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, 400 V/50 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	4	150	VD00063-2-0,06	0.06	2,800	0.6	0.6	1.9	0.42	0.6	A1	B1
	5.6					0.6	0.6	1.9	0.42	0.6	A1	B1
	8		VD00063-4-0,04	0.04	1,400	0.4	0.4	1.0	0.50	0.4	A1	B1
	11					0.4	0.4	1.0	0.50	0.4	A1	B1
	16		VD00063-4-0,02	0.02	1,400	0.4	0.4	1.0	0.40	0.4	A1	B1
	22					0.4	0.4	1.0	0.40	0.4	A1	B1
	32		SD00063-4-0,01	0.01	1,400	0.3	0.3	0.7	0.38	0.3	A1	B1
	63		SD00063-8-0,01		700	0.4	0.4	0.5	0.61	0.4	A1	B1
SQ 07.2	4	300	VD00063-2-0,12	0.12	2,800	0.7	0.9	3.0	0.52	0.9	A1	B1
	5.6					0.7	0.9	3.0	0.52	0.9	A1	B1
	8		VD00063-4-0,06	0.06	1,400	0.6	0.7	1.6	0.38	0.7	A1	B1
	11					0.6	0.7	1.6	0.38	0.7	A1	B1
	16		VD00063-4-0,03	0.03	1,400	0.4	0.5	1.0	0.43	0.5	A1	B1
	22					0.4	0.5	1.0	0.43	0.5	A1	B1
	32		SD00063-4-0,01	0.01	1,400	0.3	0.3	0.7	0.38	0.3	A1	B1
	63		SD00063-8-0,01		700	0.4	0.4	0.5	0.61	0.4	A1	B1
SQ 10.2	8	450	VD00063-4-0,10	0.10	1,400	0.8	1.0	2.0	0.48	1.0	A1	B1
	11	600				0.8	0.9	2.0	0.48	0.9	A1	B1
	16		SD00063-4-0,06	0.06	1,400	0.6	0.7	1.6	0.38	0.7	A1	B1
	22					0.6	0.7	1.6	0.38	0.7	A1	B1
	32		SD00063-4-0,04	0.04	1,400	0.5	0.5	1.0	0.48	0.5	A1	B1
	45					0.5	0.5	1.0	0.48	0.5	A1	B1
	63		SD00063-4-0,02	0.02	1,400	0.3	0.3	0.7	0.43	0.3	A1	B1
SQ 12.2	11	900	VD00063-2-0,19	0.19	2,800	1.0	1.2	3.5	0.53	1.2	A1	B1
	16		VD00063-4-0,10	0.10	1,400	0.8	1.0	2.0	0.48	1.0	A1	B1
	22	1,200				0.8	0.9	2.0	0.48	0.9	A1	B1
	32		SD00063-4-0,06	0.06	1,400	0.6	0.7	1.6	0.38	0.7	A1	B1
	45					0.6	0.7	1.6	0.38	0.7	A1	B1
	63		SD00063-4-0,04	0.04	1,400	0.5	0.5	1.0	0.48	0.5	A1	B1
	90					0.5	0.5	1.0	0.48	0.5	A1	B1
	125		SD00063-4-0,02	0.02	1,400	0.3	0.3	0.7	0.43	0.3	A1	B1
SQ 14.2	24	1,800	VD00063-2-0,19	0.19	2,800	1.0	1.2	3.5	0.53	1.2	A1	B1
	36		VD00063-4-0,10	0.10	1,400	0.8	0.9	2.0	0.48	0.9	A1	B1
	48	2 400				0.8	0.9	2.0	0.48	0.9	A1	B1
	72		SD00063-4-0,06	0.06	1,400	0.6	0.7	1.6	0.38	0.7	A1	B1
	100					0.6	0.7	1.6	0.38	0.7	A1	B1

1) – 3) Refer to Notes on Electrical data SQ .2/SQR .2 part-turn actuators with 3-phase AC motors

Installation and sizing

Motor data

Motor data is approximate. Due to usual manufacturing tolerances, there may be deviations from the values given.

Motor protection

To protect against overheating, thermoswitches or PTC thermistors are embedded in the motor windings.

Actuators without integral actuator 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 actuator 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 actuator 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

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

Actuators with AM or AC integral actuator controls:

Required switchgear in power classes A1 or B1 are directly integrated in AM or AC actuator controls.

Notes on Electrical data SQ .2/SQR .2 part-turn actuators with 3-phase AC motors

1) Nominal power P_N	Mechanical power output at motor shaft at run torque of part-turn actuator (corresponds to approx. 35 % of maximum torque).
2) Nominal current I_N	Current at run torque
3) Max. current I_{max}	Current at maximum torque