

## Electric quarterturn / partturn actuators



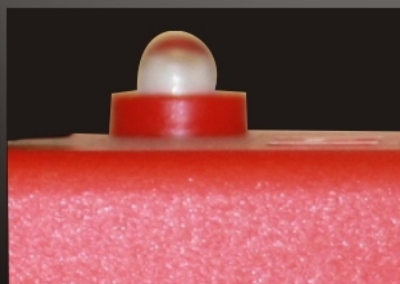
**ASC Armaturen GmbH - D 19273 Popelau**  
 phone.: +49/38841/618-0  
 e-mail: [info@ascarmaturen.de](mailto:info@ascarmaturen.de)

**Fax: +49/38841/618-22**  
**[www.ascarmaturen.de](http://www.ascarmaturen.de)**

Komponenten für die Armaturenautomatisierung



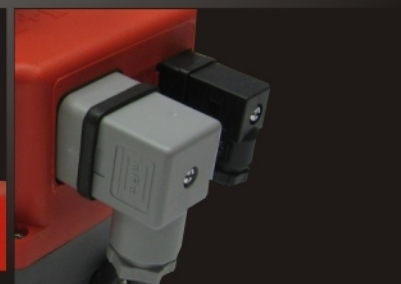
ISO-Interface



Optical function indicator



Emergency manual override and  
Optical position indication



DIN electric connectors

## The consequent and further development of “Best of Class”

### EJ2

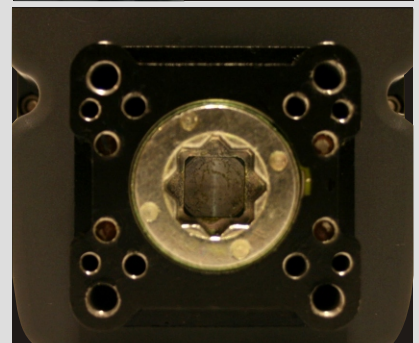
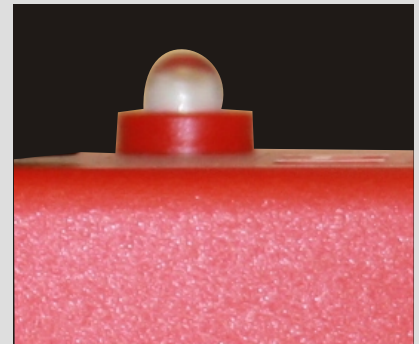
With the new **EJ3**, the actual and very successful series of electric actuators from 5G7 were now made even more powerful. A lot of additional technical features packed in a very attractive and modern designed housing make the ASC actuators quite more comfortable.

As an clear example we point out the LED on the upper side of the case which indicates the function status at a glance: not only the initiation of the torque limiter but the actual function status of the actuator. The new models 35 and 85 complete the extended product range enabling a very exact selection of the correct torque and actuator for the torque range of the different valves up to 85 Nm, and thus optimizing the cost of automation.

For higher torques up to 300 Nm we still offer the models 140 and 300 from Series **EJ2** (see pages 14 and 15).

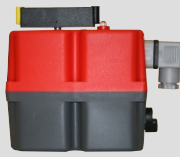



Standard features and equipment from Series **EJ2** were optimized and are integrated part of the Series EJ3, which are the following:

- ETL : Electronic Torque Limiter this new electronic device prevents damage to the valve and actuator when exceeding the maximum torque.
- AVS : Automatic Voltage Sensing With only two voltage series all possible voltages are covered fully automatically and without the need of complicated configurations! Operation torques and times are equal irrespective to the voltage modulus.
- ATC : Automatic Temperature Control Ambient heater all inclusive! If no external energy supply cut occurs this thermostatically controlled heater prevents condensation.
- Mechanical Deblocking: In case of actuation of the torque limiter device or reaching the end positions the gear will be auto-relaxed (reverse movement) thus enabling the change from Automatic to Manual Operation, maintaining the self-locking function of the actuator.
- robust, corrosion and breaking-resistant polyamide housing.
- considerable stiffness (auto-stoppage)
- manual emergency override disconnecting the motor electronically
- 2 limit switches for motor-control, 2 limit switches for position indication



## Product Range

Please refer to page 14 for the models 140 and 300 of **EJ2-Series**

Model	20	35	55	85
				
<b>Voltage range L</b> [-0%/+5%]	12–24V AC/DC	12–24V AC/DC	12–24V AC/DC	12–24V AC/DC
<b>Voltage range H</b> [+/-5%]	85-240V AC/DC	85-240V AC/DC	85-240V AC/DC	85-240V AC/DC
<b>Operating time ( s/90°)</b> [+/-10%]	L: 11 s / H: 11 s	L: 12 s / H: 11 s	L: 17 s / H: 13 s	L: 33 s / H: 32 s
<b>Break torque</b>	25 Nm	38 Nm	60 Nm	90 Nm
<b>Operational torque</b>	20 Nm	35 Nm	55 Nm	85 Nm
<b>Duty rating [ED]</b>	75%	75%	75%	75%
<b>Protection class</b>	IP65	IP65	IP65	IP65
<b>Temperature range</b>	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
<b>ISO-Flange</b>	F03/F04/F05	F03/F04/F05	F05/F07	F05/F07
<b>Double square alternatives</b>	9 mm, 11 mm or 14 mm	9 mm, 11 mm or 14 mm	14 mm or 17 mm	14 mm or 17 mm
<b>Connectors</b>	DIN 43650 ISO 4400 C-192/C-193	DIN 43650 ISO 4400 C-192/C-193	DIN 43650 ISO 4400 C-192/C-193	DIN 43650 ISO 4400 C-192/C-193
<b>Torque limiter</b>	X	X	X	X
<b>Heater</b>	X	X	X	X
<b>Enclosure / housing</b>	Nylon (PA 6)			
<b>Weight</b>	1,4 kg	1,7 kg	2,3 kg	2,8 kg
<b>Optional equipment</b>	Turn angle 0°-180°, 0°-90°-180° (other angles possible), Potentiometer (version 1K, 5K or 10K), Safety Battery Block/BSR, Digital positioning system/DPS (either 0-10V or 4-20mA, input-output)			

## Electric actuator Model EJ 20

Compact actuator for regulation and control of valves interface according ISO 5211/DIN 3337. (L=Low voltage range, H=High voltage range)

### Voltage ranges:

L (-0%/+5%) 12–24V AC/DC  
(lower voltage range)

H (+/-5%) 85-240 V AC/DC  
(upper voltage range)

Operating time s/90°(+/-10%): 11 s

Break torque: 25 Nm

Operational torque: 20 Nm

Duty rating [ED]: 75%

Protection class: IP65

Temperature range : -20°C to +70°C

Flange: Multiflange F03/F04/F05

Double square alternatives 9, 11 or 14 mm

Connectors: DIN 43650 ISO 4400 C-192/C-193

Enclosure/housing: Nylon (PA 6)

Weight: 1,4 kg



### All advantages at glance:

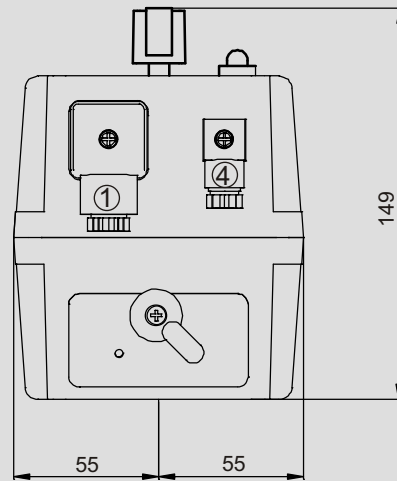
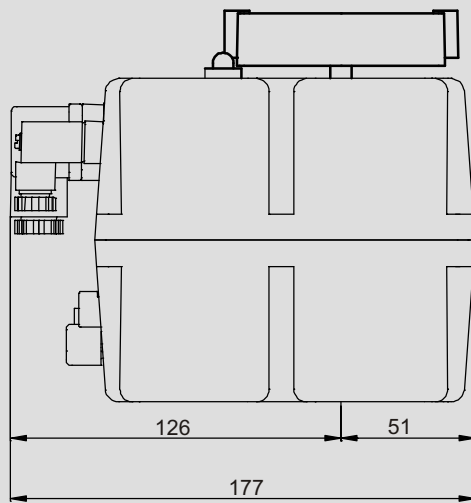
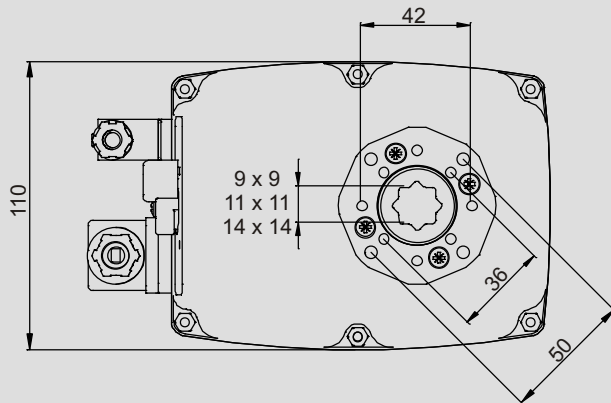
- ETL (electronic torque limiter)
- AVS (automatic voltage sensing)
- ATC (automatic temperature control) integrated heater to prevent condensation
- mechanical deblocking
- manual override for emergency operation
- two additional potential free contacts for remote position indication

### Additional optional equipment

Different operation angles 0°-180, 0°-90°-180° (other angles possible), potentiometer (alternatively 1K, 5K or 10K), Emergency-Battery pack/BSR, electronic positioning system DPS (either 0-10V or 4-20mA, input-output)



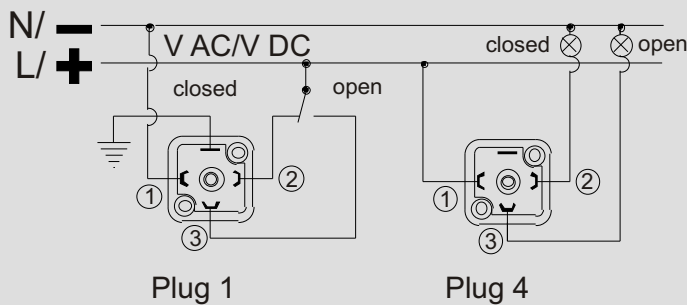
## Electric actuator Model EJ 20



Please consider our wide range of optional equipment.

### EJ3 Standard

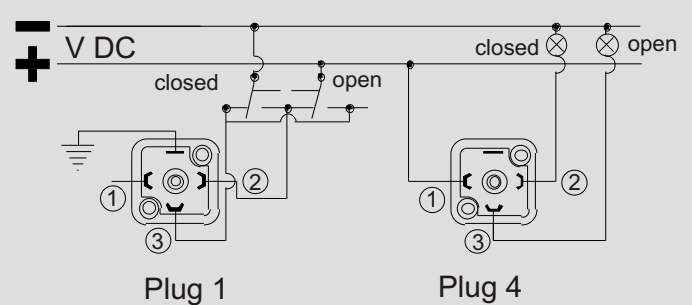
AC/DC 3 Wire connection diagram



### EJ3 Standard

alternativ

DC 2 Wire connection diagram



## Electric actuator Model EJ 35

Compact actuator for regulation and control of valves interface according ISO 5211/DIN 3337. (L=Low voltage range, H=High voltage range)

### Voltage ranges:

L (-0%/+5%) 12–24V AC/DC  
(lower voltage range)

H (+/-5%) 85-240 V AC/DC  
(upper voltage range)

**Operating time s/90°(+/-10%):** L: 12 s / H: 11 s

**Break torque:** 38 Nm

**Operational torque:** 35 Nm

**Duty rating [ED]:** 75%

**Protection class:** IP65

**Temperature range:** -20°C to +70°C

**Flange:** Multiflange F03/F04/F05

**Double square alternatives** 9, 11 or 14 mm

**Connectors:** DIN 43650 ISO 4400 C-192/C-193

**Enclosure/housing:** Nylon (PA 6)

**Weight:** 1,7 kg



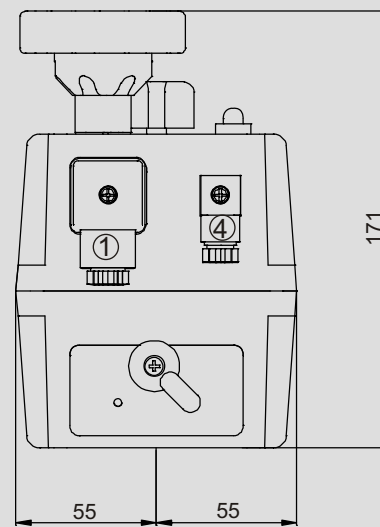
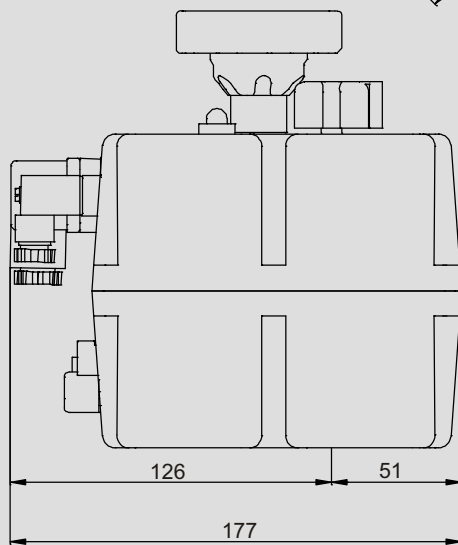
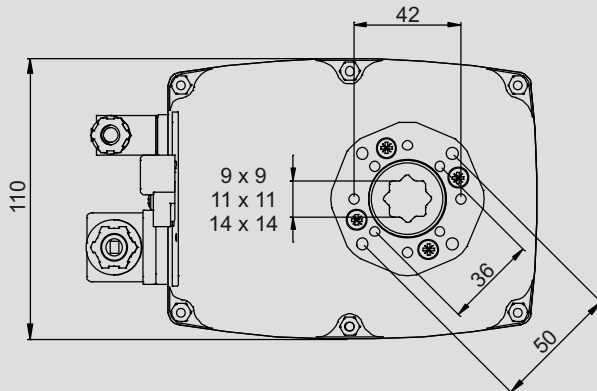
### All advantages at glance:

- ETL (electronic torque limiter)
- AVS (automatic voltage sensing)
- ATC (automatic temperature control) integrated heater to prevent condensation
- mechanical deblocking
- manual override for emergency operation
- two additional potential free contacts for remote position indication

### Additional optional equipment

Different operation angles 0°-180, 0°-90°-180° (other angles possible), potentiometer (alternatively 1K, 5K or 10K), Emergency-Battery pack/BSR, electronic positioning system DPS (either 0-10V or 4-20mA, input-output)

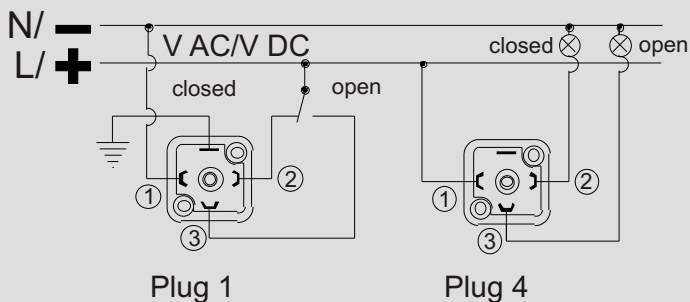
## Electric actuator Model EJ 35



Please consider our wide range of optional equipment.

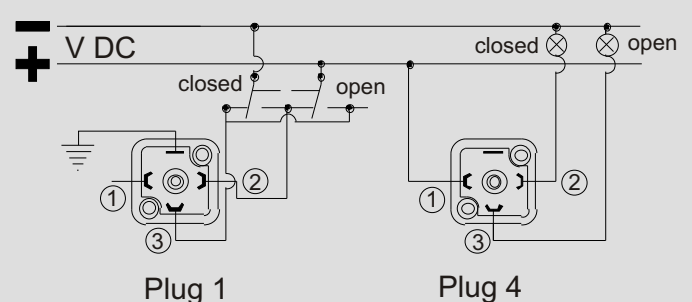
### EJ3 Standard

AC/DC 3 Wire connection diagram



### EJ3 Standard alternativ

DC 2 Wire connection diagram



## Electric actuator Model EJ 55

Compact actuator for regulation and control of valves interface according ISO 5211/DIN 3337. (L=Low voltage range, H=High voltage range)

### Voltage ranges:

L (-0%/+5%) 12–24V AC/DC  
(lower voltage range)

H (+/-5%) 85-240 V AC/DC  
(upper voltage range)

**Operating time s/90°(+/-10%):** L: 17 s / H: 13 s

**Break torque:** 60 Nm

**Operational torque:** 55 Nm

**Duty rating [ED]:** 75%

**Protection class:** IP65

**Temperature range :** -20°C to +70°C

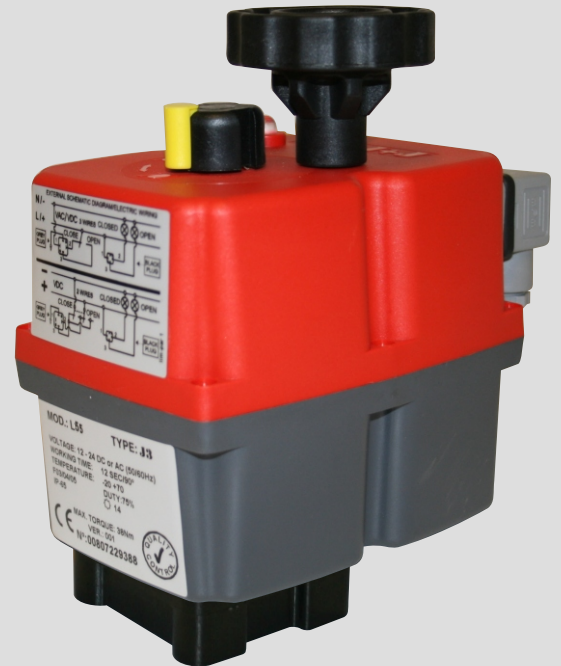
**Flange:** F05/F07

**Double square alternatives** 14 or 17 mm

**Connectors:** DIN 43650 ISO 4400 C-192/C-193

**Enclosure/housing:** Nylon (PA 6)

**Weight:** 2,3 kg



### All advantages at glance:

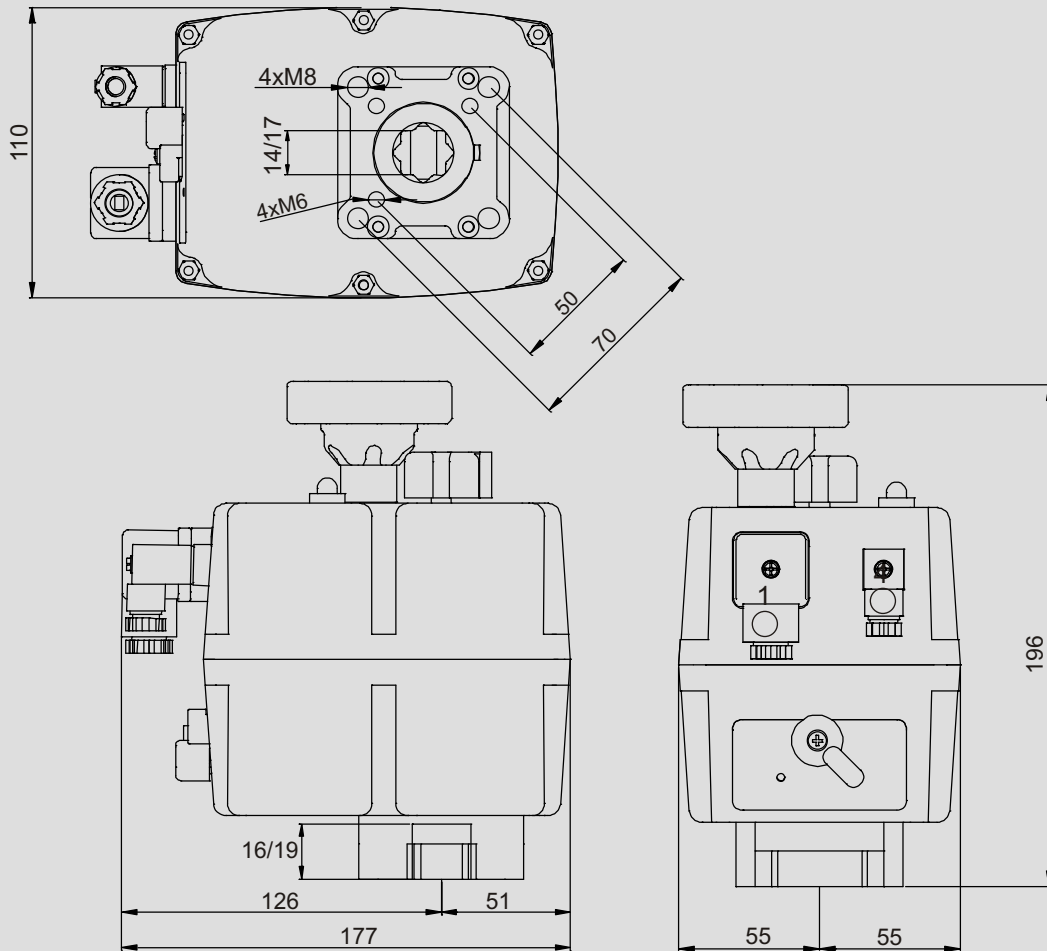
- ETL (electronic torque limiter)
- AVS (automatic voltage sensing)
- ATC (automatic temperature control) integrated heater to prevent condensation
- mechanical deblocking
- manual override for emergency operation
- two additional potential free contacts for remote position indication

### Additional optional equipment

Different operation angles 0°-180, 0°-90°-180° (other angles possible), potentiometer (alternatively 1K, 5K or 10K), Emergency-Battery pack/BSR, electronic positioning system DPS (either 0-10V or 4-20mA, input-output)



## Electric actuator Model EJ 55



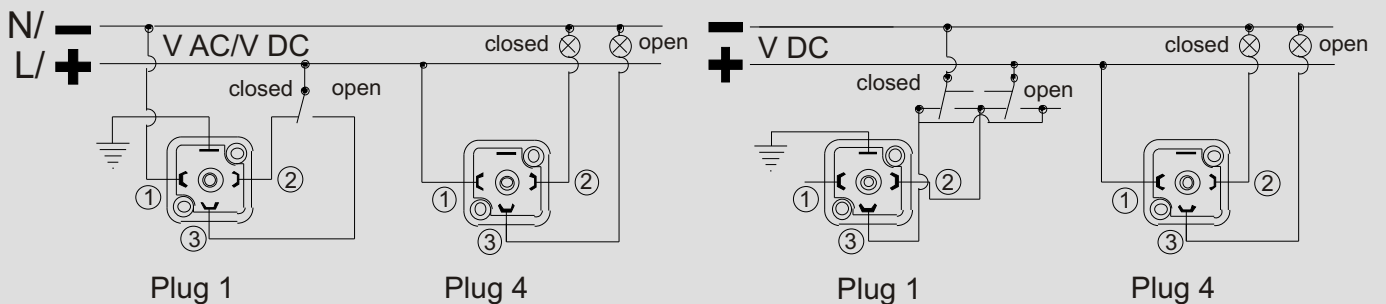
Please consider our wide range of optional equipment.

### EJ3 Standard

AC/DC 3 Wire connection diagram

### EJ3 Standard

alternativ  
DC 2 Wire connection diagram



Subject to change without notice.

## Electric actuator Model EJ 85

Compact actuator for regulation and control of valves interface according ISO 5211/DIN 3337. (L=Low voltage range, H=High voltage range)

### Voltage ranges:

**L** (-0%/+5%) 12–24V AC/DC  
(lower voltage range)

**H** (+/-5%) 85-240 V AC/DC  
(upper voltage range)

**Operating time s/90°(+/-10%):** L: 33 s / H: 32 s

**Break torque:** 90 Nm

**Operational torque:** 85 Nm

**Duty rating [ED]:** 75%

**Protection class:** IP65

**Temperature range :** -20°C to +70°C

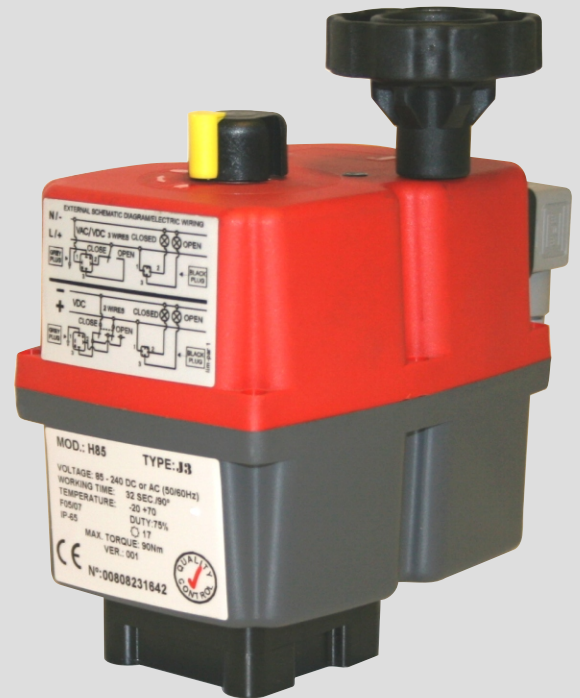
**Flange:** F05/F07

**Double square alternatives** 14 or 17 mm

**Connectors:** DIN 43650 ISO 4400 C-192/C-193

**Enclosure/housing:** Nylon (PA 6)

**Weight:** 2,8 kg



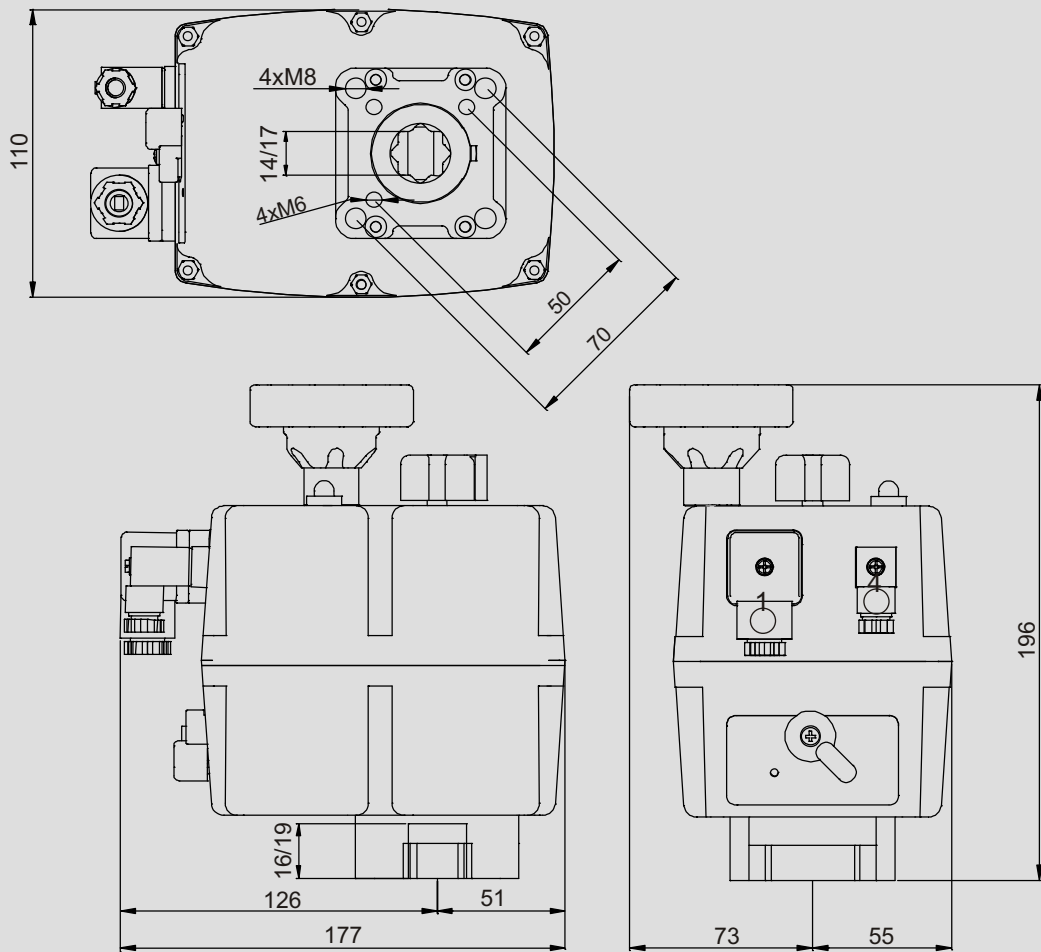
### All advantages at glance:

- ETL (electronic torque limiter)
- AVS (automatic voltage sensing)
- ATC (automatic temperature control) integrated heater to prevent condensation
- mechanical deblocking
- manual override for emergency operation
- two additional potential free contacts for remote position indication

### Additional optional equipment

Different operation angles 0°-180, 0°-90°-180° (other angles possible), potentiometer (alternatively 1K, 5K or 10K), Emergency-Battery pack/BSR, electronic positioning system DPS (either 0-10V or 4-20mA, input-output)

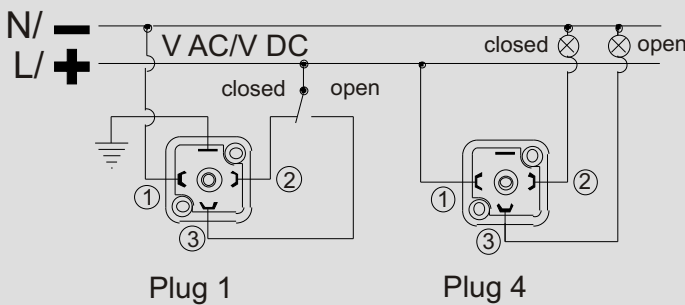
## Electric actuator Model EJ 85



Please consider our wide range of optional equipment.

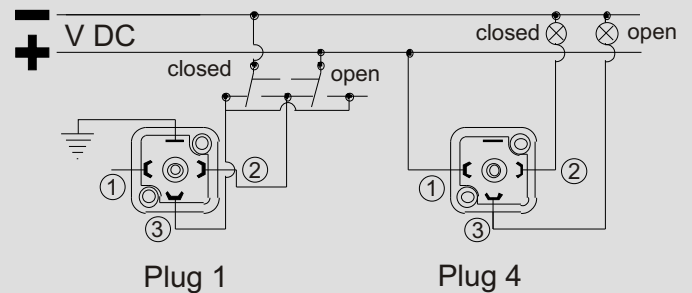
### EJ3 Standard

AC/DC 3 Wire connection diagram



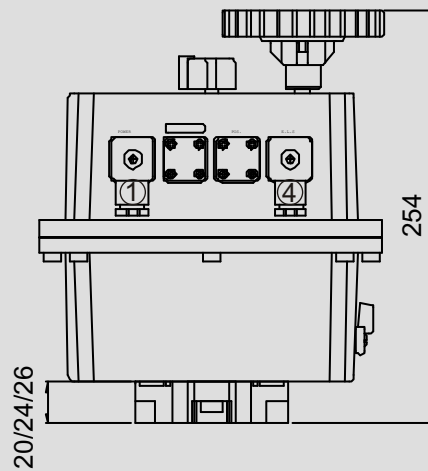
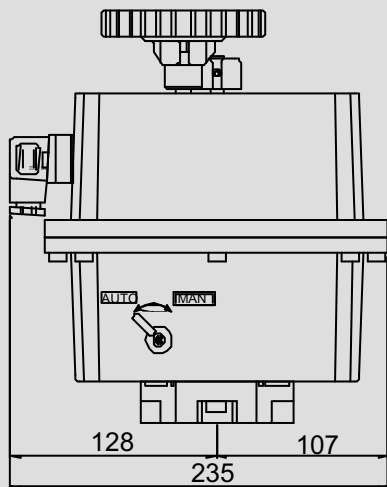
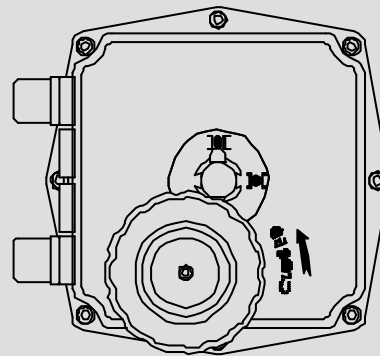
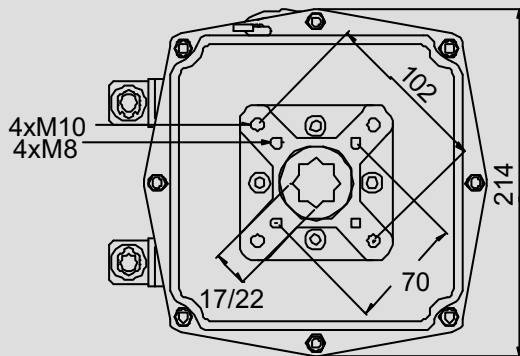
### EJ3 Standard alternativ

DC 2 Wire connection diagram



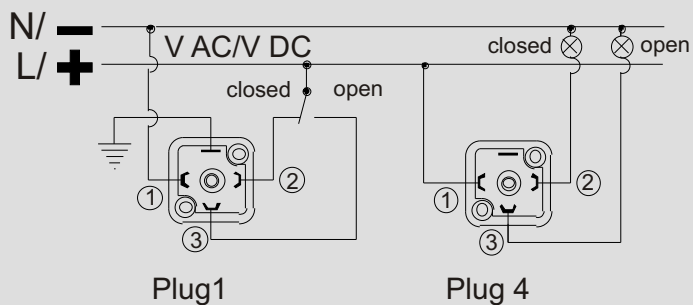


## Electric actuators **EJ2** Model 140/300



### **EJ2** Standard

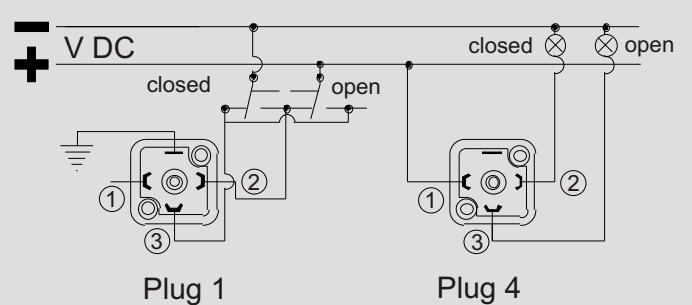
AC/DC 3 Wire connection diagram



### **EJ2** Standard

alternativ

DC 2 Wire connection diagram





## Additional equipments

### Models with Emergency Battery Pack (BSR)

#### The special feature of the J3 Series:

The Battery Pack for emergency operation is integrated in the housing.

In order to guarantee the proper function of the installed actuators in case of loss of the energy supply the actuators of the J3 Series can be equipped with the emergency battery pack (BSR).

This device enables the customer to operate into the desired position without external power supply.

Being an emergency operation device it is not design as continuous power supply for standard operation.

#### All advantages at a glance:

- automatic re-positioning at power-blackout
- free selection of the security position: NC / NO
- short charging time enables immediate response
- long endurance and lifespan due to modern accumulator technology

**Charging current:** 1200 mA

**Weight of Emergency Battery Pack (BSR):** Standard-actuator + 0,1 Kg of BSR.

**Charging time after an emergency operation Model 20 and 35:** 8 min.

**Charging time after an emergency operation Model 55 and 85:** 10 min.



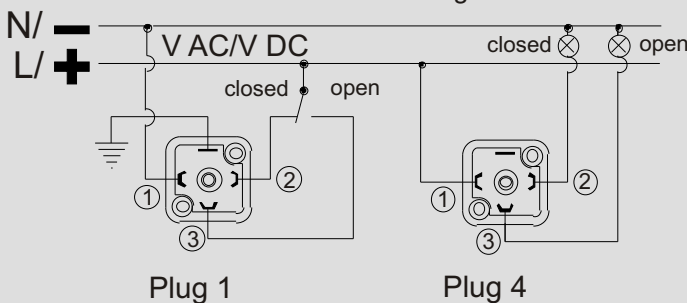
**EJ3**  
With internal integrated  
Emergency Battery Pack



**EJ2**  
Comparison with external  
Emergency Battery Pack

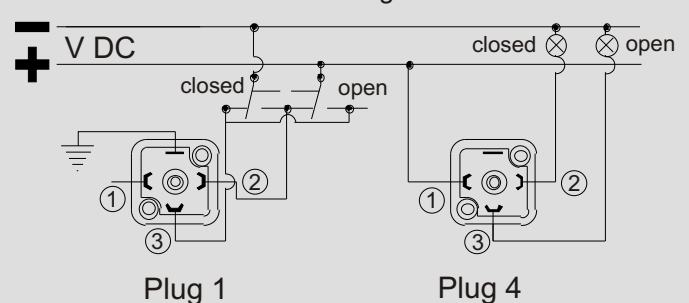
#### **EJ3** with Emergency Battery Pack

AC/DC 3 Wire connection diagram



#### **EJ3** with Emergency Battery Pack alternativ

DC 2 Wire connection diagram



## Models with Potentiometer

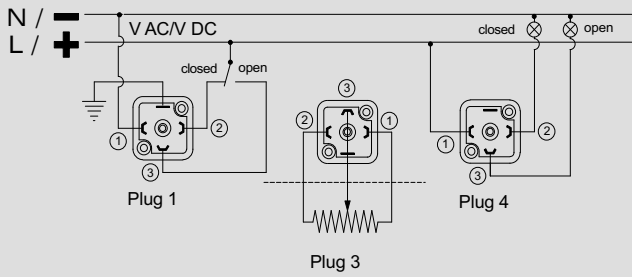
The potentiometer in the actuator indicates the position of it as linear value of the resistance which is being evaluated by an internal device controlling the operation accordingly.

The following three executions of potentiometers are available: 1KOhm, 5KOhm or 10KOhm. If other values are required please contact your nearest ASC Armaturen distributor.

Because of the fact that later changes are not possible any more, the exact value of the potentiometer has to be given at the time of order.

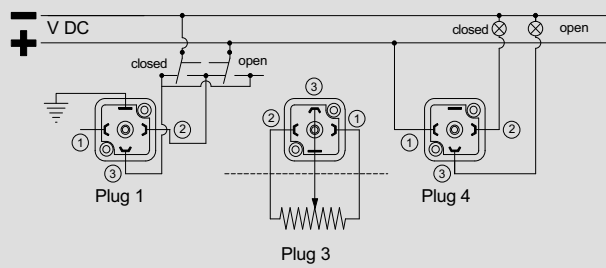
### EJ3 with Potentiometer

AC/DC 3 Wire connection diagram



### EJ3 with Potentiometer alternativ

DC 2 Wire connection diagram



## Models with Positioner DPS 2005

Alternatively 0-10V or 4-20mA (input and output signal)

The DPS2005 electronic positioner converts the actuators into servo-controlled control device for valves.

Through the input signal of the DPS 2005 it is possible to position the actuator at any angle of displacement.

The output-signal is completely proportional to the actual position of the valve.

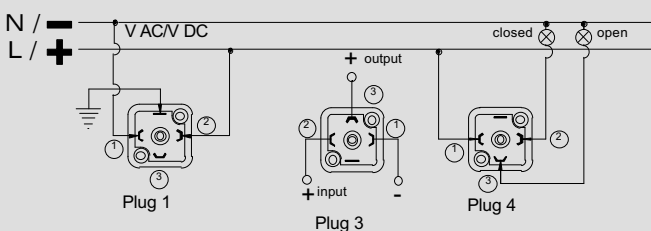
The DPS 2005 Module controls through an integrated internal micro-processor (CPU) the analog input-and output signal (4-20mA or 0-10V) and compares it with the position of the actuator.

The sensivity and repetiveness are guaranteed by means of a continous comparision of the analog input signals executed by the CPU.

Class B+C according E DIN EN 15714 Inching+Modulation

### EJ3 with DPS 2005

AC/DC 3 Wire connection diagram



### EJ3 with DPS 2005 alternativ

DC 2 Wire connection diagram

