Technical data Globe valve actuators with integral actuator controls for open-close and modulating duty

SVM 05.1 – SVM 07.5
SVMR 05.1 – SVMR 07.5

Type	Output speed rpm[1] (adjustable in 9 steps) 50 Hz/60 Hz	Torque range max. Nm	Running torque/ modulating torque[2] max. Nm	Valve attachment Standard EN ISO 5211	Valve shaft Cylindrical max. mm	Valve shaft Square max. mm	Valve shaft Two-flat max. mm	Handwheel/ crank handle acc. to VG 85081[3] Ø mm	Handwheel/ crank handle acc. to VG 85081[3] Reduction ratio	Wgt approx. kg[4]
SVM/SVMR 05.1	**1.6 – 22**	10 – 25	13	F07	20	17	17	125	13 : 1	11
SVM/SVMR 07.1	**1.6 – 22**	20 – 50	25	F07	25.4	22	22	125	13 : 1	17
SVM/SVMR 07.5	**0.6 – 8.0**	40 – 100	50	F07	25.4	22	22	125	13 : 1	17

Features and functions of actuator	
Type of duty[5]	Open-close duty SVM: Short-time duty S2 - 15 min Modulating duty SVMR : Intermittent duty S4 - 40 % with maximum number of starts of 1,800 cycles per hour (option)
Motor	Variable speed, brushless motor
Insulation class	F, tropicalized
Motor protection	PTC thermistors (according to DIN 44081)
Self-locking	Yes
Limit switching	Via position transmitter potentiometer status signals for directions OPEN and CLOSE Turns per stroke: 1 – 16
Torque switching	Via electronic current measurement status signals for directions OPEN and CLOSE, adjustable in 8 steps
Mechanical position indicator	Continuous indication, adjustable indicator disc with symbols OPEN and CLOSED
Manual operation	Manual drive for setting and emergency operation, handwheel does not rotate during electric operation
Coupling	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
Features and functions of actuator controls	
Mains voltage, mains frequency	**1-phase AC** voltages/frequencies Volt: 115 / 230 Hz: 50/60 / 50/60 Permissible variation of the mains voltage: ±10 % Permissible variation of the mains frequency: ±5 % For current consumption, refer to Electrical data Globe valve actuators SVM/SVMR
External supply of the electronics (option)	24 V DC +20 %/–15 % Current consumption: With options up to 200 mA
Overvoltage category	Category III according to IEC 60634-4-443
Switchgear	Power electronics with integral motor controller
Control	Control inputs 24 V DC, OPEN, CLOSE (via opto-isolator, one common), current consumption: approx. 15 mA per input Observe minimum pulse duration for modulating actuators
Status signals	4 programmable semiconductor output contacts: 2 NO contacts with one common, max. 24 V DC, 1 A (resistive load) Default configuration: End position CLOSED, collective fault signal, end position OPEN 2 NO contacts without one common: max. 24 V AC, 1 A (resistive load) Default configuration: Collective fault (torque fault, motor protection tripped), push button REMOTE
Position feedback signal	Galvanically isolated analogue output E2 = 0/4 – 20 mA (load max. 500 Ω)
Local controls	Push buttons OPEN, STOP (LOCAL - REMOTE), CLOSE 2 multicolour indication lights: End position CLOSED (yellow), fault/malfunction (red), end position OPEN (green), operation mode LOCAL (blue)

1) For lower output speeds (SVM/SVMR 05.1 – 07.1 up to 3.2 rpm and SVM/SVMR 07.5 up to 1.1 rpm), the rotary movement will be in stepping mode.
2) Permissible average torque for the whole travel or in modulating duty
3) Hub does not correspond to VG 85 081; other versions on request
4) Globe valve actuator weight with controls, standard electrical connection, with unbored coupling and handwheel
5) For nominal voltage and 40 °C ambient temperature and at average running or modulating torque load. The type of duty must not be exceeded.

Functions	Standard:	Switch-off mode adjustable: Limit or torque seating for end position OPEN and end position CLOSED
		Torque monitoring over the whole travel
		Torque by-pass
	Options:	Positioner: Position setpoint via analogue input E1 = 0/4 – 20 mA Programmable behaviour on loss of signal Automatic adaptation of the dead band (adaptive behaviour can be selected) Selection between open-close duty and modulating duty via digital MODE input
		EMERGENCY behaviour programmable: Digital input low active Reaction can be selected: Stop, run to end position CLOSED, run to end position OPEN
Electrical connection	Standard:	Connector with crimp connection (make ITT Cannon)
Wiring diagram (basic version)	SVM/SVMR:	TPC B-0F6-2A7-0510 TPA 50R200-0A0-000
Service conditions		
Mounting position	Any position	
Enclosure protection according to EN 60529	IP 68 According to AUMA definition, enclosure protection IP 68 meets the following requirements: Head of water max. 8 m Duration of continuous immersion in water: max. 96 hours Up to 10 operations during flooding Modulating duty is not possible during continuous immersion	
Corrosion protection	Sea water resistant bronze housing All external bolts and shafts are of stainless steel	
Ambient temperature	–25 °C to +70 °C	
Electromagnetic compatibility (EMC)	Limit class 2 according to VG 95373 (marine) and MIL-STD-461E	
Shock test	BV 0430(2), BV 0230(1) and MIL-S-901D	
Vibration test	BV 0440(1), BV 0240(1) and MIL-STD-167-1	
Lifetime	Open-close duty:	20,000 operating cycles OPEN - CLOSE - OPEN An operation cycle is based on an operation from CLOSED to OPEN and back to CLOSED, with a respective swing movement of 90°.
	Modulating duty[6]:	5 million modulating steps
Further information		
EU Directives	Electromagnetic Compatibility (EMC): (2004/108/EC) Low Voltage Directive: (2006/95/EC) Machinery Directive: (2006/42/EC)	

6) The lifetime depends on the load and the number of starts. A high starting frequency will rarely improve the modulating accuracy. To reach the longest possible maintenance and fault-free operating time, the number of starts per hour chosen should be as low as possible for the process.