



■ DATA SHEET CM03/rCM03 + 90° worm gearbox

Actuator speed adjustable

- * Planning phase simplified
- * Later process optimization simplified
- * Protection of valve seats
- * Avoiding pressure shocks

Many built-in software options

- * Minimal effort for later adaptations in PLC system
- * Short activation of customer-specific functions

Minimal maintenance costs

- * Mechanical and electrical components are reduced to a minimum
- * Reduction of spare-part versions to a minimum

Construction

- * Very low volume & weight by compact construction
- * High protection degree up to IP67/IP68
- * A planetary gearbox ensure optimum actuator efficiency
- * Handwheel with reaction torque block (no change-over lever)
- * Control lid with LC-Display in 90° steps rotatable

■ TECHNICAL DETAILS

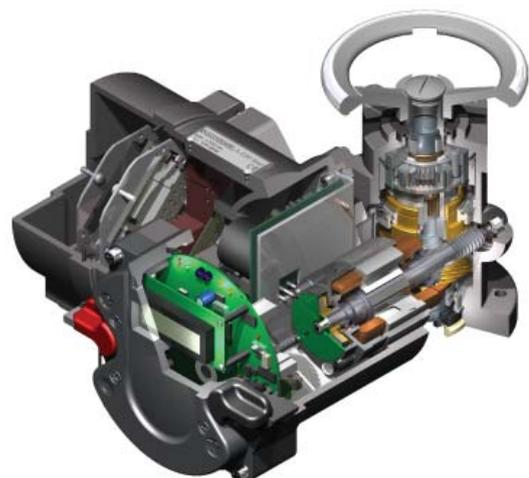
Switch-off torque: up to 2752Nm

Modulating torque: up to 1376Nm

90° position time range: 7sec up to 1440sec - free adjustable

Power supply: 1x115V-230V +/-10% AC or DC

Control unit: Integrated actuator control unit with frequency inverter technology and PM-motor



COMPACT MULTI-TURN ACTUATOR CM03 / rCM03 with 90° WORM GEARBOX

Technical data

TYPE	On/Off duty	CM03+E550s	CM03+E550I	CM03+IW3-40	CM03+IW3-70	CM03+IW4-140s	CM03+IW4-210s	CM03+IW4-240s
	Modulating duty	rCM03+E550s	rCM03+E550I	rCM03+IW3-40	rCM03+IW3-70	rCM03+IW4-140s	rCM03+IW4-210s	rCM03+IW4-240s
Switch-off torque, adjustable	max. Nm	384	384	480	736	1408	2112	2752
	min. Nm	96	96	120	184	352	528	688
Modulating torque with rCM3	max. Nm	192	192	240	368	704	1056	1376
Position-time adjustable	sec.	7 up to 192	7 up to 192	8,3 up to 240	14,6 up to 420	29 up to 840	44 up to 1260	50 up to 1440
Pivot angle	°	90° +/- 5° with travel sensor "non-intrusive" through switches adjustable						
Operation mode	On/Off duty	On/Off duty S2-15minutes						
	Modulating duty	Modulating duty S4 - 1200cycles/hour - 40% duty cycle switching free, overlaid, without lever						

Valve-mounting

Flange	ISO 5210	F07 & F12	F10 & F14	F10 or F12	F10 or F12	F12 or F14 *)	F12 or F14 *)	F12 or F14 *)
max. shaft-Ø:	with coupling without	30 45mm	30 45mm	-- 45mm	-- 45mm	-- 64mm	-- 64mm	-- 64mm
max. square:	with coupling without	27 38mm	27 38mm	-- 33mm	-- 33mm	-- 48mm	-- 48mm	-- 48mm

*) gearbox also with F16 flange available, gearbox type changes for an example from IW4-240s to IW4-240I (price adder)

Operating conditions

Protection degree acc. EN 60 529	IP67
Ambient temperature	-25°C up to + 60°C
Corrosion protection	K2 for installation in power plants, industries- and waste water plants with aggressive atmosphere
Painting / Colour	2 components painting / RAL7024
Weight	19,5 kg 19,5 kg 20 kg 20 kg 39,5 kg 39,5 kg 44,5 kg

PM-Motor

Isolation class	Isolation class F, max. 155°C permanent temperature
Power supply	V AC: 1x90...240Vrms+/-10%, 50/60Hz or DC: 1x100...220V+/-10%
Current consumption	A approx. 2,25
Power	W approx. 250W

Actuator control unit

Electronic with frequency-technology	Integrated processor control unit with frequency-technology for variable speed control
Control elements	with additional language independent symbols Selector switch LOCAL - OFF - REMOTE, contact free with GMR-technology (lockable) Control switch OPEN - STOP - CLOSE, contact free with GMR-technology
Indication	lighted LC-display, Lid with display in 90° steps turnable
Signal lamps	4 LED's for operation-, readiness-, warning- and error-messages
Communication	Infrared communication interface for programming and saving operation data

Control

Inputs	5 binary control inputs: OPEN - STOP - CLOSE - EMERGENCY OPEN - EMERGENCY CLOSE - free parametrizable Power supply: 24VDC (max. 30VDC) - current consumption with 24VDC: typical 5mA The common ground of the inputs is optical isolated from the rest of the electronic
--------	--

Status indication

Outputs	8 binary outputs: READY - OPEN - CLOSE - RUNNING OPEN - RUNNING CLOSE - TORQUE - LOCAL - REMOTE - free parametrizable power supply 24VDC +/- 6V (per actuator or through control system): max. allowed current per output: 50mA (short-circuit-proof) max. allowed current for all outputs with power supplied by actuator: 150mA max. allowed current for all outputs with power supplied by control system: 250mA All outputs are optical isolated if power is supplied by control system.
---------	---

Voltage- In- & Ouput

Power supply - external	Input power range: 20-30VDC max. current consumption 320mA or 100mA in current save mode - status indication also in case of a main power supply failure.
Power supply - by actuator	Output voltage: typical 22V, max. output current 150mA Reference ground is the common ground of the control unit and of the analog inputs and outputs

Functions

Standard	Switch-off mode adjustable: travel- or torque dependent, in reference to valve type Torque adjustable: 25-100% of max. torque 4 intermediate positions between 0 and 100% in both directions parametrizable Step-mode operation with adjustable step-start, step-stop, running- & break time in both directions Writing- and reading protection via password Multi-lingual display indication: German - English - Czech - Russia - Danish, ... Status indication of binary inputs and outputs and also of the analog signals on LC-display History data for Service-planning and Error-analyses Motor protection with thermo switches in motor
----------	--

Electric connection

motor	Industry-screw plug Han6E with 6pols in round plug casing
Control signals	Industry-screw plug Han24E with 24pols in round plug casing
Boreholes for cable entries	3 metric threaded boreholes for cable glands: M40x1,5 / M32x1,5 / M25x1,5

Important Options

- Protection degree according EN 60 529 IP68	- Positioner for analog 0/4-20mA input signal from control system
-  proof design according ATEX 94/9/EG	- PID positioner for 2 input signals 0/4-20mA (setpoint, external actual value)
- Bus connection (Profibus DP-V0, DeviceNet, Powerlink)	- Signal isolator for galvanic isolation of the 0/4-20mA position feedback signal
- Relay board for 250VAC, 2A with 4 or 8 outputs	- Signal isolator for galvanic isolation of the 0/4-20mA positioner signal
- Analog position indication 0/4-20mA (2-wire)	- 24VDC Version (reduced stroking time and torque range)