DATA SHEET

FS LINEAR FAILSAFE



SMART AND COMPACT

LINEAR FAILSAFE ACTUATOR
- Reliable drive in safe position with a mechanical spring unit
- Direct coupling of the failsafe with the valve shaft
- Failsafe triggering selectable in case of drop-off 24 V DC failsafe signal or main power supply
- Failsafe speed adjustable

EASY TO CHANGE POSITIONING TIME
- Simplifies planning
- Easy subsequent process optimization
- Emergency speed and speed ramps parameterisable

SEVERAL INTEGRATED SOFTWARE-OPTIONS
- Minimal efforts in later adaptions in PLC system

MINIMAL MAINTENANCE COSTS
- Reduction of spare-parts versions to a minimum
- Exclusive mechanic energy storage- no hydraulic, no battery
- No need of periodical inspections - selftesting with every stroke
- „parcial stroke test" possible

CONSTRUCTION
- Low maintenance
- No initial strokes required
- Modulating operation up to 1800 c/h possible (S9 Operation)

TECHNICAL DETAILS

- Switch off thrust electric: max. 30 kN
- Modulating thrust: max. 25 kN
- Failsafe thrust: max. 37 kN
- Positioning speed electric: adjustable by user
- Positioning speed failsafe: 1–10 sec adjustable
- End positions: non-intrusive adjustable
- Available for power supply:
  - 24 VDC
  - 115–230 VDC
  - 1x115V – 230VAC , 50/60 Hz
  - 3x 380 – 480 VAC, 50/60 Hz
- Control: integrated controls with frequency inverter and brushless DC motor
- Bluetooth technology for simple configuration
- Explosion proof according ATEX
  Approvals according CSA and UL standards (pending)

OPTIONAL FEATURES
- Analog positionfeedback 0/4-20mA (2-wire)
- Position for 0/4-20mA input signal
- Relais board for 250 VAC, 2A with 4 or 6 outputs
- Bussystems (Profibus DP, Modbus RTU, Modbus TCP, Devicenet, Powerlink)
- Mechanic manual override

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TYPE	ON/ OFF	CM03 FS 40/3	CM03 FS 50/6	CM03 FS 50/12	CM03 FS 100/12	CM06 FS 50/25	CM06 FS100/25
	Modulating	rCM03 FS 40/3	rCM03 FS 50/6	rCM03 FS 50/12	rCM03 FS 100/12	rCM06 FS 50/25	rCM06 FS100/25
SWITCH OFF THRUST ELECTRIC	max. lbf. (kN)	1350 (6)	2700 (12)	3370 (15)	2700 (12)	6750 (30)	6750 (30)
END THRUST FAILSAFE	max. lbf. (kN)	675 (3)	1350 (6)	2700 (12)	1125 (5)	5620 (25)	5620 (25)
MODULATING THRUST (rCM)	max. lbf. (kN)	900 (4)	1350 (6)	2250 (10)	1350 (6)	3370 (15)	3370 (15)
FAILSAFE FUNCTION		Selectable opening and closing (spindle extending/retracting)					
FAILSAFE TRIGGERING		Drop off 24 V DC Failsafe signal or main power supply (selectable)					
POSITIONING SPEED – ELECTRIC	in/sec (mm/sec)	0,008 to 0,23 (0,21 to 5,83)				0,005 to 0,126 (0,13 to 3,93)	
POSITIONING SPEED – FAILSAFE	sec	1 to 5			2 to 10	4 to 15	
WORKING STROKE	in (mm)	1,57 (40)	1,97 (50)		3,94 (100)	1,97 (50)	3,94 (100)
MODE OF OPERATION	On/Off Duty	S2–15 min					
	Modulating Duty	S4 – 1800 c/h – 40% ED (Operating S9)					
MANUAL OVERRIDE		Optional					
VALVE-MOUNTING							
FLANGE	ISO 5210/DIN 3358	F07/F10		F10/F12		F14/F16	
STEM		M 16x1,5		M 20x1,5		M 36x3	
ENVIROMENTAL CONDITIONS							
PROTECTION ACCORDING EN 60 529		IP 67 /NEMA 4 (Optional IP 68/NEMA 6)					
AMBIENT TEMPERATURE		– 20° C (-4°F) to + 60° C (140°F) /(Optional - 40° C (-40°F) to +60°C (140°F))					
CORROSION PROTECTION		K2 for agressive atmospheres					
PAINTING/COLOR		Two component painting / RAL 7024					
WEIGHT approx.	lb. (kg)	85 (39)	105 (48)	116 (53)	165 (75)	210 (96)	308 (140)
MOTOR - BRUSHLESS TECHNOLOGY							
INSULATION CLASS		Insulation class F, max. 155° C (311°F) permanent temperature					
AVAILABLE FOR POWER SUPPLY	V	24 VDC or 115-230 VDC or 1x 115-230 VAC, 50-60Hz or 3x 380-480 VAc, 50-60 Hz					
	Nominal current	2,5 A					
	Power consumption idle	max 24 W					
FAILSAFE BRAKE	Nominal voltage	24 VDC + – 10%					
	Nominal power	12 W	16 W	16W	16W	on request	on request

CONTROL	
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
DISPLAY	Display with backlight, Lid with Display in 90° steps turnable
SIGNAL LAMPS	5 RGB LEDs for operation - readiness - warning - and error messages - colors setable
COMMUNICATION	Infrared communication interface and bluetooth technology including ANDROID APP for simple configuration
INPUTS	5 binary input signals OPEN - STOP - CLOSE - EM OPEN - EM CLOSE - selectable Nominal voltage 24VDC - 60 VDC
OUTPUTS	8 binary output signals READY - OPEN - CLOSE - RUN OPEN - RUN CLOSE - TORQUE - LOCAL - REMOTE - selectable Power supply 24 VDC +/– 6V (selectable internal or external):
FUNCTIONS	
STANDARD	Switch-off mode adjustable, travel or torque dependent Torque adjustable: 25-100% of max. torque Adjustable speed for process optimization and emergency speeds Password protection (reading and/or writing) Multilanguage display Status indication for binary inputs/outputs and analog signals on LC Display History data for service planning and error analysis Motor protection by PTC sensors
ELECTRICAL CONNECTION	
MOTOR	Industry-screw plug HAN10E with 10 poles in round plug casing
CONTROL	Industry-screw plug HAN24E with 24 poles in round plug casing
CABLE ENTRY	3 metric threaded boreholes for cable grands: M40x1,5/M32x1,5/M25x1,5 (Optional: 2x NPT1/2" + 1xNPT1")