SQ 05.2 – SQ 14.2

Electrical data Part-turn actuators for open-close duty with 3-phase AC motors

Short-time duty S2 - 15 min, 208 V/60 Hz

Part-turn actuator			Motor									
Type	Operating time for 90° in seconds	Max. torque [Nm]	Motor type	Nominal power[1] P_N [kW]	Speed [rpm]	Nominal current[2] I_N (A)	Max. current[3] I_{max} [A]	Starting current I_A [A]	cos φ	Overcurrent protection device setting [A]	AUMA power class for switchgear: Contactor	AUMA power class for switchgear: Thyristor
SQ 05.2	3	150	VD00063-2-0,06	0,06	3 360	1.4	1.4	4.4	0.57	1.4	A1	B1
	4.5					1.4	1.4	4.4	0.57	1.4	A1	B1
	6		VD00063-4-0,04	0.04	1,680	0.9	0.9	2.3	0.50	0.9	A1	B1
	9					0.9	0.9	2.3	0.50	0.9	A1	B1
	12		VD00063-4-0,02	0.02	1,680	0.9	0.9	2.3	0.40	0.9	A1	B1
	17					0.9	0.9	2.3	0.40	0.9	A1	B1
	25		SD00063-4-0,01	0.01	1,680	0.7	0.7	1.6	0.38	0.7	A1	B1
	50		SD00063-8-0,01		840	0.9	0.9	1.2	0.61	0.9	A1	B1
SQ 07.2	3	300	VD00063-2-0,12	0.12	3,360	1.6	2.1	6.9	0.52	2.1	A1	B1
	4.5					1.6	2.1	6.9	0.52	2.1	A1	B1
	6		VD00063-4-0,06	0.06	1,680	1.4	1.6	3.7	0.38	1.6	A1	B1
	9					1.4	1.6	3.7	0.38	1.6	A1	B1
	12		VD00063-4-0,03	0.03	1,680	0.9	0.9	2.3	0.43	0.9	A1	B1
	17					0.9	0.9	2.3	0.43	0.9	A1	B1
	25		SD00063-4-0,01	0.01	1,680	0.7	0.7	1.6	0.39	0.7	A1	B1
	50		SD00063-8-0,01		840	0.9	0.9	1.2	0.61	0.9	A1	B1
SQ 10.2	6	450	VD00063-4-0,10	0.10	1,680	1.8	2.3	4.6	0.48	2.3	A1	B1
	9	600				1.8	2.1	4.6	0.48	2.1	A1	B1
	12		SD00063-4-0,06	0.06	1,680	1.4	1.6	3.7	0.38	1.6	A1	B1
	17					1.4	1.6	3.7	0.38	1.6	A1	B1
	25		SD00063-4-0,04	0.04	1,680	1.2	1.2	2.3	0.48	1.2	A1	B1
	35					1.2	1.2	2.3	0.48	1.2	A1	B1
	50		SD00063-4-0,02	0.02	1,680	0.7	0.7	1.6	0.43	0.7	A1	B1
SQ 12.2	9	900	VD00063-2-0,19	0.19	3,360	2.3	2.8	8.1	0.53	2.8	A1	B1
	12		VD00063-4-0,10	0.10	1,680	1.8	2.3	4.6	0.48	2.3	A1	B1
	17	1,200				1.8	2.1	4.6	0.48	2.1	A1	B1
	25		SD00063-4-0,06	0.06	1,680	1.4	1.6	3.7	0.38	1.6	A1	B1
	35					1.4	1.6	3.7	0.38	1.6	A1	B1
	50		SD00063-4-0,04	0.04	1,680	1.2	1.2	2.3	0.48	1.2	A1	B1
	75					1.2	1.2	2.3	0.48	1.2	A1	B1
	108		VD00063-4-0,02	0.02	1,680	0.7	0.7	1.6	0.43	0.7	A1	B1
SQ 14.2	20	1,800	VD00063-2-0,19	0.19	3,360	2.3	2.8	8.1	0.53	2.8	A1	B1
	30		VD00063-4-0,10	0.10	1,680	1.8	2.1	4.6	0.48	2.1	A1	B1
	40	2,400				1.8	2.1	4.6	0.48	2.1	A1	B1
	60		SD00063-4-0,06	0.06	1,680	1.4	1.6	3.7	0.38	1.6	A1	B1
	85					1.4	1.6	3.7	0.38	1.6	A1	B1

Notes on table	
1) Nominal power P_N	Mechanical power output at motor shaft at running torque of part-turn actuator (corresponds to approx. 35 % of maximum torque). The consumed electrical power can be calculated using the following formula: $P = U \times I \times \cos \varphi \times \sqrt{3}$
2) Nominal current I_N	Current at running torque
3) Max. current I_{max}	Current at maximum torque

Notes on installation and sizing	
Motor data	Motor data is approximate. Due to usual manufacturing tolerances, there may be deviations from the values given.
Thermoswitches/PTC thermistors	To protect against overheating, thermoswitches or PTC thermistors are embedded in the motor windings. **Actuators without integral controls (AUMA NORM):** Thermoswitches or PTC thermistors have to be considered within the external controls (refer to terminal plan). **Note: Failure to connect thermoswitches or PTC thermistors shall void the warranty for the motor.** **Rating of the thermoswitches**

AC current		DC current	
250 V, 50 – 60 Hz		60 V	1.0 A
cos φ = 1	2.5 A	42 V	1.2 A
cos φ = 0.6	1.6 A	24 V	1.5 A

Actuators with AM or AC integral controls:

Thermal motor protection is already integrated.

Mains voltage, mains frequency	Permissible variation of mains voltage: ±10 % Permissible variation of mains frequency: ±5 %
Switchgear sizing	For motor operation, reversing contactors (mechanically, electrically and electronically locked) or thyristors (electronically locked) can be used. **Actuators without integral controls (AUMA NORM):** Switchgear are supplied by the customer. We recommend specification of switchgear suitable for their rated operating power/motor power in compliance with the assigned AUMA power class. Switchgear assignment to AUMA power classes:

AUMA power class	Reversing contactor Rated operating power acc. to EN 60947-4-1 Utilization category AC-3	Reversing contactor Motor power according to UL/CSA at	
	400 V AC	480 V AC	600 V AC
A1	4.0 kW	5.0 hp	5.0 hp
A2	7.5 kW	10 hp	10 hp
A3	15 kW	20 hp	25 hp

AUMA power class	Thyristor Rated operating current acc. to EN 60947-4-2 Utilization category AC-53a
	400 V AC
B1	6 A
B2	8.5 A
B3	16 A

Actuators with AM or AC integral controls:
Required switchgear in power classes A1 – A3 or B1 – B3 are directly integrated in AM or AC controls.