

# Integrated motor EMCA

FESTO



Perfect for automation



## Easy integration!

### Highlights

#### Complete solution

- Motor with integrated drive
- Wide range of gearboxes
- Cables and accessories
- Optional brake and absolute multi-turn encoder
- Motor mounting kits for Festo actuators

#### Great performance

- Control position, torque and speed
- Create pre-configured motion profiles in the drive
- Long service life with brushless EC motor

#### Communication interfaces

- EtherNet/IP
- PROFINET
- EtherCAT
- Modbus TCP
- CANopen
- Digital I/O

#### Safety

- STO for Category 3, PL d

The EMCA integrated motor is a complete solution for motion tasks. The integrated motor consists of a maintenance-free, wear-free electronically commutated (EC) servo motor, drive electronics and built-in communication interface. Easily integrate the EMCA into a wide range of applications with accessories and options including gearboxes, cables, optional integrated brake, optional IP65 protection and optional multi-turn absolute encoder.

#### Performance

EMCA is a low cost servo motor with the excellent performance you have come to expect from Festo motors and drives, including positioning, torque and speed control.

#### Quick and easy commissioning

The integrated motor and drive eliminates motor and encoder cables, reducing installation workload, cabinet space requirements and effects of electromagnetic noise.

Festo high-quality cables provide convenient and reliable installation.

Configure the EMCA using the Festo Configuration Tool (FCT). FCT is free to download and makes setup a breeze.

#### Communication interfaces

Control the EMCA using standard industrial protocols, including EtherNet/IP, PROFINET, EtherCAT and more.

Add-On Instructions (AOI) and function blocks make it easy to incorporate the EMCA into your program.

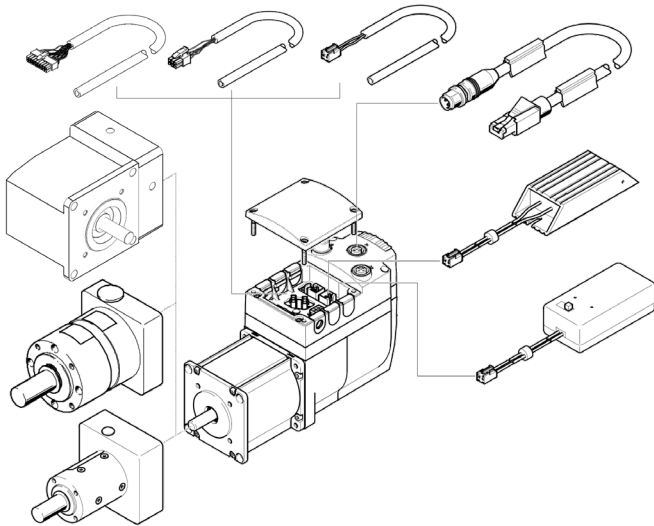
#### Safety

The EMCA includes Safe Torque Off (STO) for applications up to Category 3, PL d.

Powered by 24 V DC, the EMCA is safe to use in applications where an AC servo drive could be a hazard.

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## Accessories



### Gearboxes

A wide range of gearboxes provide the best torque-to-speed ratio for your application. Gear ratios are available from 3:1 to 40:1 and the 1:1 right-angle gearbox makes it easy to mount the motor where you need it.

### Cables

Cables for power, STO, digital I/O, sensors, Ethernet and more are available for easy integration of the EMCA into your machine.

### Braking resistor

For dynamic applications or applications in a vertical orientation, the EMCA may need to dissipate extra power. Use the Festo sizing and selection software PositioningDrives to determine when a braking resistor is required.

### Battery backup for multi-turn absolute encoder

The multi-turn absolute encoder maintains the homed positions for up to 7 days. Use the battery backup to extend storage for up to 6 months.

## Options

### Integrated brake

The EMCA is available with optional integrated holding brake for vertical applications or to hold positions when power is off.

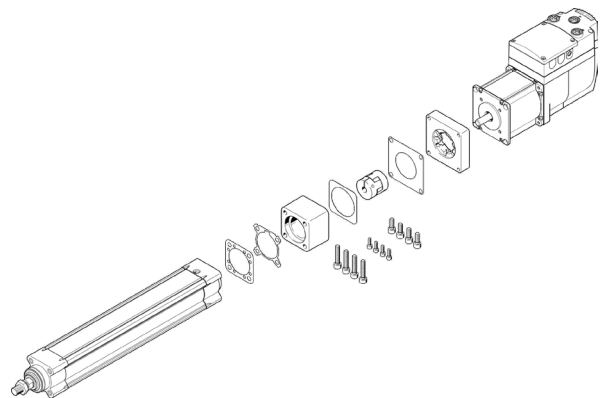
### Multi-turn absolute encoder

The EMCA with optional multi-turn absolute encoder eliminates the need to home the encoder after a power cycle. Home the EMCA once during commissioning and the built-in capacitor maintains the home positions for at least 7 days.

Plus, the multi-turn encoder provides over 4 billion ( $2^{32}$ ) motor rotations for years of use without the possibility of encoder rollover.

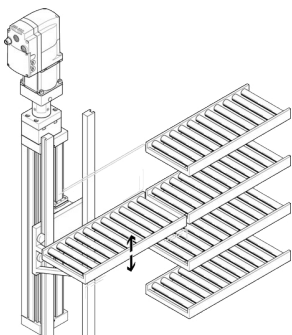
### IP65 Protection

The EMCA is designed for installation directly into your machine, and can be used in dirty, wet environments when ordered with the optional IP65 protection.

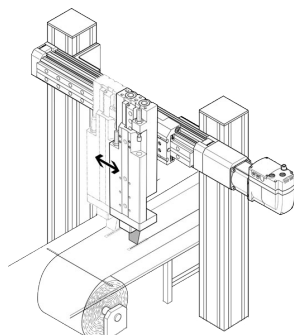


For a complete IP65 solution, couple the EMCA motor with an IP65 actuator like the Festo ESBF electric cylinder.

## Applications



Adjusting sorting conveyors



Format adjustment for paper or foil cutting machines

### Automating manual changeovers and format adjustments

- Print head adjustment on packaging machines
- Diverters and workpiece alignment on conveyers
- Web tension adjustment
- Incremental stacking
- Guide adjustments on woodworking and metalworking machines
- Tool position adjustment

### Motion control applications

- Rotary applications to control position, speed and torque on the fly
- Positioning tasks with Festo linear actuators
- Clamping applications with Festo electric cylinders
- Coordinated motion tasks with Festo motion controllers

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