

# SCHIEBEL

# ab series

issue November 2025

## AB CSC Multitum Actuator

**Multitum Modulating-Duty  
On-Off-Duty up to 5.000 Nm**



### Motor

- AC motor, isolation class F, temperature switches

### Operation mode

- ABxx: ON/OFF duty S2-15min & class A and B
- rABxx: Modulating duty S4-1200 cycles/hour with 40% duty cycle & class C

### Local control

- Selector switch LOCAL-OFF-REMOTE - lockable
- Control switch OPEN-STOP-CLOSE
- Large LC-display for detailed visualization of status information & parameters - different languages selectable
- Red display backlight for alarms
- 5 RGB LEDs for status indication & control information
- Cover lid with display in 90° steps rotatable
- Bluetooth & infrared interface for data exchange and actuator control with Android App or Windows PC

### Remote control

- 5 binary inputs 24VDC: Open - Stop - Close - Emergency Open - Emergency Close, free programmable, 24VDC rated voltage with common ground potential, inputs with jumpers configurable in groups with separated commons

### Status signals

- 8 binary outputs 24VDC: Ready - Open - Closed - Opening - Closing - Torque - Local - Remote, free programmable, 24VDC supply, max. load 0,5A/channel

### Explosion protection

- Protection class Ex II 2 G Ex de IIC T4
- Certifications ATEX

### Features

- Free programmable step mode control for open and close
- 4 intermediate positions definable
- Actuator torque adjustable between 40-100% from max. torque
- Alternative menu structure available
- Different user levels selectable
- Counter values for preventive Maintenance notification

### Valve connection

- Flange and output shaft according ISO 5210

### Electric connectors

- Power connection via 6pole screw plug Han6E+PE
- Control and status signals via 24pole screw plug Han24E
- Metric cable entries for cable glands, closed with dummy glands
- Ex-design: terminal block

### Ambient temperature

- -25°C to +70°C, extended temperature range on request

### Enclosure protection

- IP67 according EN 60 529, IP68 on request

### Corrosion protection

- C2 according EN ISO 12944-5 for installation in aggressive atmosphere, C3 to C5 on request

### Color

- RAL7030 - stonegrey

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## Multitum Modulating-Duty / On-Off-Duty up to 5.000 Nm

| Size                                         |                                                                                                  | (r)AB3    | (r)AB5    | (r)AB8    | (r)AB18   | (r)AB40 | (r)AB80     | (r)AB100  | (r)AB200  | (r)AB500  |
|----------------------------------------------|--------------------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|---------|-------------|-----------|-----------|-----------|
| Max. torque 3ph                              | Nm                                                                                               | 30        | 60        | 120       | 250       | 500     | 800         | 1000      | 2000      | 5000      |
| Max. torque 1ph                              | Nm                                                                                               | 30        | 60        | 120       | 250       | 500     | --          | --        | --        | --        |
| Max. torque S4-operation                     | Nm                                                                                               | 15        | 30        | 60        | 125       | 250     | 400         | 500       | 1000      | 2500      |
| Speed range 3ph                              | rpm                                                                                              | 1,5 - 200 | 1,5 - 200 | 2,5 - 200 | 2,5 - 200 | 5 - 200 | 5 - 60      | 5 - 200   | 7,5 - 200 | 3 - 120   |
| Speed range 1ph                              | rpm                                                                                              | 1,5 - 200 | 1,5 - 200 | 2,5 - 40  | 2,5 - 20  | 5 - 20  | --          | --        | --        | --        |
| Valve flange                                 | ISO 5210                                                                                         | F10       | F10       | F10       | F14       | F14     | F14/<br>F16 | F16       | F25       | F35       |
| Max. spindle diameter with output drive A/Am | mm                                                                                               | 26        | 26        | 36        | 40        | 52      | 52          | 95        | 95        | 132       |
| Weight                                       | kg                                                                                               | 16 - 18   | 16 - 20   | 24 - 35   | 42 - 50   | 70 - 80 | 70 - 90     | 130 - 210 | 140 - 260 | 300 - 400 |
| AC: 3phase                                   | 220VAC / 230VAC / 240VAC / 380VAC / 400VAC / 415VAC / 440VAC / 460VAC / 480VAC / 500VAC / 690VAC |           |           |           |           |         |             |           |           |           |
| AC: 1phase                                   | 220VAC / 230VAC / 240VAC                                                                         |           |           |           |           |         |             |           |           |           |

## Software Options

| Smart Codes                                                                                                                                          | Code |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 0/4-20 mA position transmission, galvanic separated (no signal isolator required), signal configurable as current sink                               | ER   |
| Positioner for actuator control with 0/4-20 mA signal from PLC, passiv, potential isolation from thre remaining electronic                           | SR   |
| PID positioner for two 0/4-20 mA input signals (target value, external actual value, configurable as activ or current sink signal)                   | PID  |
| Actuator KKS / TAG on display (max. 15 digits)                                                                                                       | ID   |
| Customer parametrization (customer specific parametrization of binary input- and output signals in accordance with customer specific wiring diagram) | KP   |
| Torque curve - torque in relation to the stroke                                                                                                      | AP   |
| Logic operations of input and output signals                                                                                                         | VIRT |
| KVS valve characteristics - Flow in relation to the position of the actuator                                                                         | VK   |
| Speed characteristics - speed in relation to the stroke                                                                                              | SC   |
| Advanced service and maintenance capabilities                                                                                                        | ADSM |
| Automatic partial and full stroke test                                                                                                               | ST   |
| Multiport valve support - Intermediate positioning                                                                                                   | MPIP |

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# SCHIEBEL

# cm/ab series

issue October 2023

## Parttum Gearboxes

**Modulating-Duty / On-Off-Duty  
up to 300.000 Nm**



## Planetary Gearboxes

### Mode of operation

■ S2-20min(On/Off) & Class A and B or S4-1200 cycles/h with 40% duty cycle and Class C

### Ambient temperatur

■ -40°C up to +85°C

### Protection enclosure

■ IP67 according EN 60 529 and IEC529

### Corrosion protection

■ K2 (C2) for installation in aggressive atmosphere, C3 up to C5 on request

### Colour

■ RAL7024 with CM-series & RAL7030 with AB-series actuator

### End stop

■ QT12.V2 | QT25 | QT50:  
Mechanical endstops at 95° in Open & Close position  
■ QTM12.V2 | QTM25 | QTM50:  
Planetary gearbox without mechanical end stops  
■ QTP12.V2 | QTP25 | QTP50:  
Mechanical endstops at 185° in Open & Close position

### Valve connection

■ Flange according to ISO 5211  
■ Plug-in coupling with bore and keyway or square

## Worm Gearboxes

### Mode of operation

■ S2-20min(On/Off) & Class A and B or S4-1200 cycles/h with 40% duty cycle and Class C

### Rotation

■ Clockwise insert rotation by clockwise rotation of input shaft

### Self-locking

■ Self-locking gearbox with single worm

### Ambient temperature

■ -40°C up to +120°C, various versions available

### Protection enclosure

■ IP67 according EN 60 529 and IEC529

### Corrosion protection

■ C2 according EN ISO 12944-5 for installation in aggressive atmosphere, C3 to C5 on request

### Colour

■ RAL7024 with CM-series & RAL7030 with AB-series actuator

### Position indicator

■ Mechanical position indicator on gearbox

### End stop

■ Stop screws for easy adjustment of the swivel angle for 0° and 90° +/- 5°.

### Valve connection

■ Flange according to ISO5211  
■ Plug-in coupling with bore and keyway or square

Modulating-Duty / On-Off-Duty up to 300.000 Nm

Planetary Gearboxes QT-series

| Type                           | max. allowed<br>output torque | max. torque<br>S4-duty | Gearbox<br>ratio | Mechanical<br>advantage | Input flange<br>for actuator | Valve output<br>flange | max. shaft-Ø<br>valve | max. valve square | Max. height<br>valve shaft | Weight approx. | Suitable<br>actuator size |
|--------------------------------|-------------------------------|------------------------|------------------|-------------------------|------------------------------|------------------------|-----------------------|-------------------|----------------------------|----------------|---------------------------|
|                                | Nm                            | Nm                     | --               | --                      | ISO 5211                     | ISO 5211               | mm                    | mm                | mm                         | kg             |                           |
| QT12.V2<br>QTM12.V2 / QTP12.V2 | 120                           | 60                     | 4,88             | 4,16                    | F10                          | F05<br>F07 / F10       | 20                    | 17                | 30                         | 3,2            | CM03 / AB3                |
| QT25<br>QTM25 / QTP25          | 250                           | 125                    | 9                | 7,92                    | F10                          | F07<br>F10             | 25                    | 22                | 41                         | 4,8            | CM03 / CM06<br>AB3 / AB5  |
| QT50<br>QTM50 / QTP50          | 500                           | 250                    | 9                | 7,92                    | F10                          | F10<br>F12             | 40                    | 32                | 46                         | 8,9            | CM06 / AB5                |

Worm Gearboxes DKB-Series

| Type       | max. allowed<br>gearbox<br>output torque | max. torque<br>S4-duty | Gearbox<br>ratio | Mechanical<br>advantage | Valve output<br>flange | max. shaft-Ø<br>valve | max. valve square | Max. height<br>valve shaft | Weight | Suitable<br>actuator size             |
|------------|------------------------------------------|------------------------|------------------|-------------------------|------------------------|-----------------------|-------------------|----------------------------|--------|---------------------------------------|
|            | Nm                                       | Nm                     | --               | --                      | ISO 5211               | mm                    | mm                | mm                         | kg     | --                                    |
| DKB-0      | 1000                                     | 500                    | 39               | 11,7                    | F10   F12              | 32/40                 | 27                | 91                         | 13     | CM03   CM06   CM12<br>AB3   AB5   AB8 |
| DKB-0-1S   | 1000                                     | 500                    | 63               | 15,7                    | F10   F12              | 32/40                 | 27                | 91                         | 19     | CM03   CM06   CM12<br>AB3   AB5   AB8 |
| DKB-01     | 1850                                     | 925                    | 46               | 13,8                    | F10 & F14<br>F12   F16 | 42/50                 | 33                | 94                         | 16     | CM12<br>AB8                           |
| DKB-01-1S  | 1850                                     | 925                    | 74               | 18,5                    | F10 & F14<br>F12   F16 | 42/50                 | 33                | 94                         | 22     | CM6   CM12<br>AB5   AB8               |
| DKB-02     | 3000                                     | 1500                   | 49               | 14,7                    | F12 & F16<br>F14       | 48/60                 | 39                | 110                        | 23     | CM12   CM25<br>AB8   AB18             |
| DKB-02-1S  | 3000                                     | 1500                   | 129              | 32,2                    | F12 & F16<br>F14       | 48/60                 | 39                | 110                        | 38     | CM06   CM12<br>AB5   AB8              |
| DKB-03     | 4200                                     | 2100                   | 60               | 18                      | F16                    | 57/70                 | 46                | 112                        | 30     | CM12   CM25<br>AB8   AB18             |
| DKB-03-1S  | 4200                                     | 2100                   | 158              | 39,5                    | F16                    | 57/70                 | 46                | 112                        | 41     | CM12<br>AB8                           |
| DKB-04     | 8000                                     | 4000                   | 68               | 18,3                    | F16 & F25              | 70/90                 | 55                | 124                        | 56     | CM25<br>AB18   AB40   AB80            |
| DKB-04-1S  | 8000                                     | 4000                   | 179              | 44,7                    | F16 & F25              | 70/90                 | 55                | 124                        | 64     | CM12   CM25<br>AB8   AB18             |
| DKB-04-1SD | 8000                                     | 4000                   | 220              | 50,6                    | F16 & F25              | 70/90                 | 55                | 124                        | 73     | CM12   CM25<br>AB8   AB18             |
| DKB-05     | 15000                                    | 7500                   | 59               | 17,7                    | F16 & F25              | 88/105                | 65                | 143                        | 74     | AB40   AB80   AB100                   |
| DKB-05-1S  | 15000                                    | 7500                   | 177              | 44,2                    | F25 & F30              | 88/105                | 65                | 143                        | 91     | CM25<br>AB18   AB40                   |
| DKB-05-1SD | 15000                                    | 7500                   | 260              | 59,8                    | F25 & F30              | 88/105                | 65                | 143                        | 97     | CM 12   CM25<br>AB8   AB18            |
| DKB-05-2SD | 15000                                    | 7500                   | 399              | 91,7                    | F25 & F30              | 88/105                | 65                | 143                        | 112    | CM12   CM25<br>AB8   AB18             |
| DKB-06     | 22000                                    | 11000                  | 67               | 20                      | F25 & F30<br>F35       | 94/120                | --                | 169                        | 118    | AB80   AB100   AB200                  |
| DKB-06-1S  | 22000                                    | 11000                  | 201              | 50,2                    | F25 & F30<br>F35       | 94/120                | --                | 169                        | 138    | CM25<br>AB18   AB40                   |
| DKB-06-1SD | 22000                                    | 11000                  | 295              | 67,8                    | F25 & F30<br>F35       | 94/120                | --                | 169                        | 144    | CM12   CM25<br>AB8   AB18   AB40      |
| DKB-06-2SD | 22000                                    | 11000                  | 453              | 104                     | F25 & F30<br>F35       | 94/120                | --                | 169                        | 160    | CM12   CM25<br>AB8   AB18             |
| DKB-07     | 32000                                    | 16000                  | 63               | 18,9                    | F30 & F35<br>F40       | 105/140               | --                | 190                        | 155    | AB200                                 |
| DKB-07-1S  | 32000                                    | 16000                  | 202              | 50,5                    | F30 & F35<br>F40       | 105/140               | --                | 190                        | 170    | AB40   AB80                           |
| DKB-07-1SD | 32000                                    | 16000                  | 567              | 130,4                   | F30 & F35<br>F40       | 105/140               | --                | 190                        | 180    | CM12   CM25<br>AB8   AB18             |
| DKB-07-2SD | 32000                                    | 16000                  | 881              | 202,6                   | F30 & F35              | 105/140               | --                | 190                        | 215    | CM12   CM25<br>AB8   AB18             |

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