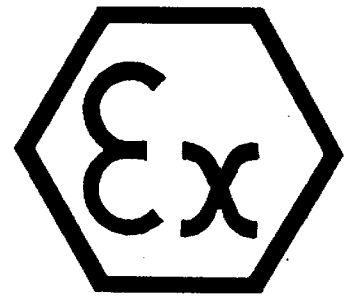


Institut Scientifique de Service Public



(1) **EC TYPE EXAMINATION CERTIFICATE**

(2) **Equipment or protective system intended for use
in potentially explosive atmospheres
Directive 94/9/EC**

(3) EC type examination certificate number: **ISSeP02ATEX039X**

(4) Equipment or protective system:

Sensor type DS600*.***S**(F or Z)*****

(5) ~~Applicant – Manufacturer – Authorized representative in the Community:~~

	Micro Motion, Inc.	Fisher Rosemount Flow
(6) Address:	Boulder, Co 80301	P.O. Box 350
	USA	3900 AJ Veenendaal
		The Netherlands

(7) This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) ISSeP, notified body n° 492 in accordance with article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in annex II to the Directive.

The examination and test results are recorded in confidential report n° 02064.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014 : 1997 + amendments 1 and 2 : 1999
EN 50018 : 2000
EN 50019 : 2000
EN 50020 : 1994

(10) If the symbol "X" is placed after the certificate number, it indicates that the equipment or protective system 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 or protective system in accordance to the Directive 94/9/EC. Further requirements of this Directive may apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

(12) The marking of the equipment or protective system shall include the following indications:

 II 2 G / EEx de[ib] IIB T4 - EEx de[ib] IIB T3 or T4

Colfontaine, 05.08.2002.

Renaud Alain
Manager of Colfontaine division

INSTITUT SCIENTIFIQUE DE SERVICE PUBLIC
Rue Grande, 60 - B7340 Colfontaine
Tél: ++ 32 65 610811 – Fax: ++ 32 65 610808

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(13)

SCHEDULE

(14)

EC TYPE EXAMINATION CERTIFICATE N^R ISSeP02ATEX039X

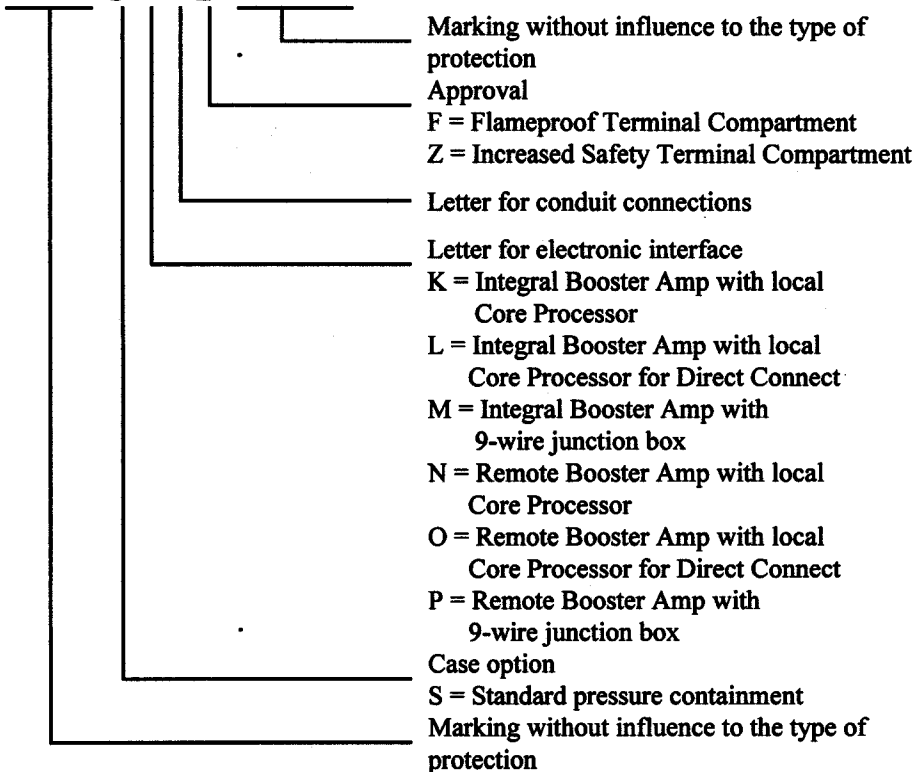
(15) Description of the equipment or protective system :

Identification :

Sensor type DS600*.*.*S*(F or Z)*.*.*.*

Instead of the *.*.* letters and numerals will be inserted which characterise the following modifications :

D S 6 0 0 * * * * S * * Z * * * * *



Description :

The flow sensor DS600 in combination with a Micro Motion Transmitter is used for flow measurement. The flow sensor, which consists of magnetically excited oscillating tubes, contains as electrical components coils, temperature sensor, terminals, connectors and a Booster Amplifier. The Booster Amplifier used in conjunction with the Mass Flow Sensor Model DS600 has been certified as a component under KEMA 01 ATEX 2184 U. The Booster Amplifier may be used either integral or remote mounted in relation to the sensor body, depending upon the maximum process temperature. The Booster Amplifier is able to accept Micro Motion's 9-Wire J-Box or Core Processor (Model 700, certified as EEx ib IIB/IIC T5 under DMT 01 ATEX E 081 U) inputs. The terminal compartment of the Booster Amplifier may be in types of explosion protection flame proof enclosure EEx d or increased safety EEx e. The Booster Amplifier additionally incorporates an intrinsically safe Junction Housing for termination and connection of the separately certified intrinsically safe transmitter and sensor wiring. The drive coils are standard designed and classified as EEx e. The pick-off coils and temperature sensor are standard designed and classified as EExi.

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SCHEDULE (Continued)

EC TYPE EXAMINATION CERTIFICATE N^R ISSeP02ATEX039X

By mounting the Core Processor (Model 700) directly to the Booster Amplifier the use of the unit will be modified according to the following table :

Sensor	DS600*.***S(N, O or P)*(F or Z)*****	DS600*.***S(K, L or M)*(F or Z)*****
	EEx de [ib] IIB T3 – T4	EEx de [ib] IIB T4

Electrical Characteristics :

Non intrinsically safe input circuits (Mains Circuit) :

voltage	Ui	AC	85 - 265 V
max. voltage	Um	AC	265 V
max. current	Ii		500 mA
max. power	Pi		50 W

Non intrinsically safe output circuits (Drive Coil) :

max. voltage	Uo	DC	32 V
max. current	Io		2 A

In type of explosion protection intrinsic safety EEx [ib] IIB only for connection to certified intrinsically safe circuits, with the following maximum values :

Input Circuit (Model 700) Core processor (Terminals 1-4) :

voltage	Ui	DC	17,3 V
current	Ii		484 mA
power	Pi		2,1 W
effective internal capacitance	Ci		2,2 μ F
effective internal inductance	Li		30 \square H

Input Circuits 9-Wire J-Box (Brown and Red Insulated Wires) :

Drive Coil Circuit :

voltage	Ui	DC	11,4 V
current	Ii		2,45 A
power	Pi		2,54 W
effective internal capacitance	Ci		negligible
effective internal inductance	Li		negligible

Pick-Off Coils (Green and White, Blue and Grey Insulated Wires) :

voltage	Ui	DC	30 V
current	Ii		215 mA
power	Pi		1,6 W
effective internal capacitance	Ci		negligible
effective internal inductance	Li		6,18 mH

Temperature Pass Through Wiring (Violet, Orange and Yellow Insulated Wires) :

voltage	Ui	DC	30 V
current	Ii		253 mA
power	Pi		1,9 W
effective internal capacitance	Ci		negligible
effective internal inductance	Li		negligible

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SCHEDULE (Continued)

EC TYPE EXAMINATION CERTIFICATE N^R ISSeP02ATEX039X

Allowable ambient and fluid temperatures :

Type DS600*.***S(K, L or M)*(F or Z)*****

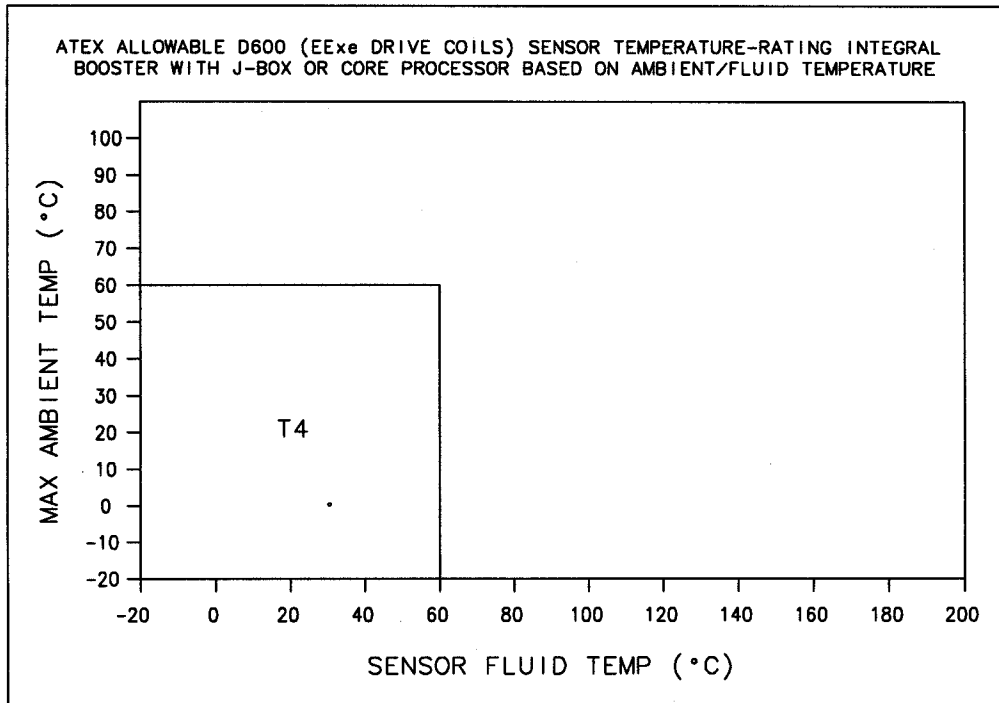
(Integral Booster Amplifier provided with 9-Wire J-Box or Core Processor)

Ambient Temperature range : Ta : -20° C up to +60° C

Regulation of temperature class :

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs:

EEx de [ib] IIB T4



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SCHEDULE (Continued)

EC TYPE EXAMINATION CERTIFICATE N^R ISSeP02ATEX039X

Type DS600*.***S(N, O or P)*(F or Z)*****

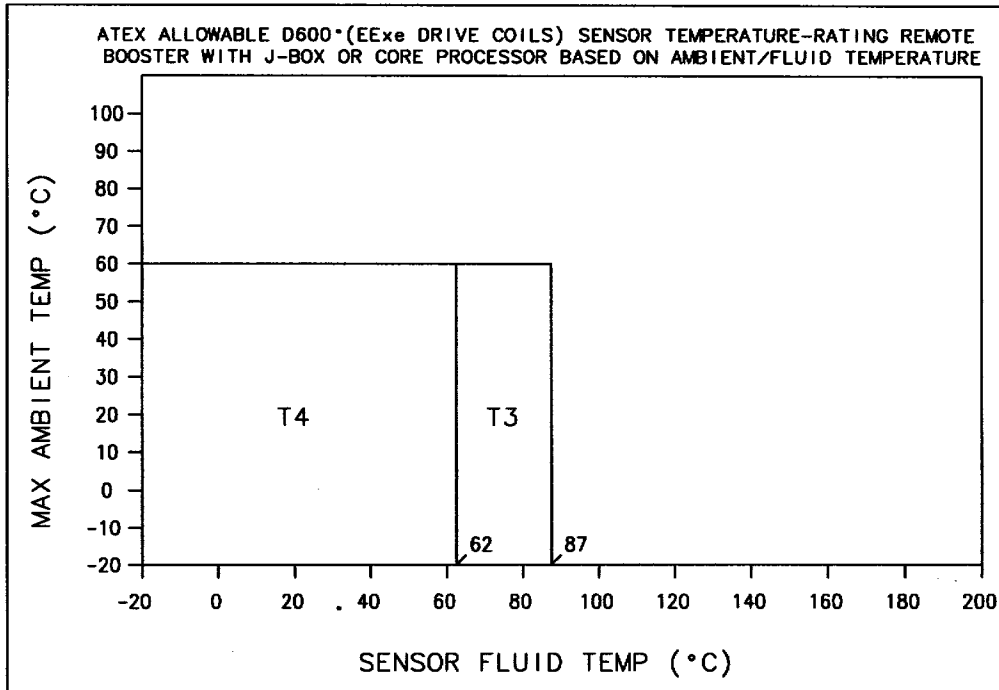
(Remote Booster Amplifier provided with Core Processor or 9-Wire J-Box)

Ambient temperature range : Ta : -20° C up to +60 °C

Regulation of temperature class :

The classification into a temperature class depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and is shown in the following graphs :

EEx de [ib] IIB T3-T4




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SCHEDULE (Continued)

EC TYPE EXAMINATION CERTIFICATE N^R ISSeP02ATEX039X

Marking :

- Name and address of the the manufacturer or his registered trade mark
- Manufacturer's type identification
- Serial number
- Year of manufacture
- Specific marking of explosion protection :  II 2 G
- Codes :

Type	Type of protection
DS600*.***S(K, L or M)*(F or Z)*****	EEx de [ib] IIB T4
DS600*.***S(N, O or P)*(F or Z)*****	EEx de [ib] IIB T3 -T4

- Indication of testing station followed by the reference of the certificate
- Ambience : -20° C to +60° C
- Any other marking required by the standards of construction of the electrical apparatus

Routine verifications and tests : (Clause 24 of EN 50014)

The manufacturer shall make the routine verifications and tests necessary to ensure that the electrical apparatus produced complies with the specification submitted to the testing station together with the prototype or sample. He shall also perform the routine tests 7.1 of EN 50019 (electric strength test) on the increased safety circuit.

Eventual prescriptions : according to the Installation Notices.

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SCHEDULE (Continued)

EC TYPE EXAMINATION CERTIFICATE N^R ISSeP02ATEX039X

(16) Report n° 02064 of 31.07.02 (17 pages) completed by the descriptive documents below :

<u>Number</u>	<u>Revision</u>	<u>Description</u>
EB-1005120	A	Spec, APPVL TAG D600 ATEX (3 pages)
EB-1005121	A	INST. DRAWING ATEX
EB-1005122	A	INST. DRAWING ATEX
EB-1005123	A	INST. DRAWING ATEX
EB-3007062	A	INST. DRAWING ATEX
EB-3600755	A	INST. DRAWING ATEX
EB-1005124	A	Spec, APPVL INST 600 SNSR ATEX (6 pages)
EB-1005113	B	Spec, APPVL INST BSTR AMP ATEX (5 pages)
EB-1005125	A	APPVL, D600 ATEX (3 pages)
E-0205700	G	COIL, DRIVE AL
EB-1005067	A	COIL, D600 COIL POS. DET
EB-9000141	A	APPVL RTD (2 pages)
EB-1004974	A	APPVL ASSY, D600 BSTR AMP (2 pages)
EB-1004990	A	APPVL ASSY, D600 BSTR AMP RMT (2 pages)
EB-1005188	A	INTERNAL WIRING DIAGRAM D600

(17) Special conditions for safe use :

- For certified conduit installations a customer supplied Conduit Seal Fitting is required within 18" of the enclosure.
- Risk of Ignition of Hazardous Atmospheres - Disconnect equipment from supply circuit and wait 30 minutes before opening. Keep assembly tightly closed when in operation.
- Explosion Hazard - Substitution of components may impare Intrinsic Safety.
- For installation only with Micro Motion Booster Amplifier and Transmitters.

(18) Essential Health and Safety Requirements : None

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