

AO2000 Series MultiFID14 in Category 3G

Supplement 2 to the Start-Up and Maintenance Manual (Rev. 3)

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Special Safety Precautions for Using the MultiFID14 in Category 3G

Follow the Safety Precautions	Before starting any work on the MultiFID14, observe all explosion protection safety precautions.
Do Not Work Where There is a Risk of Explosion	While there is a risk of explosion, do not work on current-bearing components, except intrinsically safe circuits, and do not work with equipment that poses an ignition hazard.
Risks of Hot Components	After 10 minutes, the temperature of the detector heater in the MultiFID14 is under the limit for temperature class T3. Observe the safety precautions indicated on the housing components.



Description

Application	The MultiFID14 analyzer module (measuring principle: flame ionization detector) is used to measure hydrocarbons in a non-combustible sample gas mixture.
Designation	 II 3G EEx nP II T3 X
Type Examination Certificate	DMT 01 E 126 X incl. 1st Supplement (see page 14) Measurement function per Directive 94/9/EC, Appendix II, Paragraph 1.5.5. is not covered by this EC type examination certificate.
Design	Simplified positive pressure containment per IEC 60079-2/02.01 considering the issue of possible (erroneous) release of combustible gas in the system housing (containment system).
Simplified Positive Pressure Containment Modules	It consists of a positive pressure containment with a constant air purge and the following monitoring components: <ul style="list-style-type: none">• Pressure and flow monitoring (installed in the analyzer module chassis, see Figure 1):<ul style="list-style-type: none">• Pressure sensor to monitor housing pressure• Capillary and pressure sensor to monitor air throughput: Outflow ports• Ignition suppression gas outlet with capillary and test ports for housing internal pressure (installed in a double-gland fitting in the connection box, see Figure 2)• Alarm evaluation by the central unit
Purging and Monitoring Data	Before activating the power supply: Preliminary purge (5 times the housing volume) or check to ensure the atmosphere in the system housing and surrounding area is not explosive (e.g. maximum of 25% LEL). Operation: Constant purge with at least 350 liters/hour positive pressure at a minimum of 50 Pa and maximum of 2000 Pa Alarm: If flow drops below 350 liters/hour or housing pressure drops below 50 Pa, the respective status contact on the system controller is activated (see Analyzer Data Sheet for terminal).
Current-bearing Components	All current-bearing components inside the system housing are protected by a simplified positive pressure containment system unless otherwise acceptably designed for level II 3G protection. Components on the keypad sheet not completely covered by positive pressure containment are to be supplied with intrinsically safe power. In the event of failure of the simplified positive pressure containment, an alarm is generated and the 115/230 VAC power supply is deactivated but elements powered by signal and interface circuit external power sources remain active. In this state these elements are not operational ignition sources.

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Figure 1
Pressure and Flow
Monitoring

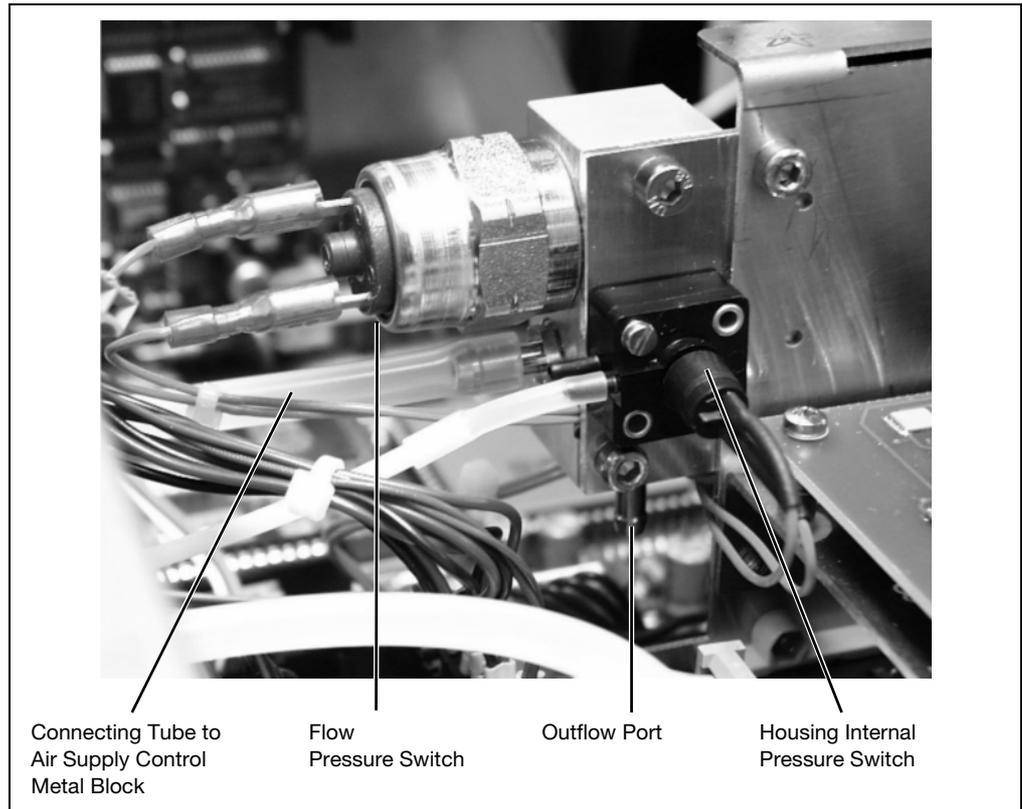
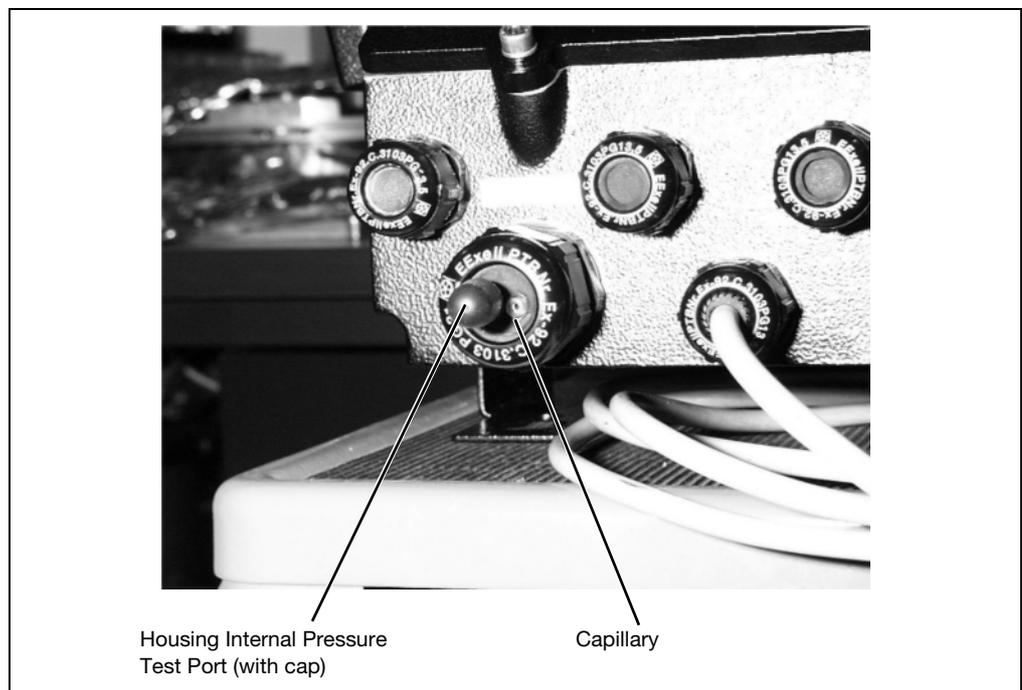


Figure 2
Ignition Suppression
Gas Outlet
(Connection Box)



Explosion Protection

External Explosion Protection

An AO2000 with the MultiFID14 analyzer module has a simplified positive pressure containment (housing internal pressure ≥ 50 Pa relative to external atmosphere). This prevents entry into the system housing of the external ex atmosphere. If the positive pressure in the housing drops below 50 Pa, an alarm is triggered via a status contact on the system controller (purge air fault).

The maximum operational housing surface temperature (sample gas port) of 160 °C is below the T3 temperature class limit. After the power supply is turned off the surface temperature of the heater in the system housing is below the T3 temperature class limit within 4 minutes. The wait time for opening the housing is 10 minutes.

Internal Explosion Protection

Presence of an explosive atmosphere in the system housing due to possible release of combustible gas (H_2) and sample gas is prevented by:

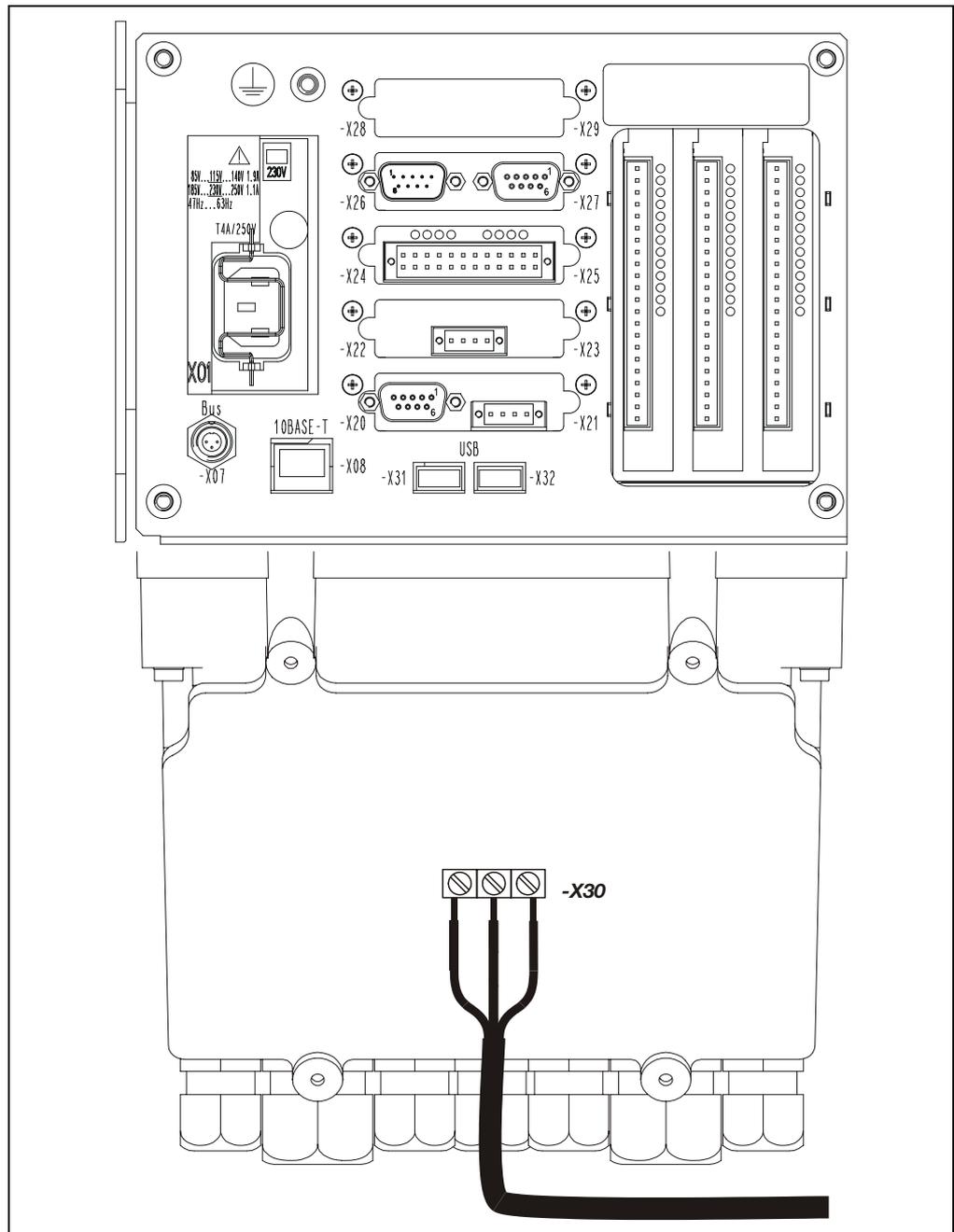
- Combustion gas:
 - Limiting of system housing flow to 3 liters/hour using a threaded metal reduction fitting.
 - In case of release of 3 liters/hours the monitored air purge at a minimum of 350 liters/hour assures H_2 dilution below 50 % LEL.
 - If the air flow rate drops below 350 liters/hour, an alarm is triggered via a status contact on the system controller (purge air fault).
- Sample gas:
 - The sample gas is not explosive under operating and fault conditions.
 - Entry of the sample gas into the system housing is prevented because the sample gas pressure in the system housing is near atmospheric pressure.
- Other measures for internal explosion protection:
 - The “dilution range” formed in the event of an unrecognized release of combustion gas is “non-hazardous”.
 - The flame barrier installed in the MultiFID14 analyzer module’s sample gas inlet prevents ignition at the sample gas inlet and toward the outer atmosphere.

Operating Specifications

Protection Level	Device Group	II
	Category	3G
Explosion Protection	Ignition Suppression Type	Simplified positive pressure containment
	Explosion Group	II
	Temperature Class	T3
Installation Site	Risk Area	Zone 2
	Ambient temperature.	45 °C max.
Electrical Connection Data and Components	Power supply 115/230 VAC and protective lead	
	Pins L1, N, PE	
	(Power supply terminal strip 115/230 VAC in connection box, see Figure 3)	
	Power supply voltage: 115/230 V, 220 VA, 48 to 62 Hz	
	External potential compensation connection	
	Secured with spring ring and additionally with M5 threaded connection fitted with washer on analyzer module (see Figure 4).	
	(If the power supply protective lead connection is not included in the potential compensation circuit, the required compensation shall be provided via the external potential compensation connection.)	
	Identification:  or 	
	Input and output signals	
	System controller and I/O board pins (plugs), 30 V/1 A max.	
Alarm evaluation via digital output signal		
Pins according to Analyzer Data Sheet, 30 V/1 A max.		
All other interfaces		
30 V/1 A max.		

Continued on next page

Figure 3
Electrical Connection Components



- X30** Power supply terminal strip 115/230 VAC
- X01** Internal connection to power supply
- X07** System bus connection
- X08** Ethernet-10BASE-T interface

Continued on next page

Operating Specifications, *continued*

Gas Connection Data and Components

(see Figure 4)

Instrument air (ignition suppression gas)

Connector	1/8-NPT internal threads
Pressure at instrument air inlet	4000 ± 500 hPa
Flow	
Inlet	approx. 1500 liters/hour
Ignition suppression gas outlet	≥ 350 liters/hour

Combustion gas

Connector	1/8-NPT internal threads
Hydrogen	
Group	IIC
Temperature class	T1
Pressure at combustion gas inlet	1200 ± 200 hPa
Flow limited upon entry into system housing	≤ 3 liters/hour

Sample gas

Connector: Sample gas inlet	G 1/4 (Flame barrier)
Sample gas outlet	Cutting ring fitting for 6 mm tubing
Hydrocarbons (temperature class T3) in sample gas:	Not explosive
Combustible components in sample gas mixture:	≤ 50 % LEL (during operation), ≤ LEL (fault condition)
Flow	≥ 20 liters/hour (max. 80 liters/hour)
Pressure at sample gas inlet	800 to 1200 hPa (absolute pressure)
Pressure in sample gas path	< atmospheric (inside system housing)

Combustion air

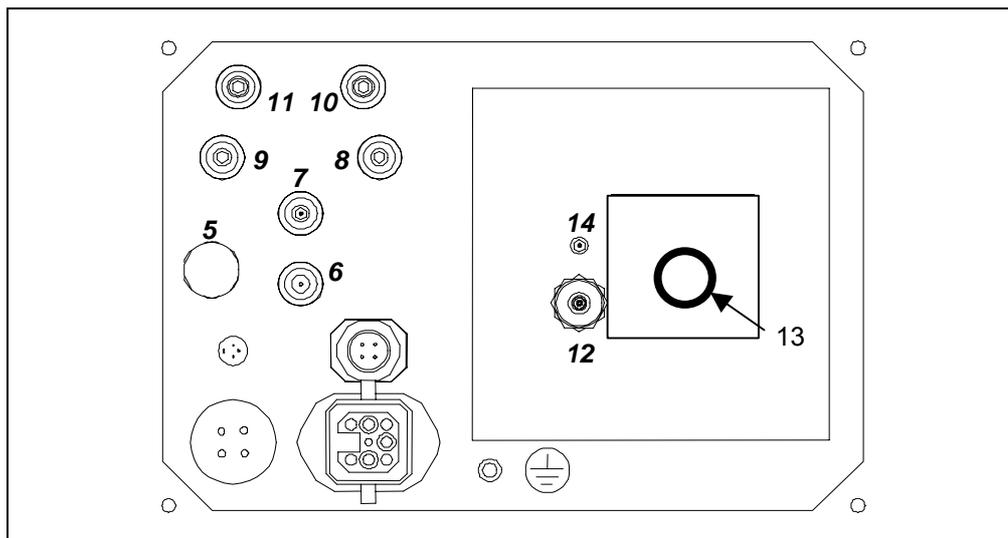
Connector	1/8-NPT internal threads
Pressure at combustion gas inlet	1200 ± 100 hPa
Flow	< 40 liters/hour

Test gases

Same as sample gas (not during fault condition)

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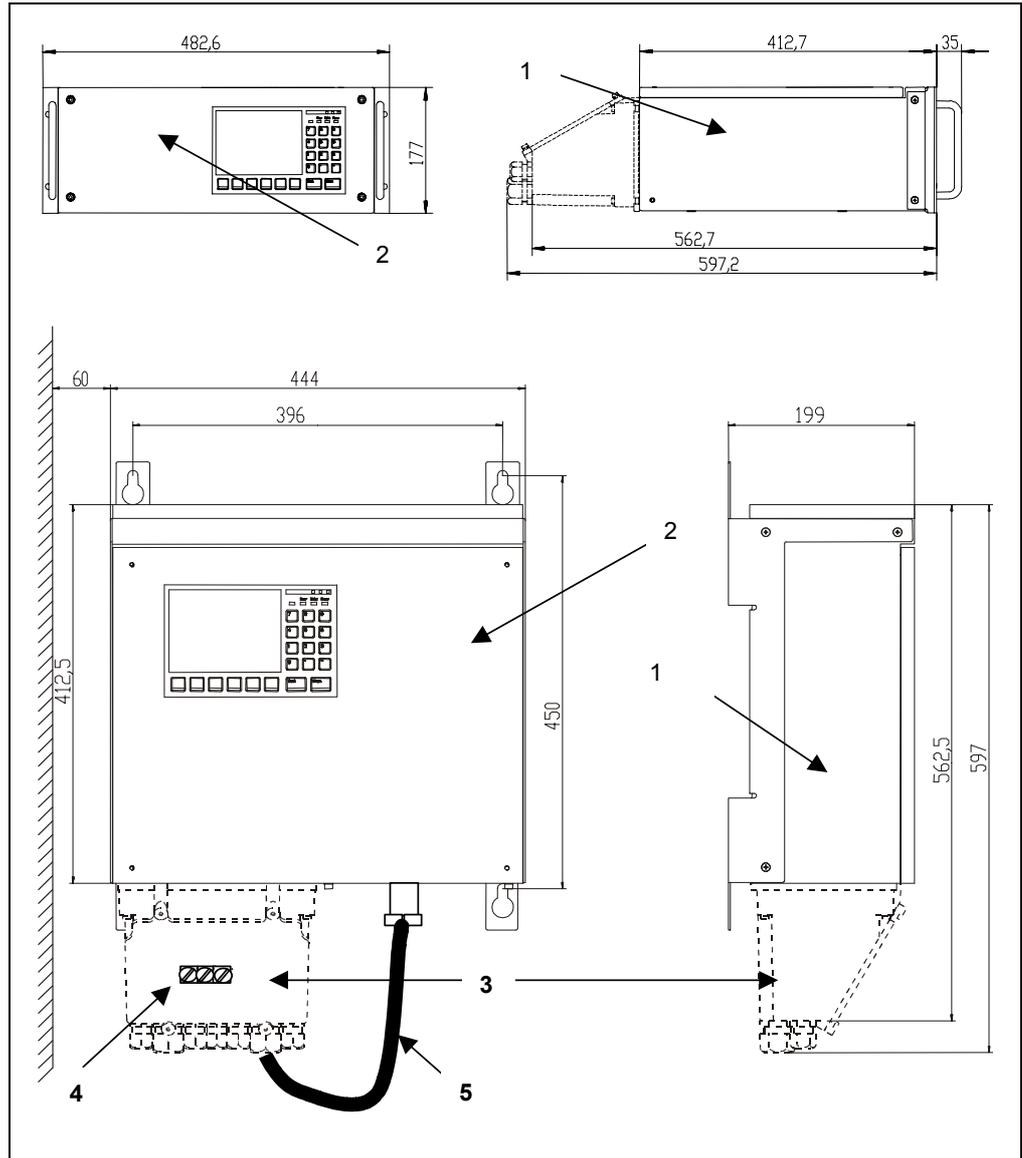
Figure 4
Gas Connection
Elements



- 5** Atmospheric pressure sampling point for housing monitor pressure sensor (with protective filter)
- 6** Instrument air inlet (ignition suppression gas)
- 7** Test gas port
- 8** Span gas inlet
- 9** Zero gas inlet
- 10** Combustion gas inlet
- 11** Combustion air inlet
- 12** Exhaust outlet (Sample gas outlet)
- 13** Sample gas inlet (Flame barrier not shown)
- 14** Bypass nozzle
-  External potential compensation connection

Continued on next page

Figure 5
Dimensional Diagram
 (dimensions in mm)



- 1 System housing
- 2 Front door
- 3 Connection box
- 4 115/230 VAC power supply terminal strip
- 5 Detector heater 115/230 VAC power supply

Ignition Suppression Gas (Instrument Air)

Ignition Suppression Gas (Instrument Air)

Use air from the explosion risk free area as the ignition suppression gas.

The ignition suppression gas is routed into the explosion-risk area. In normal operation the device does not produce any sparks or particles capable of ignition.

For the ignition suppression gas supply, use a line with a cross-section large enough (depending on line length) to provide the flow rate needed for preliminary purge and to maintain the required pilot pressure.

Connecting Electrical Lines – Safety Instructions

Potential Compensation

The external potential compensation connection and/or the protective lead must be connected to the local potential compensation point. The connection to the local potential compensation point must be made before all other connections. The minimum conductor section is 4 mm².

The MultiFID14 can be hazardous if potential compensation is interrupted inside or outside the device or if the potential compensation connection is loosened.

Securely Install Electrical Lines

The electrical lines must be firmly secured.

Connecting the Power Supply

The power supply leads must be connected to the L1, N and PE terminals in the connection box.

Starting the Simplified Positive Pressure Containment System



CAUTION!

Qualified personnel must perform a function check on startup and in the event of a fault in the positive pressure containment system.

Starting Simplified Positive Pressure Containment Operation

Step	Action
Flow switch point (see Figure 1):	
	 Make sure that the surrounding environment does not pose an explosion threat.
1	Turn off the power supply.
2	Open the housing.
3	Connect a flow meter (> 300 liters/hour) to the outflow ports.
4	Jumper the housing internal pressure switch.
5	Supply compressed air to the instrument air inlet (4000 ± 500 hPa).
6	Turn on the power supply.
7	Reduce the pressure to the instrument air inlet until the flow pressure switch changes state. The alarm contact switches on. The flow rate should be > 350 liters/hour.
Preliminary Purge	
8	Preliminary purge (5 times the housing volume) or check to ensure the atmosphere in the system housing and surrounding area is not explosive (e.g. maximum of 25% LEL).  With a pressure of 4000 ± 500 hPa at the instrument air inlet, the housing is purged at > 350 liters/hour, so that with five times the housing volume (system housing volume = 36 liters) a minimum purge time of about 30 minutes is required.
Housing internal pressure switch point (see Figure 2)	
9	Turn off the power supply.
10	Remove the jumper from the housing internal pressure switch and jumper the flow pressure switch.
11	Remove the test port cap and connect a pressure gauge to the test port.
12	Close the housing.
13	Activate the compressed air supply to the instrument air inlet (4000 ± 500 hPa).
14	Turn on the power supply.
15	Reduce the pressure to the instrument air inlet until the housing internal pressure switch changes state. The alarm contact switches on. Note the pressure. It should be > 50 hPa.
16	Remove the pressure gauge and reinstall the cap on the test port.
17	Turn off the power supply, open the housing, remove the jumper from the flow pressure switch, close the housing, turn on the power supply.



CAUTION!

If there is an explosion risk at the site at which the modular process analysis system is to be installed,

- Any external connectors on the analyzer module accessible without opening the system housing must not be disconnected when powered and the covers should not be removed.
- The housing should only be opened after 10 minutes have elapsed since power was disconnected.

If a repair is not possible immediately after failure of the simplified positive pressure containment and generation of an alarm,

- The combustion gas supply must be cut off.
- The sample gas supply must be cut off,
- The power supply must be cut off.

When the housing is opened for maintenance after the prescribed waiting period, the input and output signal circuits and interfaces must be powered off.

Notes for Installation in Explosive Areas

Installation per EN 60079-14:1996 (VDE 0165 Part 1)

The electrical device must be installed in accordance with EN 60079-14:1996 (VDE 0165 Part 1) "Elektrische Betriebsmittel in gasexplosionsgefährdeten Bereichen [Electrical Devices in Gas Explosion Risk Areas], Part 14: Elektrische Anlagen in explosionsgefährdeten Bereichen [Electrical Systems in Explosion Risk Areas]".

Potential Compensation

The requirements of EN 60079-14 and DIN VDE 0 Part 100, Part 410 "Protection from Hazardous Housing Currents" and Part 540 "Grounding, Protective Leads and Potential Compensation Leads" shall be observed.

Electrostatic Charges

Avoid electrostatic discharges. Observe the "Guidelines for Avoiding Ignition Risks Due to Electrostatic Discharges" published by the Executive Committee for the Industrial Professional/Trade Association.

Testing Prior to Initial Use Startup

The operator is required to have the electrical system tested for proper operation by a qualified electrician prior to using the unit for the first time.

If the manufacturer or installer certifies that the electrical system meets ElexV requirements, no inspection prior to initial use is required.

Notes on Maintenance and Repair

Monitoring and Inspection	<p>The condition of electrical systems in explosion risk areas must be monitored. As necessary, and at least ever three years the system shall be inspected by a qualified electrician if it is not under continuous monitoring by a responsible engineer.</p>
Work on Electrical Systems	<p>The power supply must be disconnected before performing any work on electrical systems in explosion risk areas. The disconnection area must be provided with an appropriate warning label, e.g. "Do Not Activate – Explosion Hazard".</p> <p>This does not apply to devices that are opened during operation, e.g. logging apparatus, or to devices which have been expressly type certified for such operation.</p>
Work on Intrinsically Safe Circuits	<p>Work may be performed on intrinsically safe circuits in explosion risk areas even while power is connected.</p> <p>However, the electrical characteristics (inductance, capacitance, current and voltage) of test equipment should be noted when such equipment is activated.</p> <p>Special attention is required if work is carried out on intrinsically safe circuits set up in conjunction with Zone 0 areas.</p>
Explosion Risk	<p>The explosion risk should be eliminated prior to carrying out any repair work.</p>
Personnel Qualifications	<p>Repair work should only be performed by qualified personnel.</p>
Original Parts	<p>Only original parts should be used for repairs.</p>
Testing Prior to Restarting	<p>If repairs are made on components in an electrical device necessary for explosion protection, prior to any return to service a qualified person shall inspect this device and certify that its explosion protection features are in compliance with the type and design requirements as stated in the device's certification documentation.</p>
Manufacturer's Repairs	<p>Repairs can also be carried out by the manufacturer, e.g. on site by a properly identified ABB Service employee or in the manufacturer's facility.</p> <p>In this case the repair carried out and the subsequent inspection will be shown on the device identification plate. An inspection by an expert is not required in such a case.</p>



Translation

(1) Type Examination Certificate

- (2) - Directive 94/9/EC -
Equipment and protective systems intended for use
in potentially explosive atmospheres

(3) **DMT 01 E 126 X**

(4) **Equipment:** Analyzer System Advance Optima Multi-FID 14

(5) **Manufacturer:** ABB Automation Products GmbH

(6) **Address:** D 60488 Frankfurt/Main

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.

(8) The certification body of Deutsche Montan Technologie GmbH certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of equipment intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
The examination and test results are recorded in the test and assessment report BVS PP 01.2092EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 50021:1999 Type of protection 'n'
IEC 60079-2 :2001 Pressurized enclosures 'p'

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate

(12) The marking of the equipment shall include the following:

II 3G EEx nP II T3

Deutsche Montan Technologie GmbH

Essen, dated 04. October 2001

Signed: Jockers

Signed: Eickhoff

DMT-Certification body

Head of special services unit

page 1 of 3 to DMT 01 E 126 X
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Am Technologiepark 1, 45307 Essen, Telefon (0201)172-1416, Telefax (0201)172-1716

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(13) Appendix to
 (14) **Type Examination Certificate**
DMT 01 E 126 X

(15) 15.1 Subject and type
 Analyzer System Advance Optima Multi-FID 14

15.2 Description

The analyzer system Advance Optima Multi-FID 14 serves for measuring of hydrocarbons in non-flammable gas mixtures. The analyzer system consists of a metallic enclosure, which is simplified pressurized with continuous flow of protective gas (pressurized air) according to EN 50021. The analyzer system meets the specific requirements of IEC 60079-2 (py-purging) which are taken into consideration due to the fact that the relevant requirements are still missing in the current EN 50021. Inside the enclosure are the central unit, the analyzer module as well as the control system for the simplified pressurization. The protective gas is taken from the instrumental air necessary for operation of the analyzer module.

15.3 Parameters

15.3.1 Electrical parameters

Supply	AC 115 V / 230 V, 220 VA, 48 ... 62 Hz
Electrical parameters of interfaces	see operation manual

15.3.2 Pneumatic parameters

Pressure of instrumental air supply	3,5 ... 4,5 bar
Flow of instrumental air	approx. 1500 l/h
Internal free volume	36 l
Minimum flow rate of protective gas	350 l/h

15.3.3 Parameters of fuel and measuring gas

Pressure of fuel supply (hydrogen)	1,0 ... 1,4 bar
Pressure of measuring gas (non-flammable)	0,8 ... 1,2 bar
Further parameters	see operation manual

(16) Test and assessment report
 BVS PP 01.2092 EG as of 04.10.2001

(17) Special conditions for safe use

The user shall take suitable measures to stop flow of fuel and measuring gas and to switch off the electrical supply after alarm of the control system.

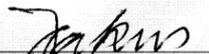
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We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

45307 Essen, 04.10.2001
BVS-Wit/Mi A 20010283

Deutsche Montan Technologie GmbH


DMT-Certification body


Head of special services unit

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Konformitätserklärung Declaration of Conformity



ABB Automation GmbH
60488 Frankfurt am Main
Germany

erklärt, dass das Produkt
declares that the product

Geräteart: **Kontinuierliche Gasanalysatoren**
Device: Continuous Gas Analyzers

Typbezeichnung: **AO2000 Serie**
Type: AO2000 Series

Produktnummer: siehe Anhang 1, 4-8
Product No.: see Annex 1, 4-8

mit den Vorschriften folgender Europäischer Richtlinien übereinstimmt:
complies with the requirements of the European Directives:

EG-Richtlinie 89/336/EWG **EMV**
EC Directive 89/336/ECC EMC

EG-Richtlinie 73/23/EWG **Niederspannung**
EC Directive 73/23/ECC Low Voltage

Weitere Angaben über die Einhaltung dieser Richtlinien enthalten die Anhänge 2 und 3
Further Information about compliance with the Directives is given in the Annexes 2 and 3

EN 60825-1 **Sicherheit von Lasereinrichtungen (nur für Laser-Analysatormodul LS25)**
Safety of Laser Products (only for Laser analyzer module LS25)

EG-Richtlinie 94/9/EG **Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung
in explosionsgefährdeten Bereichen**
EC-Directive 94/9/EC Equipment and protective systems intended for use in potentially explosive atmospheres

Nur für Ausführungen gemäß Anhang 4-8.
Only for instruments according to Annexes 4-8

ABB Automation GmbH

Frankfurt, 03. Januar 2005

(Leiter Qualitätssicherung)
(Head of Quality Management)

(Leiter Entwicklung)
(Head of Development)

Die Anhänge sind Bestandteil dieser Erklärung.
Annexes are part of this declaration.

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, beinhaltet jedoch keine
Zusicherung von Eigenschaften im rechtlichen Sinne.

This declaration certifies conformance with the above mentioned Directives. Affirmation of attributes in a legal sense is not included.

Die Sicherheitshinweise in der mitgelieferten Produktdokumentation sind zu beachten.
Safety notes given in the product documentation have to be observed.

Registrier-Nr. CT001/97

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Anhang 2 zur Konformitätserklärung (EMV)

Annex 2 of declaration of conformity (emc)

Geräteart: **Kontinuierliche Gasanalysatoren**
 Device: **Continuous Gas Analyzers**

Typbezeichnung: **AO2000 Serie**
 Type: **AO2000 Series**

Produkt-Nr.: siehe Anhang 1
 Product No.: see Annex 1

Die Übereinstimmung des bezeichneten Produktes mit den Anforderungen der Richtlinie 89/336/EWG wird nachgewiesen durch die vollständige Einhaltung der folgenden harmonisierten Europäischen Normen:
Conformance of the product with Directive 89/336/ECC is given according to the following harmonized European standards:

Störfestigkeit:	EN 61326-1	1997
<i>Electromagnetic Susceptibility:</i>	EN 61326/A1+A2	A1:1998, A2:2001
Störaussendung:	EN 61326-1	1997
<i>Electromagnetic Disturbances:</i>	EN 61326/A1+A2	A1:1998, A2:2001
	EN 61000-3-2	1998 + A14:2000
	EN 61000-3-3	1995

Prüfergebnisse:
Test results:

Festigkeit gegen elektromagnetische Störungen <i>Electromagnetic Susceptibility</i>	Norm <i>Standard</i>	Prüfschärfe* Industrieller Bereich <i>Test level industrial environment</i>
Entladung statischer Elektrizität <i>electrostatic discharge</i>	EN 61000-4-2	Kontakt / Luft 4 kV / 8 kV
Burst auf AC Versorgung <i>on AC mains supply</i> auf Signalleitungen <i>on signal lines</i>	EN 61000-4-4	2 kV 1 kV
Gestrahltes HF-Feld <i>radiated electromagnetic field</i>	EN 61000-4-3	10 V/m
Leitungsgeführte HF-Störungen <i>conducted high frequency disturbances</i>	EN 61000-4-6	10 V
Spannungsunterbrechung AC-Versorgung <i>voltage interruption AC mains supply</i>	EN 61000-4-11	0,5 Periode / 100 %
Surge auf AC Versorgung <i>on AC mains supply</i> auf Signalleitungen <i>on signal lines</i>	EN 61000-4-5	2 kV 1 kV
Störaussendung <i>Electromagnetic Disturbances</i>	Norm <i>Standard</i>	Prüfergebnisse <i>Test Results</i>
Störfeldstärke <i>radiated interference field strength</i>	EN 61326-1 EN 61326/A1	Klasse B / Class B
Störspannungen auf AC-Versorgung <i>on AC mains supply</i>	EN 61326-1 EN 61326/A1	Klasse B / Class B
Oberschwingströme <i>harmonic current</i>	EN 61000-3-2	Klasse A / Class A
Spannungsschwankungen, Flicker <i>Voltage change, flicker</i>	EN 61000-3-3	eingehalten

* Erfüllt mind. Bewertung „kontinuierlicher überwachter Betrieb“ nach Tabelle 2 der EN 61326-1
Performance criteria "continuous checked working" acc. Table 2 of EN 61326-1

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Anhang 3 zur Konformitätserklärung (Niederspannungsrichtlinie)

Annex 3 of declaration of conformity (low voltage directive)

Geräteart: **Kontinuierliche Gasanalysatoren**
 Device: **Continuous Gas Analyzers**

Typbezeichnung: **AO2000 Serie**
 Type: **AO2000 Series**

Produkt-Nr.: siehe Anhang 1
 Product No.: *see Annex 1*

Die Übereinstimmung des bezeichneten Produktes mit den Anforderungen der Richtlinie 73/23/EWG wird nachgewiesen durch die vollständige Einhaltung der folgenden harmonisierten Europäischen Normen:
Conformance of the product with the requirements of Directive 73/23/ECC is approved by compliance with the following harmonized European standards:

EN 61010-1: 2001 Sicherheitsbestimmungen für elektrische Mess-, Steuer-, Regel- und Laborgeräte
Safety Requirements for electrical equipment for measurement, control, and laboratory use

Prüfergebnisse:
Test results:

	Im Gehäuse mit internem Netzteil <i>Enclosure with internal power supply</i>		Im Gehäuse ohne internes Netzteil <i>Enclosure without internal power supply</i>	Zentraleinheit in Kategorie 2G <i>Central unit in category 2G</i>
	ohne FID-Analysatormodul <i>w/o FID analyzer module</i>	mit FID-Analysatormodul <i>with FID analyzer module</i>		
Gerät der Schutzklasse <i>Equipment class</i>	I	I	III	I
Überspannungskategorie <i>Installation category</i>				
Netzeingang <i>mains circuit</i>	III	II		II
übrige Stromkreise <i>other circuits</i>	II	II	II	II
Verschmutzungsgrad <i>Pollution degree</i>	2	2	2	2
Prüfspannungen <i>Test voltages</i>				
Netzkreise gegen Sekundärkreise <i>Mains circuits to secondary circuits</i>	3,7 kV; 50 Hz, 1 min	2,3 kV; 50 Hz, 1 min		2,3 kV; 50 Hz, 1 min
Netzkreise gegen Schutzerde <i>Mains circuits to protective earth</i>	2,2 kV; 50 Hz, 1 min	1,35 kV; 50 Hz, 1 min		1,35 kV; 50 Hz, 1 min

Luft- und Kriechstrecken zwischen den berührungsgefährlichen Netzkreisen und den übrigen nicht berührungsgefährlichen Stromkreisen entsprechen den Anforderungen der verstärkten oder doppelten Isolierung (sichere elektrische Trennung).

Clearance and creepage distance between hazardous life mains circuits and non hazardous life other circuits are comply with requirements reinforced or double insulation (safe electrical separation).

Die „übrigen Stromkreise“ sind PELV-Stromkreise (Funktionskleinspannung mit sicherer Trennung).

The other circuits are PELV circuits (Protected extra low voltage with safe separation).



Anhang 6 zur Konformitätserklärung (Produktnummern)

Annex 6 of declaration of conformity (product no.)

Geräteart: **Flammenionisationsdetektor in Kategorie 3G**
 Device: **Flame Ionization Detector in Category 3G**

Typbezeichnung: **AO2020-MultiFID14 / AO2040-MultiFID14**
 Type: **AO2020-MultiFID14 / AO2040-MultiFID14**

Der Flammenionisationsdetektor Typ AO2020-MultiFID14 / AO2040-MultiFID14 dient zur Messung von Kohlenwasserstoffen in nichtbrennbaren Gasgemischen.
The flame ionization detector type AO2020-MultiFID14 / AO2040-MultiFID14 is used for the measurement of hydrocarbons in non-flammable gas mixtures.

Baumusterprüfbescheinigung: DMT 01 E 126 X
 Type Examination Certificate:

Benannte Stelle: Deutsche Montantechnologie GmbH (0158)
 Notified Body: D-45307 Essen

Geräte-Kennzeichnung: II 3G EEx nP II T3
 Apparatus Code:

Angewandte Normen: EN 50021:1999
 Standards: IEC 60079-2:2001

Produkt-Nr.:	System	Produktnummer
<i>Product No.:</i>	AO2020 / AO2040	24031-0-11ϕ0ϕϕϕϕ0000
	Modul	Produktnummer
	Systemgehäuse	24311-0-233ϕ00000001
	<i>Housing</i>	24311-0-433ϕ00000001
	FID-Analysatormodul	24811-0-111ϕϕ3ϕ000ϕ2
	<i>FID Analyzer Module</i>	24811-0-111ϕϕ4ϕ000ϕ2
	Elektronikmodul	24411-0-51ϕϕϕϕϕϕϕϕ1
	<i>Electronic Module</i>	24411-0-52ϕϕϕϕϕϕϕϕ1

ϕ = Ziffern ohne Einfluss auf die Konformitätserklärung
Digit not important for this declaration
 0 = Stelle nicht belegt
Digit not used

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