Technical data Fail safe unit

Type	Fail safe operation in s/90°[1]	Min. torque	Suitable part-turn actuator		Valve attachment		Valve shaft			Weight[2]
	Can be set in the factory	[Nm]	Type	Possible operating times s/90°	Standard ISO 5211	Option ISO 5211	Cylindrical Max. [mm]	Square Max. [mm]	Two-flat Max. [mm]	approx. [kg]
FQMEx 05.1	9 – 34	150	SQEx 05.2	5.6 – 32	F07	F10	25.4	22	22	63
FQMEx 07.1	8 – 26	300	SQEx 07.2	5.6 – 32	F10	F07	25.4	22	22	66
FQMEx 10.1	15 – 54	600	SQEx 10.2	11 – 63	F12	F10[3]	50	36	36	137
FQMEx 12.1	13 – 39	1,200	SQEx 12.2	22 – 63	F14	F12	50	36	36	140

1) The operating time increases with the torque requirement.
2) The weights of SQEx .2 part-turn actuators and the ACExC .2 actuator controls have to be added.
3) Only possible with reduction flange.

Features and functions		
Explosion protection	ATEX:	II 2G Ex db eb IIB T4 Gb
	IECEx:	Ex db eb IIB T4 Gb
Type of duty	Open-close duty:	Short-time duty S2 - 15 min, classes A and B according to ISO 22153
	Modulating duty:	Intermittent duty S4 - 25 %,, class C according to ISO 22153 (not available in SIL version)
Mains voltage, mains frequency	Standard voltages: Refer to table: 3-phase AC standard voltages [▶ 1] Special voltages: Refer to table: 1-phase AC special voltages [▶ 1] Further voltages on request. Permissible variation of mains voltage: ±10 % Permissible variation of mains frequency: -5 %	
Overvoltage category	Category III according to IEC 60364-4-44	
ESD input	24 V DC, current consumption: approx. 1 A Permissible voltage variation: +20 %/–15 %	
Status signal	Single switch (1 NC and 1 NO) for each end position, galvanically isolated for OPEN and CLOSED: max. 0.1 A at 30 V DC Output contact for Fail safe function ready signal: max. 0.1 A at 30 V DC	
Swing angle	Adjustable between 80° and 96°	
Electrical connection	Standard:	AUMA Ex plug/socket connector with terminal blocks (KES-e)
	Option:	AUMA Ex plug/socket connector with terminal blocks (KES-d)
Threads for cable entries	Standard:	Metric threads
	Option:	NPT threads, G threads
Terminal plan	Terminal plan according to order number enclosed with delivery	
Splined coupling for connection to the valve shaft	Standard:	Coupling without bore
	Options:	Machined coupling with bore and keyway, square bore or bore with two-flats according to EN ISO 5211
Valve attachment	Dimensions according to EN ISO 5211 without spigot	

Table 1: 3-phase AC standard voltages

Voltages/frequencies				
Volt [3~]	200 – 240	200 – 240	380 – 690	380 – 690
Hz	50	60	50	60

Table 2: 1-phase AC special voltages

Voltages/frequencies		
Volt [1~]	100 – 120	100 – 120
Hz	50	60

Service conditions	
Use	Indoor and outdoor use permissible
Mounting position	Vertical and horizontal position (for horizontal mounting position, a support is required) The mounting position pointing downward is not permitted.
Installation altitude	≤ 2,000 m above sea level > 2,000 m above sea level on request

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Service conditions		
Ambient temperature	Standard:	–30 °C to +60 °C
	Option:	–40 °C to +60 °C
Humidity	Up to 100 % relative humidity across the entire permissible temperature range	
Enclosure protection according to EN 60529	IP68	
	According to AUMA definition, enclosure protection IP68 meets the following requirements: • Depth of water: maximum 8 m head of water • Continuous immersion in water: maximum 96 hours	
Pollution degree according to IEC 60664-1	Pollution degree 4 (when closed), pollution degree 2 (internal)	
Vibration resistance according to IEC 60068-2-6	FQMEx 05.1/07.1 with valve attachment F07 = 0.3 g , 10 – 200 Hz FQMEx 05.1/07.1 with valve attachment F10 = 0.5 g , 10 – 200 Hz FQMEx 10.1/12.1 with valve attachment F10 = 0.3 g , 10 – 200 Hz FQMEx 10.1/12.1 with valve attachment F12 = 0.5 g , 10 – 200 Hz Resistant to vibration during startup or for plant failures. However, a fatigue strength may not be derived from this.	
Corrosion protection	Standard:	KS Suitable for use in areas with high salinity, almost permanent condensation, and high pollution.
	Option:	KX Suitable for use in areas with extremely high salinity, permanent condensation, and high pollution.
Coating	Double layer powder coating	
Colour	Standard:	AUMA silver-grey (similar to RAL 7037)
	Option:	Available colours on request
Lifetime	500 fail safe operation (ESD cycles) AUMA fail safe units meet or even exceed the lifetime requirements of EN 15714-2 in motor operation. Detailed information can be provided on request.	