



High Performance Force/Torque Sensing for Universal Robots.

FORCEKIT is the new powerful force/torque sensing solution for Universal Robots. FORCEKIT contains all components to solve force controlled applications with UR robots successfully within minutes.

Uncompromising Performance

FORCEKIT is based on the proven six-axis force torque sensor KMS 40 from Weiss Robotics. Its stiff construction and the high resolution of the measured values make FORCEKIT the ideal solution for force-controlled applications. Fully integrated data acquisition with Ethernet communication greatly simplifies the application.

Seamless integration

To ensure a quick start, FORCEKIT contains not only the actual sensor but also the required mounting plates and the matching connecting cables. With the URCaps plugin, the sensor can be effortlessly integrated into the application. FORCEKIT provides direct communication with the sensor via Ethernet, so you always have full access to current force and torque readings. In addition, FORCEKIT supports the RTDE interface of the UR robot. Thus, the measured data can be fed directly into the control loop and allow

precise force control directly via the robot controller. A zero force control, for example, can be realized in just a few minutes.

Intelligent measuring in all axes

The factory calibration provides the measurement data for all six load components directly in SI units. The measuring range of 120 N and 3 Nm is optimized for the power range of the UR robots.

High Performance and Reliability

With a frame rate of up to 500 frames per second, an absolute accuracy better than 1.5% and a repeatability better than 0.5% the KMS 40 delivers highly precise measurement data while still being able to fulfill the requirements on robustness and reliability of even demanding industrial applications.

Multiple applications

- Force controlled assembly
- Automated haptic testing
- System Monitoring and Quality Control
- Service Robotics and Human-robot collaboration

TECHNICAL DATA

Measurement range	$\pm 120 \text{ N} / \pm 3 \text{ Nm}$
Effective Resolution	0.005 N / 0.001 Nm
Max. Overload	M_z : 5x, others 10x full scale
Absolute Accuracy	$\pm 1.5 \%$ typ.
Repeatability	0.5 %
Sampling rate	500 Frames/s
Sampling resolution	16 Bit
Power supply	24 VDC $\pm 10 \%$, 1.9 W typ.
Weight	520 g
Protection class	IP 40
Temperature range	5 to 50 °C



FORCEKIT CONTAINS



KMS 40
SENSOR MODULE



MOUNTING PLATES
AND ACCESSORIES



CABLES
AND ACCESSORIES



URCAPS PLUG-IN
ON USB FLASH DRIVE



YOUR LOCAL DISTRIBUTOR