DIN EN 1359:2007-06 (E)

Gas meters - Diaphragm meters (includes Amendment A1:2006)

Contents

Page

1 Scope 4

2 Normative references 5

3 Terminology 6
3.1 Definitions 6
3.2 Symbols 8

4 Working conditions 9
4.1 Flow range 9
4.2 Maximum working pressure 10
4.3 Temperature range 10
4.4 Climatic environment 10

5 Metrological performance 10
5.1 Errors of indication 10
5.2 Pressure absorption 12
5.3 Starting flow rate 12
5.4 Metrological stability 13
5.5 Overload flow rate 13
5.6 Environment and humidity 13
5.7 Influence of other devices 14
5.8 Cyclic volume 14

6 Construction and materials 14
6.1 General 14
6.2 Robustness 14
6.3 Corrosion protection 24
6.4 Resistance to storage temperature range 30
6.5 Optional features 30

7 Mechanical performance 33
7.1 Meter assembly 33
7.2 Index 37
7.3 Diaphragms and other components in the gas path 39

8 Marking 43
8.1 All meters 43
8.2 Two-pipe meters 43
8.3 Durability and legibility of marking 44

9 Meters supplied for testing 44

Annex A (normative) Production requirements for gas meters 46

A.1 Specification 46
A.2 Technical requirements 46
A.3 Certificates of conformity 47
A.4 Provision of information 47

Annex B (normative) Diaphragm gas meters provided with a built-in mechanical gas temperature conversion device 49

B.1 Scope 49
B.2 Metrological performance 49
B.2.1 Errors of indication at constant temperature 49
B.2.2 Durability 51
B.2.3 Error of indication where the temperature of the gas at the meter inlet is significantly different from the ambient temperature of the air surrounding the meter 53
B.3 Marking 54

Annex C (normative) Durability 55

Annex D (normative) Additional tests for meters to be used in open locations 56

D.1 Humidity 56
D.1.1 Requirements 56
D.1.2 Test 56
D.2 Weathering 56
D.2.1 Requirement 56
D.2.2 Test 56

Annex E (informative) Bibliography 58

Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2004/22 Measuring Instruments Directive 59