Tomorrow starts today!

SCHUNK – The Pioneer of Modular Robotics

Exceptional Precision from the Competence Leader for Clamping Technology and Gripping Systems.
Welcome to SCHUNK – a Pioneer of Modular Robotics

Tomorrow starts today!

SCHUNK is playing a leading role in Modular Robotics. Our philosophy “from the individual modules to the complex robot structure” forms the basis for implementing concepts in industrial and service robotics, which are designed for everyday life, but efficiently.

With compact and flexibly combinable rotary actuators, lightweight manipulators, and servo-electrically actuated grippers we are able to offer approaches to unique and modular designed special solutions.

It is our intention to provide robot modules for industrial and service applications, which are flexible enough for the usage in different robot applications.

www.schunk-modular-robotics.com
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PSM
Compact Servo Drive with integrated control electronics

PDU
Compact Servo Drive with integrated control electronics and precision gear

MSM
High Power Servo Motor with integrated control electronics

PR
Universal rotary module with integrated control electronics

PW
Pan-Tilt-Unit with integrated control electronics

PRM
Compact Rotary module with integrated control electronics

PRL
Rotary module with integrated control electronics and hollow shaft

ARL
High Power Rotary module with integrated control electronics

STM
Rotary module with torque motor

REA
Compact wrist module with integrated control electronics

PRH
Miniature rotary module with integrated control electronics

PR
Compact Servo-electric Gripper with integrated control electronics

EVG
2-Finger Parallel Gripper with variable stroke

PEH
Long-stroke Gripper with integrated control electronics

EGN
Servo-electric 2-Finger Parallel Gripper

MEG
Gripper for small components

WSG
2-Finger Parallel Gripper with integrated electronics in the fingers

SDH
3-Finger dextrous robotic hand with 7 DOF

EZN
Servo-electric 3-Finger Centric Gripper

PG
Compact Servo-electric Gripper with integrated control electronics

MEG
Gripper for small components

SDH
3-Finger dextrous robotic hand with 7 DOF

Viro-Con
Efficient engineering tool for configuration and assembly of modular robotics

Example Kinematics

6 DOF PowerCube-Arm with 3 kg payload*

5 DOF PowerCube-Arm with 5 kg payload*

6 DOF PowerCube-Arm with 3 kg payload*

7 DOF PowerCube-Arm with 3 kg payload*

6 DOF PowerCube-Arm with 6 kg payload*

7 DOF LWA-Arm with 3 kg payload*

7 DOF LWA-Arm with 10 kg payload*

7 DOF LWA4-Arm with 10 kg payload*

6 DOF PBA-Arm with 3 kg payload*

* related to the arm

Configuration Software

Viro-Con
Efficient engineering tool for configuration and assembly of modular robotics

www.comoso.com
Example Kinematics

* related to the arm

Control

Robot-Control-Software and Standard Libraries
Modular Robotics
From single modules to complex robot structure

Industrial robotics – just like service robotics – place high standards on mechanical construction, gripping and sensor technology, as well as control and feedback control technology. It is not economically feasible to develop specific robot types for each application, but standard modules, which form the basis for flexible robot structures.

As a pioneer of the modular robotics SCHUNK focuses on the expansion of usable approaches for market-ready and everyday products for:
- Service robotics
- Industrial robotics
- Modular robotics for research and development

Example Applications

Care-O-bot®
Household robots of the next generation.

The Care-O-bot® is the innovation platform for controlling, sensors, kinematics, multimedia and ambient intelligence. Vital robotic components of the Care-O-bot® come from the modular SCHUNK robotics system. The modular LWA 3 lightweight arm is an arm with high mobility and low weight that is ideal for use in mobile, battery-operated systems. The SCHUNK SDH hand is an extremely versatile gripping instrument, which is suitable for the forms and weights of typical household objects such as cups, plates or glasses. Furthermore, it is equipped with tactile sensors. An additional force-torque-sensor allows delicate handling.

Care-Providing Robot FRIEND

The care-providing robotic system FRIEND (Functional Robot arm with user-friENdly interface for Disabled people) is a semi-autonomous robot designed to support disabled and elderly people in their daily life activities, like preparing and serving a meal, or reintegration in professional life.

Both platforms are available for R&D.
The worldwide leading symposium for applied Service Robotics.

With over 110 experts and 18 speakers from 22 countries.

“SCHUNK has always had a pioneering spirit. This has led us to become the competence leader in clamping and gripping technology. Today, we are again pioneers in the field of service robotics. We are ready for this exciting challenge because we believe that service robotics is the market of the future, which has been proven by years of study and research. Currently, the service robotics field has very little competition. It is the joint effort to turn this market into a market, everybody is talking about, and to fulfill the hopes of everybody, whether it be simple commercial interest, or personal well-being. SCHUNK offers this platform as a modest contribution for pushing service robotics forward.”

Henrik A. Schunk

The next ExpertDays will take place on February 29 to March 1st, 2012. Please visit expertdays.schunk.com for program, registration and further details.