



SQM40... / SQM41... Actuators for air and gas dampers

Extended modulation range below ignition load

User Documentation

The SQM40... / SQM41... and this User Documentation are intended for use by OEMs which integrate the actuators in their products.



Note!

This documentation is only valid together with SQM40... / SQM41... Data Sheet N7817!

Contents

1	Supplementary documentation	2
2	Warning notes	2
3	Typographical conventions	3
3.1	Safety notes	3
4	Extended modulation range.....	4
4.1	Basic diagram	4
4.2	Connection diagram.....	5
4.3	Preadjustment of cams	6

1 Supplementary documentation

Data Sheet SQM40... / SQM41...	N7817
Environmental Product Declaration SQM40... / SQM41...	E7817

2 Warning notes



Warning!

The safety, warning and technical notes given in the Data Sheet on the SQM40... / SQM41... (N7817) apply fully to the present document also!

To avoid injury to persons, damage to property or the environment, the warning notes must be observed!

The SQM40... / SQM41... are safety devices! Do not open, interfere with or modify the unit. Siemens does not assume responsibility for damage resulting from unauthorized interference!

3 Typographical conventions

3.1 Safety notes

This User Documentation contains instructions which must be observed to ensure your own personal safety and to prevent damage to equipment and property. The instructions and notes are highlighted by warning triangles, arrows or a hand symbol and are presented as follows, depending on the hazard level:



Warning means that death, severe personal injury or substantial property damage **can** occur if adequate precautionary measures are not taken.



Note draws your attention to **important information** on the product, on product handling, or to a special part of the documentation.

Qualified staff

Only **qualified staff** are allowed to install and operate the equipment. Qualified staff in the context of the safety-related notes contained in this document are persons who are authorized to commission, ground and tag devices, systems and electrical circuits in compliance with established safety practices and standards.

Correct use

Note the following:

The device may only be used on the applications described in the technical documentation and only in connection with devices or components from other suppliers that have been approved or recommended by Siemens.

The product can only function correctly and safely if shipped, stored, set up and installed correctly, and operated and maintained as specified.

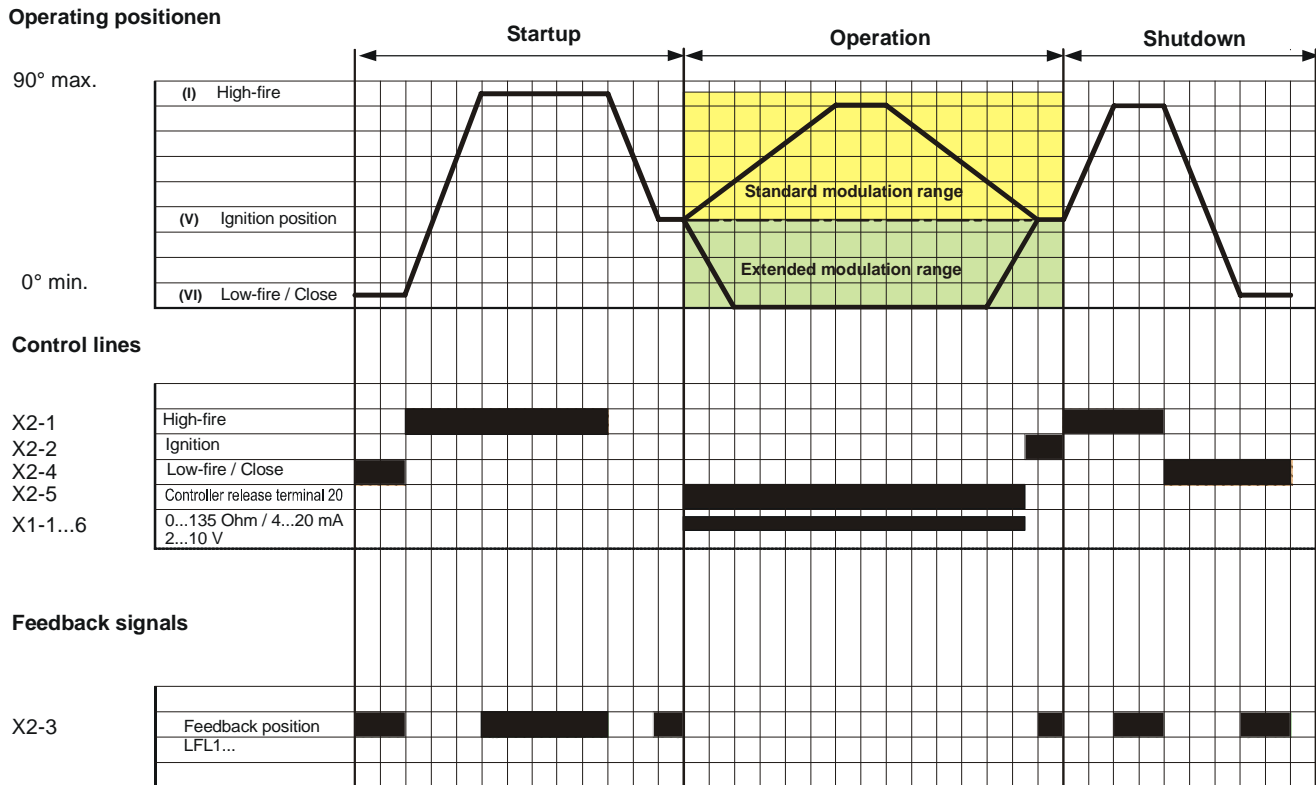
4 Extended modulation range



Note
 Only for **SQM4x.x4xxxx** (electronic version) together with LAL..., LFL1... (without LFL1.148), LGK... and LOK...

To set up an extended modulation range with the SQM40... / SQM41... actuator (electronic version), the low-fire position must be laid below the ignition position.

4.1 Basic diagram



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Fig 1: Application LFL1... modulating operation

4.2 Connection diagram

SQM4x.x4xxxx

(Electronic version)

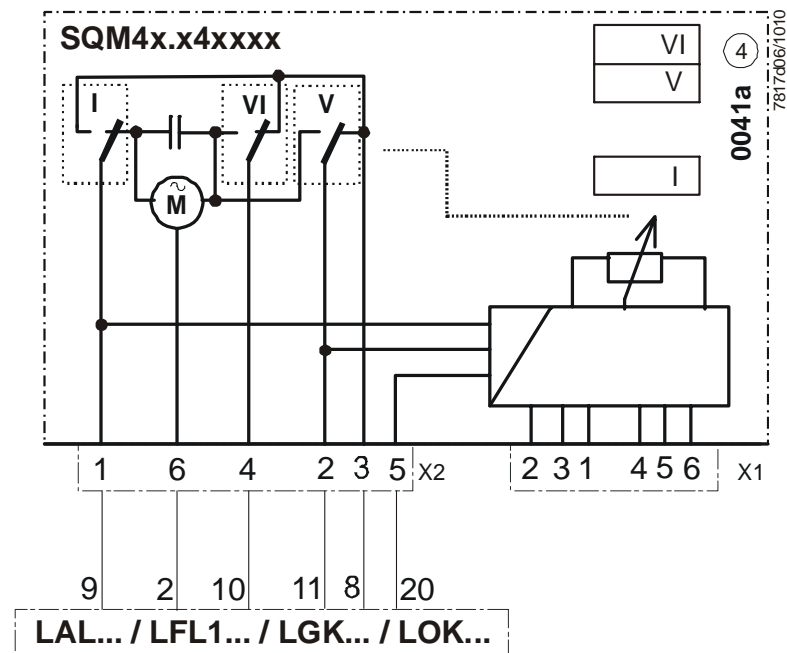
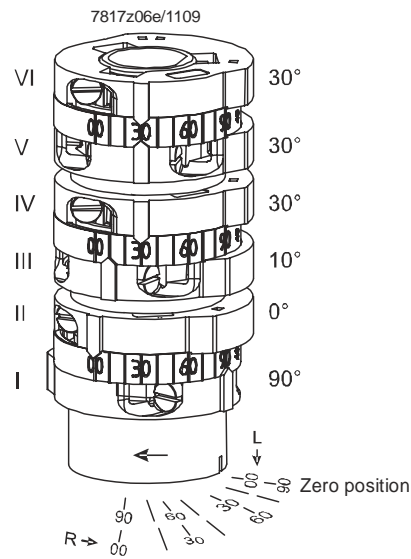


Fig. 2: Connection diagram

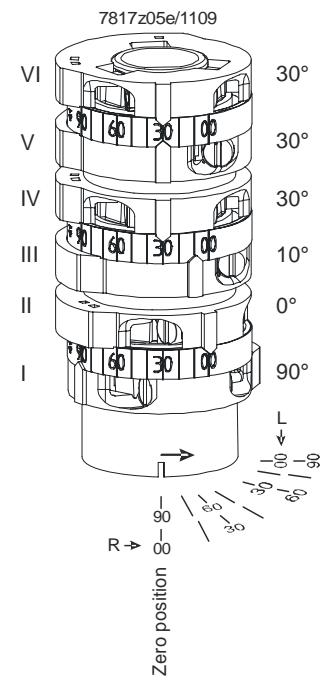
Mains voltage terminals			Design
X2-1	Opening / high-fire position (I)	Input	AC120V / AC230V
X2-2	Ignition position (V)	Input	AC120V / AC230V
X2-3	Position reached	Output	AC120V / AC230V max. 10 mA
X2-4	Closing / low-fire position (VI)	Input	AC120V / AC230V
X2-5	Controller release	Input	AC120V / AC230V
X2-6	Neutral	Input	AC120V / AC230V
Low-voltage terminals			Design
X1-1	2...10 V input	Input	max. 10 V to X1-2
X1-2	GND	Input	
X1-3	4...20 mA input	Input	max. 20 mA to X1-2
X1-4	0...135 Ω 1	Input	
X1-5	0...135 Ω 2	Input	
X1-6	0...135 Ω 3 (GND)	Input	
Assignment of terminals burner controls LAL.../LFL1.../LGK.../LOK...			
2	Neutral		
8	Feedback signal		
9	OPEN position of air damper		
10	MIN position of air damper		
11	CLOSE position of air damper		
20	Load controller		

4.3 Preadjustment of cams

Example for SQM40... (CCW)



Example for SQM41... (CW)



Note!

The setting of the switch position must be checked.

SQM4x.x4xxxx

Electronic version		Preadjustment
Cam I	High-fire	90°
Cam II	Not used	---
Cam III	Not used	---
Cam IV	Not used	---
Cam V	Ignition	10°
Cam VI	Off / low-fire	0°