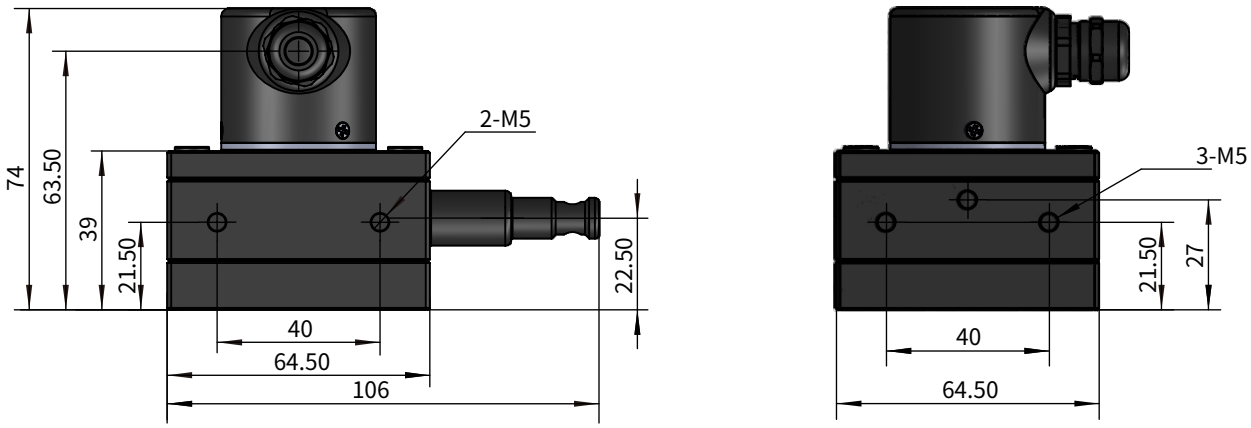
65 Stretch box digital quantity

- Flexible application from various angles.
- Adopt imported key components to grasp every accuracy.
- The unique internal design ensures that the outgoing line never tangles.
- Exquisite processing, highlighting details.

WPS	65	DO	400	0.01	05K
①	②	③	④	⑤	⑥

①.Model: WPS:Displacement sensor
②.Mechanical dimensions:65*65
③.Exportmodel：DO:Digital output
④. Measuring stroke ：400MM
⑤.Precision ：0.042-1.5mm
⑥.Export mode：L：Driver output 、E:Voltage output 、C：Current output 、F：Complementary push pull output 、485：485export 、332：332export

Product size



Export waveform and signal position accuracy

Figureexport

Measuring stroke	maximum3000mm
output signal	voltage、current、push-pull、
	drive、RS485/232
precision	0.042-1.5
Repetition accuracy	0.01%
maximumvelocity	2500mm/S
Cable length	2M(standard), Customizable
Outgoing tension	5N
life span	2 million to 10 million times
working voltage	5-12V,12-24V
working temperature	-25-70°C
hullmaterial quality	alufer
Protection grade	IP54

Stretch box precisionoutside

Contour circumference (mm)	encodedimplement Pulse number	Drawstring boxprecision (mm)
150	100	1.500
150	200	0.750
150	360	0.417
150	400	0.375
150	500	0.300
150	600	0.250
150	1000	0.150
150	1024	0.146
150	1500	0.100
150	2000	0.075
150	2500	0.060
150	3000	0.050
150	3600	0.042

Page 56

80 stretching boxDigital quantity

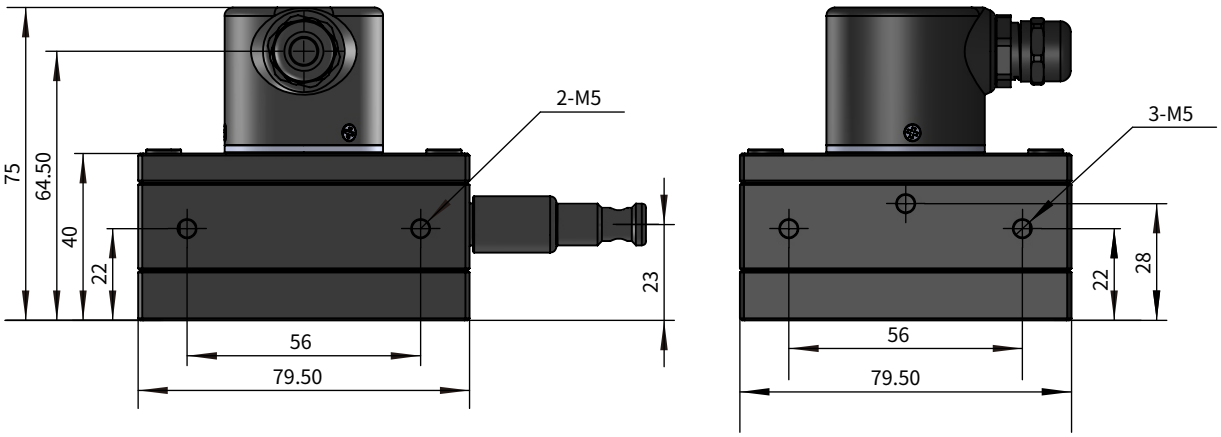
- Flexible application from various angles.
- Adopt imported key components to grasp every accuracy.
- The unique internal design ensures that the outgoing line never tangles.
- Exquisite processing, highlighting details.

WPS	80	DO	400	0.01	05K
①	②	③	④	⑤	⑥

①.Model:WPS:Displacement sensor
②.Mechanical dimensions:80*80
③.Exportmodel:DO:Digital output
④. Measuring stroke :400MM
⑤.Precision :0.056-2MM
⑥.Export mode:L:Driver output 、E:Voltage output 、C:Current output 、F:Complementary push pull output 、485:485export 、332:332export

Product size

CHBG



Export waveform and signal position accuracy

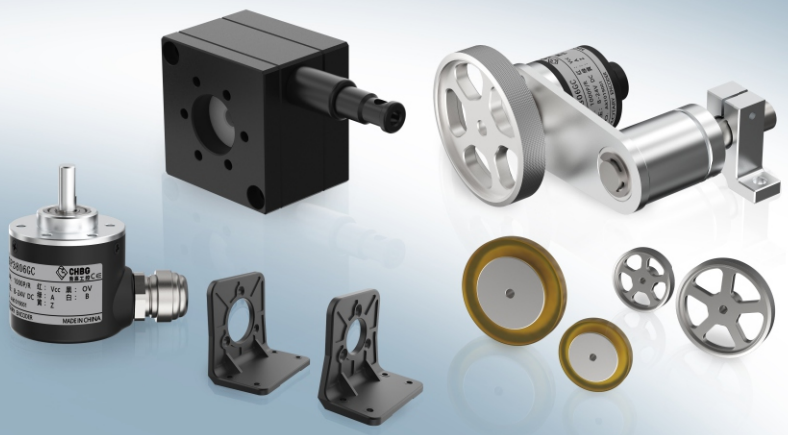
CHBG

Figureexport

Measuring stroke	maximum3000mm
output signal	voltage、current、push-pull、
	drive、RS485/232
precision	0.042-1.5
Repetition accuracy	0.01%
maximumvelocity	2500mm/S
Cable length	2M(standard), Customizable
Outgoing tension	5N
life span	2 million to 10 million times
working voltage	5-12V,12-24V
working temperature	-25-70℃
hullmaterial quality	alufer
Protection grade	IP54

Stretch box precisionoutside

Contour circumference (mm)	encodedimplement Pulse number	Drawstring boxprecision (mm)
200	100	2.000
200	200	1.000
200	360	0.556
200	400	0.500
200	500	0.400
200	600	0.333
200	1000	0.200
200	1024	0.195
200	1500	0.133
200	2000	0.100
200	2500	0.080
200	3000	0.067
200	3600	0.056



Encoder, meter wheel, stretch box, bracket series

Photoelectric, laser, proximity sensor series

Expansion sleeve series

Handheld and hand-held box series

Coupling series

CHBG®
勃嘉工控

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