

SCHIEBEL

cm series

issue November 2025

CM Multiturn Actuator

Modulating-Duty / On-Off-Duty
up to 250 Nm



Power supply

- AC: 1phase 110VAC...240VAC 50/60Hz +/-10%
- DC: 24VDC +/-10% ■ 3-phase: 380...480VAC 50/60Hz +/-10%

Motor

- PM-motor ■ Controlled via BLDC motor control board
- Isolation class F

Absolut encoder

- (magnetic based) for high precision control with an accuracy of 0,1%

Operation mode

- CMxx: ON/OFF duty S2-15min & class A and B ■ rCMxx: 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, IECEx, NEC

Features

- Free programmable step mode control for open and close
- 4 intermediate positions definable ■ Actuator torque adjustable between 25-100% 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 up to +60°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

- RAL7024 - graphite grey, all others on request

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Size		(r)CM03	(r)CM06	(r)CM12	(r)CM25
Torque range 1phase or 3phase, free adjustable	Nm	8-32	16-64	32-125	64-250
Torque range 24VDC, up to 5rpm with 20rpm	Nm	8-32 8-32	19-55 19-35	--	--
Max. torque S4-operation	Nm	16	32	64	125
Max. torque S9-operation	Nm	10	20	30	60
Speed range 1ph or 3ph, free adjustable	rpm	1-72	1-60	2,5-70	1,5-33
Speed range 24VDC, free adjustable	rpm	1-20	1-20	--	--
Travel sensor range	Turns	0,25-105 0,25-1600	0,25-105 1-300 0,25-1600	1-300 0,25-1600	0,25-1600
Valve flange	ISO 5210	F07 / F10 / G0	F10 / G0	F10 / G0	F14 / G1/2
Output drive	ISO 5210 / DIN 3210 / DIN 3338 A / Am / B / B1 / BSo / C / CSo / D / E-DO / DO / E / B3 / ESo / X				
Weight	kg	11,5	17,5	22	29
Motor	M	Brushless DC motor controlled by integrated control unit			
Power factor	cos ϕ	> 0,95			
Power supply 1ph (Standard)		1phase 110VAC...240VAC 50/60Hz +/- 10%			
Nominal current @1x230VAC	A	1,5A (16Nm / 72rpm)	1,9A (32Nm / 60rpm)	3,8A (64Nm / 60rpm)	3,8A (18Nm / 30rpm)
Power supply 3ph (Option)		AC: 3phase 380...480VAC 50/60Hz +/- 10%			
Nominal current @3x400VAC	A	0,5A (16Nm / 72rpm)	0,9A (32Nm / 60rpm)	1,4A (64Nm/60rpm)	1,4A (128Nm/30rpm)
Power supply 24VDC (Option)		DC: 24VDC +/- 10%		--	--
Nominal current	A	8,6A (10Nm / 20rpm)	14,0A (32Nm / 20rpm)	--	--

Software Options	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

All informations are subject to change without notice. Values provided for guidance only.
Due to production tolerance variation, the electrical values are averages compiled from actuator production test data.

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

Worm Gearboxes DKB-Series

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

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