MX_079-9010 – Rotary axis

High Precision Rotary axis

MX_079-9010 – Rotary axis
Standard class rotation stage with 12mm free aperture. Equipped with DC motor, high resolution encoder and index

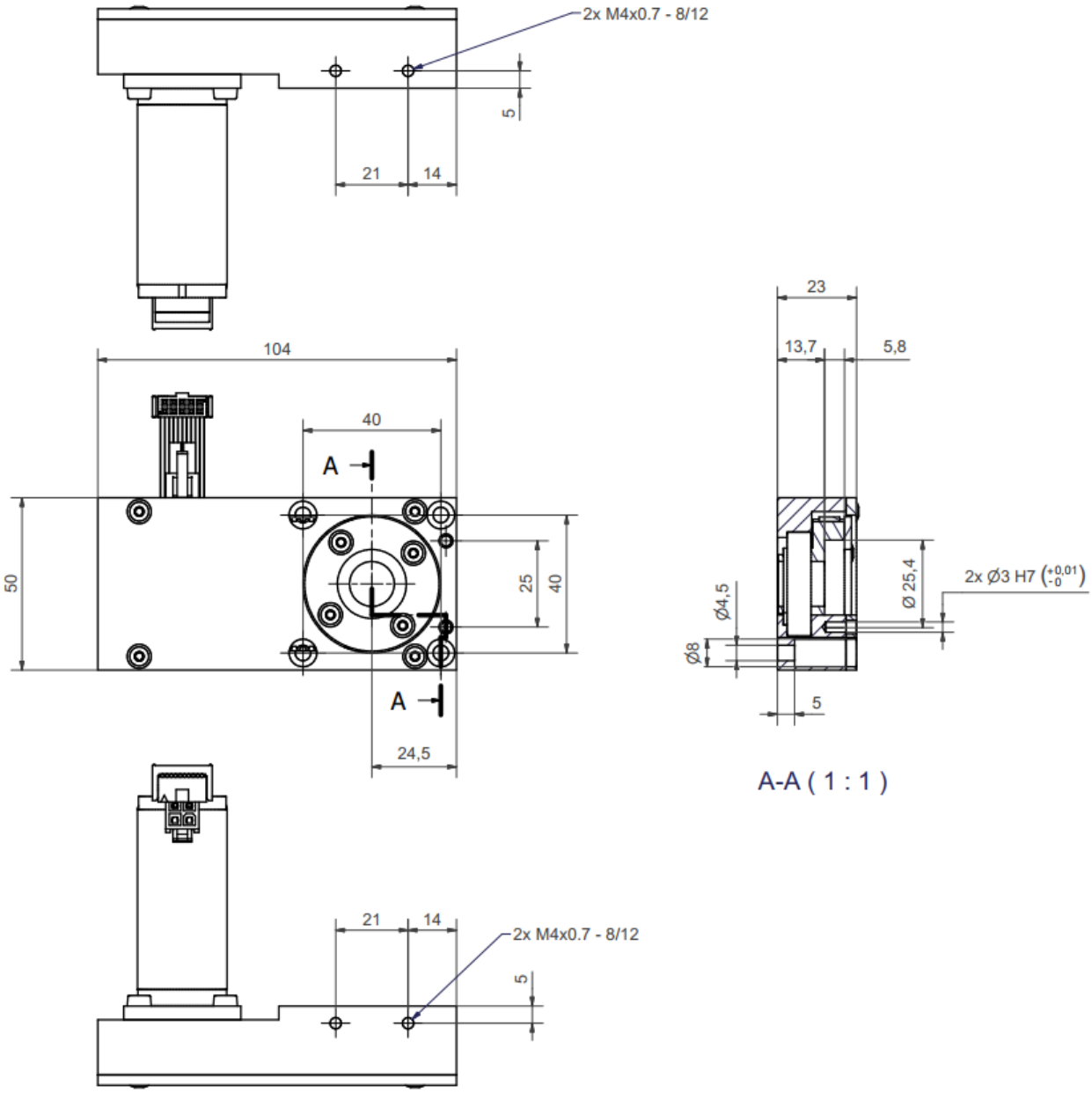
Fields of application
Precision micro-assembly, research, automation, optical equipment

- 360° continuous rotation
- Max speed to 5900 min^{-1}
- Peak torque 384 mNm
- Bidirectional repeatability up to <0.05°
- Bidirectional accuracy up to <+-0.1°
- Integrated differential encoder with 32768 cts/rev

General Specifications

	MX_079 – 9010	Unit	Note
Motion and position			
Active axis	A or B		
Rotation range	360	°	Continuos
Integrated sensor	Noncontact linear enc.		
Counts per turn	32768	cts/rev	
Bidirectional accuracy (if calibrated)	<-/+0.1	°	
Bidirectional repeatability (if calibrated)	<0.05	°	
Driver used logic	Differential, EIA RS 422		
Nominal speed	4600	min^{-1}	
Max speed	5900	min^{-1}	
Direction of rotation	A before B CW		
Index position	A low and B low		
Drive properties			
Drive type	DC motor		
Operating voltage	24	V	
Nominal current	1.25	A	
Max current	8.95	A	
Nominal torque	52.3	mNm	
Peak torque	384	mNm	
Motor speed constant	223	$min^{-1}V^{-1}$	
Motor torque constant	42.9	$mNmA^{-1}$	
Resistance	2.68	Ω	
Inductance	0.514	mH	
Motor inertia	21.2	gcm^2	
Miscellaneous			
Housing material	Anodized black aluminium		
Free aperture	12mm		
Optical diameter	25.4mm		
Operating temperature	18-28°C		
Humidity	20-80%		
Connector	1x Molex 39-01-2040 (motor) 1x 2.54mm 10poles (encoder)		

Mechanical Interface

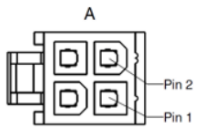
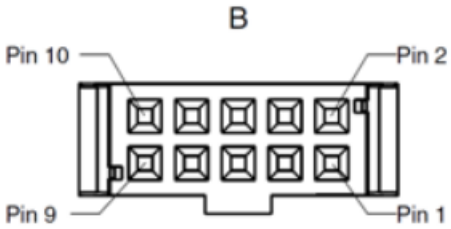


Mecartex is a cutting-edge company operating in the field of high precision applications.
The company, founded in early 2002 offer micro-positioning devices with high dynamics and precision and base solutions with motion control

Customized solutions & manufacturing
Mecartex provides innovative solutions for very high precision applications, offering complete support from development through production while maintaining a short time-to-market.

Flexures technology
Mecartex offers a unique expertise in flexures. This technology enables extremely accurate movements and has numerous advantages like high reliability, frictionless, contamination' proof or cleanliness.

Electrical Interface

	Description	Image
Motor Connector Molex 39-01-2040		
1	Red (+)	
2	Black (-)	
3		
4		
Encoder connector 2.54mm 10-poles		
1	NC	
2	VCC	
3	GND	
4	NC	
5	Channel A-	
6	Channel A	
7	Channel B-	
8	Channel B	
9	Channel I-	
10	Channel I	