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 EN ISO 5211	Option EN ISO 5211	Cylindrical Max. [mm]	Square Max. [mm]	Two-flat Max. [mm]	approx. [kg]
FQMEx 05.1	9 to 34	150	SQEx 05.2	5.6 to 32	F07	F10	25.4	22	22	63
FQMEx 07.1	8 to 26	300	SQEx 07.2	5.6 to 32	F07	F10	25.4	22	22	66
FQMEx 10.1	15 to 54	600	SQEx 10.2	11 to 63	F10	F12	50	36	36	137
FQMEx 12.1	13 to 39	1,200	SQEx 12.2	22 to 63	F12	F14	50	36	36	140

1) The operating time increases with the torque requirement
2) The weights of SQEx .2 actuators and AC .2 actuator controls must be added.

Features and functions		
Explosion protection	ATEX:	II2G Ex db eb IIB T4 Gb
	IECEx:	Ex db eb IIB T4 Gb
	FM:	Class I, Div. 1, Groups C, D T4
		Class I, Zone 1, Group IIB T4
	EAC:	1 ExdeIIBT4
		1 ExcdIIBT4
Type of duty	Standard:	FQMEx: Short-time duty S2 - 15 min, classes A and B according to EN 15714-2
	Option:	FQMREx: Intermittent duty S4 - 25%, class C according to EN 15714-2 (not available in SIL version)
Mains voltage, mains frequency	Standard voltages:	

3-phase AC Voltages/frequencies				
Volt	200 – 240	200 – 240	380 – 690	380 – 690
Hz	50	60	50	60

Special voltages:

1-phase AC Voltages/frequencies		
Volt	100 – 240	100 – 240
Hz	50	60

Further voltages on request
Permissible variation of mains voltage: ±10 %
Permissible variation of mains frequency: ±5 %

Overvoltage category	Category III according to IEC 60364-4-443	
ESD input	24 V DC, current consumption: approx. 1 A Permissible voltage variation: +20%/–15%	
Status signals	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 screw-type terminals (KP), max. 38 control terminals / max. power supply 525 V AC
	Options:	AUMA Ex plug/socket connector with terminal blocks (KES)
Threads for cable entry	Standard:	Metric threads
	Options:	Pg-threads, NPT-threads, G-threads
Terminal plan	Terminal plan according to order number enclosed with delivery	

Technical data Fail safe unit

Features and functions		
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	

Service conditions		
Use	Indoor and outdoor use permissible	
Mounting position	Any position (for horizontal mounting position, a support is required)	
Installation altitude	≤ 2,000 m above sea level > 2,000 m above sea level on request	
Ambient temperature	Standard:	–30 °C to +60 °C (ATEX and IECEx)
	Options:	FQMEx 05.1 – FQMEx 07.1: –60 °C to +60 °C (ATEX, IECEx and EAC) –40 °C to +60 °C (FM) FQMEx 10.1 – FQMEx 12.1: –40 °C to +60 °C (ATEX and IECEx) –25 °C to +60 °C (FM) –20 °C to +60 °C (EAC)
	For exact version, refer to actuator name plate.	
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 • Duration of continuous immersion in water: Max. 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 to 200 Hz FQMEx 05.1/07.1 with valve attachments F10 = 0.5 g , 10 to 200 Hz FQMEx 10.1/12.1 with valve attachment F10 = 0.3 g , 10 to 200 Hz FQMEx 10.1/12.1 with valve attachments F12 = 0.5 g , 10 to 200 Hz Resistant to vibration during start-up or for failures of the plant. 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 Two-component iron-mica combination	
Colour	Standard:	AUMA silver-grey (similar to RAL 7037)
	Option:	Available colours on request
Lifetime	500 fail safe operations (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.	

Further information	
EU Directives	• ATEX Directive: (2014/34/EU) • Electromagnetic Compatibility (EMC): (2014/30/EU) • Machinery Directive: (2006/42/EC)