

DIN EN 298:2012-11 (E)

Automatic burner control systems for burners and appliances burning gaseous or liquid fuels

Contents	Page
Foreword	4
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 Classification	13
5 Units of measurement and test condition	13
6 Constructional requirements	14
7 Performance	18
8 EMC/Electrical requirements	30
9 Marking, installation and operating instructions	34
Annex A (informative) Gas connections in common use in the various countries	38
Annex B (informative) Leak-tightness test - Volumetric method	39
Annex C (informative) Leak-tightness - Pressure loss method	40
Annex D (normative) Conversion of pressure loss into leakage rate	41
Annex E (normative) Electrical/electronic component fault modes	42
Annex F (normative) Additional requirements for safety accessories and pressure accessories as defined in EU 97/23/EC	44
Annex G (normative) Materials for pressurized parts	45
Annex H (informative) Additional materials for pressurized parts	46
Annex I (normative) Requirements for controls used in DC supplied fuel burners and fuel burning appliances	47
Annex AA (informative) Functional characteristics of burner control systems, to be given by the appliance standard	49
Annex BB (informative) Fault modes of flame sensors	50
Annex CC (informative) Functional diagrams of oil burner control systems	52
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2009/142/EC relating to appliances burning gaseous fuels	57
Bibliography	59

Figures	
Figure 1 -- Basic functional chain of a typical flame supervision	7
Figure 2 -- Basic functional chain of an independent flame detector device	8
Figure 3 -- Flame sensors for visible light	28
Figure 4 -- Acoustic flame sensor	29
Figure CC.1 -- Burner without pilot	54
Figure CC.2 -- Burners with pilot which operates only during the ignition time	55
Figure CC.3 -- Ignition restoration after loss of sensed flame during running position	55
Figure CC.4 -- Recycling after loss of sensed flame during running position	56
Figure CC.5 -- Lock-out after loss of sensed flame during running position	56
Figure CC.6 -- Lock-out for the non-establishment of the flame signal (during safety time t5)	56
Tables	
Table E.1 -- Electrical/electronic component faults modes	42
Table AA.1 -- Functional characteristics of gas burner control systems, to be given by the appliance standard	49
Table AA.2 -- Functional characteristics of oil burner control systems, to be given by the appliance standard	49
Table BB.1 -- Fault modes of flame sensors	50
Table CC.1 -- Symbols	52
Table ZA.1 -- Correspondence between this European Standard and Directive 2009/142/EC relating to appliances burning gaseous fuels	57