POCH

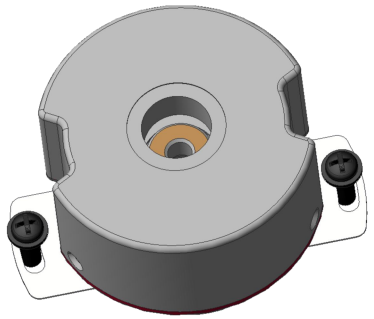
FOCUS ON PROVIDING

Absolute Incremental Encoders

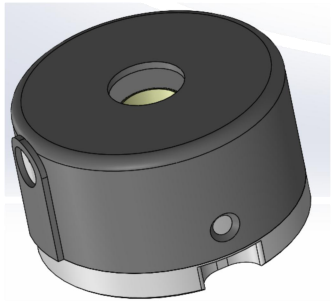
Designed specifically for servo drive control systems

Transform Your Operations with Superior Performance and Reliability in Servo Motor Systems.

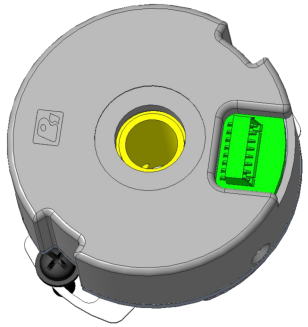
ABSOLUTE ENCODERS



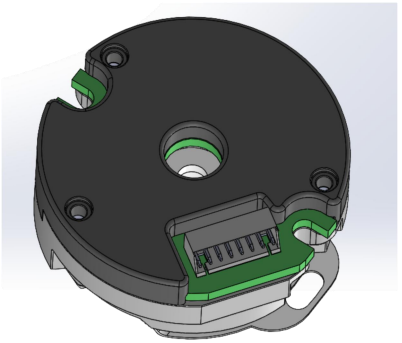
RZH4409A/ RZ4809A



RZ35A09

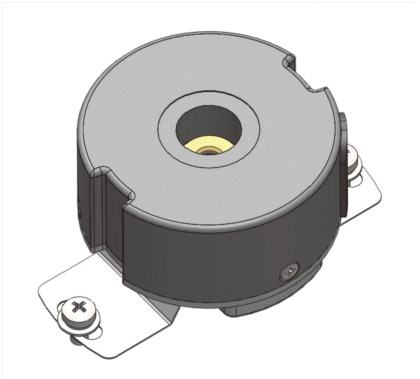


RZL 4408A



RZ35D06

INCREMENTAL ENCODERS



UZ Series

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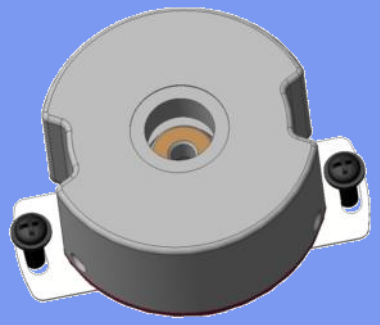
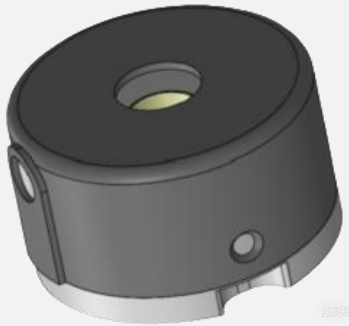
01 >> Absolute Encoders



RZH4409A/ RZ4809A



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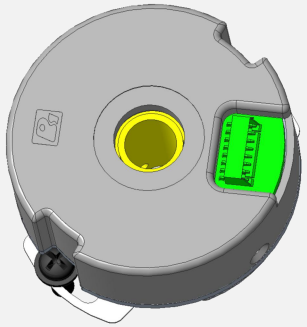

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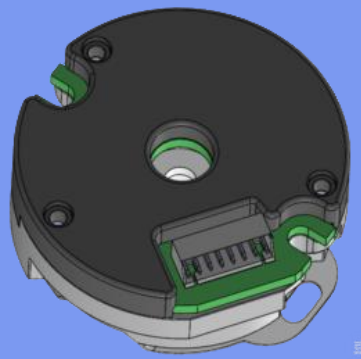

RZ35D06

Our encoders are mainly used in servo-driven control systems.

They provide feedback information and auxiliary signals required for precise position and speed control within the system.

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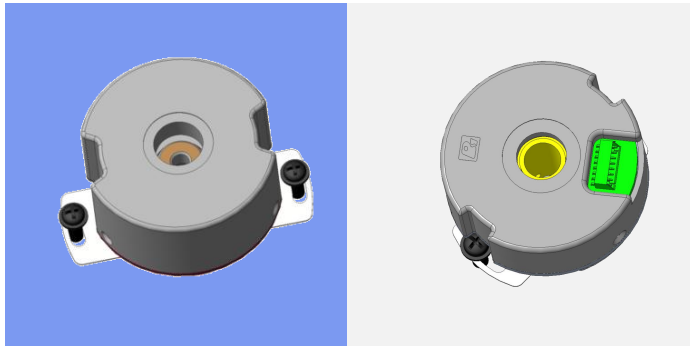
RZ Series Absolute Encoders

SPECIFICATIONS

Working Temperature:	-20 ℃ —+105 ℃
Current Consumption:	< 100mA
Battery Voltage:	3.6V DC
Battery Fault Voltage:	2.5V
Battery Warning Voltage:	3.1V

Signal:	Differential output
Supply Voltage:	Single 5V Supply
Rise/Fall Time:	Around 100ns
Insulated Resistance:	50MΩ



MECHANICAL SPECIFICATIONS

Enter Allowable Deviation Of Shaft:	Axial:±0.5mm Radial:±0.02mm Dip Angle:0.1° Axial Endplay:<0.1mm Radial Runout:<0.01mm
Operation Speeds:	Of Up To 6000rpm
Shaft Diameter:	Axis Of A Cone Ø9, Taper 1:10
Moment Of Inertia:	0.68kg * mm2
Rotor Angular Acceleration:	During Power Supply ≤80000rad/S2 When Battery Powered ≤4000rad/S2
Mechanical Shock:	Impact Acceleration 980m/S2 11ms.Impact 3 Times In Each Direction, Totally 18 Times
Vibrate:	10 To 55hz, Keeping The Amplitude Of 1.5mm Acceleration Between 55 And 2000hz Is 98m/S2 XYZ 2 Hours Per Axial Direction, 6 Hours In Total
Working Temperature:	-20 ℃ —+105 ℃
Relative Humidity:	≤90% (40℃/21d, Based On En 60068-2-78) Without Condensation.
Degree Of Protection:	IP40

ELECTRICAL SPECIFICATIONS

Resolution Ranges:	131072 (17Bit) - 8388608 (23Bit)
Resolution Capabilities:	16 Bits Multi-Turn Resolution Counter
Absolute Positioning Accuracy:	<±50 Angular Seconds
Repetition Positioning Accuracy:	<±3 angular seconds
Battery Voltage Fault Warning:	Yes
Interface:	RS485
Communication Frequency:	≤16K
Baud Rate:	2.5MHz

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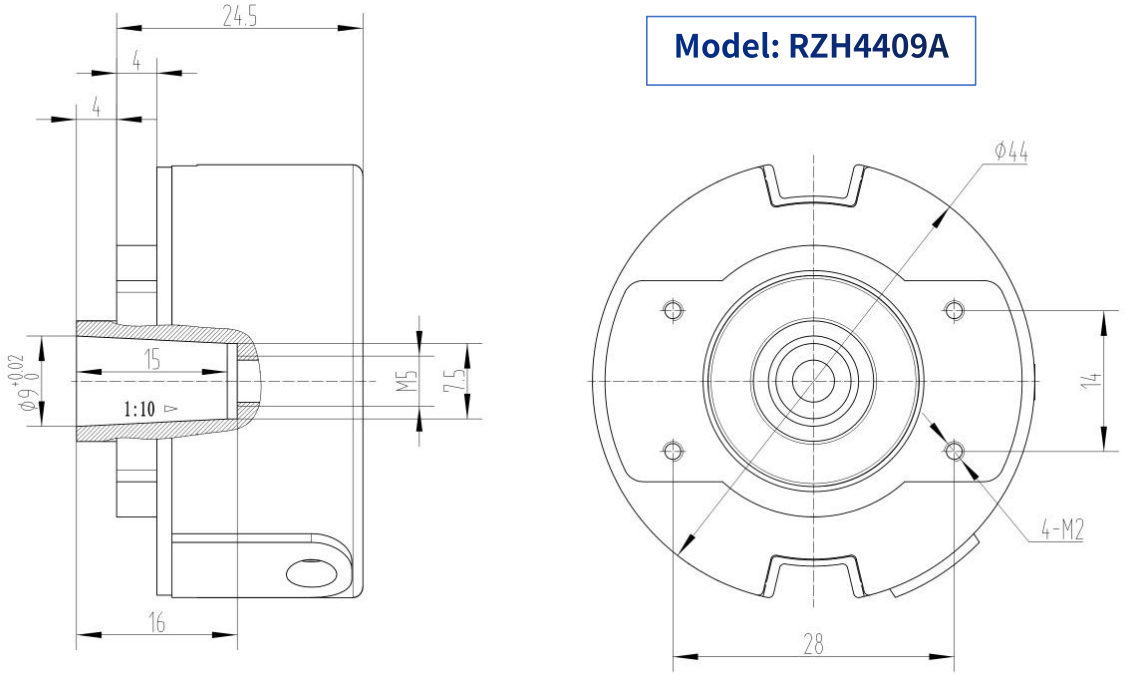
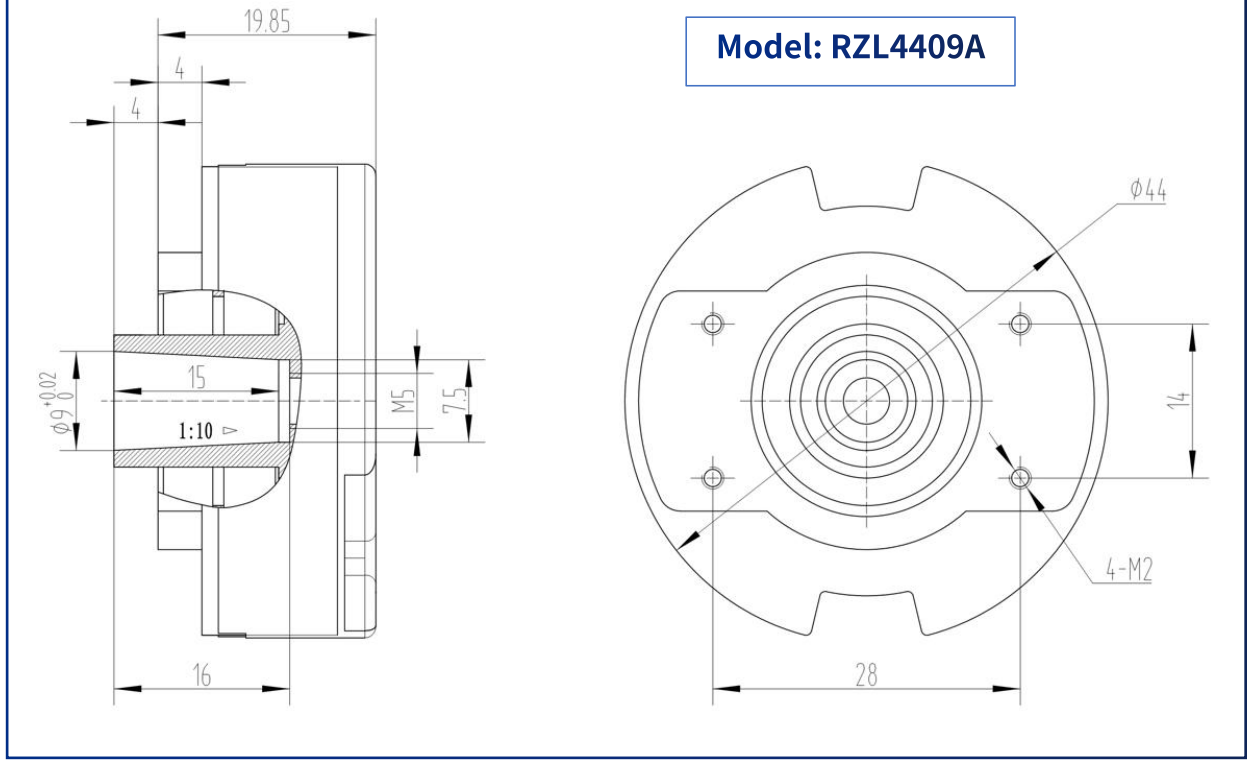
Main Size Selection (mm)

Model: RZH4409A



Model: RZL4409A



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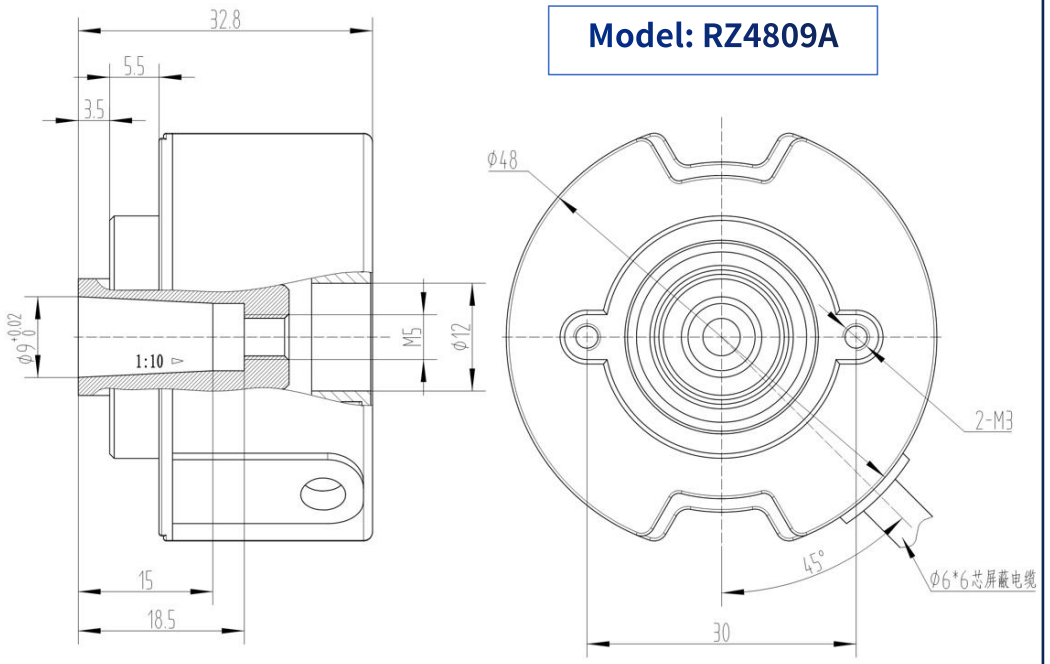
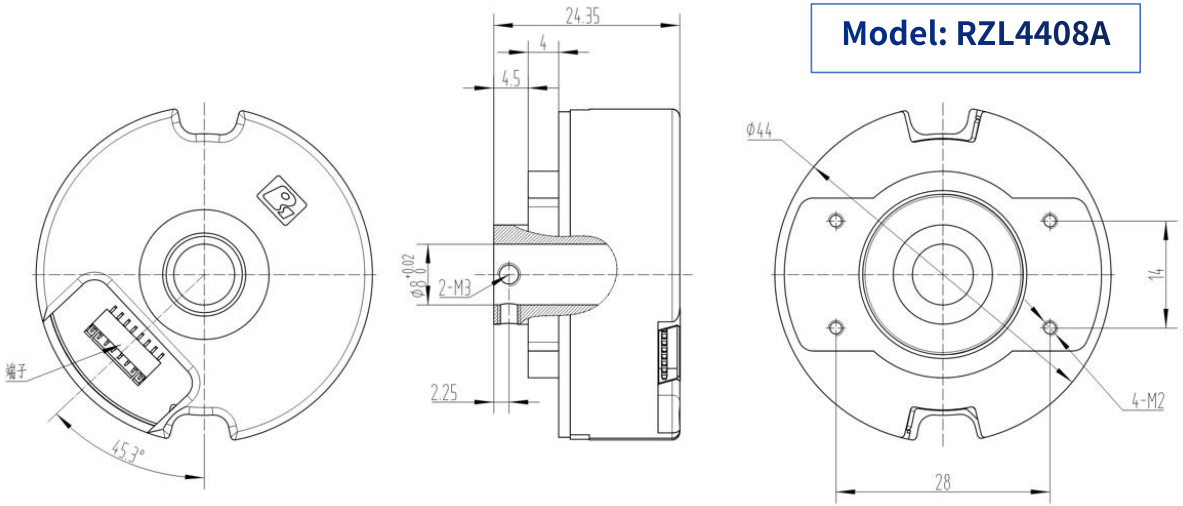
Main Size Selection (mm)

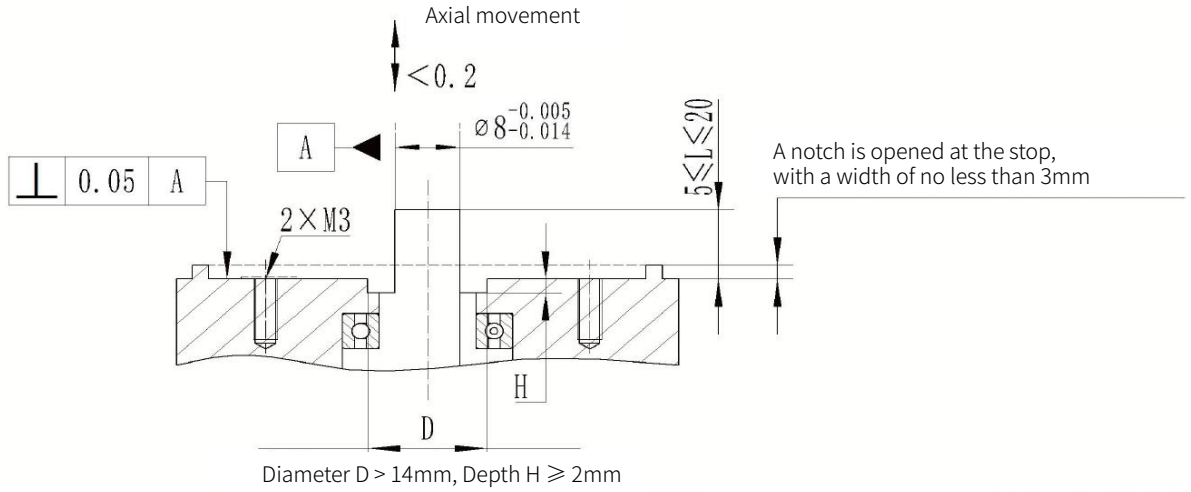
Model: RZ4809A



Model: RZL4408A



RZL4408A recommended motor end size:



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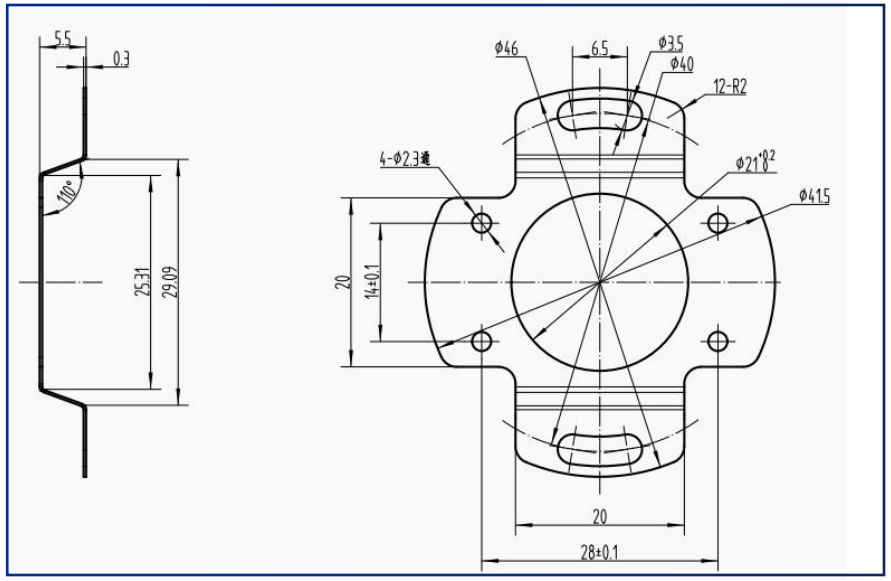
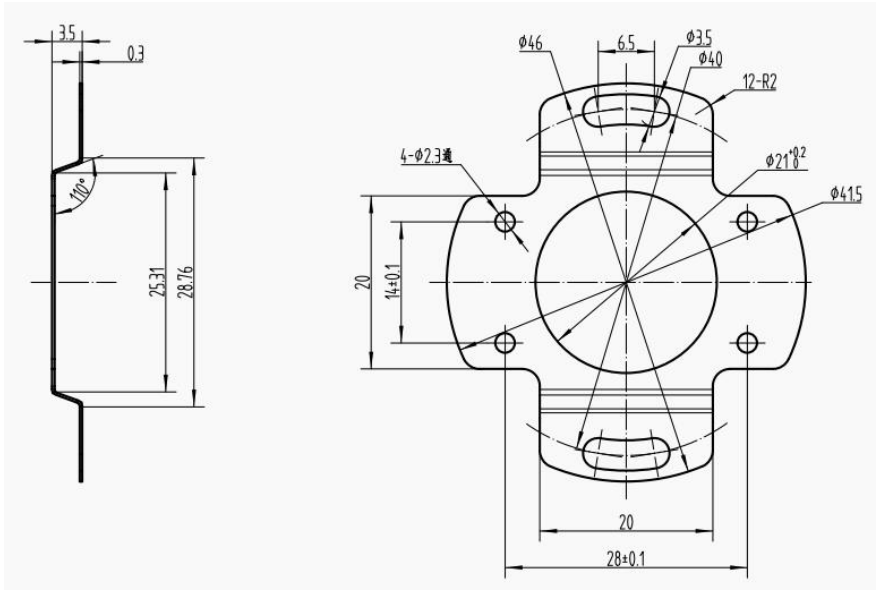
Spring Tab Size Selection

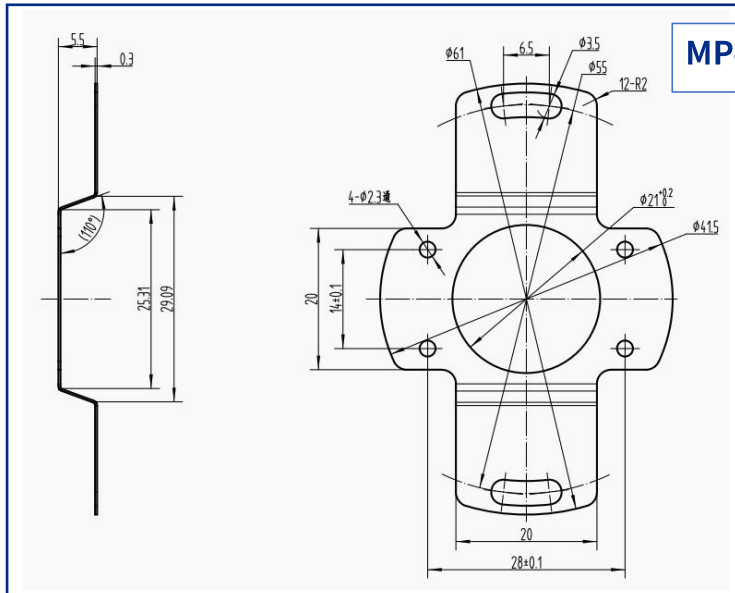
MP4409-002A-40（C-Mounting hole d40）



MP4409-003A-40（CL-Low type mounting hole d40）



MP4409-001A-55（D- Mounting hole d55）



Note:

The spring tab should be selected according to the motor end size.

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ORDERING INFORMATION / PART NUMBER

R ZH 44 09 A 23 P T C 5V G0.35m

Series
R-Absolute

Type
Z-Hollow shaft
ZH-Hollow shaft high
ZL-Hollow shaft low

Size
44-Φ44mm
48-Φ48mm

Hole Diameter
09-9mm Tapered
08-8mm Straight
06-6mm Straight
06Z-6mm Tapered

Subject Code
A-ID No.
B-ID No.

Resolution
23-23Bits
21-21 Bits
17-17 Bits

Single / Mult
P-Pseudo Multi-Turn 16 Bits
M-Multi-Turn 16 Bits
S-Single-Turn

Interface
T-485*
S-SSI*
B-BISS*
Customized*

Spring Tab
C-
Mounting hole d40
CL-
Low mounting hole d40
D-
Mounting hole d55

Voltage

Cable/Plug
G-Cable

SIGNAL DEFINITIONS

LEAD COLOR	RED	BLACK	BLUE	YELLOW	BROWN	WHITE	SHIELDED CABLE
SIGNAL DEFINITION	5V	GND	485+	485-	Battory Positive	Batteny GND	P

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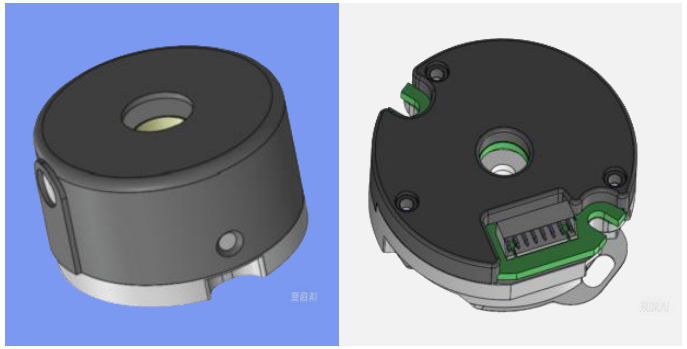
RZ35 Series Absolute Encoders

SPECIFICATIONS

Working Temperature:	-20 ℃ —+105 ℃
Current Consumption:	< 100mA
Battery Voltage:	3.6V DC
Battery Fault Voltage:	2.5V
Battery Warning Voltage:	3.1V

Signal:	Differential output
Supply Voltage:	Single 5V Supply
Rise/Fall Time:	Around 100ns
Insulated Resistance:	50MΩ



MECHANICAL SPECIFICATIONS

Enter Allowable Deviation Of Shaft:	Axial:±0.5mm Radial:±0.02mm Dip Angle:0.1° Axial Endplay:<0.1mm Radial Runout:<0.01mm
Operation Speeds:	Of Up To 6000rpm
Shaft Diameter:	Axis Of A Cone Taper 1:10
Moment Of Inertia:	0.68kg * mm2
Rotor Angular Acceleration:	During Power Supply ≤80000rad/S2 When Battery Powered ≤4000rad/S2
Mechanical Shock:	Impact Acceleration 980m/S2 11ms.Impact 3 Times In Each Direction, Totally 18 Times
Vibrate:	10 To 55hz, Keeping The Amplitude Of 1.5mm Acceleration Between 55 And 2000hz Is 98m/S2 XYZ 2 Hours Per Axial Direction, 6 Hours In Total
Working Temperature:	-20 ℃ —+105 ℃
Relative Humidity:	≤90% (40℃/21d, Based On En 60068-2-78) Without Condensation.
Degree Of Protection:	IP40

ELECTRICAL SPECIFICATIONS

Resolution Ranges:	131072 (17Bit) - 8388608 (23Bit)
Resolution Capabilities:	16 Bits Multi-Turn Resolution Counter
Absolute Positioning Accuracy:	<±50 Angular Seconds
Repetition Positioning Accuracy:	<±3 angular seconds
Battery Voltage Fault Warning:	Yes
Interface:	RS485
Communication Frequency:	≤16K
Baud Rate:	2.5MHz

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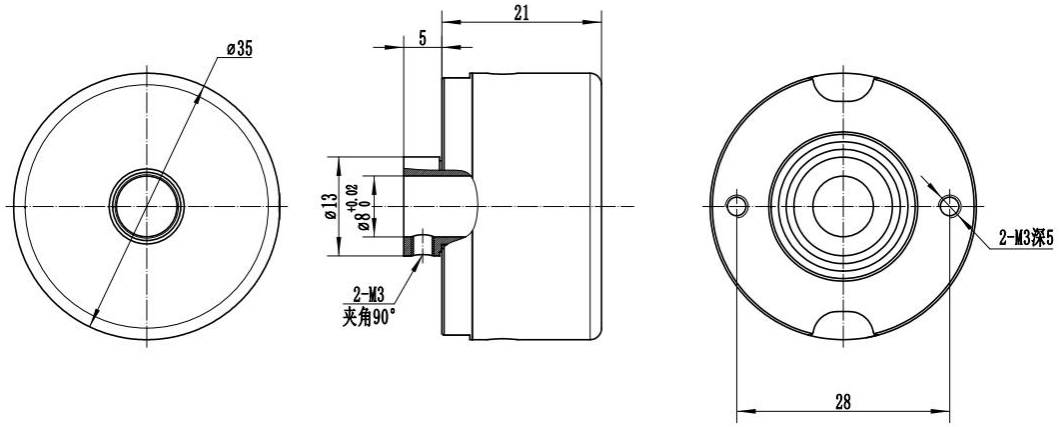
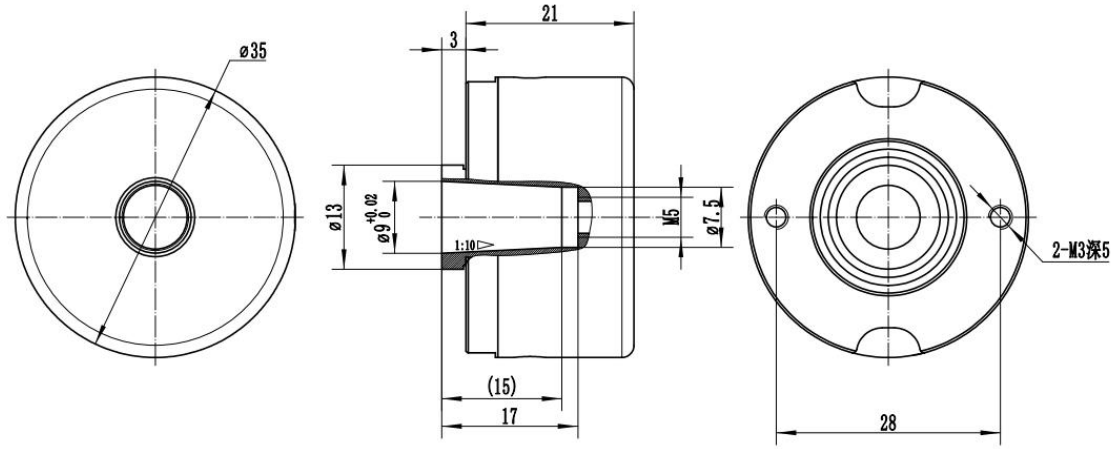
Main Size Selection (mm)

Model: RZ35A08



Model: RZ35A09



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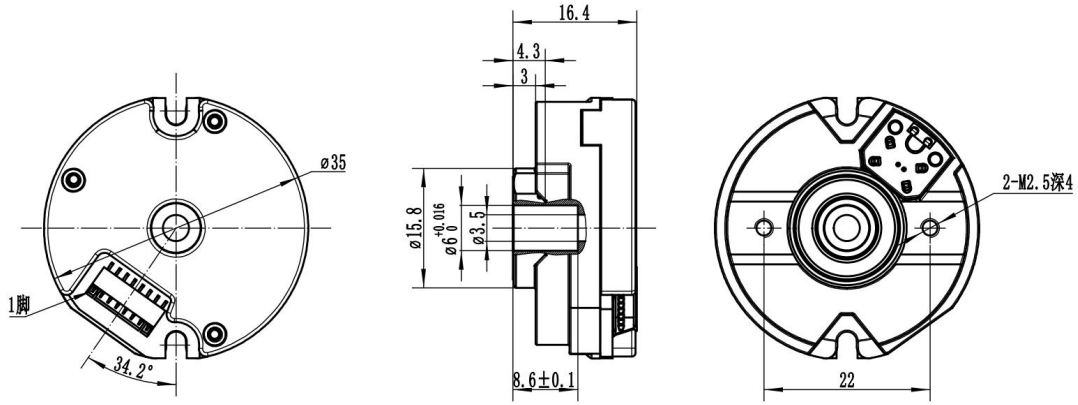
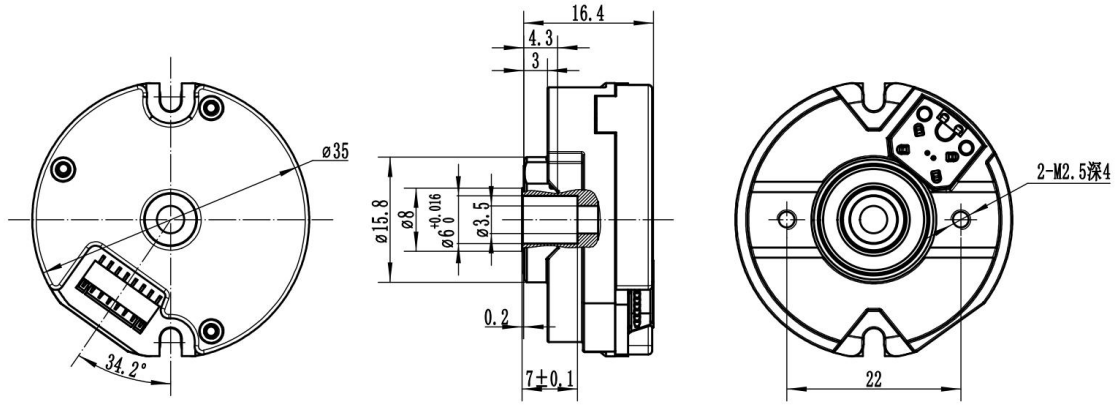
Main Size Selection (mm)

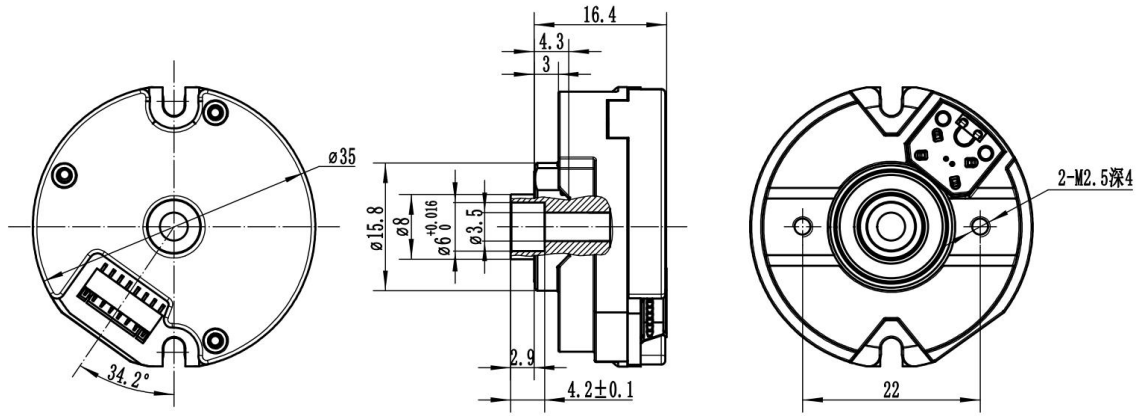
Model: RZ35D06C



Model: RZ35D06Q



Model: RZ35D06S



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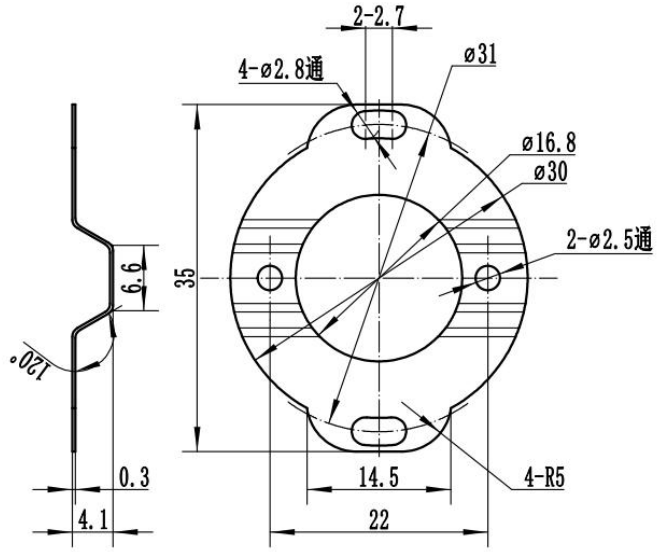
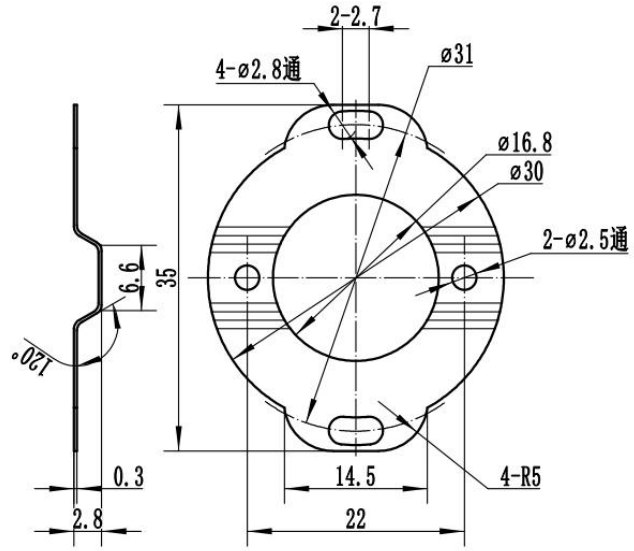
Spring Tab Size Selection

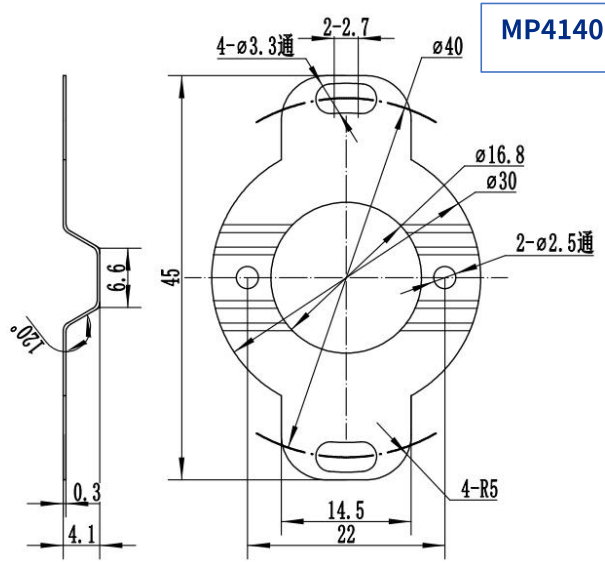
MP4131-704R（BM-Medium type mounting hole d31）



MP2831-704R（BL-Low type mounting hole d31）



MP4140-704R（CM-Medium type mounting hole d40）



Note:

The spring tab should be selected according to the motor end size.

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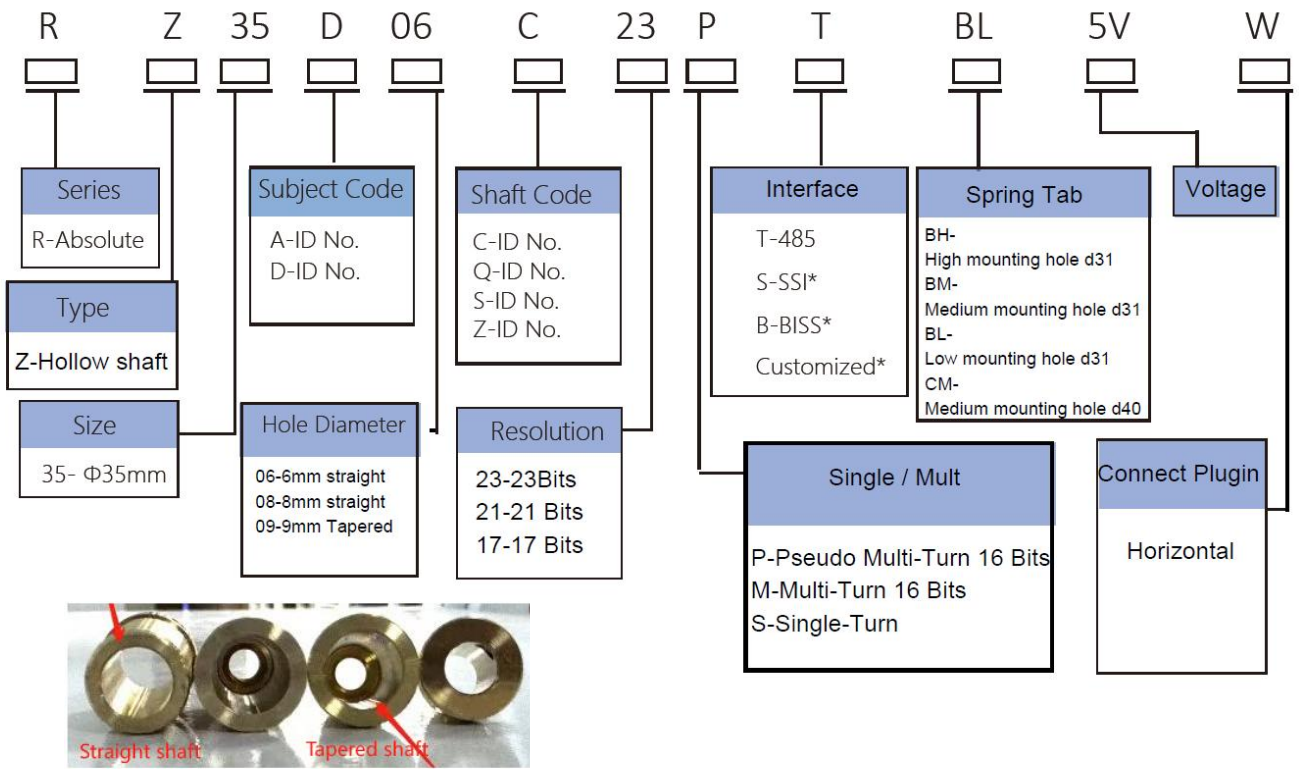
ORDERING INFORMATION / PART NUMBER



Note: 8mm straight shaft and 9mm conical shaft are only available for the RZ35A.

SIGNAL DEFINITIONS

LEAD COLOR	RED	BLACK	BLUE	YELLOW	BROWN	WHITE		SHIELDED CABLE
SOCKET PINS	1	2	3	4	5	6	7	8
SIGNAL DEFINITION	5V	GND	485+	485-	Battery Positive	Battery GND	NC	SHIELDED CABLE

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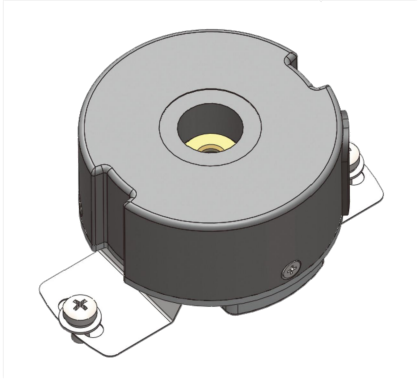
02 >> Incremental Encoders

UZ Series



FEATURES

Well protected, High frequency response, high speed, High reliability.

Resolution 1,000-5,000 CPR.

Differential output.

Count Frequency Up To 500 KHZ.

Working temperature -20 ℃ —+105 ℃

Single 5V Supply

Our encoders are mainly used in servo-driven control systems.

They provide feedback information and auxiliary signals required for precise position and speed control within the system.

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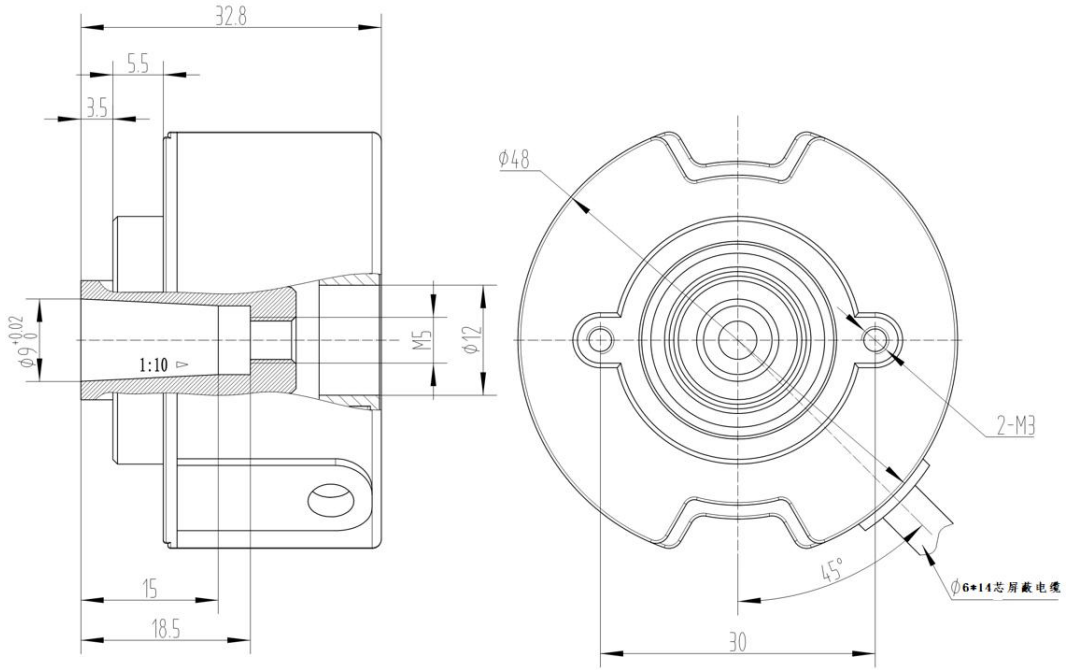
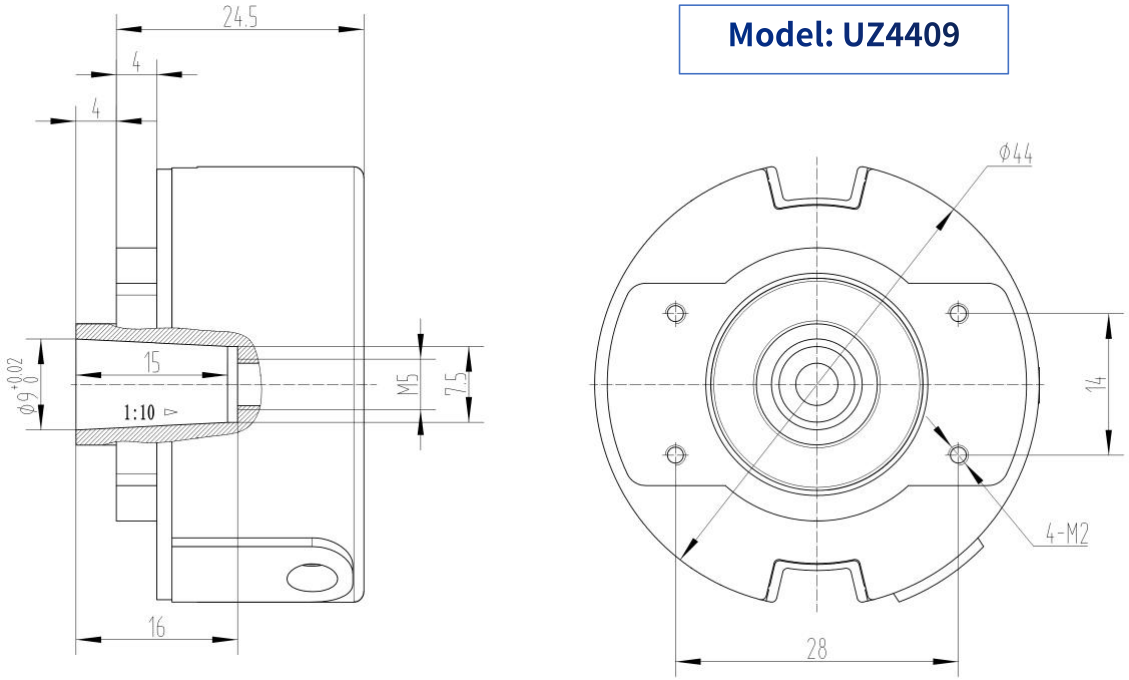
Main Size Selection (mm)

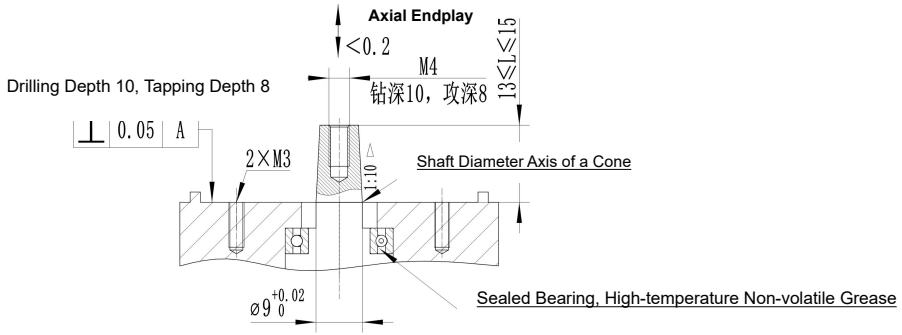
Model: UZ4809



Model: UZ4409



4409 Encoder Motor End Face Dimensional Requirements:



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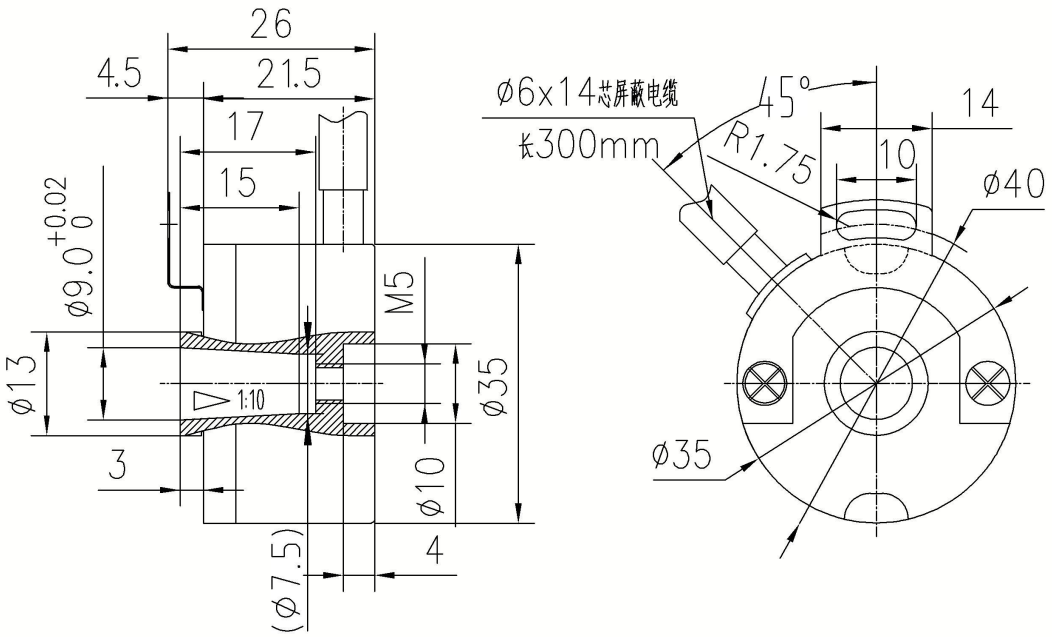
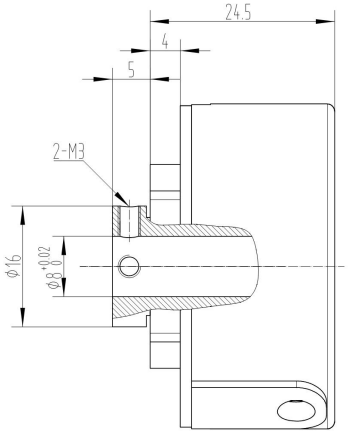
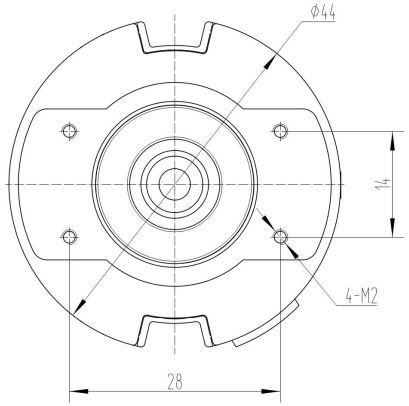
Main Size Selection (mm)

Model: UZ3509

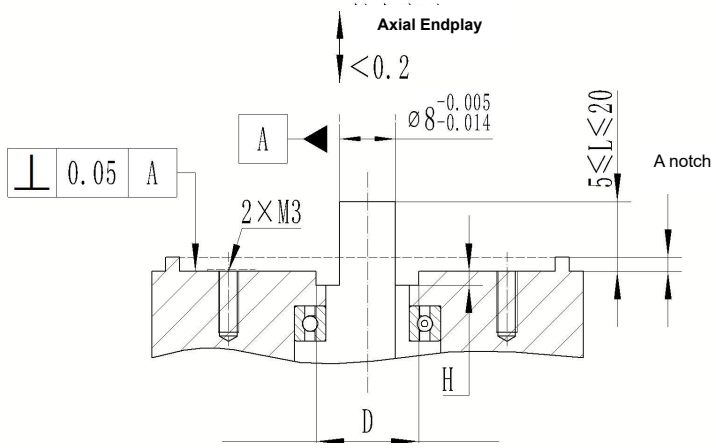


Model: UZ4408





UZ4408 Encoder Motor End Face Dimensional Requirements:



A notch is opened at the stop,with a width ofno less than 3mm

Diameter D > 14mm, Depth H ≥ 2mm

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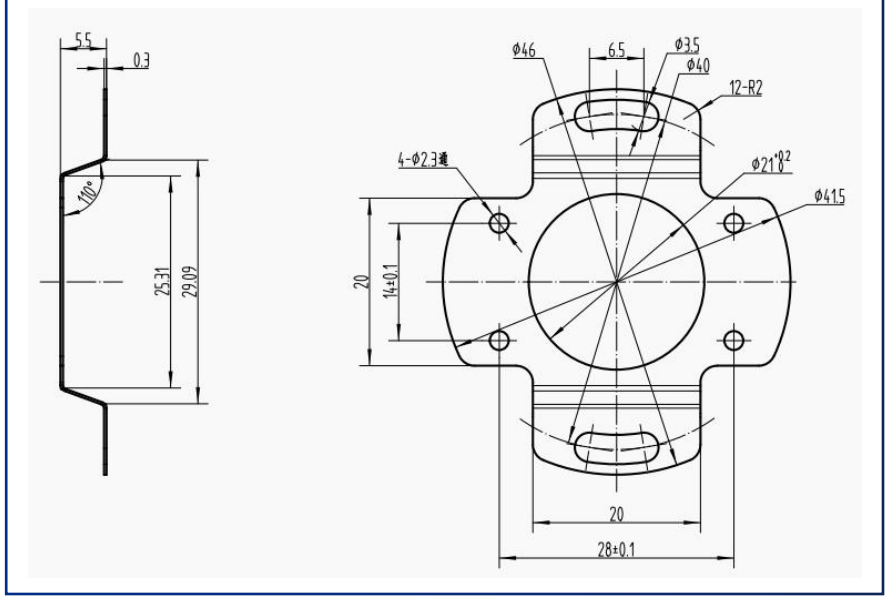
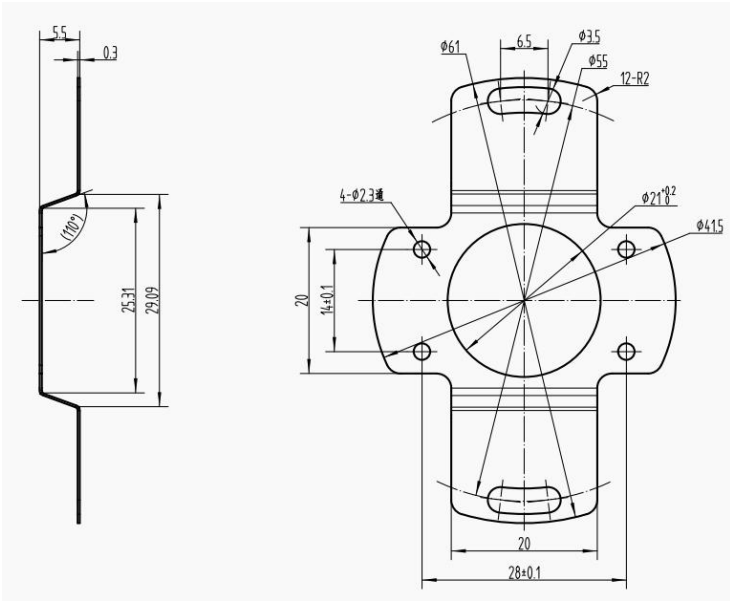
Spring Tab Size Selection

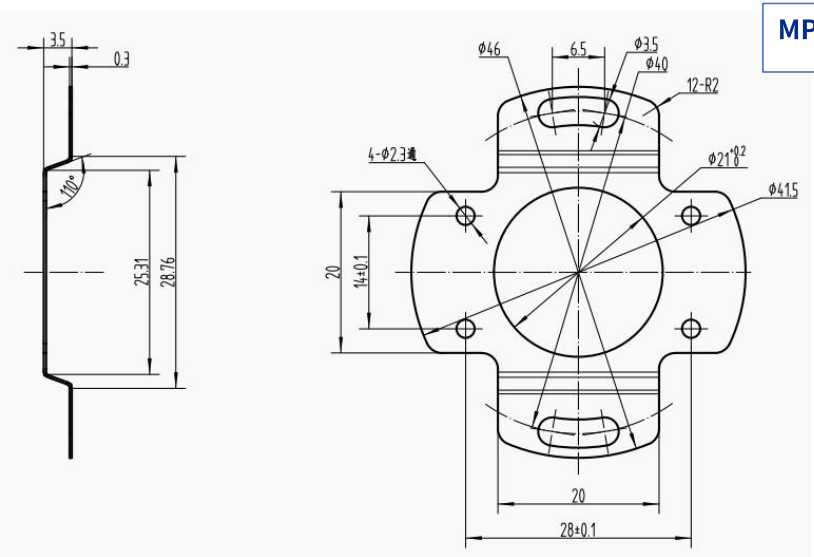
MP4409-002A-40（C-Mounting hole d40）



MP4409-001A-55（D-Mounting hole d55）



MP4409-003A-40（CL- Mounting hole d40）



Note:

The spring tab should be selected according to the motor end size.

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CONNECTIONS

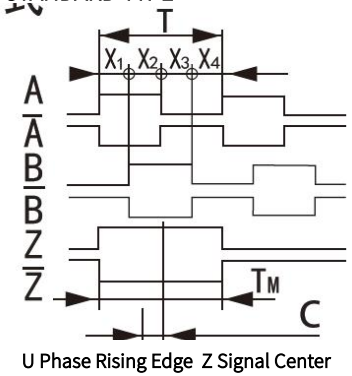
SIGNAL	A	B	Z	-A	-B	-Z	U	V	W	-U	-V	-W	Vcc	GND
COLOR	GREEN	WHITE	YELLOW	GREEN/BLACK	WHITE/BLACK	YELLOW/BLACK	BROWN	GREY	ORANGE	BROWN/BLACK	GREY/BLACK	ORANGE/BLACK	RED	BLACK

Cable-Saving Type

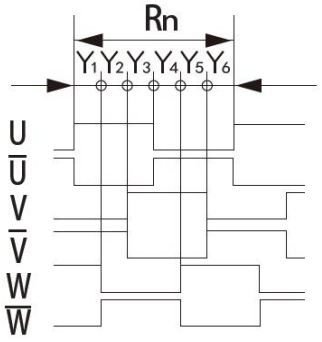
SIGNAL	A	B	Z	-A	-B	-Z	Vcc	GND
COLOR	BLUE	GREEN	YELLOW	BLUE/BLACK	GREEN/BLACK	YELLOW/BLACK	RED	BLACK

OUTPUT PHASE

OUTPUT WAVEFORM
STANDARD TYPE



U Phase Rising Edge Z Signal Center



Waveform Ratio: X1+X2=0.5T±0.1T

X2+X3=0.5T±0.1T

Phase Difference: Xn=0.25T±0.1T

Z Signal Width: Z=1T±0.5T

T=360°/N (N is the number of pulses per revolution)

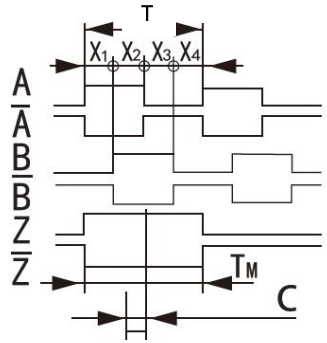
Period P = 360°/N1±1.5°N1=2、3、4)

Phase Difference Y: P / 6±1.5°(n=1、2、3、4、5、6)

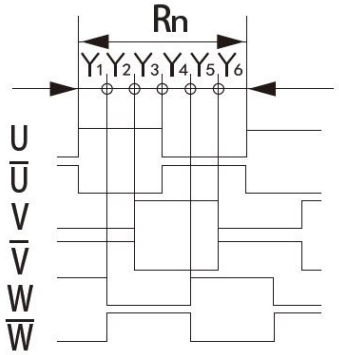
The Phase Position between A, B Signals and U, V, W Signals is Not Specified.

Z Phase and U Phase Relationship: C≤±1°(Mechanical Angle)

OUTPUT WAVEFORM
CABLE-SAVING TYPE



U Phase Rising Edge Z Signal Center



Waveform Ratio: X1+X2=0.5T±0.1T

X2+X3=0.5T±0.1T

Phase Difference: Xn=0.25T±0.1T

Z Signal Width: Z=1T±0.5T

T=360°/N (N is the number of pulses per revolution)

Period P = 360°/N1±1.5°N1=2、3、4)

Phase Difference Y: P / 6±1.5°(n=1、2、3、4、5、6)

The Phase Position between A, B Signals and U, V, W Signals is Not Specified.

Z Phase and U Phase Relationship: C≤±1°(Mechanical Angle)

***Difference from Standard Type: During the first 20ms after power-on, ABZ lines output UVW signals. After 20ms, ABZ lines continuously output ABZ signals.**

UZ Series

ORDERING INFORMATION / PART NUMBER

U	Z	48	09	G	M	2500	P4	C	L5	G0.15m

Series
U-Incremental

Type
Z-Hollow shaft

Size
48-Φ48mm
44-Φ44mm
35-Φ35mm

Hole Diameter
09-9mm Tapered
08-8mm Straight
<9mm Customized

Code Wheel
G - Glass
P - Film

C-CPR
1000-1000CPR
1024-1024CPR
2000-2000CPR
2048-2048CPR
2500-2500CPR
5000-5000CPR

Standard / Cable-Saving
M-Standard type
S-Cable-saving type

Number of Pole Pairs
P2 - 2 Pole pair
P3 - 3 Pole pair
P4 - 4 Pole pair
P5 - 5 Pole pair

Spring Tab
C-Mounting hole d40
D-Mounting hole d55

Voltage

Cable
G-Cable

liya@epoch-electronic.com

EPOCH

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liya@epoch-electronic.com