

# ABSOLUTE ENCODERS

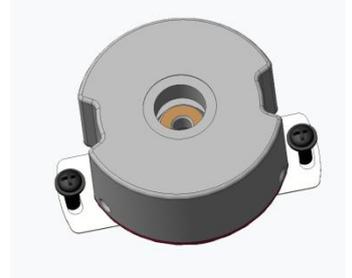
## ➤ RZ Series

### APPLICATION

Servo motor control

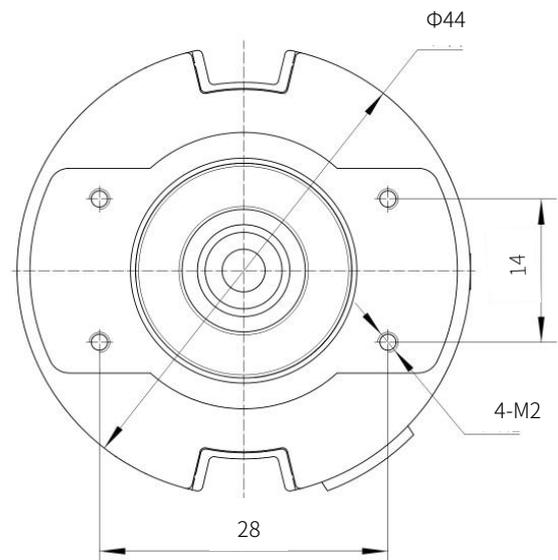
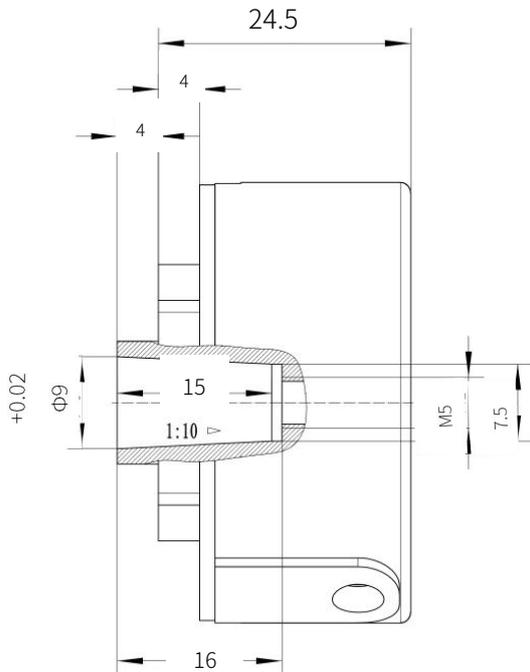
### FEATURES

- Interface RS485.
- Provides resolution of up to 17 to 23 bits.
- 16-bit multi-turn counting capability.
- Absolute positioning accuracy within  $\pm 50$  arc seconds.



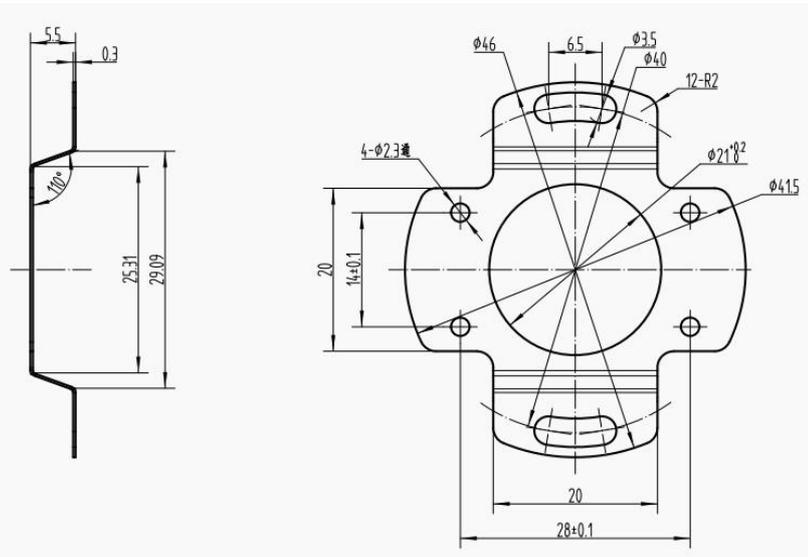
**Model: RZH4409A**

### Main Size Selection



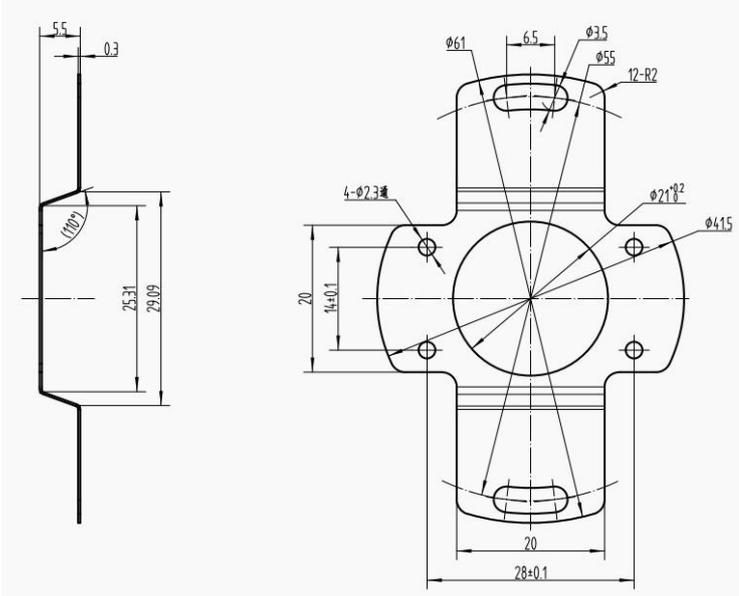
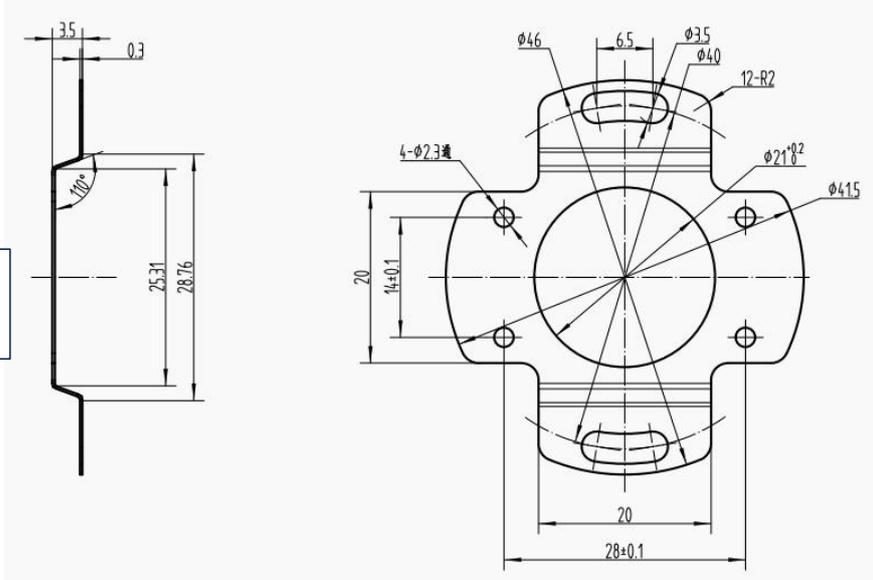
Spring Tab Size Selection

ENCODERS



MP4409-002A-40 (C-Mounting hole d40)

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

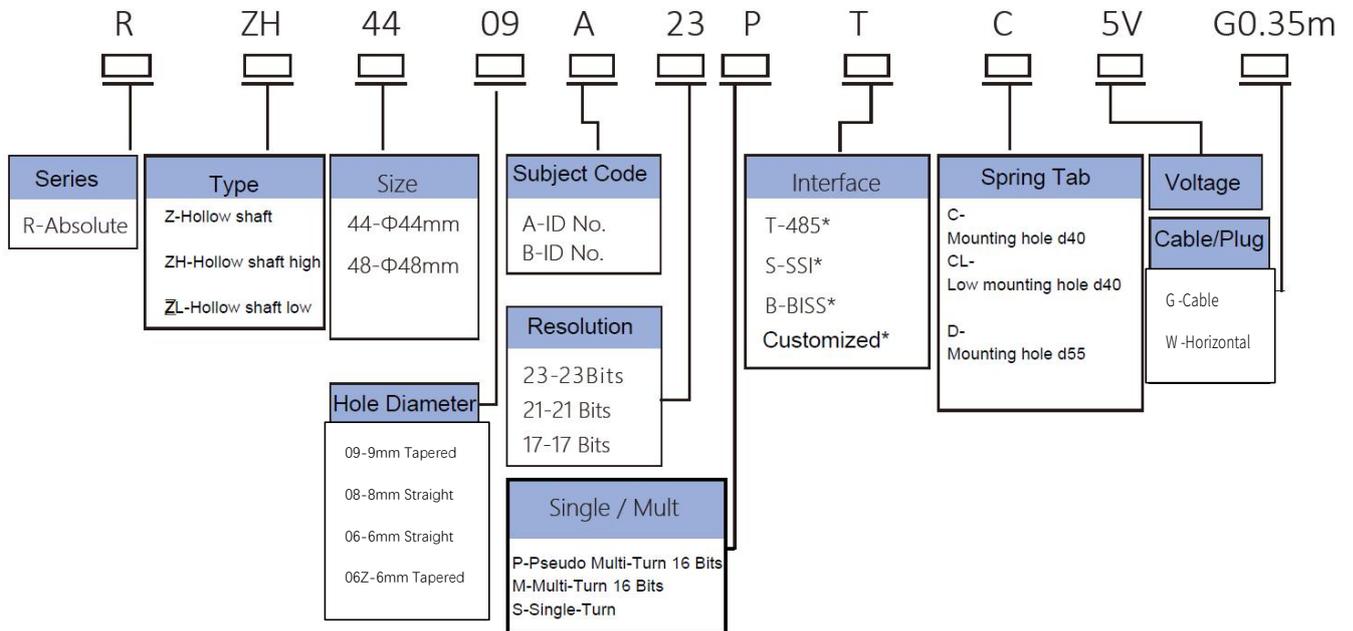


MP4409-001A-55 (D-Mounting hole d55)

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

## ORDERING INFORMATION / PART NUMBER

ENCODERS



## SIGNAL DEFINITIONS

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

Select hole diameter, resolution, interface, and spring tab according to project requirements.

If you have any customization requirements, please contact: [liya@epoch-electronic.com](mailto:liya@epoch-electronic.com)

Please refer to the next page for key electrical and mechanical parameters.

## SPECIFICATIONS

Working Temperature:	-20 °C —+105 °C
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:	50M $\Omega$

## ELECTRICAL SPECIFICATIONS

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

## MECHANICAL SPECIFICATIONS

Enter Allowable Deviation Of Shaft:	Axial: $\pm$ 0.5mm Radial: $\pm$ 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 $\varnothing$ 9, Taper 1:10
Moment Of Inertia:	0.68kg * mm <sup>2</sup>
Rotor Angular Acceleration:	During Power Supply $\leq$ 80000rad/S <sup>2</sup> When Battery Powered $\leq$ 4000rad/S <sup>2</sup>
Mechanical Shock:	Impact Acceleration 980m/S <sup>2</sup> 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/S <sup>2</sup> XYZ 2 Hours Per Axial Direction, 6 Hours In Total
Working Temperature:	-20 °C —+105 °C
Relative Humidity:	$\leq$ 90% ( 40°C/21d, Based On En 60068-2-78 ) Without Condensation.
Degree Of Protection:	IP40