

Air damper motors

reversible

SQM...
Series 02 and 03



Quality Assurance Services
FM739, QAS34/61



Application and design features

The reversible damper motors type SQM... are suitable for 2-wire control with controllers or switching units with changeover contact.

The control section comprises 2 motor travel limit switches, 5 auxiliary switches and — on request — 1 potentiometer (as feedback potentiometer for P-control, as position indicator with slave control systems, or for remote position indication).

The operation of the limit and auxiliary switches is made by manually adjustable cams. Setting scales provided between the cam discs simplify the adjustment. An additional scale at the end of the cam stack serves as position indicator. In addition, the damper motor type SQM21 is provided with a position indicator visible from the outside (see «Dimensions»).

The reduction gearing is provided with self-lubricating sinter-bronze bearings and therefore requires no periodic maintenance. When mounting the motor and damper actuating rod, the gearing can be decoupled by means of a lever, so that the main drive spindle is easy to adjust in either direction of rotation.

The gear housing is of die-cast aluminium and painted silver-grey; the cover is in dark-grey, impact proof plastic. The base is provided with four threaded entries for Pg11 cable glands.

Technical data

Operating voltage	220 V —15%...240 V +10%
— with 50 Hz	220 V —15%, +10%
— with 60 Hz	Damper motors for 110 V ~ on request
Switching capacity of the limit and auxiliary switches	10(3)A, 24 V...250 V a.c. up to 160° (scale range) optional
Angular rotation	IP54, DIN 40050
Mounting position	
Protection standard	
Permissible ambient temp.	
— during operation, at a switching ratio $\epsilon < 0,5$	—20...+60°C
— during transport and storage	—50...+60°C
Cable entries	4 threaded entries for Pg11 approx. 1,7 kg
Weight	

Types available

Type of motor	Power consumption VA	Running time with 50 Hz ¹⁾ for travel		Internal wiring acc. to diagram no.	Direction of rotation with voltage on terminal 1, facing the spindle	Nominal torque ²⁾ Nm	Starting torque Nm	Retaining torque Nm	For 220–240 V, 50 Hz, or 220 V, 60 Hz	For 110 V, 50 Hz or 110 V 60 Hz (delivery on request) Type
		s	s						Type	Type
Standard execution. Spindle diameter: 10 mm.										
Syn. motor	9	14	20	1	Anti-clockwise	10	10	4	SQM10.15502	
Syn. motor	9	29	42	1	Anti-clockwise	10	15	7	SQM10.16502	
Syn. motor	9	70	100	1	Anti-clockwise	10	15	15	SQM10.17502	
Syn. motor	9	14	20	2	Anti-clockwise	10	10	4	SQM10.15562	SQM10.15561
Syn. motor	9	29	42	2	Anti-clockwise	10	15	7	SQM10.16562	SQM10.16561
Reinforced execution. Spindle diameter: 12 mm. Reduction gear with hardened spindles and nitrated gears. Type SQM21 with position indicator visible from the outside (see «Dimensions»).										
Syn. motor	9	45	66	1	Anti-clockwise	20	20	12	SQM20.18502	SQM20.18501
Syn. motor	9	45	66	1	Clockwise	20	20	12	SQM21.18502	SQM21.18501
Syn. motor	9	29	42	1	Clockwise	20	20	12	SQM21.16502	—

¹⁾ With 60 Hz frequency the running times are approx. 17% shorter

²⁾ Valid for 150 000 position changes

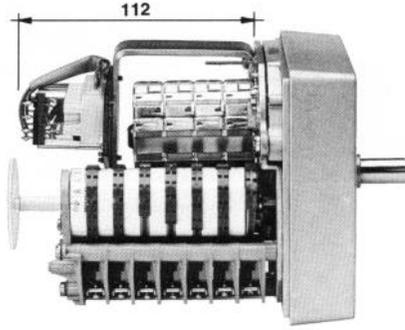
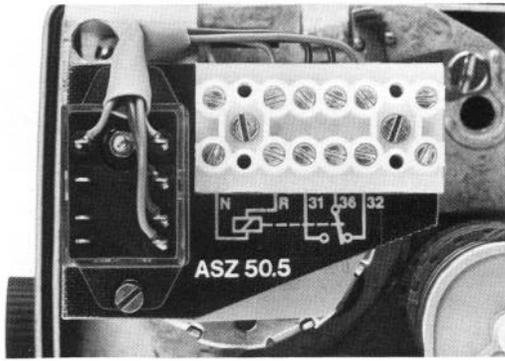
³⁾ Also available as double-potentiometer. Angular rotation 135°. Triple-pole connection:

220 Ω / 220 Ω Type **ASZ88.733**
220 Ω / 1000 Ω Type **ASZ82.733**
1000 Ω / 1000 Ω Type **ASZ22.733**

Potentiometers ³⁾

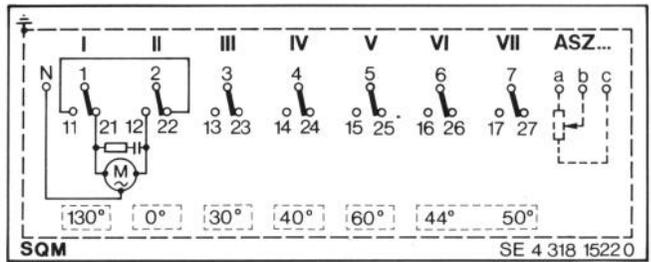
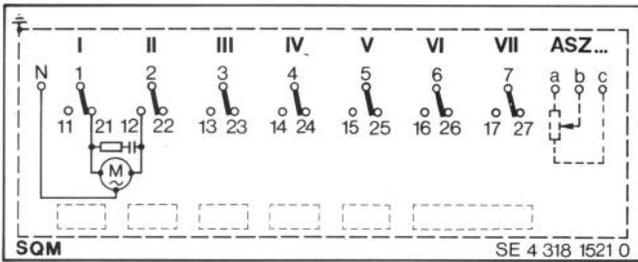
Execution	135 Ω	220 Ω	1000 Ω
3-pole-wiring; terminals «a», «b» and «c»			
For angle of rot. 90°	ASZ16.703	ASZ8.703	ASZ12.703
130°	ASZ16.733	ASZ8.733	ASZ12.733

Changeover relay ASZ50.5 for one-wire control

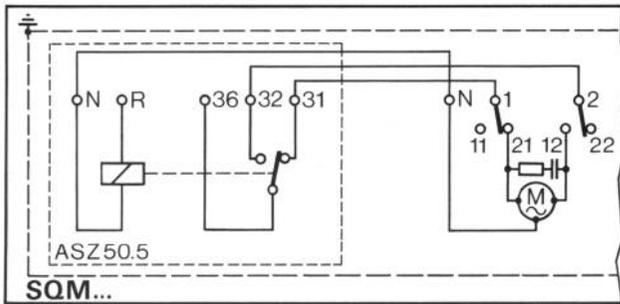


Internal diagrams

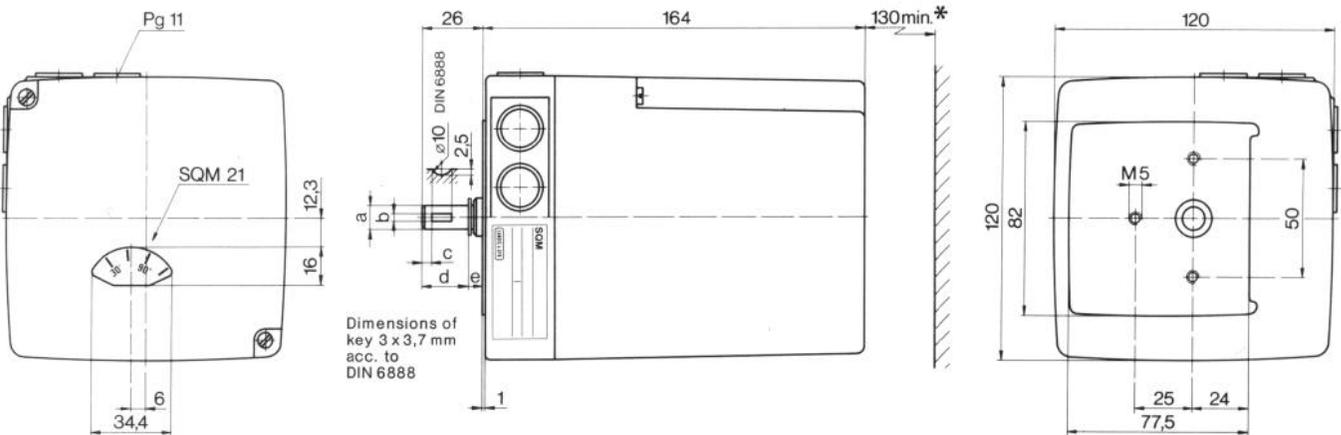
Before any adjustment to the motor or wiring is made, the electrical supply to the control unit must be disconnected. All installation and repair work must only be carried out by a qualified person.



Internal diagram for ASZ50.5



Dimensions



Dimensions of key 3 x 3,7 mm acc. to DIN 6888

	a	b	c	d	e
SQM10...	10h8	3N9	4	20	6
SQM20..., SQM21...	12h8	3N9	4	21,5	4,5

The groove on the drive spindle of the motor is in the position shown, when the cam stack is in the 0° position (factory adjustment).

* To remove the motor cover, a clearance of at least 130 mm must be left between the cover and the nearest wall or similar.