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.

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.

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R-SERIES ACTUATOR – TECHNICAL SPECIFICATIONS

CONFIGURATION	R8–3	R8–9	R8–16
Peak Torque **Cont. Torque** **Max Speed**	7 N-m 3 N-m 84 RPM	20 N-m 8 N-m 30 RPM	38 N-m 16 N-m 15 RPM
Mass	670g	685g	715g
Dimensions ***(w/ connector cover)***	156mm x 78mm x 51mm 15mm hollow bore		
Power	24-48V DC Cont. Current: 1.3 A @ 36V Peak Current: 3.0 A @ 36V		
Temperature	-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)		

Each individually purchased R-Series Actuator® includes:
A-2456-02: R/T-Series Standard Wiring Kit
Additional technical documentation at **docs.hebi.us**

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