

DIN EN 14626:2012-12 (E)

Ambient air - Standard method for the measurement of the concentration of carbon monoxide by non-dispersive infrared spectroscopy

Contents		Page
Contents 2		
Foreword		4
1 Scope		5
2 Normative references		6
3 Terms and definitions		6
4 Abbreviated terms		10
5 Principle		11
5.1 General		11
5.2 Measuring principle		11
5.3 Type approval test		11
5.4 Field operation and quality control		12
6 Sampling		12
6.1 General		12
6.2 Sampling location		12
6.3 Sampling system		12
6.4 Control and regulation of sample flow rate		13
6.5 Sampling pump for the manifold		14
7 Analyser equipment		14
7.1 General		14
7.2 Interferents		14
7.3 Details about analyser equipment		14
7.4 Pressure measurement		15
7.5 Flow rate indicator		15
7.6 Sampling pump for the analyser		15
7.7 Particle filter		15
8 Type approval of carbon monoxide analysers		15
8.1 General		15
8.2 Relevant performance characteristics and performance criteria		16
8.3 Design change		18
8.4 Procedures for determination of the performance characteristics during the laboratory test		18
8.5 Determination of the performance characteristics during the field test		28
8.6 Expanded uncertainty calculation for type approval		32
9 Field operation and ongoing quality control		33
9.1 General		33
9.2 Suitability evaluation		33
9.3 Initial installation		35
9.4 Ongoing quality assurance/quality control		36
9.5 Calibration of the analyser		38
9.6 Checks		39
9.7 Maintenance		43

9.8	Data handling and data reports	44
9.9	Measurement uncertainty	44
10	Expression of results	45
11	Test reports and documentation	45
11.1	Type approval test	45
11.2	Field operation	46
Annex A (normative) Test of lack of fit		48
Annex B (informative) Sampling equipment		50
Annex C (informative) Schematics of non-dispersive infrared spectrometer		52
Annex D (informative) Manifold testing		54
Annex E (normative) Type approval		56
Annex F (informative) Calculation of uncertainty in field operation at the 8-hour limit value		75
Annex G (informative) Significant technical changes		83
Bibliography		84