

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 adaptations 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
- „partial 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

| TYPE | ON/ OFF | CM03 FS 40/3 | CM03 FS 50/6 | CM03 FS 50/12 | CM03 FS 100/5 | CM06 FS 50/25 | CM06 FS100/25 |
|-------------------------------------|---|--|---------------|----------------|----------------|-------------------------------|----------------|
| | Modulating | rCM03 FS 40/3 | rCM03 FS 50/6 | rCM03 FS 50/12 | rCM03 FS 100/5 | 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 aggressive 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") | | | | | | |