

# ELECTRIC ACTUATORS E 50 - E 210



E 65 and E 110.

## TECHNICAL DATA

|                        |   |
|------------------------|---|
| Types:                 | E 50 - E 210  |
| Duty class:            | Class C acc. to prEN WI69000095   |
| Valve interface:       | EN ISO 5211   |
| Actuation time:        | 6 s - 180 s   |
| Corrosion protection:  | C4 acc. to prEN WI 6900095<br>tested acc. to EN 600068-2-52   |
| Protection class:      | IP 67 acc. to EN IEC 60529  |
| Insulation class:      | F   |
| Limit switches:        | max. 250 V AC, 3A for DS-Actuators<br>max. 250 V AC, 3A for WS-Actuators<br>max. 24 V DC, 10 A for GS-Actuators |
| Operation temperature: | -20°C to +70°C  |
| Cable glands:          | 2 x M20 x 1,5; Ø min = 6 mm,<br>Ø max = 13 mm   |
| Hand wheel:            | 15 revolutions for 90°  |
| Hand wheel torque:     | 8 Nm for E 50<br>4 Nm for E 65<br>20 Nm for E 110<br>35 Nm for E 160<br>50 Nm for E 210                         |

## FEATURES

- Robust aluminum body
- Completely ball beared wormgear
- Safe arresting by self-inhibition
- Changeable clutch nuts for mounting on different shaft ends
- Mechanical position indicator disc for an optical control of the valve's position
- Motor with thermic winding protection switch
- Hand wheel enables immediate hand emergency operation if necessary
- Maintenance-free, long life service by continuous lubrication

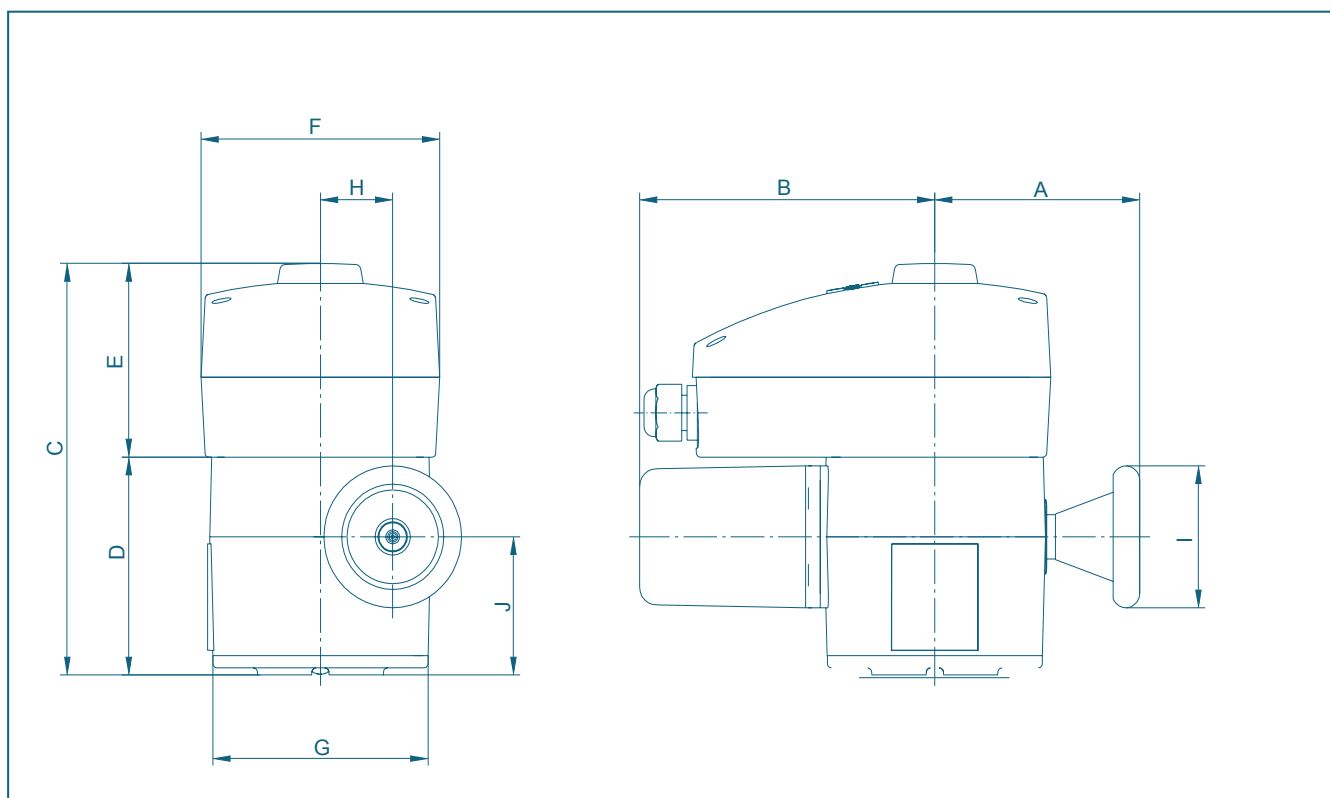
## GENERAL APPLICATIONS:

- Water and waste water technology
- Chemical industry
- Car industry
- Civil engineering
- Everywhere applicable, where butterfly valves are installed



E 160 and E 210.

# DIMENSIONS E 50 - E 210



| Type  | Dimensions [mm] |     |     |     |     |     |     |     |     |     | Weight [kg] |
|-------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------|
|       | A               | B   | C   | D   | E   | F   | G   | H   | I   | J   |             |
| E 50  | 110             | 149 | 210 | 123 | 87  | 124 | 126 | 42  | 80  | 73  | 5           |
| E 65  | 119             | 172 | 235 | 123 | 112 | 139 | 125 | 42  | 80  | 78  | 7           |
| E 110 | 136             | 247 | 257 | 145 | 112 | 139 | 150 | 58  | 125 | 88  | 14          |
| E 160 | 157             | 280 | 282 | 170 | 112 | 139 | 175 | 89  | 200 | 112 | 25          |
| E 210 | 212             | 352 | 274 | 162 | 112 | 139 | 240 | 125 | 315 | 84  | 40          |

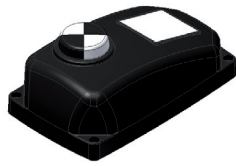
Subject to change without notice

## FEATURES

Valve interface: EN ISO 5211

| Type                                   | E 50<br>WS | E 65<br>WS | E 65<br>DS | E 65<br>GS | E 110<br>WS | E 110<br>DS | E 110<br>GS | E 160<br>WS | E 160<br>DS | E 160<br>GS | E 210<br>DS |
|--|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Actuation time from 0° - to 90°</b> | 25 s       | 6 s        | 6 s        | 6 s        | 12 s        | 12 s        | 6 s         | 24 s        | 24 s        | 12 s        | 24 s        |
| <b>Rated torque</b>                    | 40 Nm      | 100 Nm     | 100 Nm     | 100 Nm     | 400 Nm      | 400 Nm      | 360 Nm      | 1000 Nm     | 1000 Nm     | 800 Nm      | 3500 Nm     |
| <b>Rated current</b>                   | 0,15 A     | 0,7 A      | 0,3 A      | 5 A        | 1,3 A       | 1,0 A       | 8,8 A       | 1,3 A       | 1,0 A       | 8,8 A       | 1 A         |
| <b>Starting current</b>                | 0,18 A     | 1,0 A      | 0,3 A      | 8,0 A      | 2 A         | 1,8 A       | 12,5 A      | 2 A         | 1,8 A       | 12,5 A      | 3,2 A       |
| <b>Power consumption</b>               | 0,04 kW    | 0,16 kW    | 0,09 kW    | 0,08 kW    | 0,26 kW     | 0,22 kW     | 0,4 kW      | 0,26 kW     | 0,22 kW     | 0,4 kW      | 0,54 kW     |
| <b>Rated voltage</b>                   | 230 V      | 230 V      | 400 V      | 24 V       | 230 V       | 400 V       | 24 V        | 230 V       | 400 V       | 24 V        | 400 V       |
| <b>Frequency</b>                       | 50 Hz      | 50 Hz      | 50 Hz      | -          | 50 Hz       | 50 Hz       | -           | 50 Hz       | 50 Hz       | -           | 50 Hz       |
| <b>Duty cycle</b>                      | 30 %       | 30 %       | 30%        | 30%        | 30%         | 30%         | 30 %        | 30%         | 30%         | 30%         | 30%         |
| <b>Protection class</b>                | IP 67      | IP 67      | IP 67      | IP 67      | IP 67       | IP 67       | IP 67       | IP 67       | IP 67       | IP 67       | IP 67       |

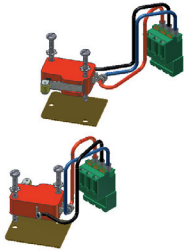
# OPTIONS



Cover plate with position indicator (E 50)



Cover plate with position indicator (E 65 - E 210)



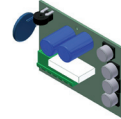
Additional volt-free limit switches



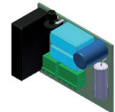
Current feedback 4-20 mA



Potentiometer 1000 Ω



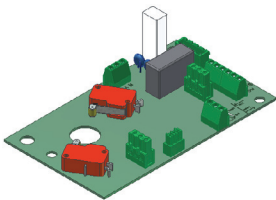
Torque control



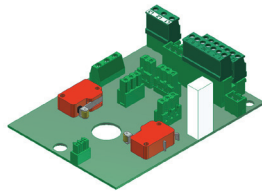
Timer



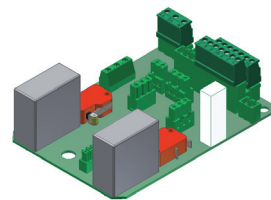
Conector terminals



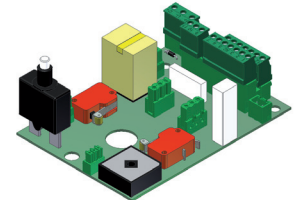
E 50 - 230 V AC



400 V AC



230 V AC



24 V DC



Switch box with cable glands



E 50



E 65



E 110



E 160



E 210

# CERTIFICATE



## Declaration of conformity

# CE

We, **EBRO ARMATUREN**  
**Gebr. Bröer GmbH, Karlstraße 8, 58135 Hagen, Germany**

declare in our sole responsibility, that the electric quarter-turn actuators of the E-series,

|               |                |                 |                 |                 |
|---------------|----------------|-----------------|-----------------|-----------------|
| <b>E50 WS</b> | <b>E 65 WS</b> | <b>E 110 WS</b> | <b>E 160 WS</b> |                 |
|               | <b>E 65 DS</b> | <b>E 110 DS</b> | <b>E 160 DS</b> | <b>E 210 DS</b> |
|               | <b>E 65 GS</b> | <b>E 110 GS</b> | <b>E 160 GS</b> |                 |

and the enhanced unit box system

**M71-WS-XXX-40** and **M71-DS-XXX-40** and **M71-GS-XXX-40**

this declaration is valid for, fulfil the requirements of the guideline rights of the european member states about EMC directive (89/336/EWG) and the low voltage directive 73/23/EWG (NSR).

For assessment of these products related to electromagnetic compatibility and low voltage directive following standards have been consulted:

**EN 50178 : 1997**  
**EN 61010 -1 : 1993** for low voltage directive

**EN 55011 : 1998**  
**EN 61000** for EMC directive

As manufacturer of these products, we declare additionally, that following standards according to machinery directive 89/392/EWG have been consulted:

**EN ISO 5211**  
**EN 60068-2-52**  
**EN IEC 60529** acc. to machinery directive 89/392/EWG

The starting is not permitted till it is ensured, that the complete machine, where EBRO quarter-turn actuators are installed, fulfil the guidelines of directive 89/392/EWG.

Hagen, dated 22.07.2008

A handwritten signature in blue ink, appearing to read 'H. Konopatzki', written over a horizontal line.

Dipl.-Ing. H. Konopatzki, Technical director