Contents

1 Introduction 6

1.1 General notes 6
1.2 Typographical conventions 7
1.2.1 Safety notes 7
1.2.2 Warning symbols 7
1.2.3 Notification symbols 8
1.2.4 Presentation 8
1.3 Description 9
1.4 Block structure 10

2 Identification of product no. 11

2.1 Type field 11
2.2 Scope of delivery 11

3 Installation 12

3.1 Installation site and climatic conditions 12
3.2 Dimensions 12
3.3 Side-by-side mounting 13
3.4 Mounting the controller in a panel cutout 13
3.5 Removing the controller from the panel cutout 14
3.6 Cleaning the front 14

4 Electrical connections 15

4.1 Installation notes 15
4.2 Galvanic separation 16
4.3 Assignment of terminals 17

5 Operating modes 19

5.1 Low-fire operation 19
5.2 High-fire operation 20
5.2.1 Modulating burner, 3-position output 20
5.2.2 Modulating burner, analog output 21
5.2.3 2-stage burner, 3-position output 22
5.2.4 2-stage burner, analog output 23
5.3 Burner shutdown 24
5.4 Predefined setpoint 25
5.5 Response threshold (q) 26
5.6 Cold start of plant 27
5.7 Thermal shock protection (TSS) 29

6 Operation 30

6.1 Meaning of display and buttons 30
6.2 Basic display 31
6.3 User level 32
6.4 Manual control, modulating burner 33
6.5 Manual control, 2-stage burner 34
6.6 Starting the self-setting function 35
6.7 Display of software version 36

7 Parameterization PArA 37

8 Configuration ConF 39

8.1 Analog input InP1 40
8.2 Controller Cntr 41
8.3 Thermal shock protection (TSS) rAFC 42
8.4 Control outputs OutP 43
8.5 Binary input binF 44
8.6 Display diSP 45

9 Self-setting function 46

9.1 Self-setting function in high-fire operation 46
9.2 Checking the controller parameters 48

10 PC software ACS411 49

10.1 Safety notes 49
10.2 Setting the correct system parameters 49
10.3 Changing the parameters 49
10.4 Place of installation 50
10.5 License and liability regulations 50
10.6 Procurement of PC software ACS411 50
10.7 Languages 50
10.8 Operating systems : Operating 50
10.9 Prerequisites for hardware 50
10.10 Installation 51
10.11 Others 51
10.11.1 Use of USB port : Use of 51
10.11.2 Powering the controller via the USB port : Powering the controller via the port 51

11 What to do if 52

11.1 Alarm messages: 52
11.2 Others 52

12 Technical data 53

12.1 Inputs 53