Product Information
Heavy-duty rotary module ERM
Adaptable. Strong. Loadable.

Heavy-duty rotary module ERM

Electric rotary module for high loads with adaptable servomotor, rotary angle > 360°, center bore, and optional feed-throughs

Field of application

universal, ultra-flexible rotary module for handling and positioning applications in clean or contaminated environments.

Advantages – Your benefits

Modular drive concept for adaption of common servomotors for example from Bosch or Siemens

Easy system integration by use of a preferred motor with available fieldbus and safety technology

90° swivel-mounted drive for flexible adaptation to gantries or robots

High torque and precision for the positioning of heavy loads with high precision

Center bore and integrated feed-through for cable and media feed-through

High robustness and large loading area for demanding applications

Sizes

Quantity: 1

Weight

15.5 .. 21.5 kg

Torque

75 Nm

Repeat accuracy

0.035°

Angle of rotation

>360°
**Functional description**

The torque of the motor is transferred from the driving shaft via the two stage hypoid gearing to the output flange. Via the rotary feed-through compressed air can be fed through to the distributor flange for connection of the output flange. The orientation of the transmission housing can be adjusted in 4 x 90° steps (for fastening the module or the attachment).

1. **Drive shaft**
   - for motor connection

2. **Bevel gear**
   - Can be attached in various positions. The motor can thereby be swiveled by 90° in each direction.

3. **2-step hypoid gear speed**
   - for gear reduction of the rotation

4. **Output flange**
   - for mounting the application to be rotated

5. **Integrated air supply with mounting holes**
   - for hose-free feed-through of compressed air
General notes about the series

**Housing material:** Aluminum alloy, coated

**Material of the (internal) functional components:** Steel

**Actuation:** electrically via an adaptable servo drive

**Operating principle:** Two-stage hypoid gears

**Scope of delivery:** Centering sleeves for module mounting and mounting on the output flange, O-rings for compressed air connections on the output flange.

**Warranty:** 24 months

**Swiveling time:** are purely the times of the module to rotate from rest position to rest position. Relay switching times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times. Load-dependent rest periods may have to be included in the cycle time.

**Repeat accuracy:** Is defined as the spread of the target position after 100 consecutive positioning cycles.

**Middle attached load:** intended to represent a typical load. It is defined as the half of the max. possible mass moment of inertia that can be swiveled without restriction, bouncing or hitting, with a centric load and a vertical rotating axis.

**Motor torque:** For all motor moments from above the rated moment to the maximum motor moment, observe the instructions in the respective product documentation.

Application example

Completely electrically actuated axis gantry for loading and unloading pallets with various greatly differing components.

1. Electric universal rotary module ERM
2. Electric long-stroke gripper EGA
3. Linear module with toothed-belt drive Gamma
4. Linear module with rack and pinion drive Gamma
SCHUNK offers more ...

The following components make the product ERM even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.

Options and special information

Flexible in motor and controller selection: The electrical control is carried out via an adaptable servo drive using common standard controller like Bosch or Siemens.

Easy integration: The easy integration into the control system is ensured by the possibility of attaching a common servomotor.

Identical control: The rotary module can directly be controlled like a normal servo axis, and can be interpolated with existing axes.

Protection class IP: The specified protection class can only be achieved with the mounted motor.

Unique mechatronic modular system: For setting up combined systems, a range of mechatronic products (e.g. gripper and linear units) are available.

For more information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696
Max. admissible inertia J

The diagrams are valid for 90° and 180° angles of rotation for use with vertical rotary axes and centric loads with horizontal rotary axes and rated motor moment. The swiveling times must be observed, otherwise the lifetime can decrease. We will be happy to help you design other applications.

Dimensions and maximum loads

Moments and forces may occur simultaneously. Depending on the application higher values can be achieved, therefore please contact us.

Technical data

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Main view

The drawing shows the module without the motor and the motor add-on kit.

Hose-free direct connection G1/8"

The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Media feed-through

Connections on the output flange. The preferred drilling pattern is two screws and two screws with a centering sleeve.

1. Connection swivel unit
2. Attachment connection
24. Bolt circle
72. Fit for centering sleeves
80. Depth of the centering sleeve hole in the counter part
90. Index-bores

3. Adapter
4. Rotary unit

24. Bolt circle
28. Through-hole
Mounting variants for the transmission gearbox

The transmission gearbox can also be re-oriented retrospectively if necessary.

Version with a motor

The variant with a motor add-on kit and Bosch MSX050B is shown.

Motor add-on kit for version "B"

3 Adapter 90 Coupling
4 Rotary unit 91 Mounting screws for the motor
62 Servomotor 92 Mounting screws for adapters

The basic version without a drive motor (version B) can be equipped with the corresponding motor using a motor attachment kit. The motor itself is not part of the attachment kit, and must be provided by the customer.

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Jens Lehmann, German goalkeeper legend, SCHUNK brand ambassador since 2012 for safe, precise gripping and holding.
schunk.com/Lehmann