

PASSIVE KNUCKLE ENCODERS®

This series of ruggedized encoder modules allow end-users to make passive arms to serve as a customized coordinate measuring machine (CMM) in challenging field environments. The passive knuckle encoders are sealed to IP67 and are designed with a lightweight and rugged form factor that allows them to be used in wet/dirty industrial applications.

Each knuckle includes one or more high-resolution absolute encoders and supporting electronics in a compact package that daisy-chains power and data over a two-wire interface. This keeps the overall system lightweight, low power, simple and safe.



*M-A-IZRX
2-DoF KNUCKLE



*M-B-IZ
1-DoF BASE

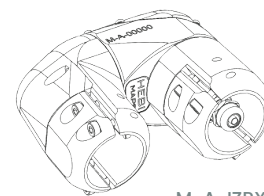


These encoders form the basis of HEBI's MAPS platform (left) for industrial inspection. They can also be used as a flexible and rugged input device for tele-operating robotic manipulators and other systems.

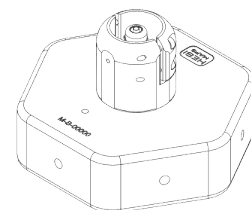
HEBI Robotics provides cross-platform software tools that make configuring and using the encoder knuckles a breeze, with features such as live plotting, built-in tools for kinematics, and APIs for MATLAB, ROS, C/C++ and Python.

PASSIVE KNUCKLE ENCODERS — TECHNICAL SPECIFICATIONS

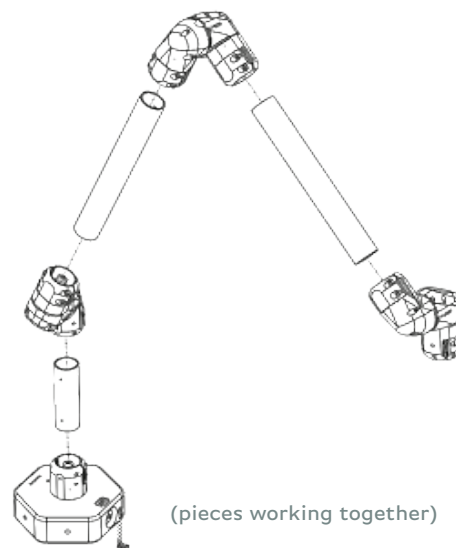
	M-A-IZRX 2-DoF KNUCKLE	M-B-IZ 1-DoF BASE
Encoder Type	2x Absolute Magnetic	1x Absolute Magnetic
Encoder Resolution	0.001°	
Encoder Accuracy	+/- 0.1°	
Max Data Rate	1000 Hz	
Rotation	Continuous	
Mass	250g	550g
Dimensions	85mm x 75mm (folded) 37mm wide	117mm x 105mm wide 70mm tall
Mechanical Interface	1" [25.4mm] OD tubing w/ 2mm locating pin	
Electrical Interface	2x FAKRA Coax Power + Data	1x FAKRA Coax 1x HD-BNC Coax Power + Data
Communication	100 Mbps Ethernet	
Power	24-48V DC 50mA @ 36V	
Environment	-10°C to 50°C Ambient Designed for IP67	
Other Sensing	Voltage Temperature 3-Axis Gyro 3-Axis Accelerometer Orientation	
Additional technical documentation at docs.hebi.us		
Updated on October 4, 2021. Specifications subject to change without notice.		



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(pieces working together)

