

R-SERIES ACTUATOR[®]

This series of robotic actuators allow engineers and end-users to make custom robotic systems that can be deployed directly into wet/dirty industrial and outdoor environments. R-Series Actuators are sealed to IP67 and are designed with a lightweight and rugged form factor that allows them to be used in challenging field applications.

Each actuator integrates a brushless motor, gear reduction, force-sensing, encoders, and control electronics into a compact package that runs on anything from 24V-48V DC and communicates using standard 100Mbps Ethernet. This keeps the overall robotic system lightweight, low-power, simple, and safe.



The R-Series Actuator is a full-featured robotic component as opposed to a simple servo motor. The output rotates continuously, requires no calibration or homing on boot-up, and contains a thru-bore for easy daisy-chaining of wiring. This enables the actuators to be used in everything from wheeled robots to collaborative robotic arms. **The R8+ actuators offer increased speed and torque, greater power efficiency, and improved geartrain lifetime.**

HEBI Robotics provides cross-platform software tools that make configuring and controlling the R-Series a breeze, with features such as live plotting, control from mobile devices like phones and tablets, and APIs for MATLAB, ROS, C/C++, and Python.



R-SERIES ACTUATOR — TECHNICAL SPECIFICATIONS

CONFIGURATION	R8-3+	R8-9+	R8-16+
Peak Torque	8 N-m	23 N-m	44 N-m
Cont. Torque	4 N-m	10 N-m	20 N-m
Max Speed	110 RPM	39 RPM	20 RPM
Mass	670g	685g	715g
Dimensions	156mm x 78mm x 51mm 15mm hollow bore		
Power	24-48V DC Cont. Current: 1.0 A @ 36V Peak Current: 2.5w A @ 36V		
Environment	-10°C to 50°C Ambient / IP67		
Communication	2X 100 Mbps Plastic Optical Fiber (OptoLock®)		
Angular Resolution	0.005°		
Torque Resolution	0.01 Nm		
Backlash	+/- 0.25°		
Sensing	Angular Position (multi-turn absolute, +/- 4 turns) Angular Velocity Output Torque 3-axis Accelerometer / Gyro Temperature Voltage Current Internal Pressure		
API Support	MATLAB (Windows / Linux / OS X) ROS (Linux) Python (Windows / Linux / OS X) C/C++ (Windows / Linux / OS X)		
<p>Each individually purchased R-Series Actuator® includes: A-2456-02: R/T-Series Standard Wiring Kit Additional technical documentation at docs.hebi.us</p> <p>Updated on May 31, 2024. Specifications subject to change without notice.</p>			

