

## DATA SHEET CM03/rCM03



### 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

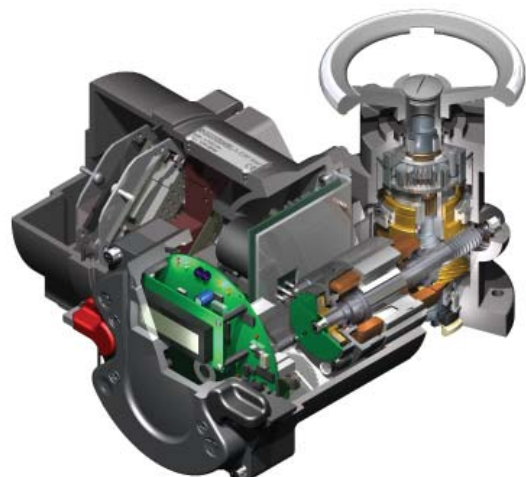
- \* Mechanical and electrical components are reduced to a minimum
- \* Reduction of spare-part versions to a minimum

### 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)
- \* LC-Display in 90° steps rotatable


## TECHNICAL DETAILS

- Switch-off torque: max. 32Nm
- Modulating torque: max. 16Nm
- Speed range: 2,5 up to 72rpm - free adjustable
- Travel measuring: 0,25 up to 105 turns via multi-turn sensor
- Power supply: 1x115V-230V +/-10% AC or DC
- Control unit: Integrated actuator control unit with frequency inverter technology and PM-motor
- Housing-material: Aluminium



# COMPACT MULTI-TURN ACTUATOR CM03 / rCM03

## Technical data

TYPE	On/Off duty	CM03
	Modulating duty	rCM03
<b>Switch-off torque, adjustable</b>	max. Nm	32
	min. Nm	8
<b>Modulating torque with rCM3</b>	max. Nm	16
<b>Speed range</b>	rpm	2,5rpm up to 72rpm, free adjustable
<b>Travel range</b>	Turns	0,25 up to 100 with travel sensor "non-intrusive" through switches adjustable
<b>Operation mode</b>	On/Off duty	On/Off duty S2-15minutes
	Modulating duty	Modulating duty S4 - 1200cycles/hour - 40% duty cycle
<b>Manual operation</b>		switching free, overlaid, without lever
<b>Valve-mounting</b>		
	Flange	F10 according ISO 5210 or G0 according DIN 3210
	Output shafts	A / Am / B / B1 / BSo / C / CSo / D / E / ESo
	max. vavle spindle-Ø	20mm
<b>Operating Conditions</b>		
	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	9,5 kg
<b>Motor</b>		PM-Motor
<b>Isolation class</b>		Isolation class F, max. 155°C permanent temperature
<b>Power supply</b>	V	1 x 115V-230V +/- 10%; 50/60Hz AC or DC
	Current consumption	A approx. 2,25
	Power	W approx. 250W
<b>Actuator control</b>		
<b>Electronic with frequency-technology</b>		Integrated processor control unit with frequency-technology for variable speed control
<b>Control unit</b>		
	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
<b>Control</b>		
	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.
<b>Status indication</b>		
	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.
<b>Voltage- In- &amp; Ouput</b>		
	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
<b>Functions</b>		
	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
<b>Electric connection</b>		
	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
<b>Important Options</b>		
	- F07 valve flange	- Analog position indication 0/4-20mA (2-wire)
	- Spindle cover tube for valve spindle	- Positioner for analog 0/4-20mA input signal from control system
	- Protection degee according EN 60 529 IP68	- PID positioner for 2 input signals 0/4-20mA (setpoint, external actual value)
	-  proof design according ATEX 94/9/EG	- Signal isolator for galvanic isolation of the 0/4-20mA position feedback signal
	- Bus connection (Profibus DP-V0, DeviceNet, Powerlink)	- Signal isolator for galvanic isolation of the 0/4-20mA positioner signal
	- Relay board for 250VAC, 2A with 4 or 8 outputs	