

| Part-turn actuator |                                     |                  | Motor          |   |             |  |   |                                     |       |   |                              |           |
|--------------------|-------------------------------------|------------------|----------------|---|-------------|--|---|-------------------------------------|-------|---|------------------------------|-----------|
| Type               | Operating time for 90° [in seconds] | Max. torque [Nm] | Motor type     | Nominal power <sup>1)</sup> P <sub>N</sub> [kW] | Speed [rpm] | Nominal current <sup>2)</sup> I <sub>N</sub> [A] | Max. current <sup>3)</sup> I <sub>max</sub> [A] | Starting current I <sub>A</sub> [A] | cos φ | Overcurrent protection device setting [A] | AUMA power class switchgears |           |
|                    |                                     |                  |                |   |             |  |   |                                     |       |   | Contact-                     | Thyristor |
| SQ 05.2            | 4                                   | 150              | VD00063-2-0.06 | 0.06  | 2,800       | 0.6  | 0.6   | 1.9                                 | 0.57  | 0.6                                       | A1                           | B1        |
|                    | 5.6                                 |                  |                |   |             | 0.6  | 0.6   | 1.9                                 | 0.57  | 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  | 0.39  | 0.3                                 | 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  | 0.4   | 1.0                                 | 0.43  | 0.4                                       | A1                           | B1        |
|                    | 22                                  |                  |                |   |             | 0.4  | 0.4   | 1.0                                 | 0.43  | 0.4                                       | A1                           | B1        |
| 32                 | SD00063-4-0.01                      | 0.01             | 1,400          | 0.3   | 0.3         | 0.7  | 0.39  | 0.3                                 | 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                                  |                  |                |   |             | 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            | 16                                  | 900              | VD00063-4-0.10 | 0.10  | 1,400       | 0.8  | 1.0   | 2.0                                 | 0.48  | 1.0                                       | A1                           | B1        |
|                    | 22                                  |                  |                |   |             | 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                                  |                  |                |   | 0.5         | 0.5  | 1.0   | 0.48                                | 0.5   | 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                                  |                  |                |   |             | 0.8  | 0.9   | 2.0                                 | 0.48  | 0.9                                       | A1                           | B1        |
|                    | 48                                  | VD00063-4-0.10   | 0.10           | 1,400   | 0.8         | 0.9  | 2.0   | 0.48                                | 0.9   | A1  | B1                           |           |
|                    | 72                                  |                  |                |   | 0.8         | 0.9  | 2.0   | 0.48                                | 0.9   | A1  | B1                           |           |
|                    | 100                                 |                  |                |   | 0.6         | 0.7  | 1.6   | 0.38                                | 0.7   | A1  | B1                           |           |

**Notes on table**

|                                   |   |
|-----------------------------------|---|
| 1) Nominal power P <sub>N</sub>   | Mechanical power output at motor shaft at running torque of part-turn actuator (corresponds to approx. 35 % of maximum torque).<br>Consumed electrical power can be calculated using the following formula:<br>$P = U \times I \times \cos \varphi \times \sqrt{3}$ |
| 2) Nominal current I <sub>N</sub> | Current at running torque.  |
| 3) Max. current I <sub>max</sub>  | 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.<br><br><b>Actuators without integral controls (AUMA NORM):</b><br>Thermoswitches or PTC thermistors have to be considered within external controls (refer to terminal plan).<br><b>Note: Failure to connect thermoswitches or PTC thermistors shall void our warranty for the motor.</b><br><b>Rating of thermoswitches</b><br><table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2">AC current</th> <th colspan="2">DC current</th> </tr> </thead> <tbody> <tr> <td colspan="2">250 V, 50 – 60 Hz</td> <td>60 V</td> <td>1.0 A</td> </tr> <tr> <td>cos φ = 1</td> <td>2.5 A</td> <td>42 V</td> <td>1.2 A</td> </tr> <tr> <td>cos φ = 0.6</td> <td>1.6 A</td> <td>24 V</td> <td>1.5 A</td> </tr> </tbody> </table><br><b>Actuators with AM or AC integral controls:</b><br>Thermal motor protection is already integrated. | 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 |
| 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 |            |  |                   |  |      |       |           |       |      |       |             |       |      |       |
| Mains voltage, mains frequency | Permissible variation of mains voltage: ±10 %<br>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.  |  |   |          |
|  | <b>Actuators without integral controls (AUMA NORM):</b>  |  |   |          |
|  | Switchgears are supplied by the customer. We recommend specification of switchgears suitable for their rated operating power/motor power in compliance with the assigned AUMA power class. |  |   |          |
|  | Switchgear assignment to AUMA power classes:   |  |   |          |
|  | <b>AUMA power class</b>  | <b>Reversing contactor<br/>Rated power according to<br/>IEC 60947-4-1 AC-3</b> | <b>Reversing contactor<br/>motor power according to UL/CSA at</b> |          |
|  |  | 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    |
|  | A4   | 30 kW  | 60 hp   | 60 hp    |
| A5   | 55 kW  | 75 hp  | 100 hp  |          |
| <b>AUMA power class</b>  | <b>Thyristor<br/>Rated current according to<br/>EN 60947-4-2 AC-53a</b>  |  |   |          |
|  | 400 V AC   |  |   |          |
| B1   | 6 A  |  |   |          |
| B2   | 8.5 A  |  |   |          |
| B3   | 16 A   |  |   |          |
| <b>Actuators with AM or AC integral controls:</b>  |  |  |   |          |
| Required switchgear in power classes A1 – A3 or B1 – B3 are directly integrated in AM or AC controls. Switch gear in power classes A4/A5 additionally require the control box. |  |  |   |          |