



Translation

(1) **Type Examination Certificate**

(2) **- Directive 94/9/EC -**

**Equipment and protective systems intended for use
in potentially explosive atmospheres**

(3) **BVS 06 ATEX E 093 X**

(4) **Equipment:** **Sensor type CMF*** *****V****, CNG050*****V****,
F*****V****, H*****V****, R*****V**** and
T*****V******

(5) **Manufacturer:** **Micro Motion, Inc.**

(6) **Anschrift:** **Boulder, Co. 80301, USA**

(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 EXAM BBG Prüf- und Zertifizier GmbH certifies that this equipment (or component) has been found to comply with the Essential Health and Safety Requirements relating to the design of Category 3 equipment intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in confidential test and assessment report BVS PP 06.2082 EG.

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

EN 60079-0:2004 General requirements
IEC 60079-15:2005 Type of protection 'n'
EN 50281-1-1:1998 +A1 Dust explosion protection

(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 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 Ex nA II T1-T5
II 3D IP65 T* °C**

EXAM BBG Prüf- und Zertifizier GmbH

Bochum, dated 02. August 2006

Signed: Dr. Jockers

Signed: Dr. Eickhoff

Certification body

Special services unit

(13) Appendix to

(14) **Type Examination Certificate**

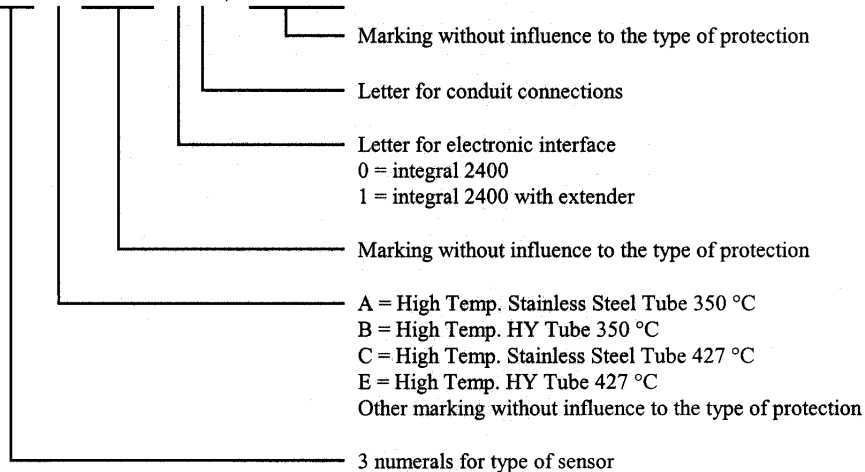
BVS 06 ATEX E 093 X

(15) 15.1 Subject and type

Sensor type CMF*****V****
 CNG050*****V****
 F*****V****
 H*****V****
 R*****V****
 T*****V****

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

C M F * * * * * V * * * *
 C N G 0 5 0 * * * * * V * * * *
 F * * * * * V * * * * *
 H * * * * * V * * * * *
 R * * * * * V * * * * *
 T * * * * * V * * * * *



15.2 Description

The flow sensor in combination with a transmitter is used for flow measurement. The flow sensor, which consists of magnetically excited oscillating tubes, contains as electrical components coils, resistors, temperature sensors and terminals and connectors.

The sensor is designed for use in connection with a suitable transmitter, e. g. type 24*****L**** in accordance with BVS 05 E 116 X; only the assembly of the sensor and the transmitter guarantees the necessary degrees of protection.

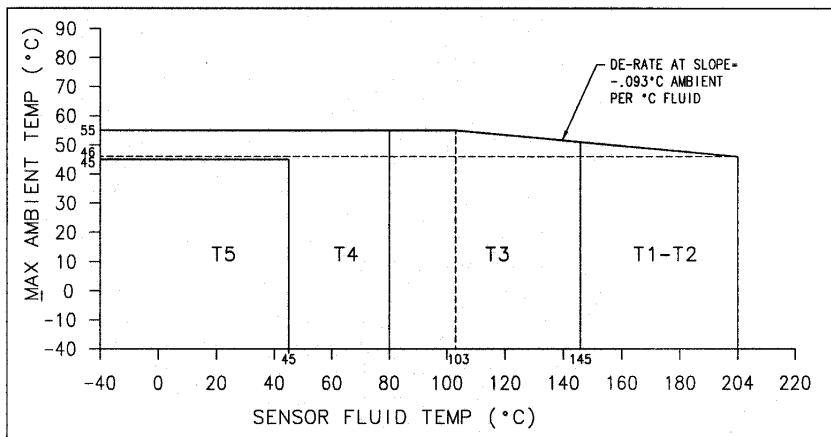
15.3 Parameters

15.3.1	Drive circuit (pin connections 7-8)			
	Voltage	DC	30	V
	Current		84	mA
15.3.2	Pick-Off circuit (pin connections 3-4)			
	Voltage	DC	30	V
	Current		25	mA
15.3.3	Temperature circuit (pin connections 1, 2 and 9)			
	Voltage	DC	30	V
	Current		25	mA

15.3.4 Thermal data
Regulation of temperature class/max. surface temperature T

The classification into a temperature class/determination of the maximum surface temperature T depend on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graphs:

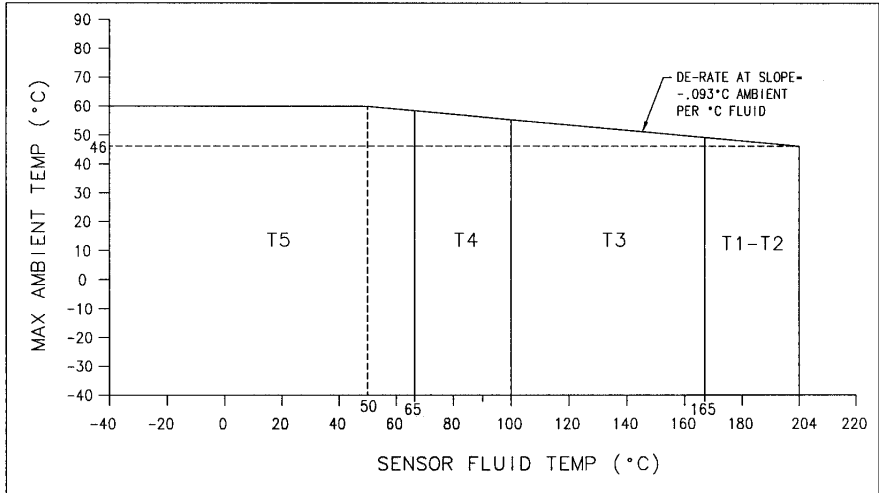
15.3.4.1 Type CMF010*****V****, CMF025*****V****, CMF050*****V****, CMF100*****V****, CMF200*****V****, CMF300*****V**** with integral 2400, except CMF**(A, B, C, E)*****V****



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 254 °C.

Ambient temperature range Ta -40 °C up to +55 °C

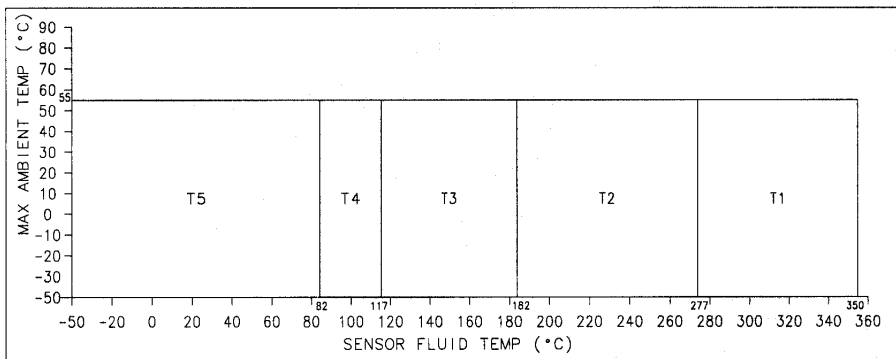
4.4.2 Type CMF400*****V**** with integral 2400



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 234 °C.

Ambient temperature range Ta -40 °C up to +55 °C

4.4.3 Type CMF200(A, B)*****V****, CMF300(A, B)*****V****, CMF400(A, B)*****V**** with integral 2400



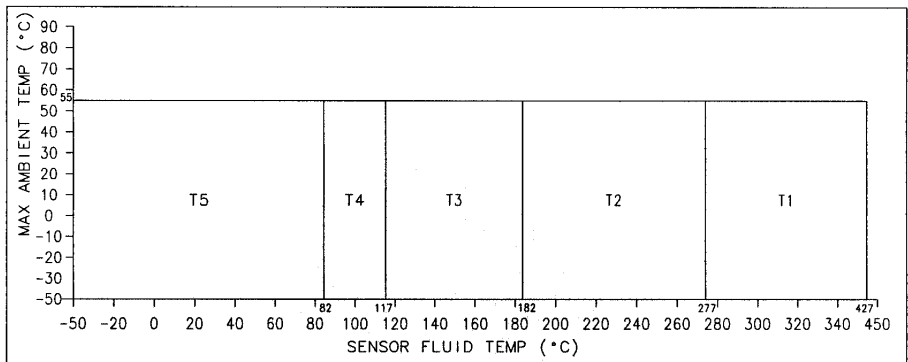
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 363 °C.

Ambient temperature range Ta -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.4.4 Type CMF200(C, E)*****V****, CMF300(C, E)*****V****, CMF400(C, E)*****V**** with integral 2400



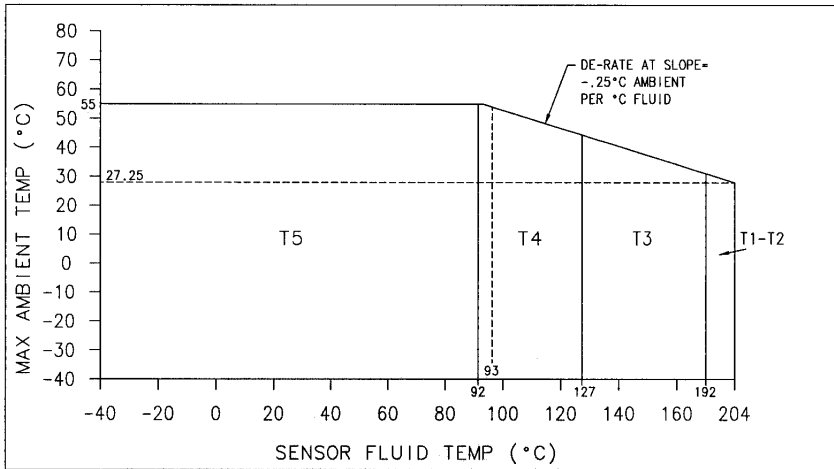
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 440 °C.

Ambient temperature range T_a -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.5 Type F025*****V*****, F050*****V*****, H025*****V*****, H050*****V*****, R025*****V*****, R050*****V*****, and CNG050*****V***** with integral 2400, except F*** (A, B, C, E)*****V*****

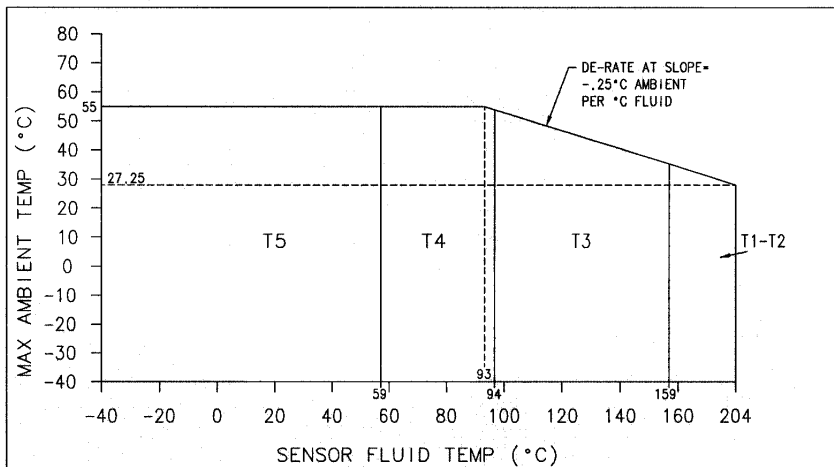


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 207 °C.

Ambient temperature range

Ta -40 °C up to +55 °C

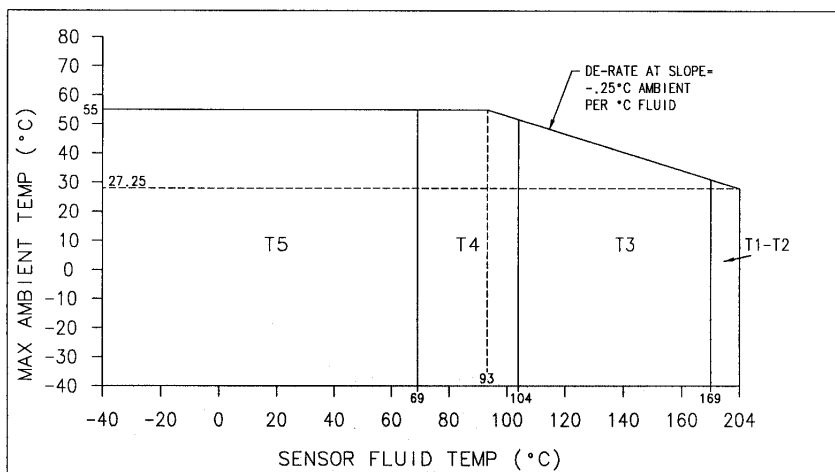
15.3.4.6 Type F100*****V*****, H100*****V*****, R100*****V***** with integral 2400, except F100(A, B, C, E)*****V*****



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 240 °C.

Ambient temperature range T_a -40 °C up to +55 °C

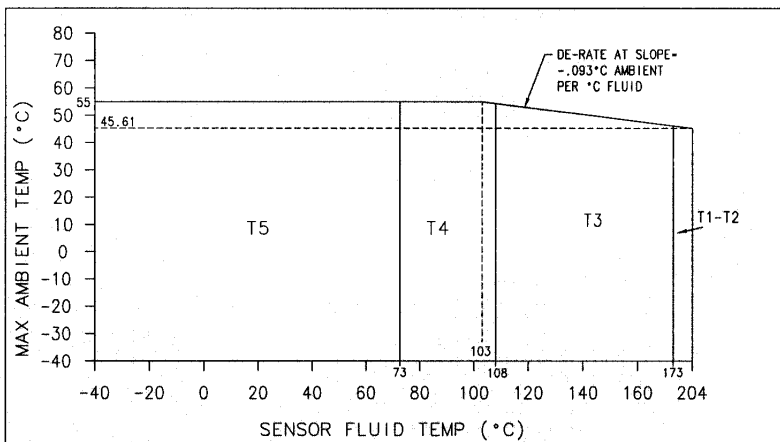
15.3.4.7 Type F200*****V*****, H200*****V*****, R200*****V*****,
with integral 2400, except F200(A, B, C, E)*****V*****



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 230 °C.

Ambient temperature range T_a -40 °C up to +55 °C

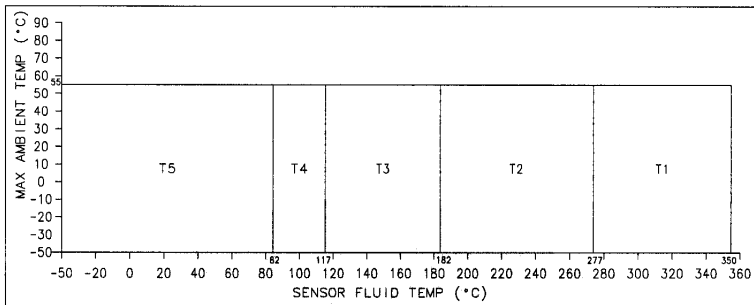
15.3.4.8 Type F300*****V*****, H300*****V*****, with integral 2400,
except F200(A, B, C, E)*****V*****



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 226 °C.

Ambient temperature range T_a -40 °C up to +55 °C

15.3.4.9 Type F025(A, B)*****V*****, F050(A, B)*****V*****, F100(A, B)*****V*****, F300(A, B)*****V***** with integral 2400



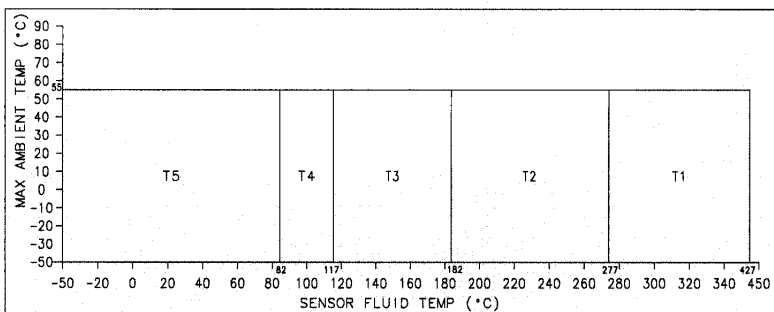
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 363 °C.

Ambient temperature range T_a -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.10 Type F025(C, E)*****V*****, F050(C, E)*****V*****, F100(C, E)*****V*****, F300(C, E)*****V***** with integral 2400



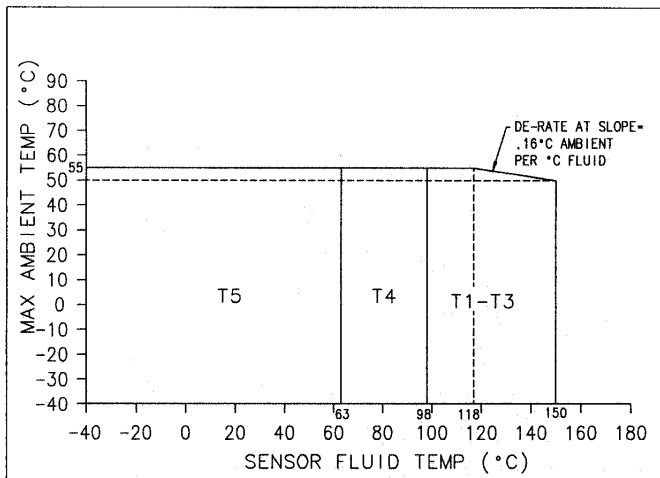
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 440 °C.

Ambient temperature range T_a -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15..4.11 Type T025*****V*****, T050*****V*****, T075*****V*****, T100*****V*****, T150*****V*****, with integral 2400



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: to T1: 182 °C.

Ambient temperature range T_a -40 °C up to +55 °C

(16) Test report
BVS PP 06.2082 EG, dated 02.08.2006

(17) Special condition for safe use

The sensor is designed for use in connection with a suitable transmitter, e. g. type 24*****L**** in accordance with BVS 05 E 116 X; only the assemblage of the sensor and the transmitter guarantees the necessary degrees of protection.

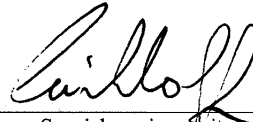
We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 02.08.2006
BVS-Schu/Mi A 20050713

EXAM BBG Prüf- und Zertifizier GmbH



Certification body



Special services unit

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Ihr Zeichen Henk van Holland
Ihre Nachricht 17.01.2007
Unser Zeichen BVS-Hk/Mi A 20070039
Durchwahl Tel.: (0234) 3696 105 Fax: (0234) 3696 110
e-mail Hauke@bg-exam.de
Datum 24.01.2007

Ladies and Gentlemen,

we added the Revision Report as of 24.01.2007 to the Test and Assessment Report
BVS PP 06.2082 EG.


We confirm, that the Certificate

BVS 06 ATEX E 093 X as of 02.08.2006

is still valid.

Kind regards
BBG Prüf- und Zertifizier GmbH


(Dr. Jockers)


(Dr. Eickhoff)

Enclosures: Revision Report

EXAM
BBG Prüf- und Zertifizier
GmbH

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Dr.-Ing. Günter Levin

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Amtsgericht Bochum
HRB 5357

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Translation

1st Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the Type Examination Certificate BVS 06 ATEX E 093 X

Equipment: Sensor type CMF*** *****V****, CNG050*****V****,
F*****V****, H*****V****, R*****V**** and
T*****V****

Manufacturer: Micro Motion, Inc.

Address: Boulder, Co. 80301, USA

Description

The sensor has been assessed in acc. with the standards EN 62141-** and new versions
type CMF800*****V**** and type CMFCH3*****V****
are possible.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 60079-0:2006 General requirements
EN 60079-15:2005 Type of protection 'n'
EN 61241-0:2006 General requirements
EN 61241-1:2004 Protection by enclosures 'tD'

The marking of the equipment shall include the following:

 **II 3G Ex nA II T1-T5
II 3D Ex tD A22 IP65 T* °C**

Special conditions for safe use

Not changed

Modified parameters

1 Type CMF800*****(0, 1)*V**** and CMFHC3*****(0, 1)*V**** , including type CMF800(A,B,C,E)*****(0, 1)*V**** and CMFHC3(A,B,C,E)*****(0, 1)*V****.

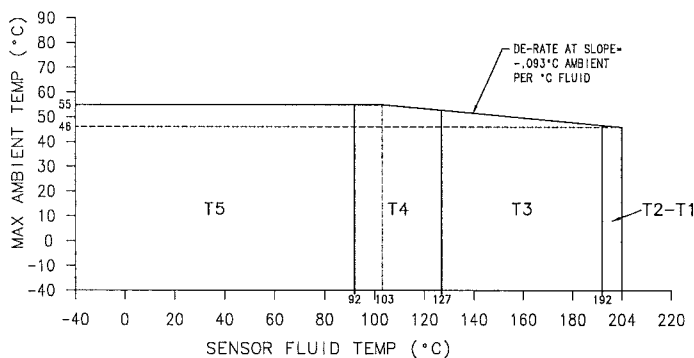
1.1	Drive circuit (pin connections 7-8)			
	Voltage	DC	30	V
	Current		84	mA
1.2	Pick-Off circuit (pin connections 3-4)			
	Voltage	DC	30	V
	Current		25	mA
1.3	Temperature circuit (pin connections 1, 2 and 9)			
	Voltage	DC	30	V
	Current		25	mA

2 Thermal data

Regulation of temperature class/max. surface temperature T

The classification into a temperature class/determination of the maximum surface temperature T depend on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graphs:

2.1 Types CMF800*****(0,1)*V**** and CMFHC3*****(0,1)*V**** with integral 2400

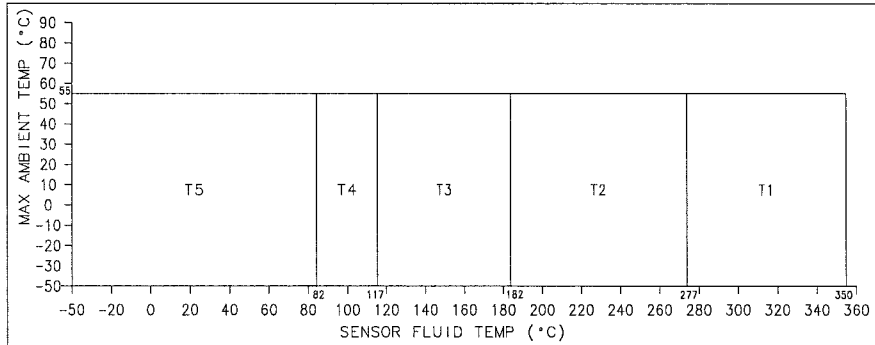


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 207 °C.

Ambient temperature range

Ta -40 °C up to +55 °C

2.2 Type CMF800(A,B)****(0,1)*V**** and CMFHC3(A,B)***** (0,1)*V**** with integral 2400

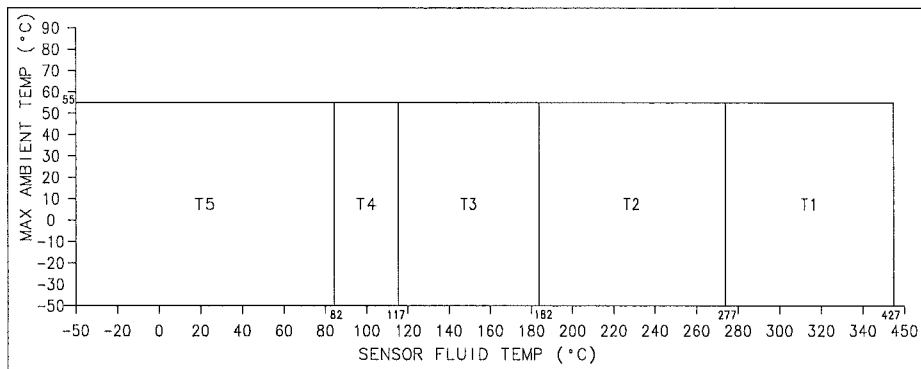


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 363 °C.

Ambient temperature range Ta -50 °C up to +55 °C
 The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

2.3 Type CMF800(C,E)****(0,1)*V**** and CMFHC3(C,E)***** (0,1)*V**** with integral 2400



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 440 °C.

Ambient temperature range Ta -50 °C up to +55 °C
 The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

Test and assessment report

BVS PP 06.2082 EG as of 13.11.2007

DEKRA EXAM GmbH

Bochum, dated 13. November 2007

Signed: Dr. Jockers

Signed: Dr. Eickhoff

Certification body

Special services unit

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.

44809 Bochum, 13.11.2007
BVS-Schu/Mi A 20070569

DEKRA EXAM GmbH



Certification body



Special services unit



Translation

2nd Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the Type Examination Certificate

BVS 06 ATEX E 093 X

Equipment: Sensor type CMF*** *****V****, CNG050*****V****, F*****V****, H*****V****, R*****V**** and T*****V****

Manufacturer: Micro Motion, Inc.

Address: Boulder, Co. 80301, USA

Description

The sensor can be modified according to the descriptive documents as mentioned in the pertinent test and assessment report.

Versions type CMF800*****V**** have been removed.

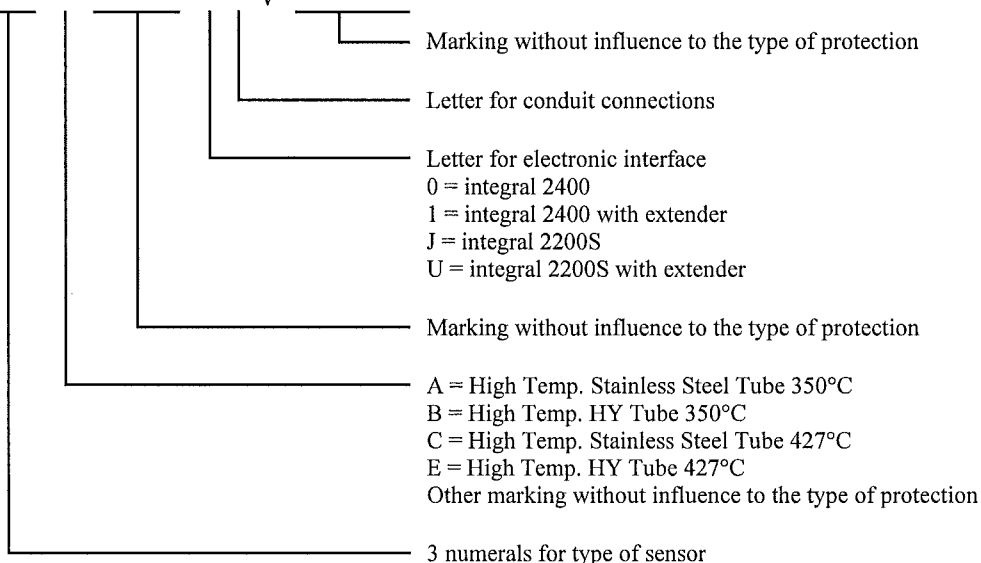
New versions type CMFHC2*****V**** are possible.

New versions with integral 2200S*****L**** (BVS PP 08.2150 EG) are possible:

Type ***** (J,U)*V****

Instead of the *** letters and numerals will be inserted which characterize modifications.

CMF*****V****
CNG050*****V****
F*****V****
H*****V****
R*****V****
T*****V****



The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

- EN 60079-0:2006 General requirements
- EN 60079-15:2005 Type of protection 'n'
- EN 61241-0:2006 General requirements
- EN 61241-1:2004 Protection by enclosures 'tD'

The marking of the equipment shall include the following:

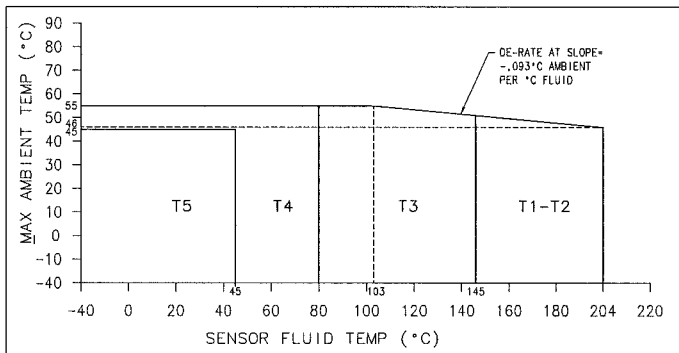
II 3G Ex nA II T1-T4/T5
II 3D Ex tD A22 IP65 T* °C

Parameters

1	Drive circuit (pin connections 7-8) Voltage Current	DC	30 84	V mA
2	Pick-Off circuit (pin connections 3-4) Voltage Current	DC	30 25	V mA
3	Temperature circuit (pin connections 1, 2 and 9) Voltage Current	DC	30 25	V mA
4	Thermal data type CMF*****V***** Regulation of temperature class/max. surface temperature T			

The classification into a temperature class/determination of the maximum surface temperature T depend on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graphs:

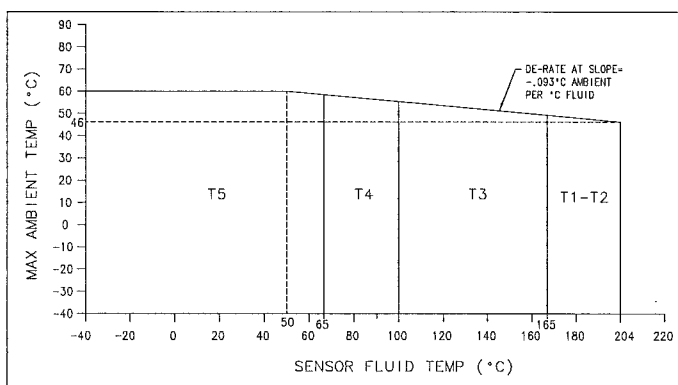
- 4.1 Type CMF010***** $(0,1)$ *V*****, CMF025***** $(0,1)$ *V*****, CMF050***** $(0,1)$ *V*****, CMF100*** $(0,1)$ *V*****, CMF200***** $(0,1)$ *V*****, CMF300***** $(0,1)$ *V***** with integral 2400, **except** CMF*** (A,B,C,E) ***** $(0,1)$ *V*****



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 254 °C.

Ambient temperature range Ta -40 °C up to +55 °C

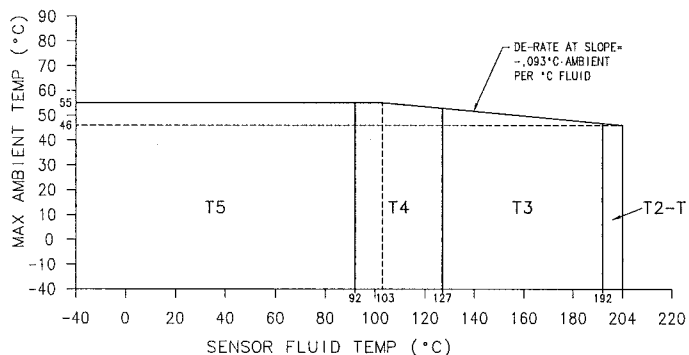
4.2 Type CMF400*****(0,1)*V**** with integral 2400



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 234 °C.

Ambient temperature range Ta -40 °C up to +60 °C

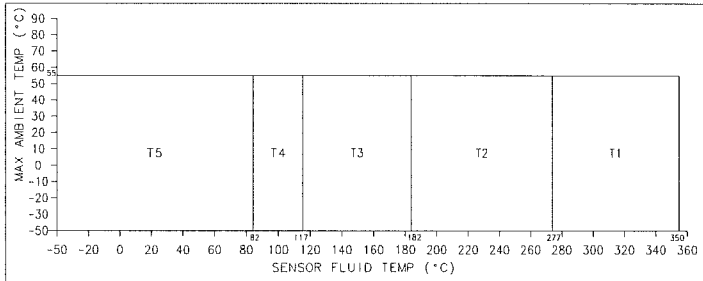
4.3 Types CMFHC2*****(0,1)*V**** and CMFHC3*****(0,1)*V**** with integral 2400



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 207 °C.

Ambient temperature range Ta -40 °C up to +55 °C

4.4 Type CMF200(A,B)****(0,1)*V****, CMF300(A,B)****(0,1)*V****, CMF400(A,B)****(0,1)*V****, CMFHC2(A,B)****(0,1)*V**** and CMFHC3(A,B)****(0,1)*V**** with integral 2400



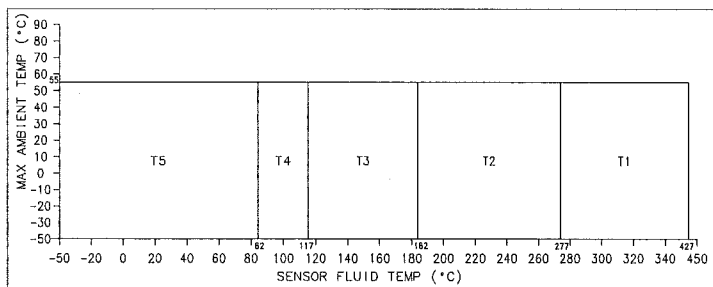
Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 363 °C.

Ambient temperature range Ta -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.5 Type CMF200(C,E)****(0,1)*V****, CMF300(C,E)****(0,1)*V****, CMF400(C,E)****(0,1)*V****, CMFHC2(C,E)****(0,1)*V**** and CMFHC3(C,E)****(0,1)*V**** with integral 2400



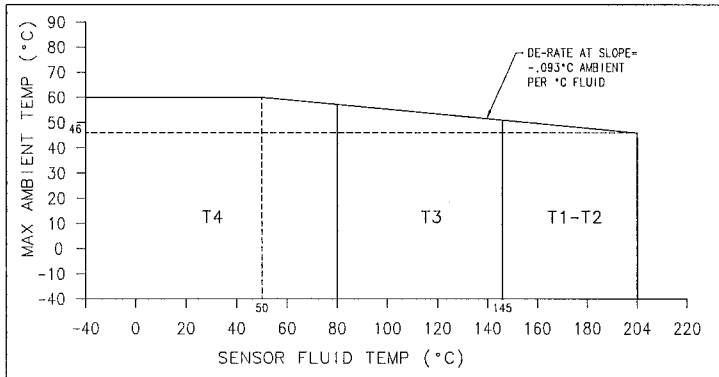
Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 440 °C.

Ambient temperature range Ta -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

- 4.6 Type CMF010*****(J,U)*V****, CMF025*****(J,U)*V****, CMF050*****(J,U)*V****, CMF100*****(J,U)*V****, CMF200*****(J,U)*V****, CMF300*****(J,U)*V**** with integral 2200S, except CMF***(A,B,C,E)*****(J,U)*V****

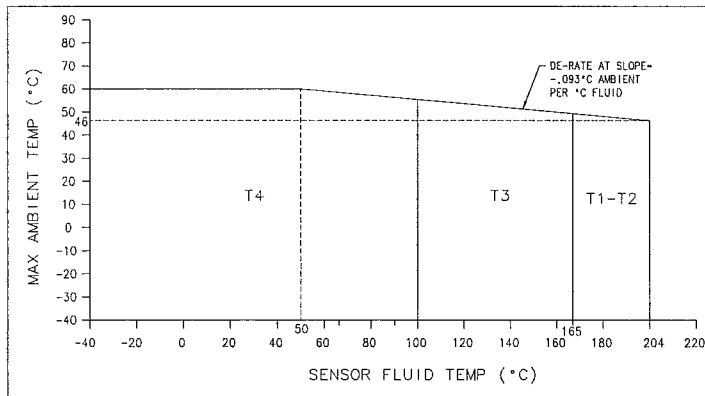


Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: 195 °C, T2: to T1: 254 °C.

Ambient temperature range

Ta -40 °C up to +60 °C

- 4.7 Type CMF400*****(J,U)*V****, with integral 2200S

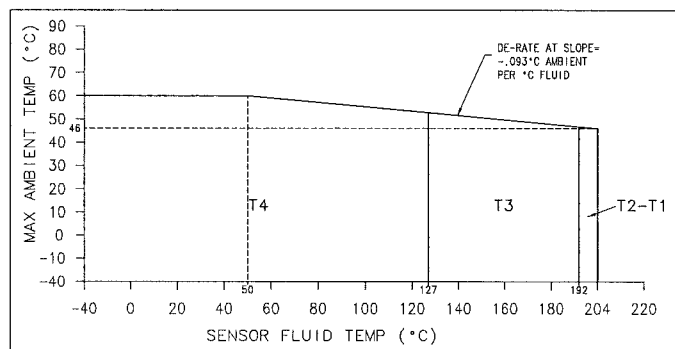


Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: 195 °C, T2: to T1: 234 °C.

Ambient temperature range

Ta -40 °C up to +60 °C

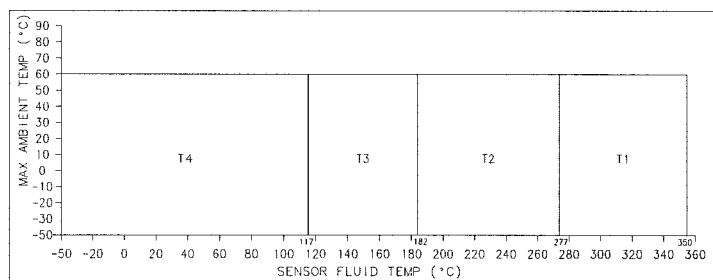
4.8 Types CMFHC2*****(J,U)*V**** and CMFHC3*****(J,U)*V**** with integral 2200S



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: 195 °C, T2: to T1: 207 °C.

Ambient temperature range Ta -40 °C up to +60 °C

4.9 Type CMF200(A,B)****(J,U)*V****, CMF300(A,B)****(J,U)*V****, CMF400(A,B)****(J,U)*V****, CMFHC2(A,B)****(J,U)*V**** and CMFHC3(A,B)****(J,U)*V**** with integral 2200S



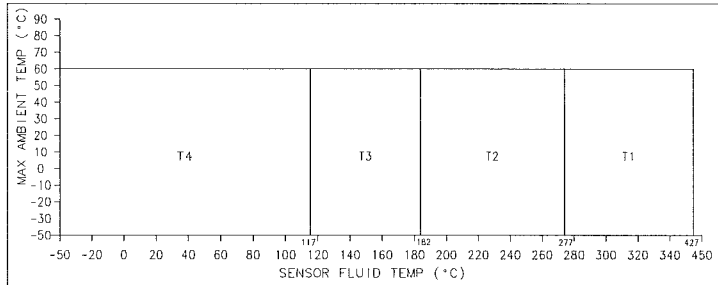
Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 363 °C.

Ambient temperature range Ta -50 °C up to +60 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +60°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.10 Type CMF200(C,E)****(J,U)*V****, CMF300(C,E)****(J,U)*V****, CMF400(C,E)****(J,U)*V****, CMFHC2(C,E)****(J,U)*V**** and CMFHC3(C,E)****(J,U)*V**** with integral 2200S



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 440 °C.

Ambient temperature range T_a -50 °C up to +60 °C

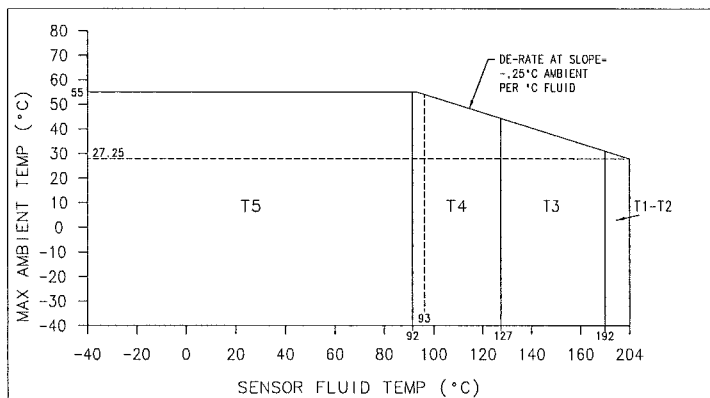
The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +60°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

5 Thermal data type F*****V*****, H*****V*****, R*****V*****, CNG050*****V**** Regulation of temperature class/max. surface temperature T

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

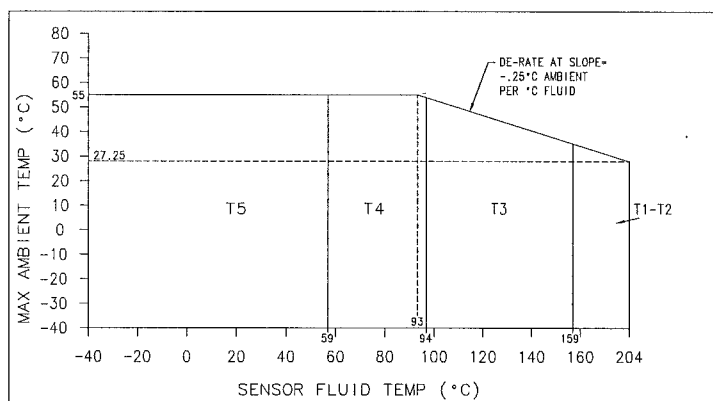
5.1 Type F025***** (0,1)*V*****, F050***** (0,1)*V*****, H025***** (0,1)*V*****, H050***** (0,1)*V*****, R025***** (0,1)*V*****, R050***** (0,1)*V***** and CNG050*** (0,1)*V***** with integral 2400, **except** F*** (A,B,C,E)**** (0,1)*V*****



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature.
 The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C,
 T2: to T1: 207 °C.

Ambient temperature range Ta -40 °C up to +55 °C

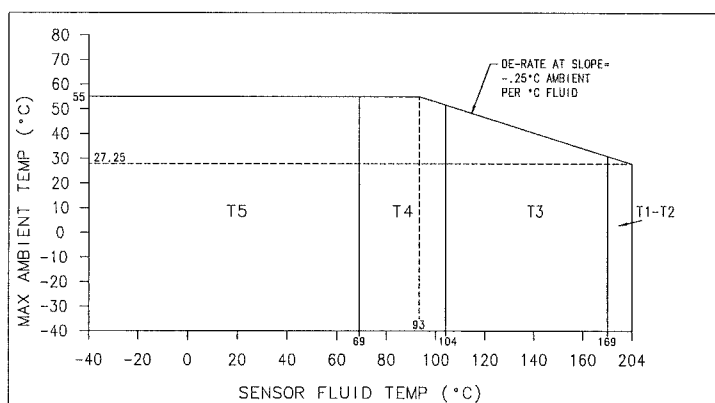
5.2 Type F100***** $(0,1)*V*****$, H100***** $(0,1)*V*****$, R100***** $(0,1)*V*****$
 with integral 2400, **except** F100(A,B,C,E)***** $(0,1)*V*****$



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature.
 The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C,
 T2: to T1: 240 °C.

Ambient temperature range Ta -40 °C up to +55 °C

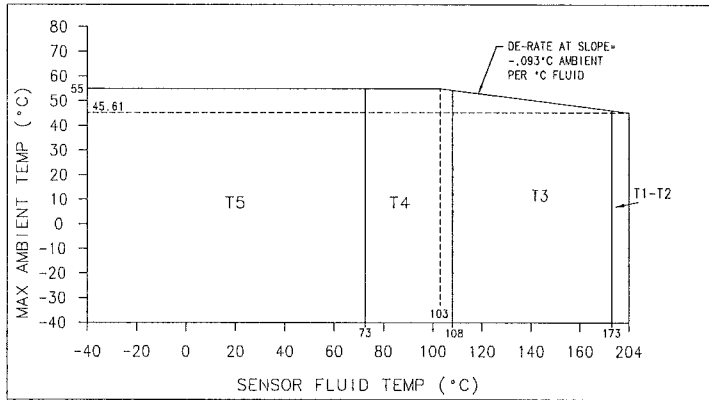
5.3 Type F200***** $(0,1)*V*****$, H200***** $(0,1)*V*****$, R200***** $(0,1)*V*****$
 with integral 2400, **except** F200(A,B,C,E)***** $(0,1)*V*****$



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature.
 The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1:
 230 °C.

Ambient temperature range Ta -40 °C up to +55 °C

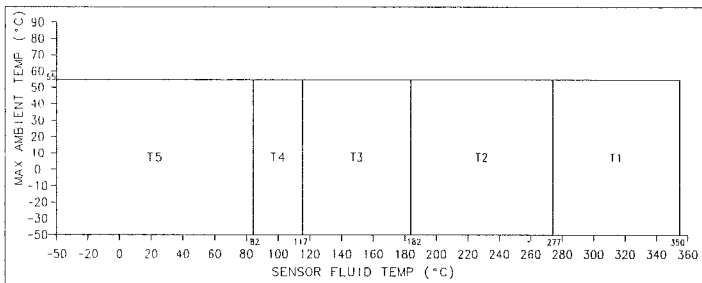
5.4 Type F300*****(0,1)*V*****, H300*****(0,1)*V*****, with integral 2400, except F300(A,B,C,E)*****(0,1)*V*****



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 226 °C.

Ambient temperature range Ta -40 °C up to +55 °C

5.5 Type F025(A,B)*****(0,1)*V*****, F050(A,B)*****(0,1)*V*****, F100(A,B)*****(0,1)*V*****, F300(A,B)*****(0,1)*V***** with integral 2400



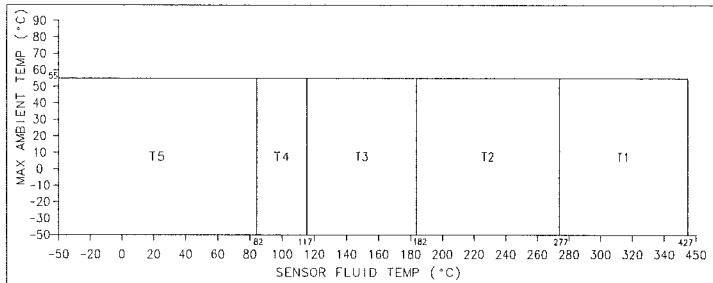
Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 363 °C.

Ambient temperature range Ta -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

5.6 Type F025(C,E)****(0,1)*V*****, F050(C,E)****(0,1)*V*****, F100(C,E)****(0,1)*V*****, F300(C,E)****(0,1)*V***** with integral 2400



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 440 °C.

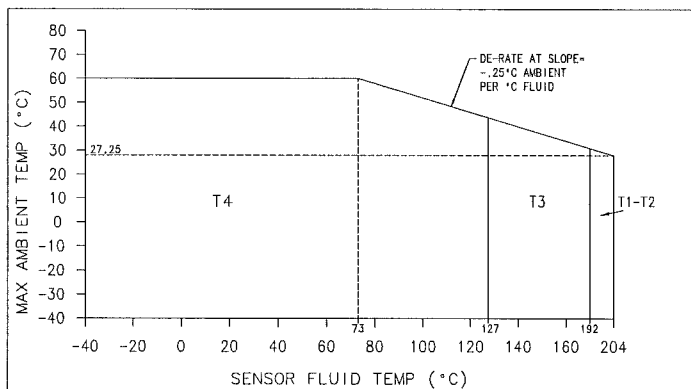
Ambient temperature range

Ta -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

5.7 Type F025*****(J,U)*V*****, F050*****(J,U)*V*****, H025*****(J,U)*V*****, H050*****(J,U)*V*****, R025*****(J,U)*V*****, R050*****(J,U)*V***** and CNG050*****(J,U)*V***** with integral 2200S, except F***(A,B,C,E)*****(J,U)*V*****

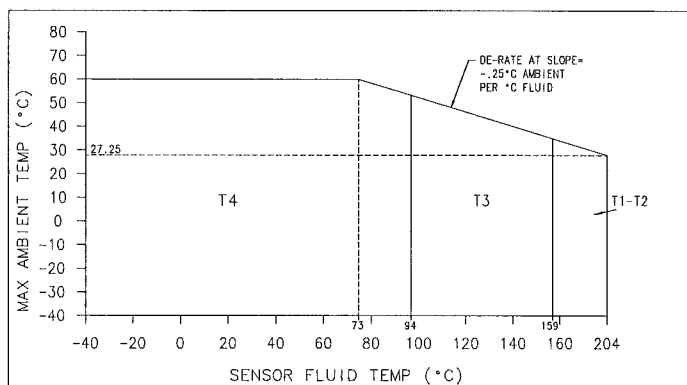


Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: 195 °C, T2: to T1: 207 °C.

Ambient temperature range

Ta -40 °C up to +60 °C

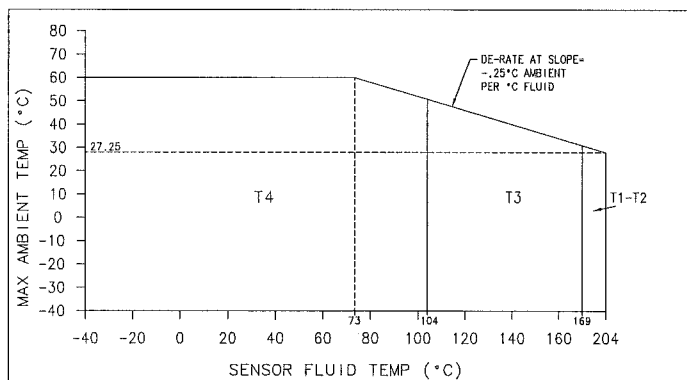
5.8 Type F100*****(J,U)*V*****, H100*****(J,U)*V*****, R100*****(J,U)*V***** with integral 2200S, **except** F100(A,B,C,E)*****(J,U)*V*****



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: 195 °C, T2: to T1: 240 °C.

Ambient temperature range Ta -40 °C up to +60 °C

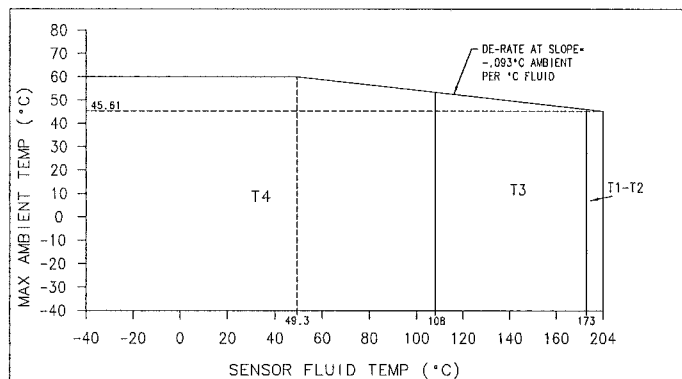
5.9 Type F200*****(J,U)*V*****, H200*****(J,U)*V*****, R200*****(J,U)*V***** with integral 2200S, **except** F200(A,B,C,E)*****(J,U)*V*****



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: 195 °C, T2: to T1: 230 °C.

Ambient temperature range Ta -40 °C up to +60 °C

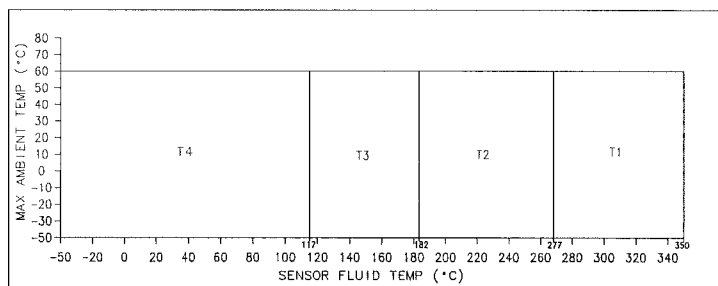
5.10 Type F300*****(J,U)*V*****, H300*****(J,U)*V*****, with integral 2200S, except F300(A,B,C,E)*****(J,U)*V*****



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: 195 °C, T2: to T1: 226 °C.

Ambient temperature range Ta -40 °C up to +60 °C

5.11 Type F025(A,B)*****(J,U)*V*****, F050(A,B)*****(J,U)*V*****, F100(A,B)*****(J,U)*V*****, F300(A,B)*****(J,U)*V***** with integral 2200S



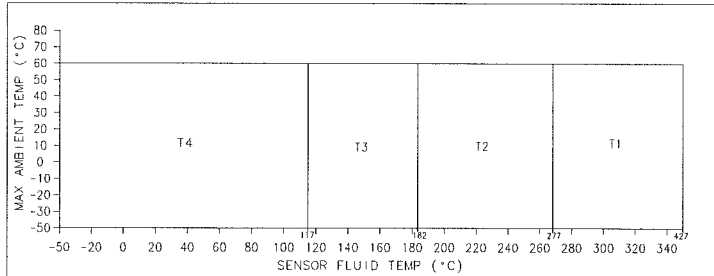
Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 363 °C.

Ambient temperature range Ta -50 °C up to +60 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +60°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

5.12 Type F025(C,E)****(J,U)*V*****, F050(C,E)****(J,U)*V*****, F100(C,E)****(J,U)*V*****, F300(C,E)****(J,U)*V***** with integral 2200S



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: 195 °C, T2: 290 °C and T1: 440 °C.

Ambient temperature range Ta -50 °C up to +60 °C

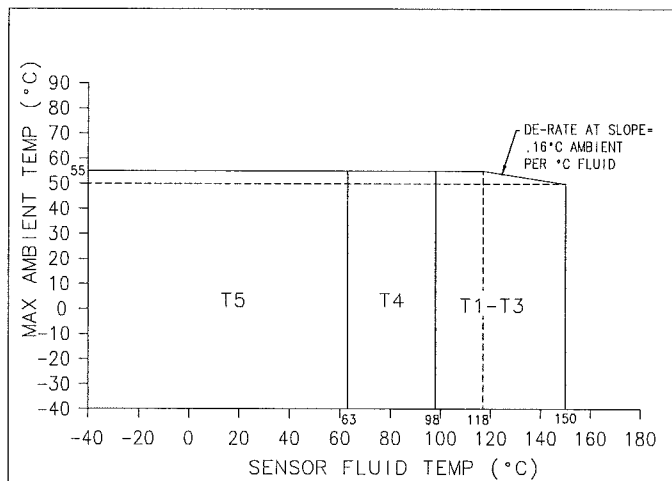
The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +60°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

6 Thermal data type T*****V*****
Regulation of temperature class/max. surface temperature T

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

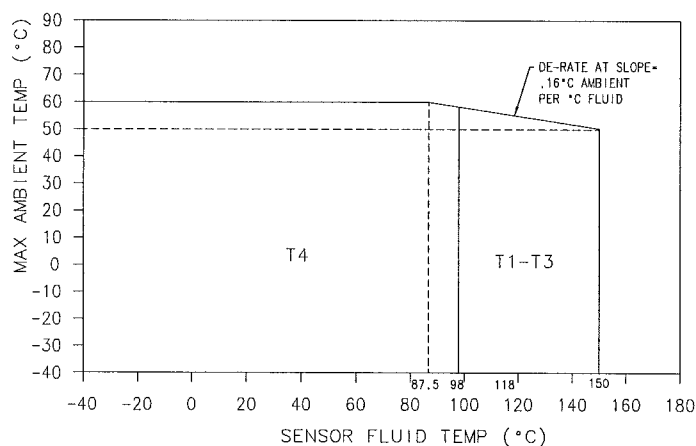
6.1 Type T025***** (0,1)*V*****, T050***** (0,1)*V*****, T075***** (0,1)*V*****, T100***** (0,1)*V*****, T150***** (0,1)*V*****, with integral 2400



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature.
The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: to T1: 182 °C.

Ambient temperature range Ta -40 °C up to +55 °C

6.2 Type T025******(J,U)*V******, T050******(J,U)*V******, T075******(J,U)*V******,
T100******(J,U)*V******, T150******(J,U)*V******, with integral 2200S



Note: Use the graph above to determine the temperature class for a given fluid and ambient temperature.
The maximum surface temperature T for dust is as follows: T4: 130 °C, T3: to T1: 182 °C.

Ambient temperature range Ta -40 °C up to +60 °C

Special conditions for safe use

The sensor is designed for use in connection with a suitable transmitter, e. g. type 24******L***** in accordance with BVS 05 E 116 X resp. type 2200S******L***** in accordance with BVS 08 ATEX E 112 X; only the assemblage of the sensor and the transmitter guarantees the necessary degrees of protection.

Test and assessment report

BVS PP 06.2082 EG as of 13.11.2008

DEKRA EXAM GmbH
Bochum, dated 13. November 2008

Signed: Dr. Jockers

Certification body

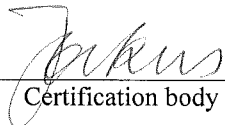
Signed: Dr. Eickhoff

Special services unit

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.

44809 Bochum, 13. November 2008
BVS-Schu / Her A 20080839

DEKRA EXAM GmbH



Certification body



Special services unit



3rd Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the Type Examination Certificate BVS 06 ATEX E 093 X

Equipment: Sensor_type CMF*** *****V****, CNG050*****V****,
F*****V****, H*****V****, R*****V****,
T*****V**** and CMFS*****V****

Manufacturer: Micro Motion, Inc.

Address: Boulder, Co. 80301, USA

Description

New versions are possible:

Type CMFS***V******

Instead of the *** letters and numerals will be inserted which characterize modifications.

C	M	F	*	*	*	*	*	*	*	*	*	*	V	*	*	*	*
C	N	G	0	5	0	*	*	*	*	*	*	*	V	*	*	*	*
F	*	*	*	*	*	*	*	*	*	*	*	*	V	*	*	*	*
H	*	*	*	*	*	*	*	*	*	*	*	*	V	*	*	*	*
R	*	*	*	*	*	*	*	*	*	*	*	*	V	*	*	*	*
T	*	*	*	*	*	*	*	*	*	*	*	*	V	*	*	*	*
C	M	F	S	*	*	*	*	*	*	*	*	*	V	*	*	*	*

- Marking without influence to the type of protection
- Letter for conduit connections
- Letter for electronic interface
 - 0 = integral 2400
 - 1 = integral 2400 with extender
 - J = integral 2200S
 - U = integral 2200S with extender
- Marking without influence to the type of protection
 - A = High Temp. Stainless Steel Tube 350°C
 - B = High Temp. HY Tube 350°C
 - C = High Temp. Stainless Steel Tube 427°C
 - E = High Temp. HY Tube 427°C
 - Other marking without influence to the type of protection
- 3 numerals for type of sensor

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

- EN 60079-0:2006 General requirements
- EN 60079-15:2005 Type of protection 'n'
- EN 61241-0:2006 General requirements
- EN 61241-1:2004 Protection by enclosures 'tD'

The marking of the equipment shall include the following:

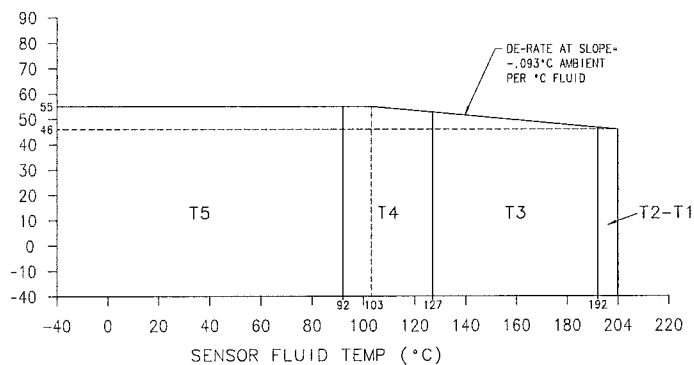
Ex II 3G Ex nA II T1-T4/T5
II 3D Ex tD A22 IP65 T* °C

Parameters type CMF*****V*****

1	Drive circuit (pin connections 7-8) Voltage Current	DC	30 84	V mA
2	Pick-Off circuit (pin connections 3-4) Voltage Current	DC	30 25	V mA
3	Temperature circuit (pin connections 1, 2 and 9 resp. wires orange, yellow and violet) Voltage Current	DC	30 25	V mA
4	Thermal data Regulation of temperature class/max. surface temperature T			

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

4.1 Type CMFS010***** (0,1)*V*****, CMFS015***** (0,1)*V***** with integral 2400

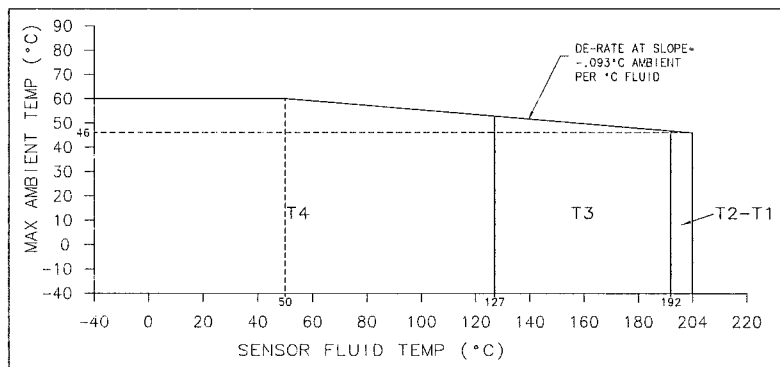


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 207 °C.

Ambient temperature range

Ta -40 °C up to +55 °C

4.2 Type CMFS010*****(J, U)*3****, CMFS015*****(J, U)*3**** with integral 2200



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: to T1: 207 °C.

Ambient temperature range

Ta -40 °C up to +60 °C

Special conditions for safe use

The sensor is designed for use in connection with a suitable transmitter, e. g. type 24*****L**** in accordance with BVS 05 E 116 X resp. type 2200S*****L**** in accordance with BVS 08 ATEX E 112 X; only the assemblage of the sensor and the transmitter guarantees the necessary degrees of protection.

Test and assessment report

BVS PP 06.2082 EG as of 02.03.2009

DEKRA EXAM GmbH
Bochum, dated 02.March 2009

Signed: Dr. Eickhoff
Certification body

Signed: Dr. Arnold
Special services unit


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.

44809 Bochum, 02. March 2009
BVS-Schu / Her A 20090031

DEKRA EXAM GmbH



Certification body



Special services unit



Translation

4th Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the Type Examination Certificate

BVS 06 ATEX E 093 X

Equipment: Sensor type CMF*** *****V****, CNG050*****V****, F*****V****, H*****V****, R*****V****, T*****V**** and CMFS*****V****

Manufacturer: Micro Motion, Inc.

Address: Boulder, Co. 80301, USA

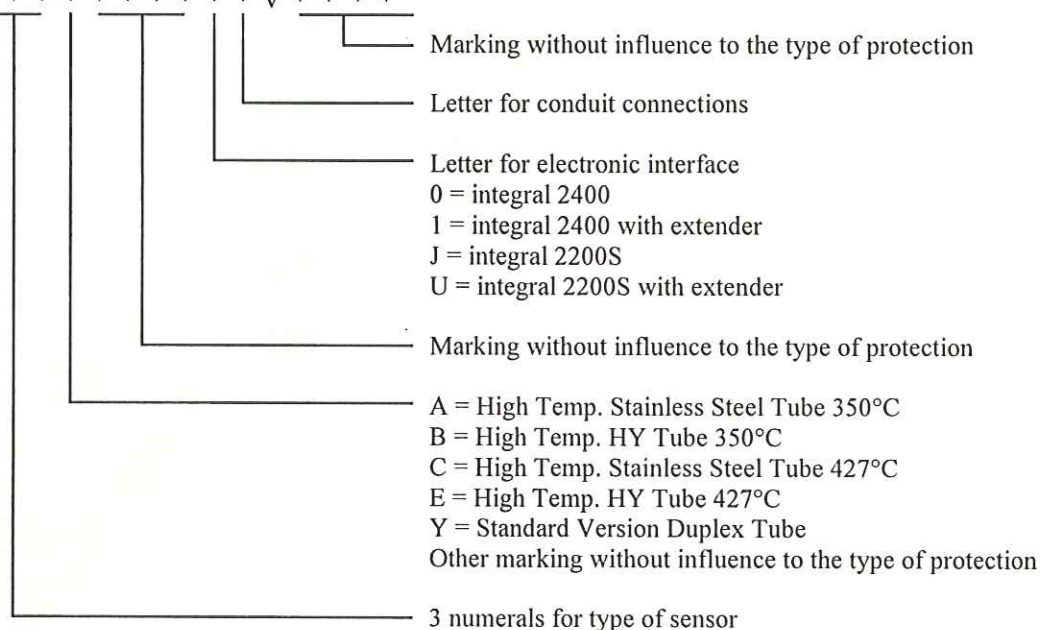
Description

New versions are possible:

Type CMFHC*Y*****V****

Instead of the *** letters and numerals will be inserted which characterize modifications:

C	M	F	*	*	*	*	*	*	*	*	*	*	V	*	*	*	*
C	N	G	0	5	0	*	*	*	*	*	*	*	V	*	*	*	*
	F	*	*	*	*	*	*	*	*	*	*	*	V	*	*	*	*
	H	*	*	*	*	*	*	*	*	*	*	*	V	*	*	*	*
	R	*	*	*	*	*	*	*	*	*	*	*	V	*	*	*	*
	T	*	*	*	*	*	*	*	*	*	*	*	V	*	*	*	*
C	M	F	S	*	*	*	*	*	*	*	*	*	V	*	*	*	*



The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

- EN 60079-0:2006 General requirements
- EN 60079-15:2005 Type of protection 'n'
- EN 61241-0:2006 General requirements
- EN 61241-1:2004 Protection by enclosures 'tD'

The marking of the equipment shall include the following:

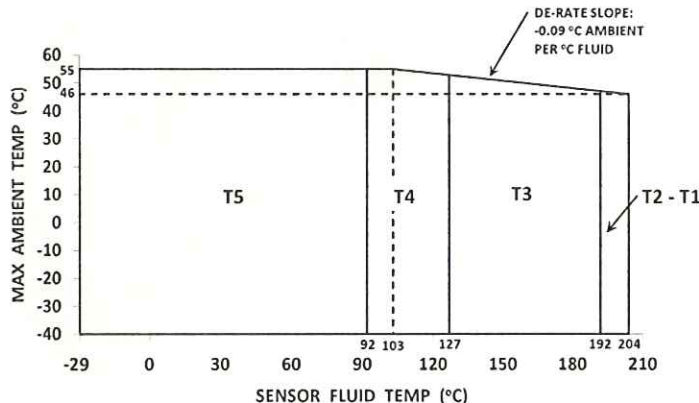
II 3G Ex nA II T1-T4/T5
II 3D Ex tD A22 IP65 T* °C

Parameters type CMF*****V****

1	Drive circuit (pin connections 7-8) Voltage Current	DC	30 84	V mA
2	Pick-Off circuit (pin connections 3-4) Voltage Current	DC	30 25	V mA
3	Temperature circuit (pin connections 1, 2 and 9 resp. wires orange, yellow and violet) Voltage Current	DC	30 25	V mA
4	Thermal data Regulation of temperature class/max. surface temperature T			

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

For type CMFHC*Y****(0,1)*V****



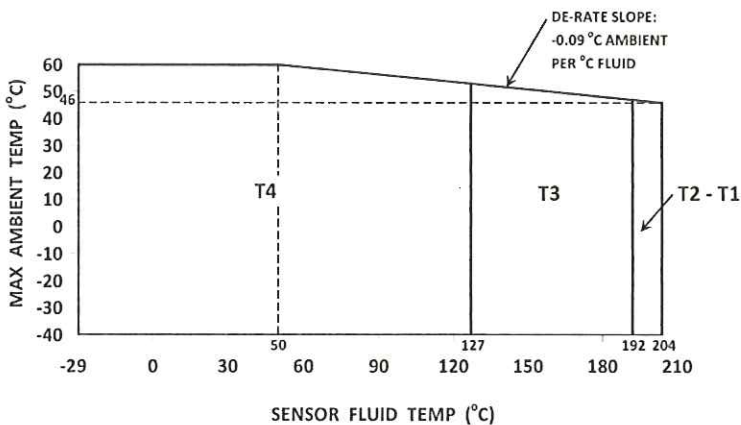
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust for types CMFHC*Y*****V**** is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 to T1: 207 °C.

Ambient temperature range

Ta

-40 °C up to +55 °C

For type CMFHC*Y****(J,U)*V****



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust for types CMFHC*Y*****V**** is as follows: T4: 130 °C, T3: 195 °C, T2 to T1: 207 °C.

Ambient temperature range

Ta

-40 °C up to +60 °C

Special conditions for safe use

The sensor is designed for use in connection with a suitable transmitter, e. g. type 24*****L**** in accordance with BVS 05 E 116 X resp. type 2200S*****L**** in accordance with BVS 08 ATEX E 112 X; only the assemblage of the sensor and the transmitter guarantees the necessary degrees of protection.

Test and assessment report

BVS PP 06.2082 EG as of 12.08.2009

DEKRA EXAM GmbH

Bochum, dated 12. August 2009

Signed: Migenda

Certification body

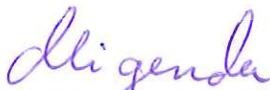
Signed: Dr. Eickhoff

Special services unit

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.

44809 Bochum, 12. August 2009
BVS-Schu/Sz A 20090500

DEKRA EXAM GmbH



Certification body



Special services unit



5th Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the Type Examination Certificate BVS 06 ATEX E 093 X

Equipment: Sensor type CMF*** *****V****, CNG050*****V****,
F*****V****, H*****V****, R*****V****,
T*****V**** and CMFS*****V****

Manufacturer: Micro Motion, Inc.

Address: Boulder, Co. 80301, USA

Description

The sensors can be modified according to the descriptive documents as mentioned in the pertinent test and assessment report.

New versions with integral transmitter type FMT***3*L**** (BVS PP 10.2222EG) are possible:

Type *** (K, L, M or N)*V*******

A new sensor type CMFHC4*****V**** is possible.

Versions 2200S with THUM Wireless Hart Adaptor are possible.


Revised flex conduit for CMF High Temperature versions can be used.

Also the sensors have been tested in acc. with the standards EN 60079-0:2009, EN 60079-15:2010; this leads to a modified marking.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 60079-0:2009	General requirements
EN 60079-15:2010	Type of protection 'n'
EN 60079-31:2009	Protection by enclosures 't'

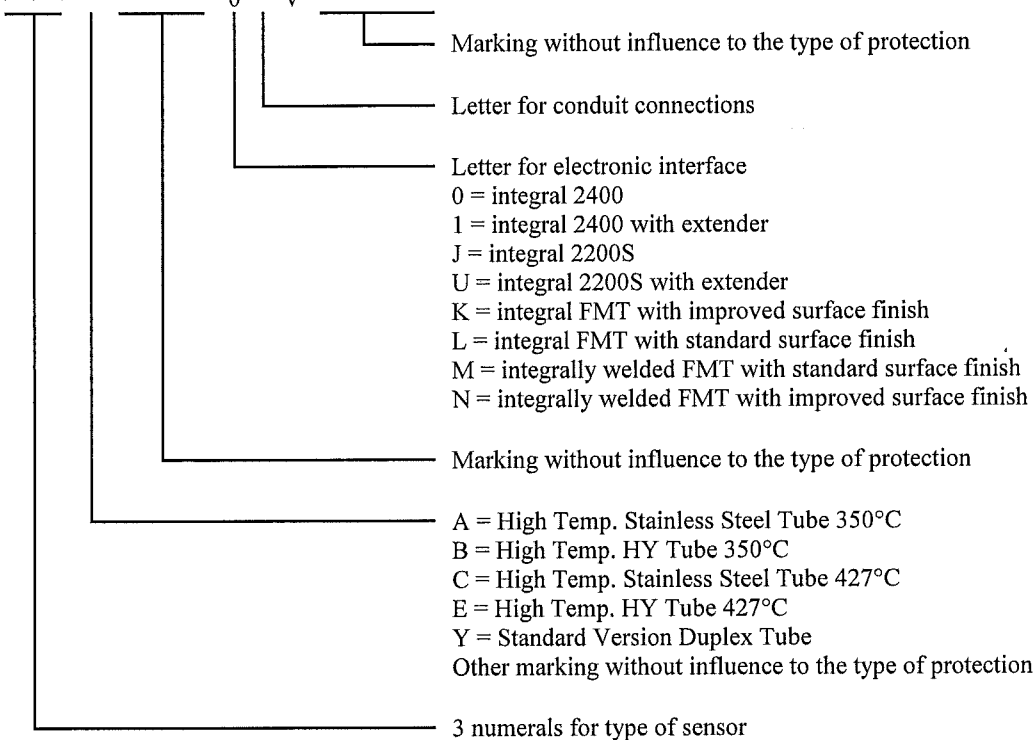
The marking of the equipment shall include the following:

 **II 3G Ex nA IIC T1-T4/T5 Gc**
II 3D Ex tc IIIC T* °C Dc
IP65

Sensor type CMF*****V****
 CNG050*****V****
 F*****V*****
 H*****V*****
 R*****V*****
 T*****V*****
 CMFS*****V****

Instead of the *** letters and numerals will be inserted which characterize modifications.

C M F * * * * * 0 * V * * * *
 C N G 0 5 0 * * * * * 0 * V * * * *
 F * * * * * 0 * V * * * * *
 H * * * * * 0 * V * * * * *
 R * * * * * 0 * V * * * * *
 T * * * * * 0 * V * * * * *
 C M F S * * * * * 0 * V * * * *



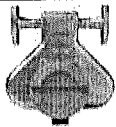
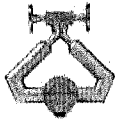
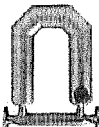
Parameters

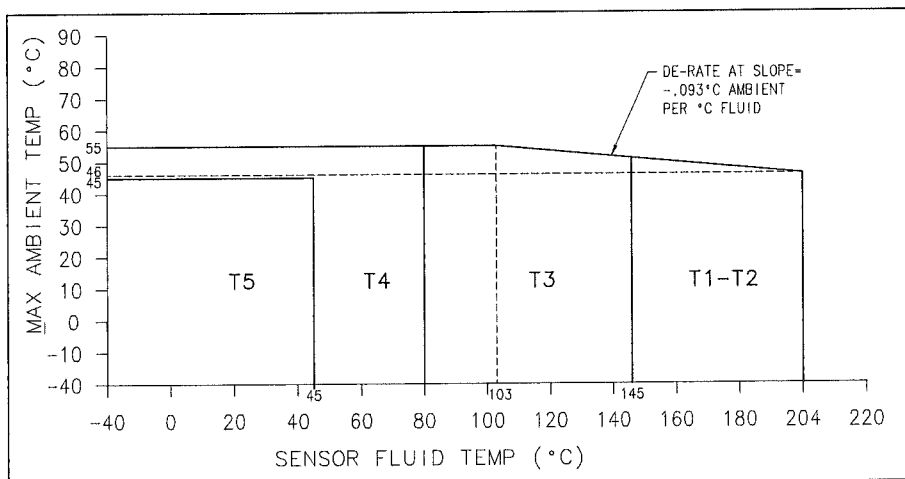
1	Drive circuit (pin connections 7-8)			
	Voltage	DC	30	V
	Current		84	mA
2	Pick-Off circuit (pin connections 3-4 and 5-6)			
	Voltage	DC	30	V
	Current		25	mA
3	Temperature circuit (pin connections 1, 2 and 9)			
	Voltage	DC	30	V
	Current		25	mA

4 Thermal data
Regulation of temperature class/max. surface temperature T

The classification into a temperature class/determination of the maximum surface temperature T depends on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graphs:

4.1 Excluding CMF***(A, B, C, E)***(0,1,K,L,M, N)*V****

Sensor type			
With 2400S	CMF010*****(0,1)*V****	CMF025*****(0,1)*V****	CMF200*****(0,1)*V****
		CMF050*****(0,1)*V****	CMF300*****(0,1)*V****
		CMF100*****(0,1)*V****	
With FMT	CMF010*****(K,L,M,N)*V****	CMF025*****(K,L,M,N)*V****	CMF200*****(K,L,M,N)*V****
		CMF050*****(K,L,M,N)*V****	CMF300*****(K,L,M,N)*V****
		CMF100*****(K,L,M,N)*V****	

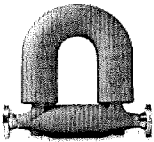


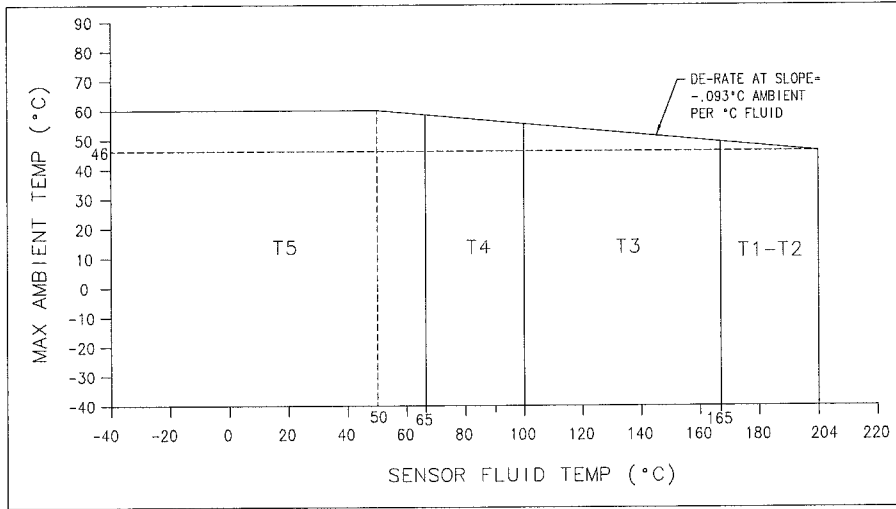
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 254°C

Ambient temperature range

Ta -40 °C up to +55 °C

4.2 Excluding CMF***(A, B, C, E)***(0,1,K,L,M, N)*V****

Sensor type	
With 2400S	CMF400*****(0,1)*V****
With FMT	CMF400*****(K,L,M,N)*V****

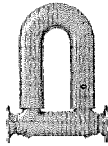


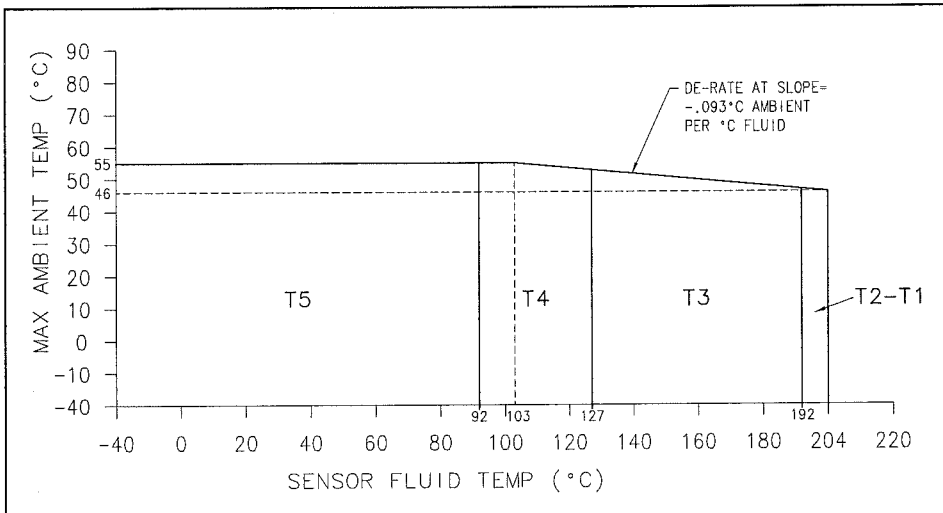
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 234°C

Ambient temperature range

Ta -40 °C up to +60 °C

4.3 Excluding CMF***(A, B, C, E)****(0,1,K,L,M, N)*V****

Sensor type	
With 2400S	CMFHC2*****(0,1)*V****
	CMFHC3*****(0,1)*V****
	CMFHC4*****(0,1)*V****
With FMT	CMFHC2*****(K,L,M,N)*V****
	CMFHC3*****(K,L,M,N)*V****
	CMFHC4*****(K,L,M,N)*V****

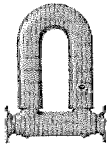


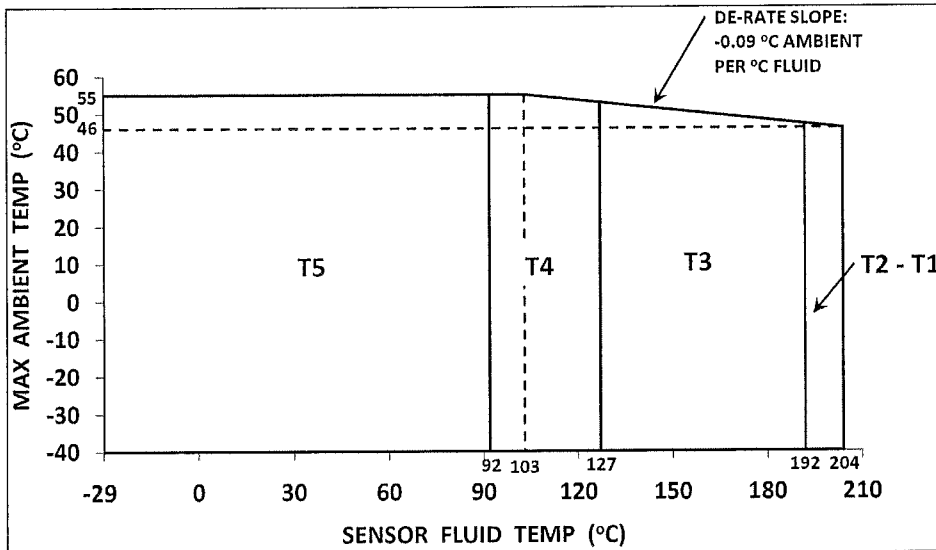
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 207°C

Ambient temperature range

Ta -40 °C up to +55 °C

4.4 Excluding CMF***(A, B, C, E)****(0,1,K,L,M, N)*V****

Sensor type	
With 2400S	CMFHC*Y****(0,1)*V****
With FMT	CMFHC*Y****(K,L,M,N)*V****

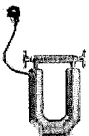


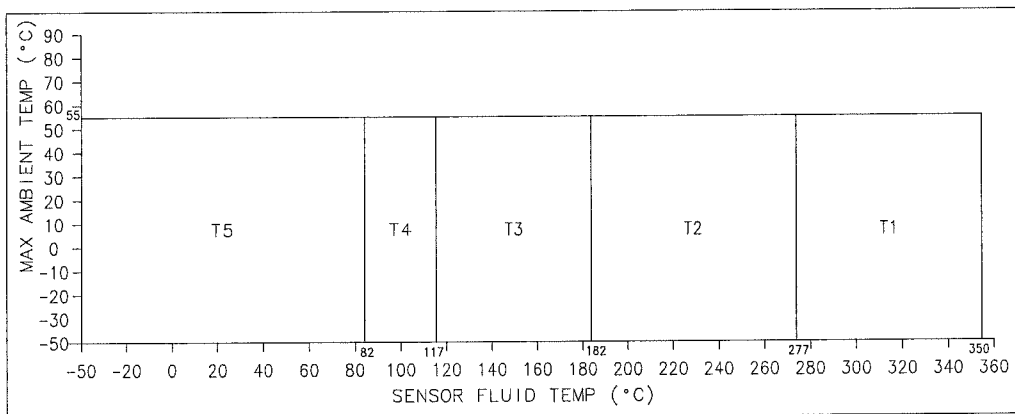
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 207°C

Ambient temperature range

Ta -40 °C up to +55 °C

4.5 CMF***(A, B)****(0,1,K,L,M, N)*V****

Sensor type	
With 2400S	CMF200(A,B)****(0,1)*V****
	CMF300(A,B)****(0,1)*V****
	CMF400(A,B)****(0,1)*V****
	CMFHC2(A,B)****(0,1)*V****
	CMFHC3(A,B)****(0,1)*V****
	CMFHC4(A,B)****(0,1)*V****
With FMT	CMF200(A,B)****(K,L,M,N)*V****
	CMF300(A,B)****(K,L,M,N)*V****
	CMF400(A,B)****(K,L,M,N)*V****
	CMFHC2(A,B)****(K,L,M,N)*V****
	CMFHC3(A,B)****(K,L,M,N)*V****
	CMFHC4(A,B)****(K,L,M,N)*V****



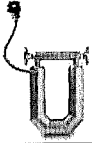
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2:T 290°C and T1:T 363°C

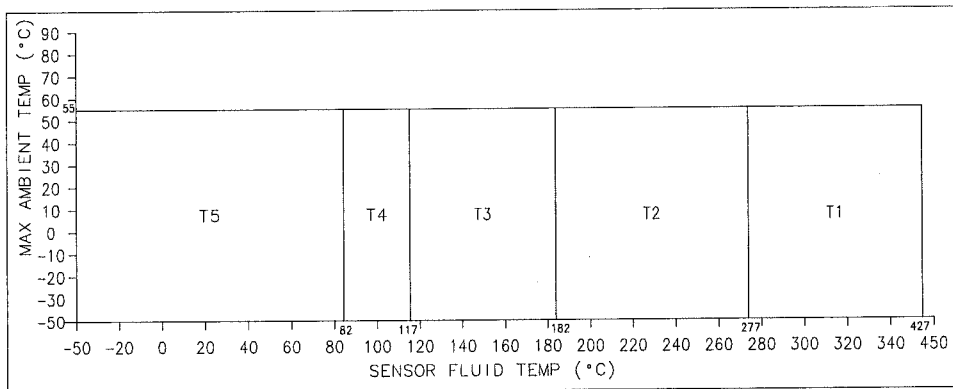
Ambient temperature range Ta -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.6 CMF***(C, E)****(0,1,K,L,M, N)*V****

Sensor type	
With 2400S	CMF200(C,E)****(0,1)*V****
	CMF300(C,E)****(0,1)*V****
	CMF400(C,E)****(0,1)*V****
	CMFHC2(C,E)****(0,1)*V****
	CMFHC3(C,E)****(0,1)*V****
	CMFHC4(C,E)****(0,1)*V****
With FMT	CMF200(C,E)****(K,L,M,N)*V****
	CMF300(C,E)****(K,L,M,N)*V****
	CMF400(C,E)****(K,L,M,N)*V****
	CMFHC2(C,E)****(K,L,M,N)*V****
	CMFHC3(C,E)****(K,L,M,N)*V****
	CMFHC4(C,E)****(K,L,M,N)*V****



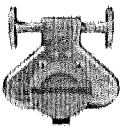
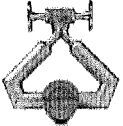
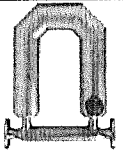
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2:T 290°C and T1:T 440°C

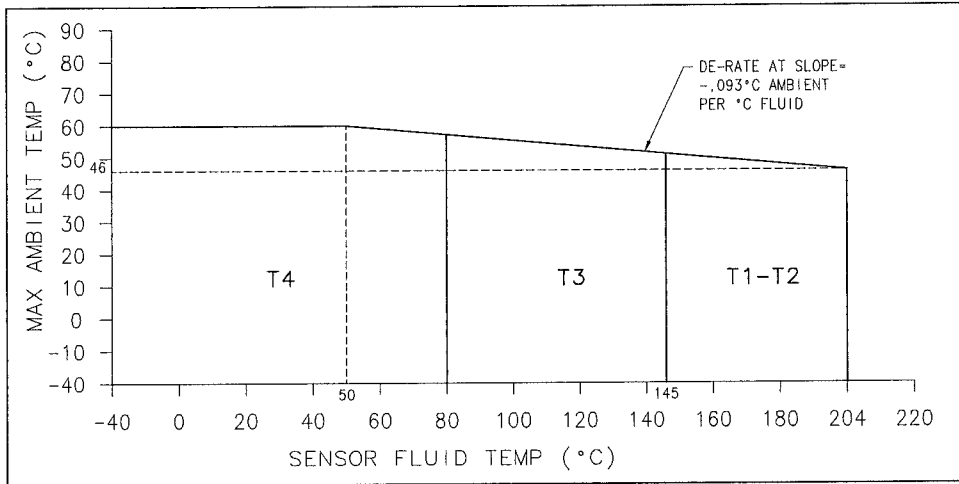
Ambient temperature range: Ta -50 °C up to +55°C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.7 Excluding CMF***(A, B, C, E)****(J,U)*V****

Sensor type			
With 2200S	CMF010*****(J,U)*V****	CMF025*****(J,U)*V****	CMF200*****(J,U)*V****
		CMF050*****(J,U)*V****	CMF300*****(J,U)*V****
		CMF100*****(J,U)*V****	

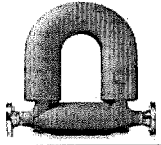


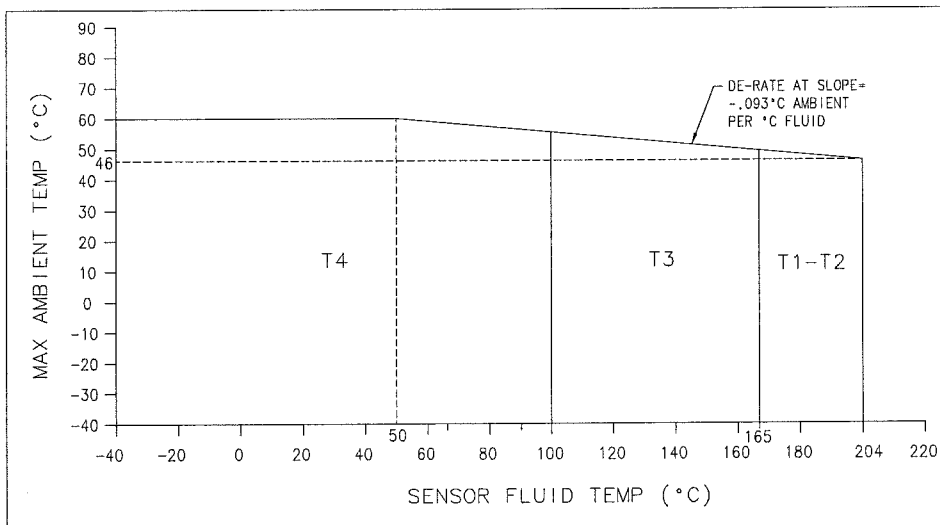
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 254°C

Ambient temperature range

Ta -40 °C up to +60 °C

4.8 Excluding CMF*** (A, B, C, E)*** (J, U) * V***

Sensor type	
With 2200S	CMF400*** (J, U) * V***

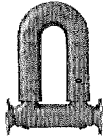


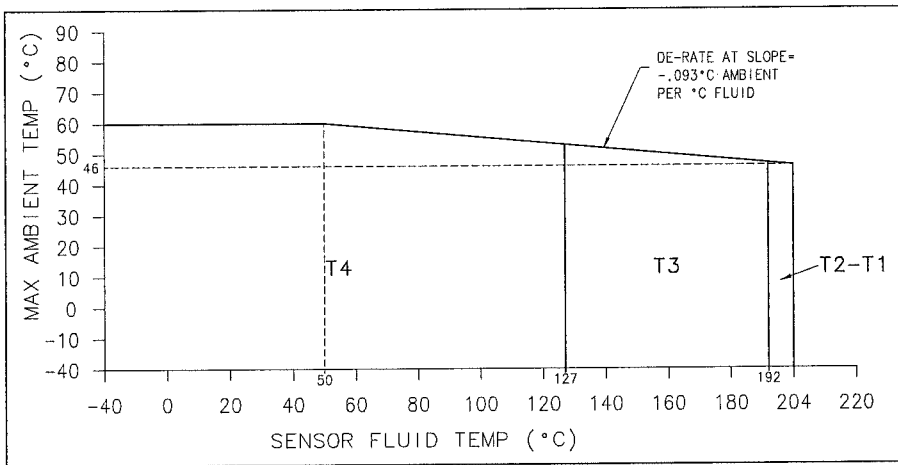
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 234°C

Ambient temperature range

Ta -40 °C up to +60 °C

4.9 Excluding CMF***(A, B, C, E)****(J,U)*V****

Sensor type	
With 2200S	CMFHC2*****(J,U)*V****
	CMFHC3*****(J,U)*V****
	CMFHC4*****(J,U)*V****




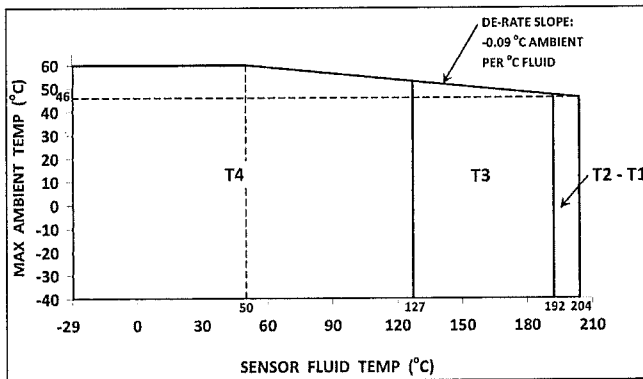
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 207°C

Ambient temperature range

Ta -40 °C up to +55 °C

4.10 Excluding CMF***(A, B, C, E)****(J,U)*V****

Sensor type	
With 2200S	CMFHC*Y*****(J,U)*V****

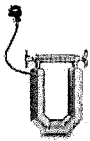


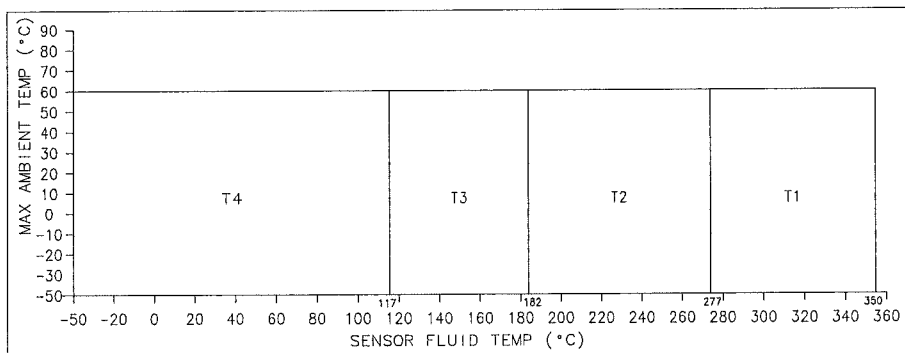
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4: T 130°C, T3: T 195°C, T2 to T1: T 207°C

Ambient temperature range

Ta -40 °C up to +60 °C

4.11 CMF***(A, B)****(J,U)*V****

Sensor type	
With 2200S	CMF200(A,B)****(J,U)*V****
	CMF300(A,B)****(J,U)*V****
	CMF400(A,B)****(J,U)*V****
	CMFHC2(A,B)****(J,U)*V****
	CMFHC3(A,B)****(J,U)*V****
	CMFHC4(A,B)****(J,U)*V****



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4: T 130°C, T3: T 195°C, T2: T 290°C and T1: T 363°C


Ambient temperature range

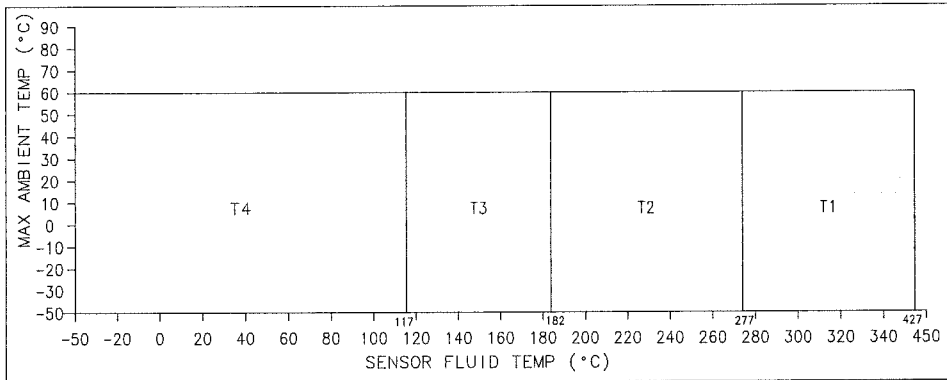
Ta -50 °C up to +60 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.12 CMF***(C, E)****(J,U)*V****

Sensor type	
With 2200S	CMF200(C,E)****(J,U)*V****
	CMF300(C,E)****(J,U)*V****
	CMF400(C,E)****(J,U)*V****
	CMFHC2(C,E)****(J,U)*V****
	CMFHC3(C,E)****(J,U)*V****
	CMFHC4(C,E)****(J,U)*V****





Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2:T 290°C and T1:T 440°C

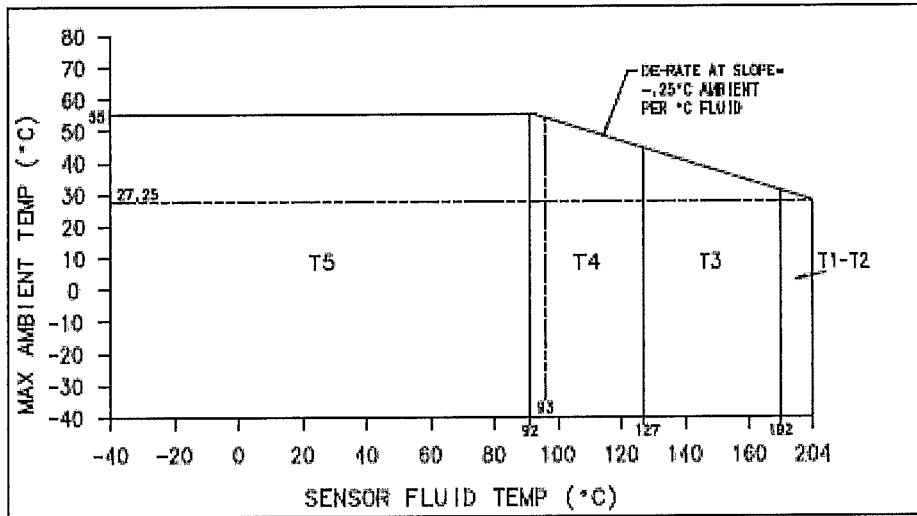
Ambient temperature range T_a -50 °C up to +60 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.13 Excluding F***(A, B, C, E)***** (0,1,K,L,M, N)*V*****

Sensor type		
With 2400S	F025***** (0,1)*V*****	CNG050*** (0,1)*V****
	F050***** (0,1)*V*****	
	H025***** (0,1)*V*****	
	H050***** (0,1)*V*****	
	R025***** (0,1)*V*****	
	R050***** (0,1)*V*****	
With FMT	F025***** (K,L,M,N)*V*****	CNG050*** (K,L,M,N)*V****
	F050***** (K,L,M,N)*V*****	
	H025***** (K,L,M,N)*V*****	
	H050***** (K,L,M,N)*V*****	
	R025***** (K,L,M,N)*V*****	
	R050***** (K,L,M,N)*V*****	

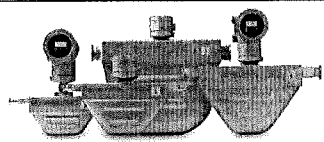


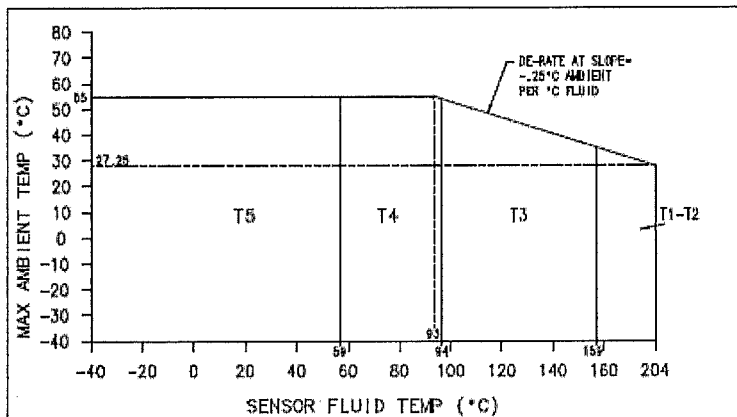
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 207°C

Ambient temperature range

Ta -40 °C up to +55 °C

4.14 Excluding F*** (A, B, C, E)***** (0,1,K,L,M, N)*V*****

Sensor type	
With 2400S	F100***** (0,1)*V*****
	H100***** (0,1)*V*****
	R100***** (0,1)*V*****
With FMT	F100***** (K,L,M,N)*V*****
	H100***** (K,L,M,N)*V*****
	R100***** (K,L,M,N)*V*****

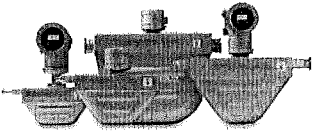


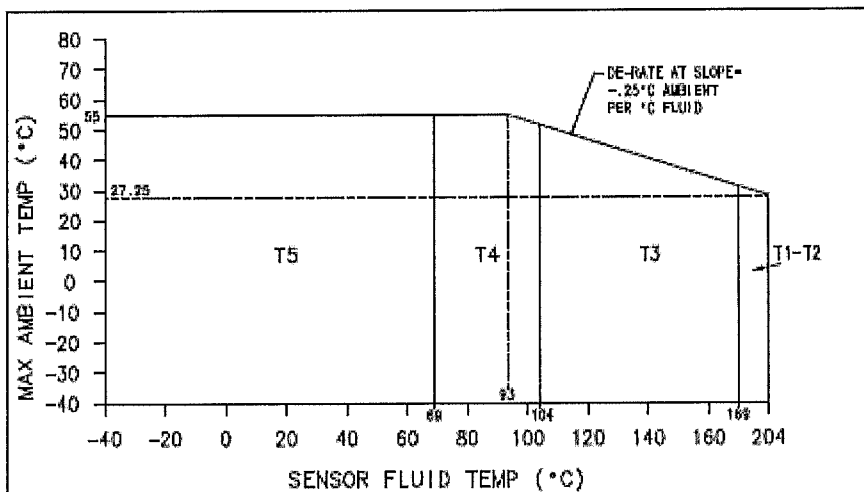
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 240°C

Ambient temperature range

Ta -40 °C up to +55 °C

4.15 Excluding F***(A, B, C, E)***** (0,1,K,L,M, N)*V*****

Sensor type	
With 2400S	F200***** (0,1)*V*****
	H200***** (0,1)*V*****
	R200***** (0,1)*V*****
With FMT	F200***** (K,L,M,N)*V*****
	H200***** (K,L,M,N)*V*****
	R200***** (K,L,M,N)*V*****

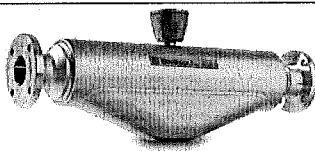


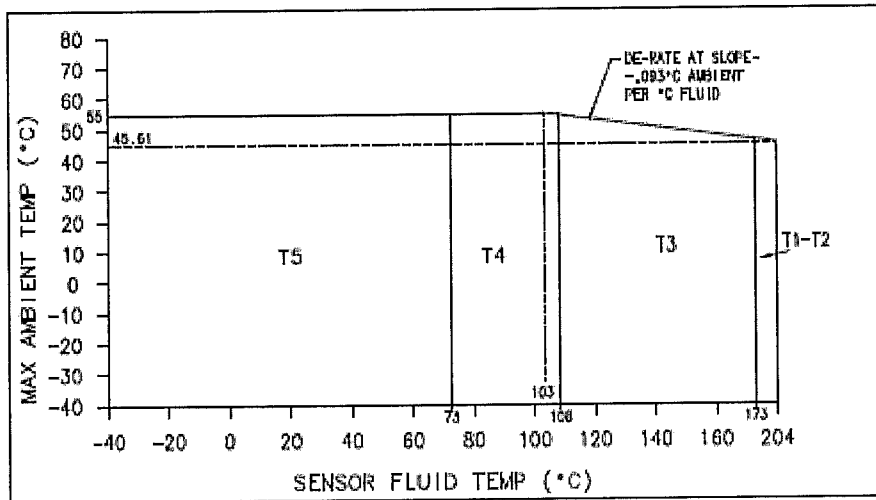
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 230°C

Ambient temperature range

Ta -40 °C up to +55 °C

4.16 Excluding F***(A, B, C, E)***** (0,1,K,L,M, N)*V*****

Sensor type	
With 2400S	F300***** (0,1)*V*****
	H300***** (0,1)*V*****
With FMT	F300***** (K,L,M,N)*V*****
	H300***** (K,L,M,N)*V*****

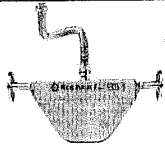


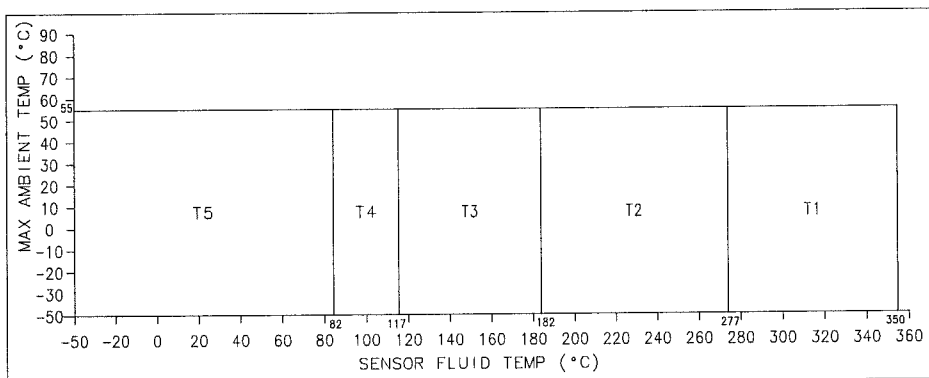
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 226°C

Ambient temperature range

Ta -40 °C up to +55 °C

4.17 F***(A, B)***** (0,1,K,L,M, N)*V*****

Sensor type	
	
With 2400S	F025(A,B)***** (0,1)*V*****
	F050(A,B)***** (0,1)*V*****
	F100(A,B)***** (0,1)*V*****
	F300(A,B)***** (0,1)*V*****
With FMT	F025(A,B)***** (K,L,M,N)*V*****
	F050(A,B)***** (K,L,M,N)*V*****
	F100(A,B)***** (K,L,M,N)*V*****
	F300(A,B)***** (K,L,M,N)*V*****



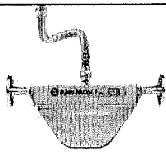
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5: T 95°C, T4:T 130°C, T3:T 195°C, T2T: 290°C and T1:T 363°C

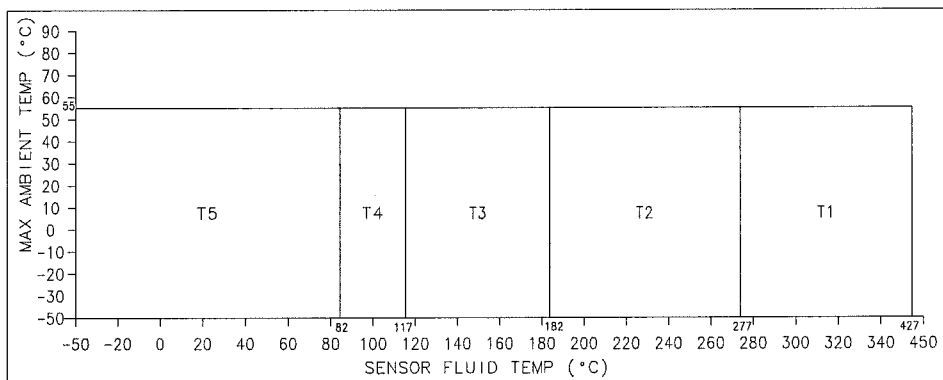
Ambient temperature range Ta -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.18 F***(C, E)***** (0,1,K,L,M, N)*V*****

Sensor type	
With 2400S	F025(C,E)***** (0,1)*V*****
	F050(C,E)***** (0,1)*V*****
	F100(C,E)***** (0,1)*V*****
	F300(C,E)***** (0,1)*V*****
With FMT	F025(C,E)***** (K,L,M,N)*V*****
	F050(C,E)***** (K,L,M,N)*V*****
	F100(C,E)***** (K,L,M,N)*V*****
	F300(C,E)***** (K,L,M,N)*V*****



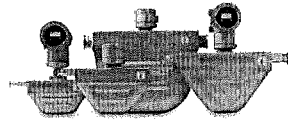

Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5: T 95°C, T4:T 130°C, T3:T 195°C, T2:T 290°C and T1:T 440°C

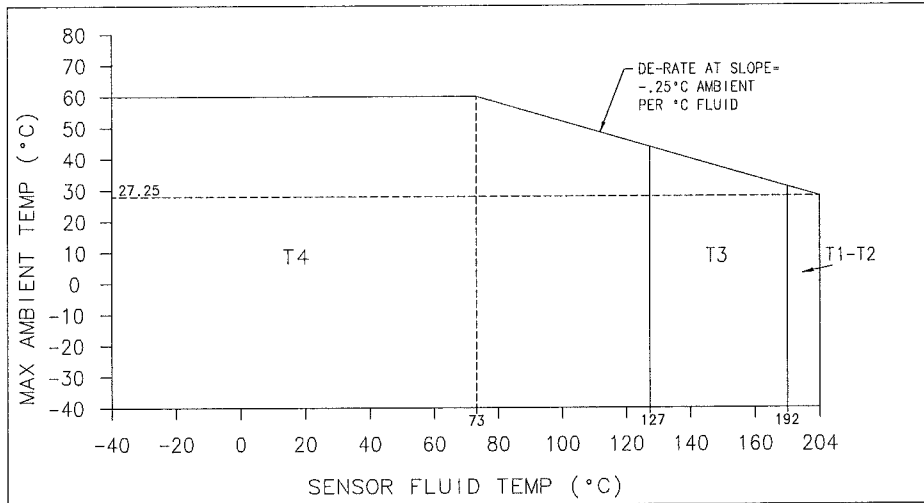
Ambient temperature range Ta -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.19 Excluding F***(A, B, C, E)***** $(J,U)*V$ *****

Sensor type		
With 2200S	F025***** $(J,U)*V$ *****	CNG050*** $(J,U)*V$ ****
	F050***** $(J,U)*V$ *****	
	H025***** $(J,U)*V$ *****	
	H050***** $(J,U)*V$ *****	
	R025***** $(J,U)*V$ *****	
	R050***** $(J,U)*V$ *****	

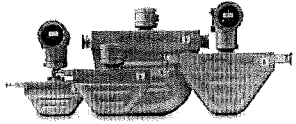


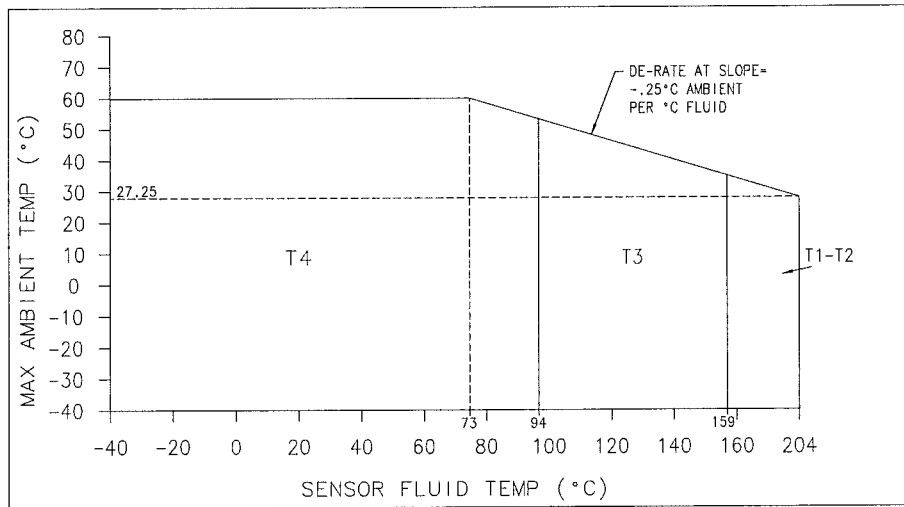
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 207°C

Ambient temperature range

Ta -40 °C up to +60 °C

4.20 Excluding F***(A, B, C, E)***** $(J,U)*V$ *****

Sensor type	
With 2200S	F100***** $(J,U)*V$ *****
	H100***** $(J,U)*V$ *****
	R100***** $(J,U)*V$ *****

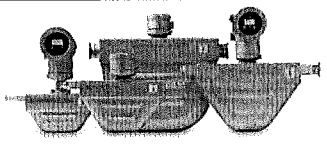


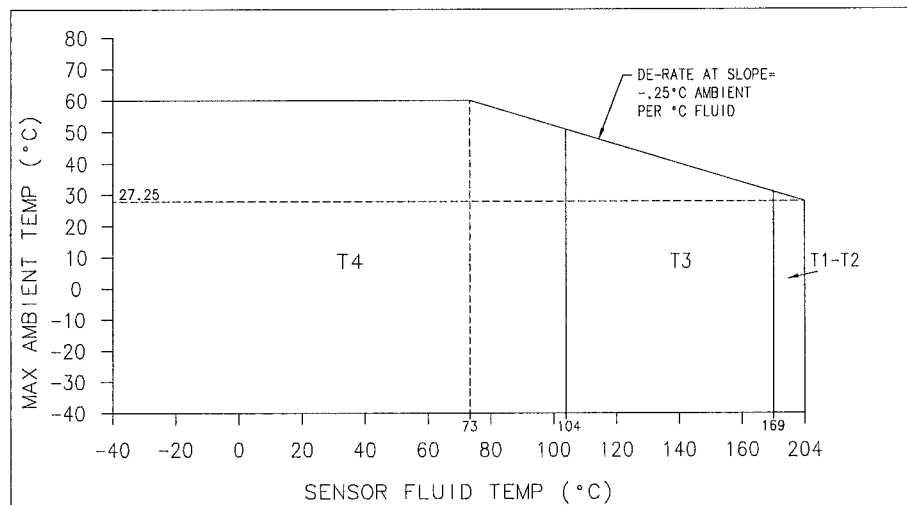
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 240°C

Ambient temperature range

Ta -40 °C up to +60 °C

4.21 Excluding F***(A, B, C, E)****(J,U)*V*****

Sensor type	
With 2200S	F200***** <u>(J,U)</u> *V*****
	H200***** <u>(J,U)</u> *V*****
	R200***** <u>(J,U)</u> *V*****




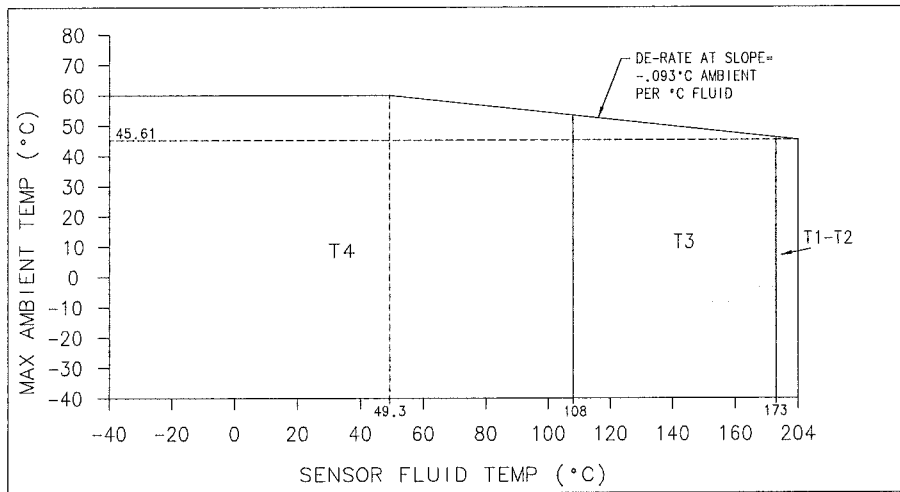
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 230°C

Ambient temperature range

Ta -40 °C up to +60 °C

4.22 Excluding F***(A, B, C, E)***** (J,U)*V*****

Sensor type	
With 2200S	F300***** (J,U)*V*****
	H300***** (J,U)*V*****

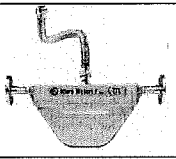


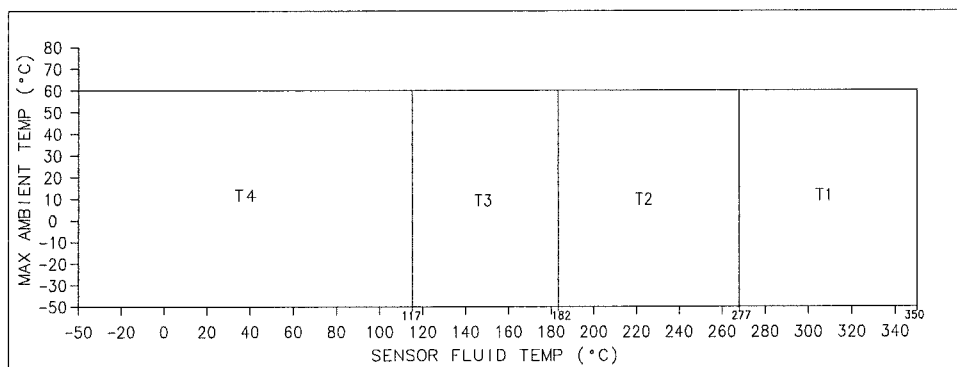
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 226°C

Ambient temperature range

Ta -40 °C up to +60 °C

4.23 F***(A, B)***** (J,U)*V*****

Sensor type	
With 2200S	F025(A,B)***** (J,U)*V*****
	F050(A,B)***** (J,U)*V*****
	F100(A,B)***** (J,U)*V*****
	F300(A,B)***** (J,U)*V*****



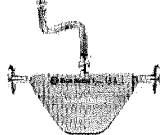
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4: T 130°C, T3: T 195°C, T2: T 290°C and T1: T 363°C

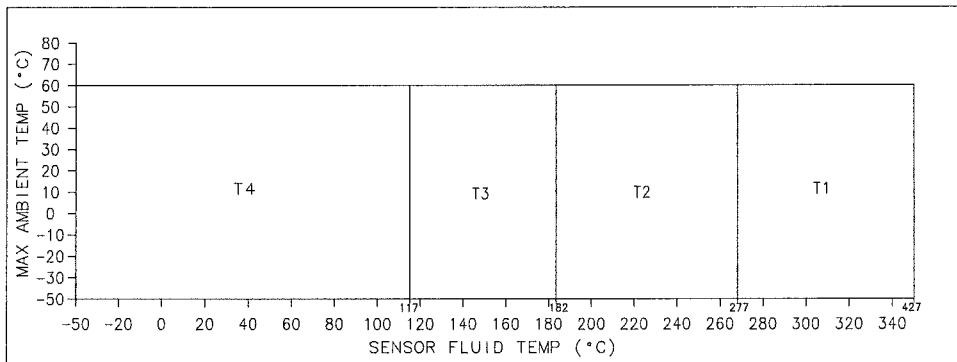
Ambient temperature range Ta -50 °C up to +60 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.24 F***(C, E)***** (J,U)*V*****

Sensor type	
With 2200S	F025(C,E)***** (J,U)*V*****
	F050(C,E)***** (J,U)*V*****
	F100(C,E)***** (J,U)*V*****
	F300(C,E)***** (J,U)*V*****



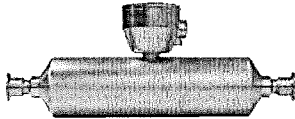
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4: T 130°C, T3: T 195°C, T2: T 290°C and T1: T 440°C

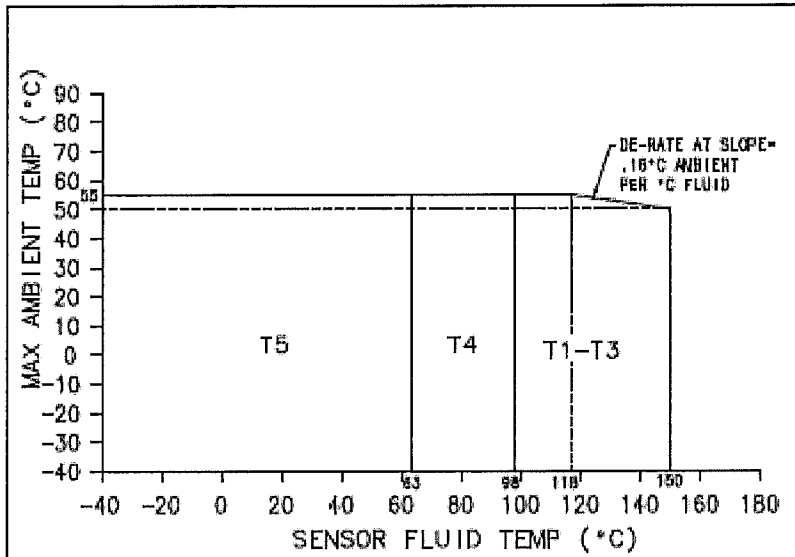
Ambient temperature range Ta -50 °C up to +60 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

4.25 T******(0,1,K,L,M,N)*V*****

Sensor type	
With 2400S	T025******(0,1)*V*****
	T050******(0,1)*V*****
	T100******(0,1)*V*****
	T150******(0,1)*V*****
With FMT	T025******(K,L,M,N)*V*****
	T050******(K,L,M,N)*V*****
	T100******(K,L,M,N)*V*****
	T150******(K,L,M,N)*V*****

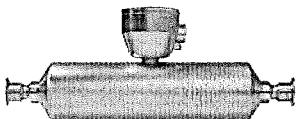


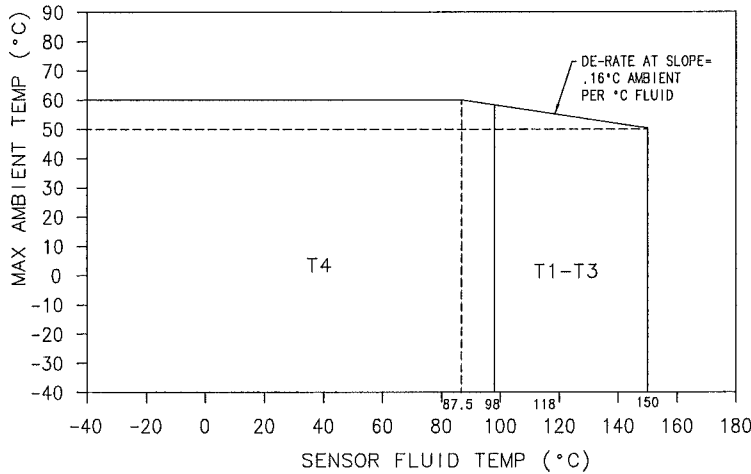
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5: T 95°C, T4: T 130°C, T3 to T1: T 182°C

Ambient temperature range

Ta -40 °C up to +55 °C

4.26 T******(J,U)*V*****

Sensor type	
With 2200S	T025******(J,U)*V*****
	T050******(J,U)*V*****
	T100******(J,U)*V*****
	T150******(J,U)*V*****

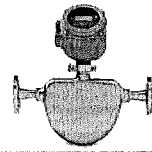


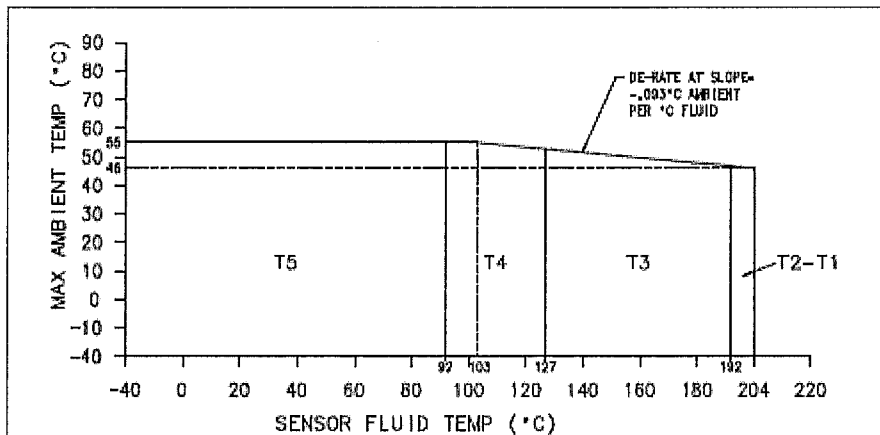
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4:T 130°C, T3 to T1:T 182°C

Ambient temperature range

Ta -40 °C up to +60 °C

4.27 CMFS***** (0,1,K,L,M,N)*V****

Sensor type	
With 2400S	CMFS010***** (0,1)*V****
	CMFS015***** (0,1)*V****
With FMT	CMFS010***** (K,L,M,N)*V****
	CMFS015***** (K,L,M,N)*V****

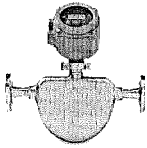


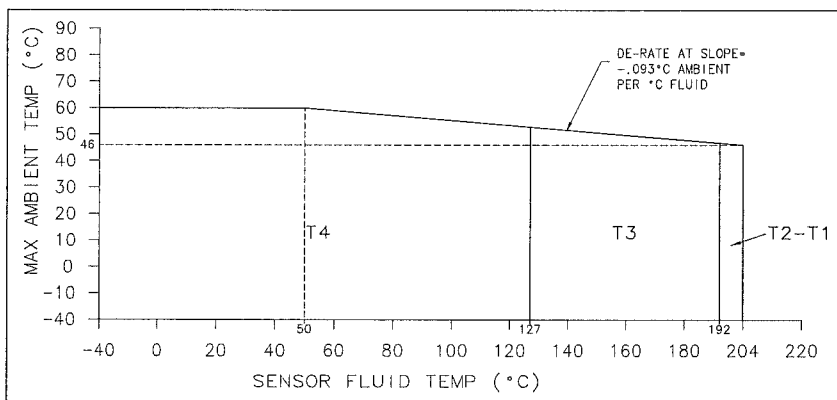
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5: T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 207°C

Ambient temperature range

Ta -40 °C up to +55 °C

4.28 CMFS*******(J,U)*V******

Sensor type	
With 2200S	CMFS010***** (J,U)*V****
	CMFS015***** (J,U)*V****



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 207°C

Ambient temperature range

Ta -40 °C up to +60 °C

Special conditions for safe use

The sensor is designed for use in connection with a suitable transmitter, e. g. type 24*******L****** in accordance with BVS 05 E 116 X resp. type 2200S*******L****** in accordance with BVS 08 ATEX E 112 X resp. type FMT*******L****** in accordance with BVS 10 ATEX E 115 X; only the assemblage of the sensor and the transmitter guarantees the necessary degrees of protection.

Test and assessment report

BVS PP 06.2082 EG as of 03.11.2010

DEKRA EXAM GmbH
Bochum, dated 03 November 2010

Signed: Simanski

Signed: Dr. Eickhoff

Certification body

Special services unit

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.

44809 Bochum, 03.11.2010
BVS-Schu/Her A 20100861

DEKRA EXAM GmbH



Certification body



Special services unit

DEKRA EXAM GmbH Postfach 10 27 48 44727 Bochum

Micro Motion, Inc.
7070 Winchester Circle
BOULDER, Co. 80301

USA

DEKRA EXAM GmbH
Fachstelle für Sicherheit
elektrischer Betriebsmittel - BVS
Dinnendahlstraße 9
44809 Bochum
Telefon +49.234.3696-300
Telefax +49.234.3696-301

Kontakt	Dipl.-Ing. Ute Hauke
Tel. direkt	+49.234.3696-338
Fax direkt	+49.234.3696-301
E-Mail	Ute.Hauke@dekra.com
Datum	28.01.2011

Unser Zeichen:	BVS-Hk/Schae A 20100803
Ihr Zeichen:	H. van Holland
Ihre Nachricht:	07.10.2010

Sensoren Typ – type CMF***V****, CNG050*****V****
F*****V****, H*****V****, R*****V****, T*****V******

Ladies and Gentlemen,

We added the Revision Report as of 28.01.2011 to the Test and Assessment Report
BVS PP 06.2082 EG.

We confirm, that the Certificate

BVS 06 ATEX 093 X as of 02.08.2006, last modified 03.11.2010

is still valid.

Yours faithfully
DEKRA EXAM GmbH


Dr. Franz Eickhoff


Ute Hauke

**Revision Report
Descriptive documents
Invoice**

Translation

(1) 6. Supplement to the Type Examination Certificate

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

(3) No. of Type Examination Certificate: **BVS 06 ATEX E 093 X**

(4) Equipment: **Sensor type CMF*****V****, CNG050*****V****, F*****V****,
H*****V****, R*****V****, T*****V****, CMFS*****V******

(5) Manufacturer: **Micro Motion, Inc.**

(6) Address: **Boulder, Co. 80301, USA**

(7) The design and construction of this equipment and any acceptable variation thereto are specified in
the appendix to this supplement.

(8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of
the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this
equipment 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 the test and assessment report BVS PP 06 2082 EG.

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

EN 60079-0:2009	General requirements
EN 60079-15:2010	Type of protection 'n'
EN 60079-31:2009	Protection by enclosures 't'

(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 appendix to this certificate.

(11) This supplement to the 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 Ex nA IIC T1-T4/T5/T6 Gc**
II 3D Ex tc IIIC T* °C Dc
IP 66

DEKRA EXAM GmbH
Bochum, dated 29.07.2011

Signed: Hans Christian Simanski

Certification body

Signed: Dr. Franz Eickhoff

Special services unit

- (13) Appendix to
- (14) **6. Supplement to the Type Examination Certificate
BVS 06 ATEX E 093 X**
- (15) 15.1 Subject and type

Instead of the *** letters and numerals will be inserted which characterize modifications.

C	M	F	*	*	*	*	*	*	*	*	0	*	V	*	*	*	*
C	N	G	0	5	0	*	*	*	*	*	0	*	V	*	*	*	*
		F	*	*	*	*	*	*	*	*	0	*	V	*	*	*	*
		H	*	*	*	*	*	*	*	*	0	*	V	*	*	*	*
		R	*	*	*	*	*	*	*	*	0	*	V	*	*	*	*
		T	*	*	*	*	*	*	*	*	0	*	V	*	*	*	*
C	M	F	S	*	*	*	*	*	*	*	0	*	V	*	*	*	*

Marking without influence to the type of protection

Letter for conduit connections

Letter for electronic interface

0 = integral 2400

1 = integral 2400 with extender

J = integral 2200S

U = integral 2200S with extender

K = integral FMT with improved surface finish

L = integral FMT with standard surface finish

M = integrally welded FMT with standard surface finish

N = integrally welded FMT with improved surface finish

R = with junction box for 9-wire

H = 9 wire junction box with extender

S = 9-wire Stainless junction box

T = 9-wire Stainless junction box with extender

Marking without influence to the type of protection

A = High Temp. Stainless Steel Tube 350 °C

B = High Temp. HY Tube 350 °C

C = High Temp. Stainless Steel Tube 427 °C

E = High Temp. HY Tube 427 °C

Y = Standard Version Duplex Tube

Other marking without influence to the type of protection

3 numerals for type of sensor

15.2 Description

New versions are possible:



- Addition of J-Box Interface Codes R, H, S and T
- Added ETO 18748 Use of Silicone O-Ring for -50 °C Dust Approval
- Changed IP Rating from IP65 to IP66

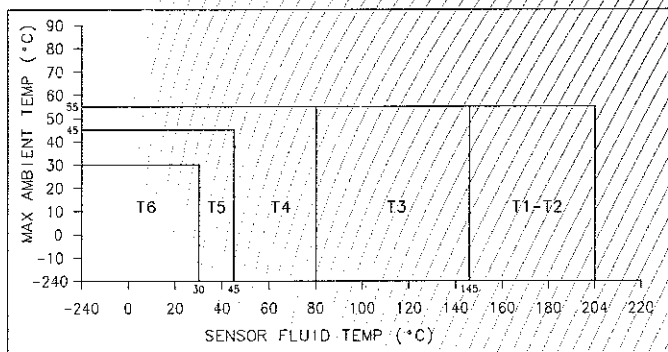
15.3 Parameters

- 15.3.1 Drive circuit (pin connections 7-8)
Voltage DC 30 V
Current 84 mA
- 15.3.2 Pick-Off circuit (pin connections 3-4)
Voltage DC 30 V
Current 25 mA
- 15.3.3 Temperature circuit (pin connections 1, 2 and 9)
Voltage DC 30 V
Current 25 mA
- 15.3.4 Thermal data
Regulation of temperature class/max. Surface temperature T

The classification into a temperature class/determination of the maximum surface temperature T depend on the temperature of the medium taking into account the maximum operating temperature of the sensor and are shown in the following graphs:

15.3.4.1

Sensor type		
with J-box	CMF010****(R,H,S,T)*V****	CMF025****(R,H,S,T)*V**** CMF050****(R,H,S,T)*V****




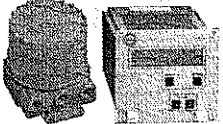
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

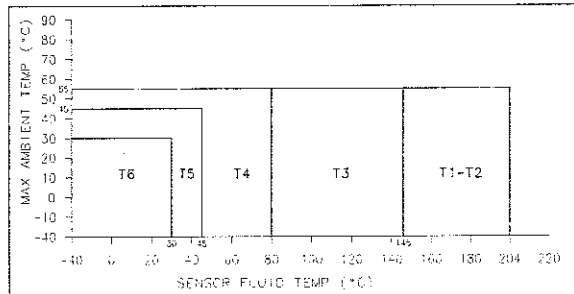
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 254 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range T_a -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.2

Sensor type		
with J-box	CMF100*****(R,H,S,T)*V****	Connected to non MVD transmitters, e.g. IFT9701, RFT9739



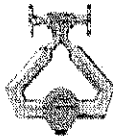
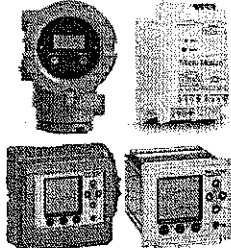
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

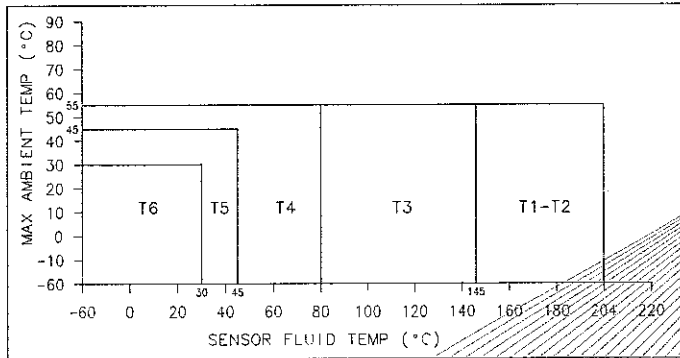
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 254 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is 50°C.

Ambient temperature range T_a -40 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.3

Sensor type		
with J-box	CMF100*****(R,H,S,T)*V****	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series




Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

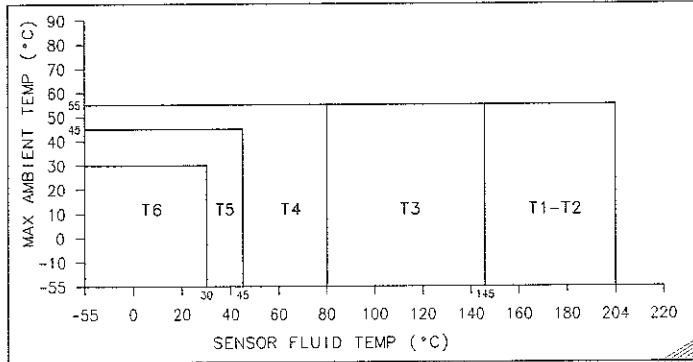
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 254 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range T_a -60 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.4

Sensor type	
with J-box	CMF200*****(R,H,S,T)*V****
	CMF300*****(R,H,S,T)*V****



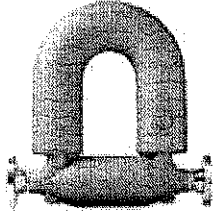
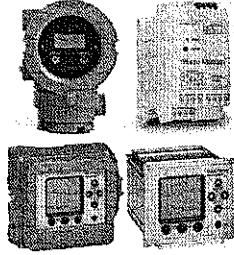
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

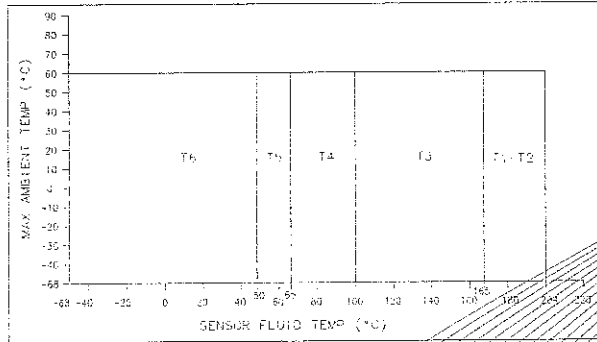
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 254 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range T_a -55 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.5

Sensor type		
with J-box	CMF400*****(R,H,S,T)*V****	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



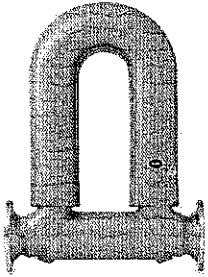
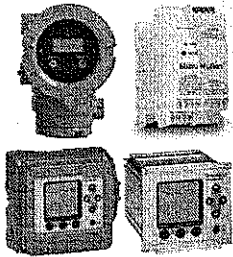
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

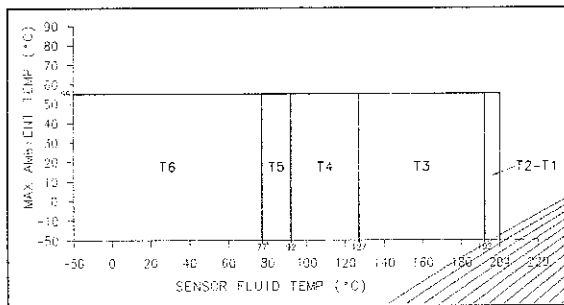
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 234 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range T_a -68 °C up to +60 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.6

Sensor type					
with J-box	<table border="1"> <tr> <td>CMFHC2****(R,H,S,T)*V****</td> </tr> <tr> <td>CMFHC3****(R,H,S,T)*V****</td> </tr> <tr> <td>CMFHC4****(R,H,S,T)*V****</td> </tr> </table>	CMFHC2****(R,H,S,T)*V****	CMFHC3****(R,H,S,T)*V****	CMFHC4****(R,H,S,T)*V****	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series
CMFHC2****(R,H,S,T)*V****					
CMFHC3****(R,H,S,T)*V****					
CMFHC4****(R,H,S,T)*V****					



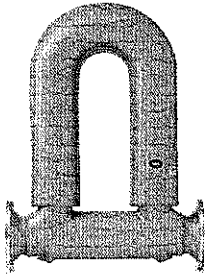
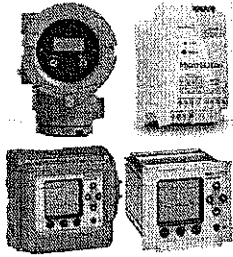
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

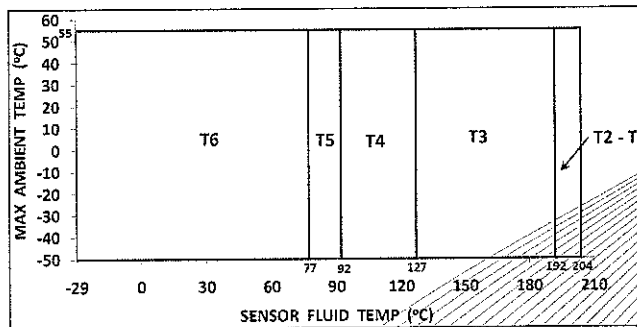
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 207 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range T_a -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.7

Sensor type		
with J-box	CMFHC*Y****(R,H,S,T)*V****	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



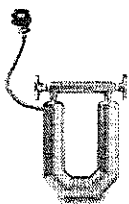
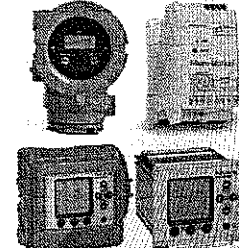
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.
 The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 207 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

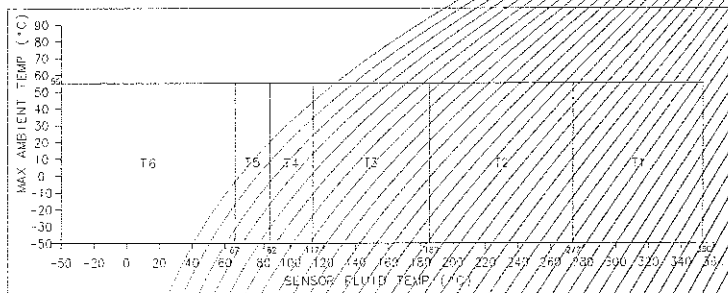
Ambient temperature range T_a -50 °C up to +55 °C

15.3.4.8

All sensors listed in 15.3.4.1 up to and including 15.3.4.7 can also be executed with the alternate junction box covered in BVS 09 ATEX E 071 U.

15.3.4.9

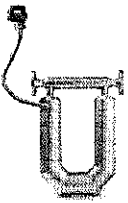
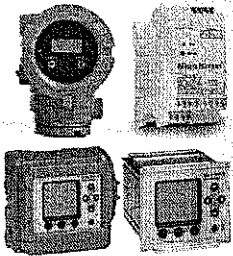
Sensor type		
with J-box	<p>CMF200(A or B)****(R,S)*V****</p> <p>CMF300(A or B)****(R,S)*V****</p> <p>CMF400(A or B)****(R,S)*V****</p> <p>CMFHC2(A or B)****(R,S)*V****</p> <p>CMFHC3(A or B)****(R,S)*V****</p> <p>CMFHC4(A or B)****(R,S)*V****</p>	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series

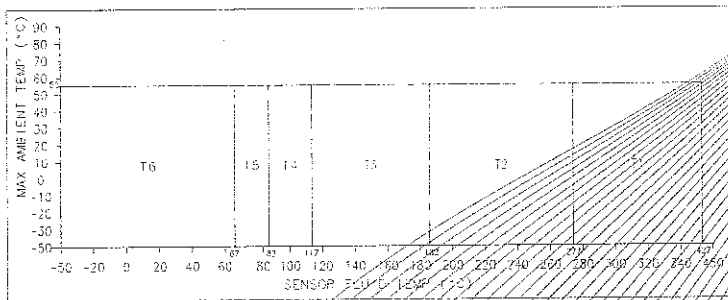


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T6: T 80 °C, T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2: T 290 °C, T1: T 363 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range T_a -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

Sensor type		
with J-box	CMF200(C or E)****(R,S)*V**** CMF300(C or E)****(R,S)*V**** CMF400(C or E)****(R,S)*V**** CMFHC2(C or E)****(R,S)*V**** CMFHC3(C or E)****(R,S)*V**** CMFHC4(C or E)****(R,S)*V****	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



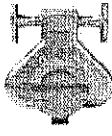

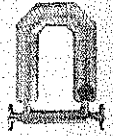
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

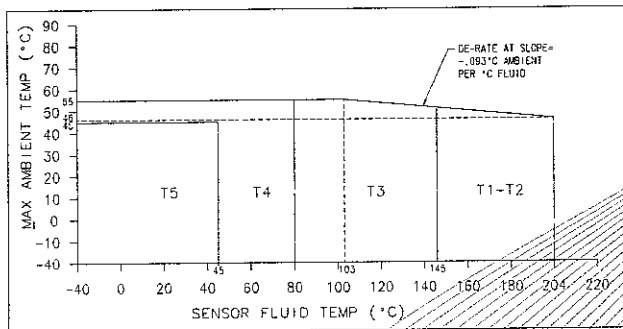
The maximum surface temperature T for dust is as follows: T6: T 80 °C, T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2: T 290 °C, T1: T 440 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range T_a -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor

15.3.4.11 Excluding CMF*****(A, B, C, E)********(0,1,K,L,M, N)***V****:

Sensor type			
With 2400S	CMF010*****(0,1)*V****	CMF025*****(0,1)*V****	CMF200*****(0,1)*V****
		CMF050*****(0,1)*V****	CMF300*****(0,1)*V****
		CMF100*****(0,1)*V****	
With FMT	CMF010*****(K,L,M,N)*V****	CMF025*****(K,L,M,N)*V****	CMF200*****(K,L,M,N)*V****
		CMF050*****(K,L,M,N)*V****	CMF300*****(K,L,M,N)*V****
		CMF100*****(K,L,M,N)*V****	

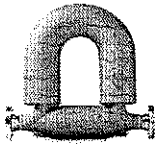


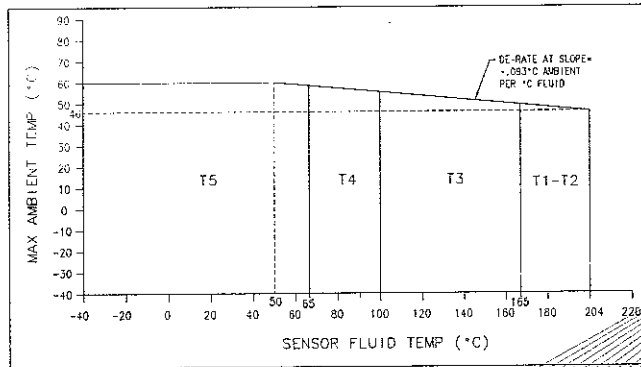
Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2 to T1: T 254 °C

Ambient temperature range: T_a -40 °C up to +55 °C.

15.3.4.12 Excluding CMF*** (A, B, C, E)**** (0,1,K,L,M, N)*V****:

Sensor type	
With 2400S	CMF400*****(0,1)*V****
With FMT	CMF400*****(K,L,M,N)*V****



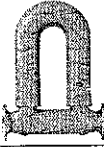
Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

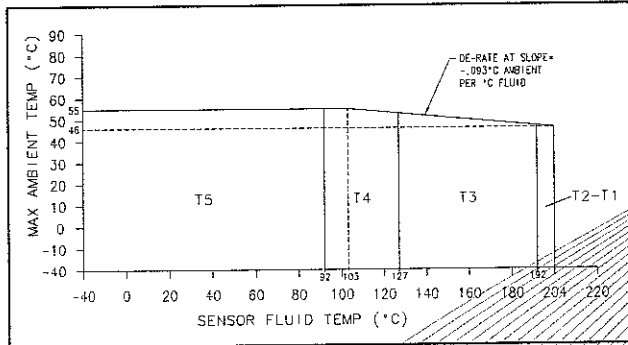
Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2 to T1: T 234 °C

Ambient temperature range:

Ta -40 °C up to +60 °C

15.3.4.13 Excluding CMF*** (A, B, C, E)**** (0, 1, K, L, M, N) *V****:

Sensor type	
With 2400S	CMFHC2**** (0, 1) *V****
	CMFHC3**** (0, 1) *V****
	CMFHC4**** (0, 1) *V****
With FMT	CMFHC2**** (K, L, M, N) *V****
	CMFHC3**** (K, L, M, N) *V****
	CMFHC4**** (K, L, M, N) *V****

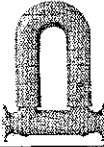


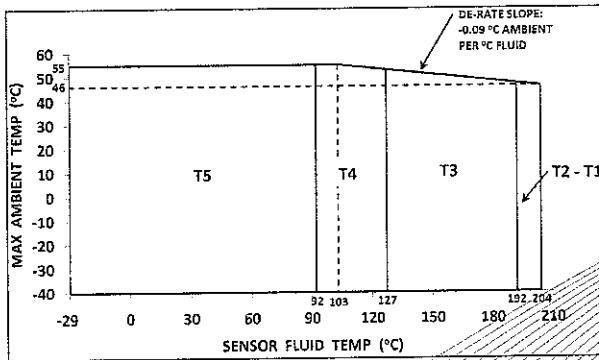
Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2 to T1: T 207 °C

Ambient temperature range: T_a -40 °C up to +55 °C

15.3.4.14 Excluding CMF*** (A, B, C, E)**** (0, 1, K, L, M, N)*V****:

Sensor type	
With 2400S	CMFHC*Y****(0,1)*V****
With FMT	CMFHC*Y****(K,L,M,N)*V****




Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

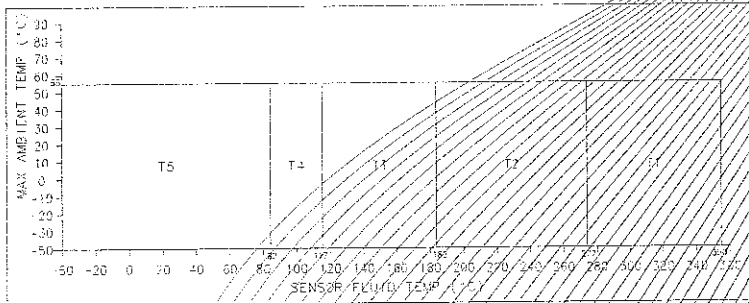
Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2 to T1: T 207 °C

Ambient temperature range:

Ta -40 °C up to +55 °C

15.3.4.15 CMF***(A, B)****(0,1,K,L,M, N)*V****:

Sensor type	
With 2400S	CMF200(A, B)****(0,1)*V****
	CMF300(A, B)****(0,1)*V****
	CMF400(A, B)****(0,1)*V****
	CMFHC2(A, B)****(0,1)*V****
	CMFHC3(A, B)****(0,1)*V****
	CMFHC4(A, B)****(0,1)*V****
With FMT	CMF200(A, B)****(K, L, M, N)*V****
	CMF300(A, B)****(K, L, M, N)*V****
	CMF400(A, B)****(K, L, M, N)*V****
	CMFHC2(A, B)****(K, L, M, N)*V****
	CMFHC3(A, B)****(K, L, M, N)*V****
	CMFHC4(A, B)****(K, L, M, N)*V****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

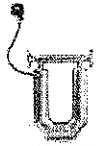
Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2: 290 °C and T1: T 363 °C

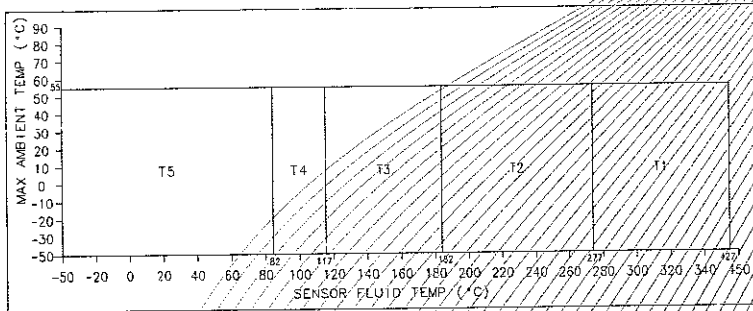
Ambient temperature range: T_a -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.16 CMF***(C, E)****(0,1,K,L,M, N)*V****:

Sensor type	
With 2400S	CMF200(C,E)****(0,1)*V****
	CMF300(C,E)****(0,1)*V****
	CMF400(C,E)****(0,1)*V****
	CMFH2(C,E)****(0,1)*V****
	CMFH3(C,E)****(0,1)*V****
	CMFH4(C,E)****(0,1)*V****
With FMT	CMF200(C,E)****(K,L,M,N)*V****
	CMF300(C,E)****(K,L,M,N)*V****
	CMF400(C,E)****(K,L,M,N)*V****
	CMFH2(C,E)****(K,L,M,N)*V****
	CMFH3(C,E)****(K,L,M,N)*V****
	CMFH4(C,E)****(K,L,M,N)*V****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.




Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2: 290 °C and T1: T 440 °C

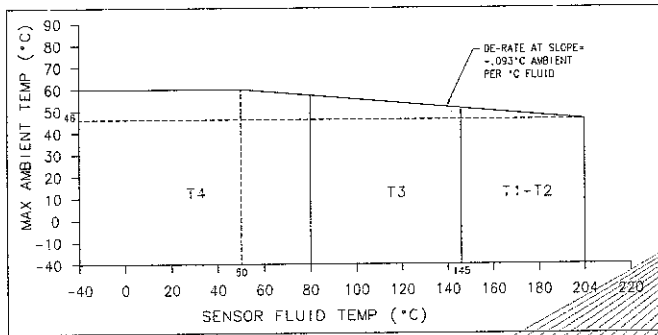
Ambient temperature range: T_a -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.17 Excluding CMF*** (A, B, C, E)*** (J,U)*V****.

Sensor type			
With 2200S	CMF010*****(J,U)*V****	CMF025*****(J,U)*V****	CMF200*****(J,U)*V****
		CMF050*****(J,U)*V****	CMF300*****(J,U)*V****
		CMF100*****(J,U)*V****	



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

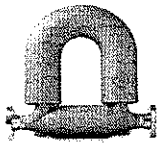
Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2 to T1: T 254 °C

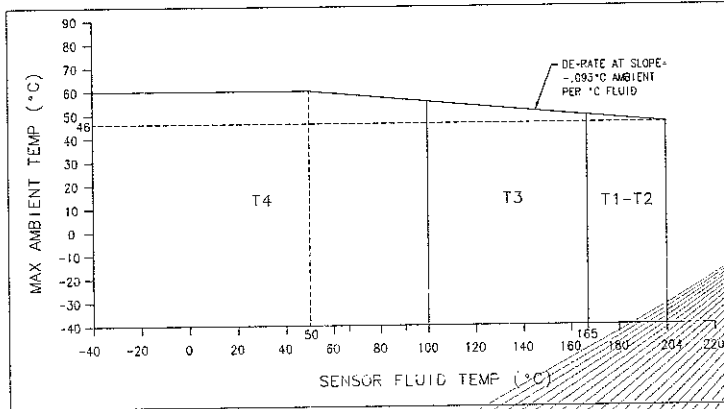
Ambient temperature range:

Ta

-40 °C up to +60 °C

15.3.4.18 Excluding CMF*** (A, B, C, E)**** (J, U) * V****.

Sensor type	
With 2200S	CMF400**** (J, U) * V****




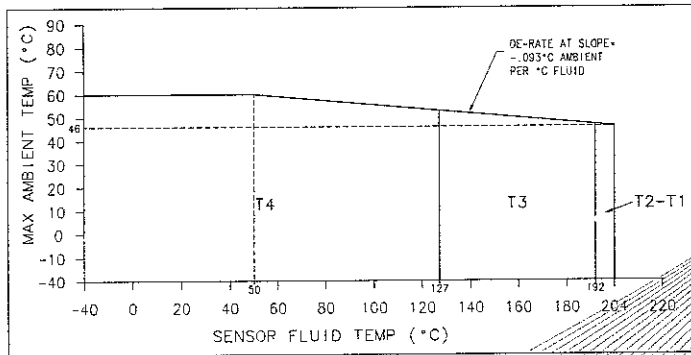
Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2 to T1: T 234 °C

Ambient temperature range: T_a -40 °C up to +60 °C

15.3.4.19 Excluding CMF*** (A, B, C, E)*** (J,U)*V****:

Sensor type	
With 2200S	CMFHC2*** (J,U)*V****
	CMFHC3*** (J,U)*V****
	CMFHC4*** (J,U)*V****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

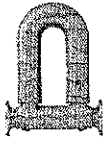
Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2 to T1: T 207 °C

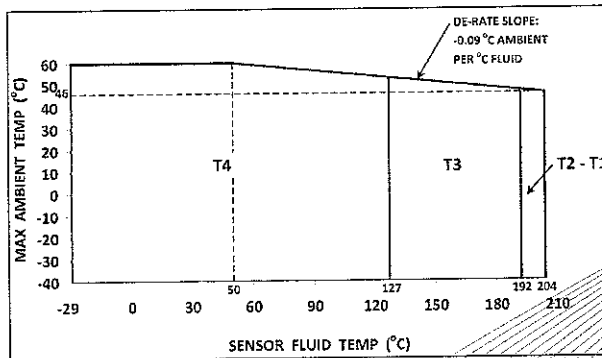
Ambient temperature range:

Ta

-40 °C up to +55 °C

15.3.4.20 Excluding CMF*** (A, B, C, E)*** (J, U) * V***:

Sensor type	
With 2200S	CMFHC*Y*** (J, U) * V***



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.


Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2 to T1: T 207 °C.

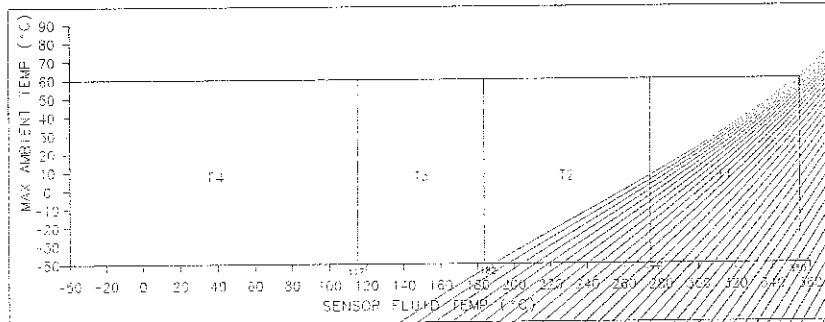
Ambient temperature range:

Ta

-40 °C up to +60 °C

15.3.4.21 CMF***(A, B)****(J,U)*V****:

Sensor type	
With 2200S	CMF200(A,B)****(J,U)*V****
	CMF300(A,B)****(J,U)*V****
	CMF400(A,B)****(J,U)*V****
	CMFHC2(A,B)****(J,U)*V****
	CMFHC3(A,B)****(J,U)*V****
	CMFHC4(A,B)****(J,U)*V****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

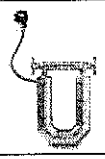
Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2: 290 °C and T1: T 363 °C

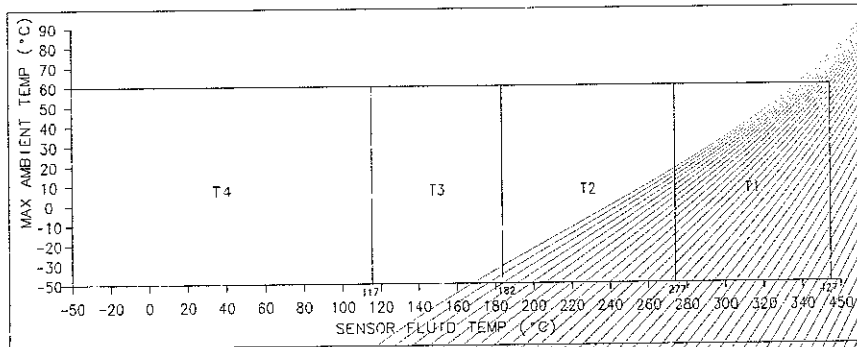
Ambient temperature range: T_a $-50\text{ °C up to }+60\text{ °C}$

The minimum ambient and process fluid temperature for dust is -40 °C .

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than $+60\text{ °C}$ is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.22 CMF***(C, E)****(J,U)*V*****

Sensor type	
With 2200S	CMF200(C,E)****(J,U)*V*****
	CMF300(C,E)****(J,U)*V*****
	CMF400(C,E)****(J,U)*V*****
	CMFHC2(C,E)****(J,U)*V*****
	CMFHC3(C,E)****(J,U)*V*****
	CMFHC4(C,E)****(J,U)*V*****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.


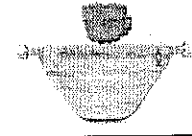

Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2: 290 °C and T1: T 440 °C

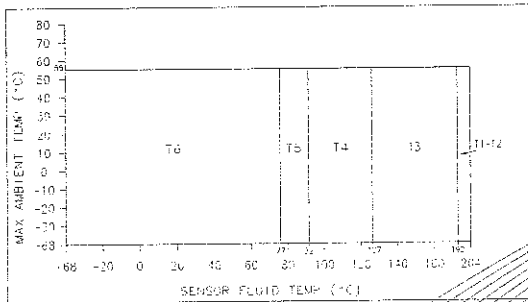
Ambient temperature range: T_a -50 °C up to +60 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.23 Excluding F***(A, B, C, E)*****(R,H,S,T)*V*****.

Sensor type			
with J-box	F025*****(R,H,S,T)*V***** F050*****(R,H,S,T)*V***** H025*****(R,H,S,T)*V***** H050*****(R,H,S,T)*V***** R025*****(R,H,S,T)*V***** R050*****(R,H,S,T)*V*****	CNG050****(R,H,S,T)*V*****	Connected to non MVD transmitters, e.g. IFT9701, RFT9739



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.



The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 207 °C. The minimum ambient temperature allowed for dust is -40 °C.

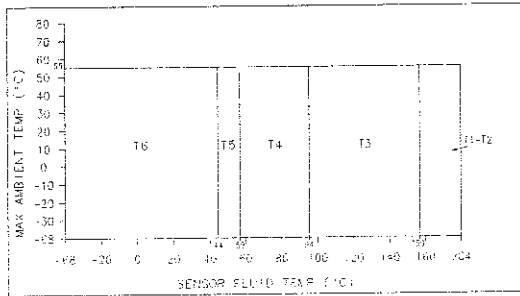
When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range: T_a -68 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.24 Excluding F***(A, B, C, E)*****(R,H,S,T)*V*****:

Sensor type		
with J-box	F100*****(R,H,S,T)*V***** H100*****(R,H,S,T)*V***** R100*****(R,H,S,T)*V*****	Connected to non MVD transmitters, e.g. IFT9701, RFT9739



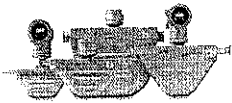

Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

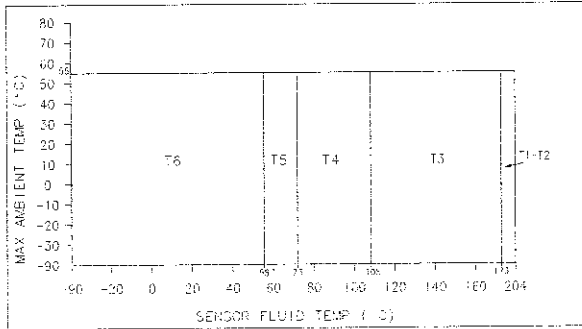
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 240 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range: T_a -68 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.25 Excluding F*** (A, B, C, E)***** (R, H, S, T) *V*****:

Sensor type		
with J-box	F200***** (R, H, S, T) *V***** H200***** (R, H, S, T) *V***** R200***** (R, H, S, T) *V*****	Connected to non MVD transmitters, e.g. IFT9701, RFT9739



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.



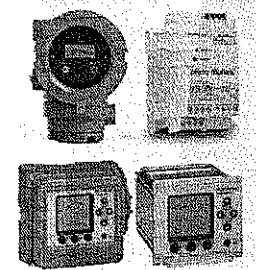
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 226 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

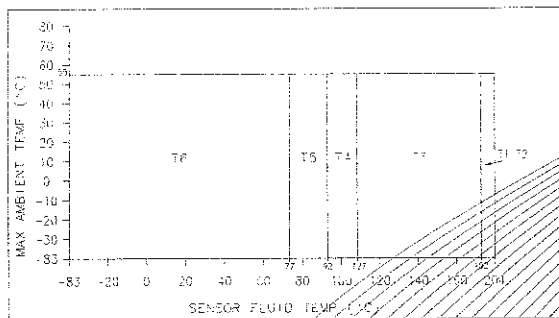
Ambient temperature range:

Ta -90 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.26 Excluding F***(A, B, C, E)****(R,H,S,T)*V****.

Sensor type			
with J-box	F025*****(R,H,S,T)*V**** F050*****(R,H,S,T)*V**** H025*****(R,H,S,T)*V**** H050*****(R,H,S,T)*V**** R025*****(R,H,S,T)*V**** R050*****(R,H,S,T)*V****	CNG050***(R,H,S,T)*V****	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series




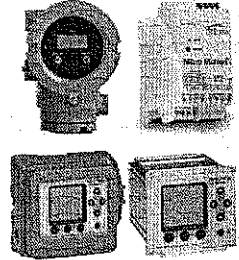
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

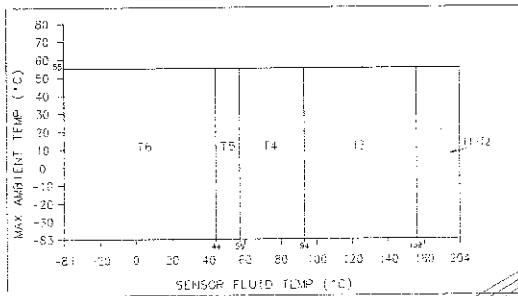
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 207 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range: T_a -83 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.27 Excluding F*** (A, B, C, E)**** (R, H, S, T) *V*****:

Sensor type		
with J-box	F100**** (R, H, S, T) *V***** H100**** (R, H, S, T) *V***** R100**** (R, H, S, T) *V*****	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.


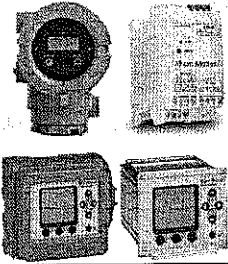
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 240 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

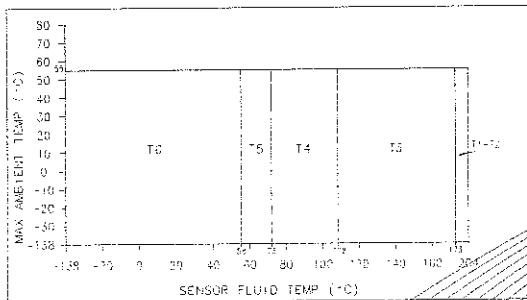
Ambient temperature range:

Ta -83 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.28 Excluding F*** (A, B, C, E)*****(R,H,S,T)*V*****:

Sensor type		
with J-box	F200*****(R,H,S,T)*V***** H200*****(R,H,S,T)*V***** R200*****(R,H,S,T)*V*****	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

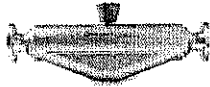
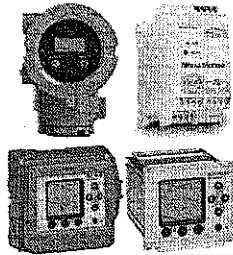
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 226 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

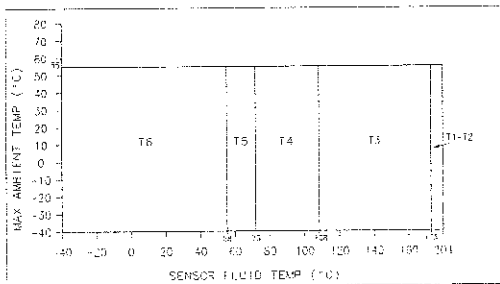
Ambient temperature range:

Ta -138 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.29 Excluding F*** (A, B, C, E)**** (R, H, S, T)*V*****:

Sensor type		
with J-box	F300**** (R, H, S, T)*V***** H300**** (R, H, S, T)*V*****	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series



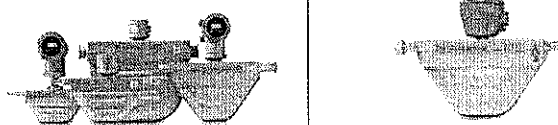
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

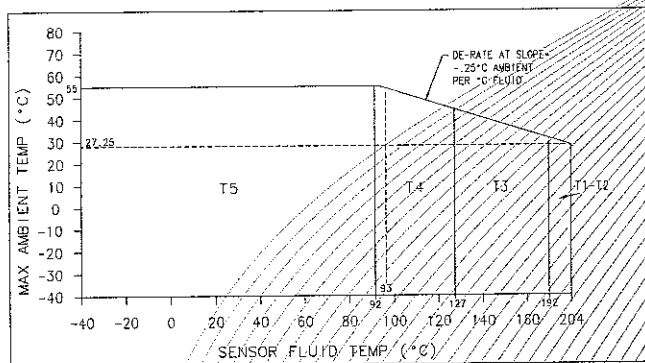
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 and T1: 226 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range: T_a -40 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.30 Excluding F***(A, B, C, E)***** (0,1,K,L,M, N)*V*****.

Sensor type		
With 2400S	F025***** (0,1)*V*****	CNG050*** (0,1)*V*****
	F050***** (0,1)*V*****	
	H025***** (0,1)*V*****	
	H050***** (0,1)*V*****	
	R025***** (0,1)*V*****	
	R050***** (0,1)*V*****	
With FMT	F025***** (K,L,M,N)*V*****	CNG050*** (K,L,M,N)*V*****
	F050***** (K,L,M,N)*V*****	
	H025***** (K,L,M,N)*V*****	
	H050***** (K,L,M,N)*V*****	
	R025***** (K,L,M,N)*V*****	
	R050***** (K,L,M,N)*V*****	

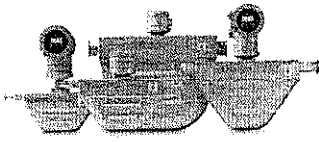


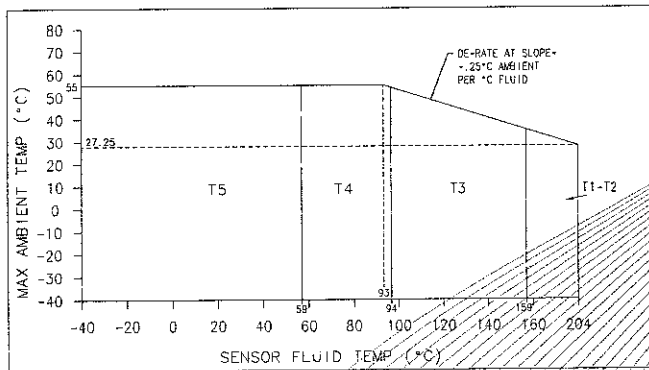
Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2 to T1: T 207 °C.

Ambient temperature range: T_a -40 °C up to +55 °C

15.3.4.31 Excluding F**(A, B, C, E)***(0,1,K,L,M, N)*V**.*

Sensor type	
With 2400S	F100***(0,1)*V**.*
	H100***(0,1)*V**.*
	R100***(0,1)*V**.*
With FMT	F100***(K,L,M,N)*V**.*
	H100***(K,L,M,N)*V**.*
	R100***(K,L,M,N)*V**.*



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

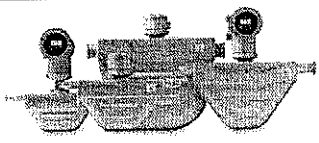
Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2 to T1: T 240 °C.

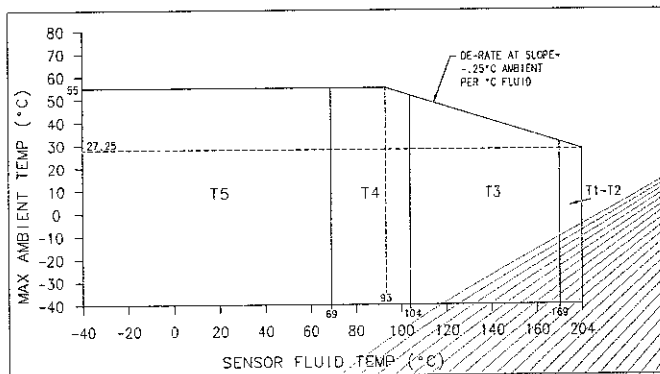
Ambient temperature range:

Ta

-40 °C up to +55 °C

15.3.4.32 Excluding F*** (A, B, C, E)***** (0,1,K,L,M, N)*V*****.

Sensor type	
With 2400S	F200***** (0,1)*V*****
	H200***** (0,1)*V*****
	R200***** (0,1)*V*****
With FMT	F200***** (K,L,M,N)*V*****
	H200***** (K,L,M,N)*V*****
	R200***** (K,L,M,N)*V*****

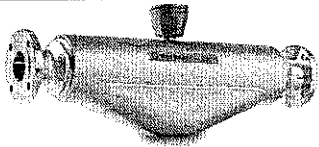


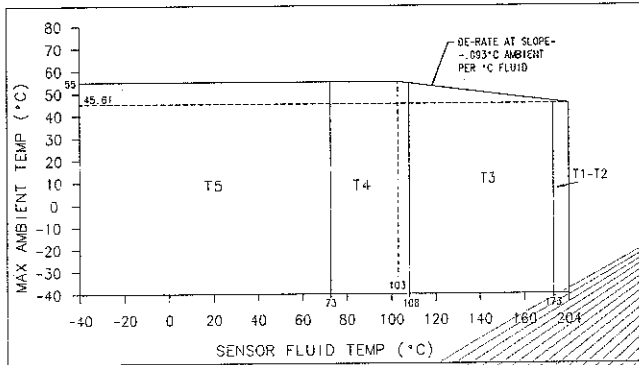
Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2 to T1: T 230 °C.

Ambient temperature range: T_a -40 °C up to $+55\text{ °C}$

15.3.4.33 Excluding F*** (A, B, C, E)***** (0,1,K,L,M, N)*V*****.

Sensor type	
With 2400S	F300***** (0,1)*V*****
	H300***** (0,1)*V*****
With FMT	F300***** (K,L,M,N)*V*****
	H300***** (K,L,M,N)*V*****



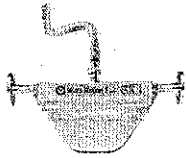
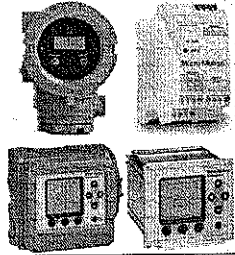
Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

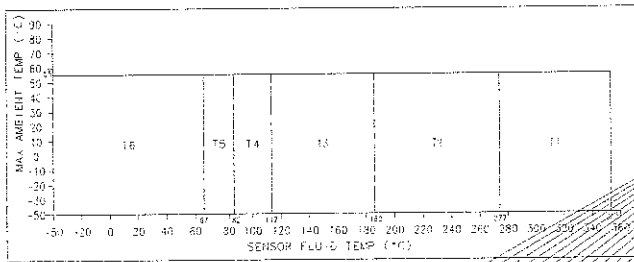
Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2 to T1: T 226 °C.

Ambient temperature range:

Ta

-40 °C up to +55 °C

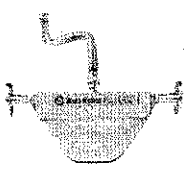
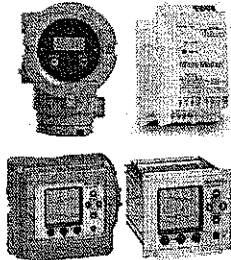
Sensor type		
with J-box	F025(A,B)****(R,S)*V***** F050(A,B)****(R,S)*V***** F100(A,B)****(R,S)*V***** F300(A,B)****(R,S)*V*****	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series

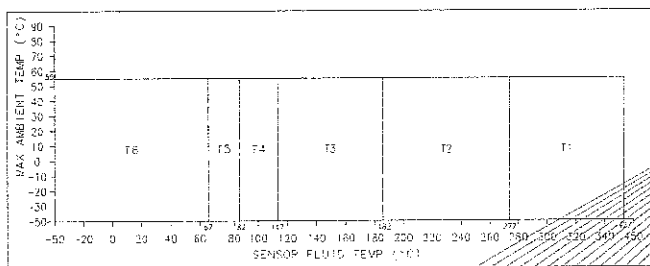


Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.
 The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C, T1: 363 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range: T_a -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

Sensor type		
with J-box	F025(C,E)****(R,S)*V***** F050(C,E)****(R,S)*V***** F100(C,E)****(R,S)*V***** F300(C,E)****(R,S)*V*****	Connected to MVD transmitters, e.g. 1000/2000/3000MVD series




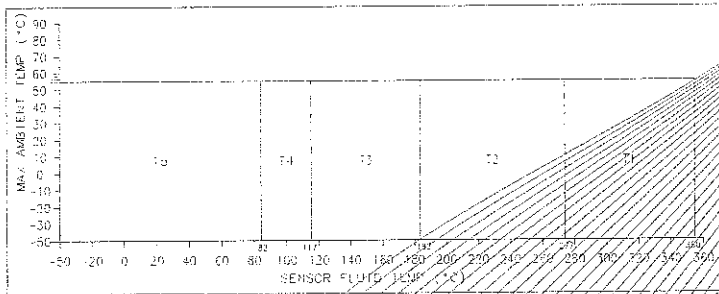
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.
 The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C, T1: 440 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range: T_a -50 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.36

Sensor type	
With 2400S	F025(A,B)***** $(0,1)*V$ *****
	F050(A,B)***** $(0,1)*V$ *****
	F100(A,B)***** $(0,1)*V$ *****
	F300(A,B)***** $(0,1)*V$ *****
With FMT	F025(A,B)***** $(K,L,M,N)*V$ *****
	F050(A,B)***** $(K,L,M,N)*V$ *****
	F100(A,B)***** $(K,L,M,N)*V$ *****
	F300(A,B)***** $(K,L,M,N)*V$ *****



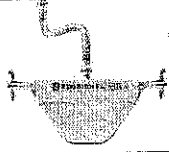
Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

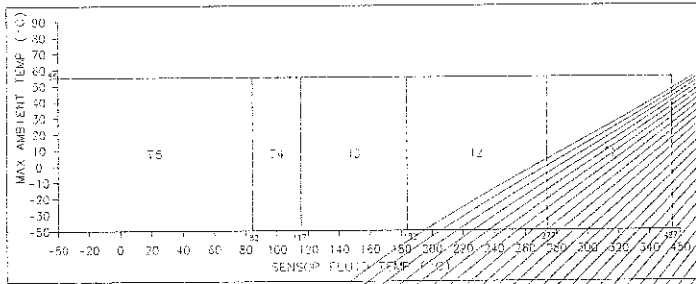
Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2: 290 °C and T1: T 363 °C

Ambient temperature range: T_a -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

Sensor type	
With 2400S	F025(C,E)***** (0,1)*V*****
	F050(C,E)***** (0,1)*V*****
	F100(C,E)***** (0,1)*V*****
	F300(C,E)***** (0,1)*V*****
With FMT	F025(C,E)***** (K,L,M,N)*V*****
	F050(C,E)***** (K,L,M,N)*V*****
	F100(C,E)***** (K,L,M,N)*V*****
	F300(C,E)***** (K,L,M,N)*V*****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

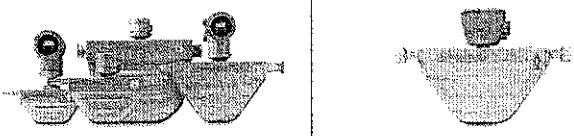
Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2: 290 °C and T1: T 440 °C

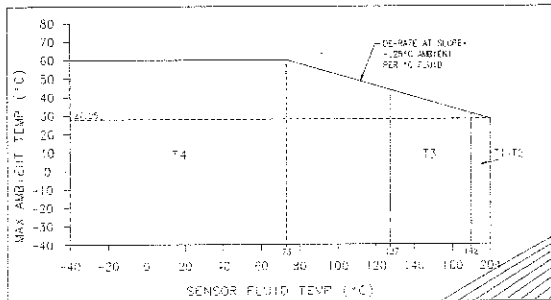
Ambient temperature range: T_a -50 °C up to +55 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.38 Excluding F***(A, B, C, E)***** (J,U)*V*****:

Sensor type		
With 2200S	F025***** (J,U)*V*****	CNG050*** (J,U)*V*****
	F050***** (J,U)*V*****	
	H025***** (J,U)*V*****	
	H050***** (J,U)*V*****	
	R025***** (J,U)*V*****	
	R050***** (J,U)*V*****	

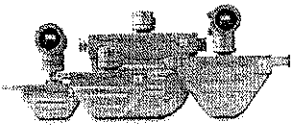


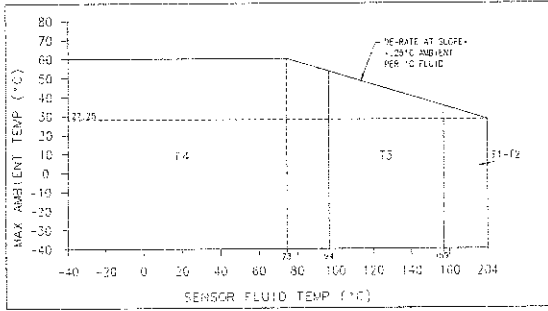
Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2 to T1: T 207 °C.

Ambient temperature range: Ta -40 °C up to +60 °C

15.3.4.39 Excluding F***(A, B, C, E)***** (J,U)*V*****:

Sensor type	
With 2200S	F100***** (J,U)*V*****
	H100***** (J,U)*V*****
	R100***** (J,U)*V*****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

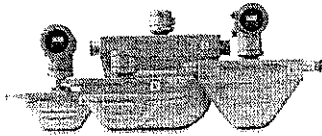
Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2 to T1: T 240 °C.

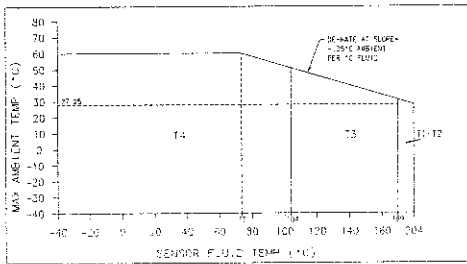
Ambient temperature range:

Ta

-40 °C up to +60 °C

15.3.4.40 Excluding F*** (A, B, C, E)***** (J, U) * V*****.

Sensor type	
With 2200S	F200***** (J, U) * V*****
	H200***** (J, U) * V*****
	R200***** (J, U) * V*****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

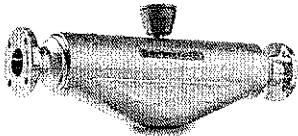
Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2 to T1: T 230 °C.

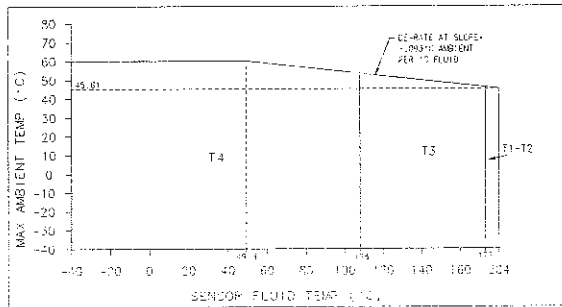
Ambient temperature range:

Ta

-40 °C up to +60 °C

15.3.4.41 Excluding F**(A, B, C, E)***(J,U)*V**.*

Sensor type	
With 2200S	F300***(J,U)*V** H300***(J,U)*V**



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

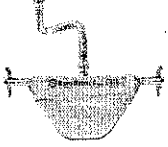
Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2 to T1: T 226 °C.

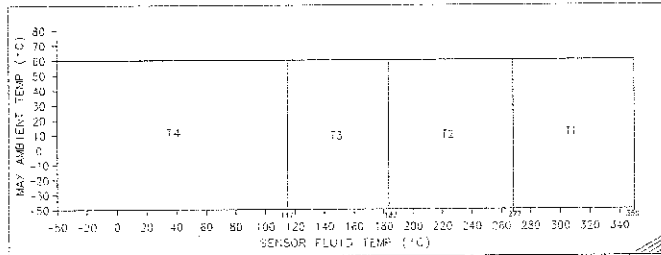
Ambient temperature range:

Ta

-40 °C up to +60 °C

15.3.4.42

Sensor type	
With 2200S	F025(A,B)***** (J,U)*V*****
	F050(A,B)***** (J,U)*V*****
	F100(A,B)***** (J,U)*V*****
	F300(A,B)***** (J,U)*V*****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

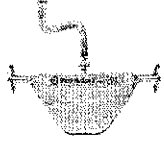
Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2: 290 °C and T1: T 363 °C

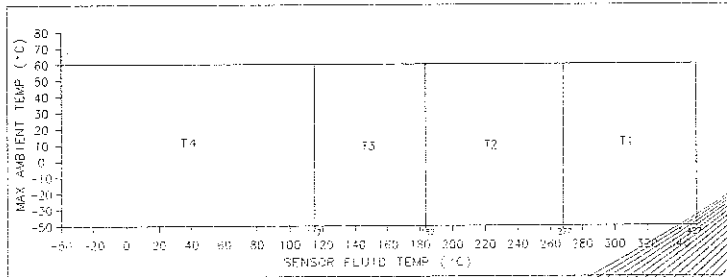
Ambient temperature range: T_a -50 °C up to +60 °C

The minimum ambient and process fluid temperature for dust is -40 °C.

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.43

Sensor type	
With 2200S	F025(C,E)***** (J,U)*V*****
	F050(C,E)***** (J,U)*V*****
	F100(C,E)***** (J,U)*V*****
	F300(C,E)***** (J,U)*V*****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

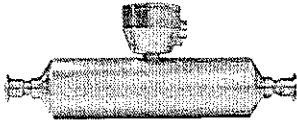
Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2: 290 °C and T1: T 440 °C.

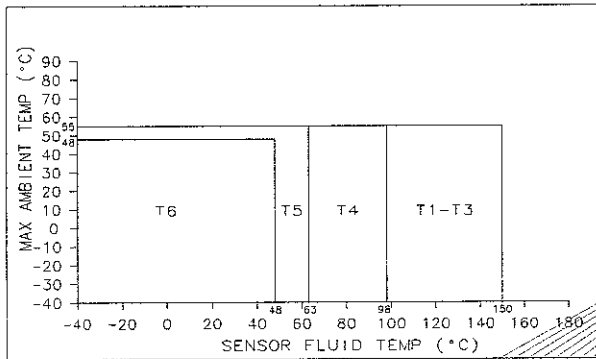
Ambient temperature range: T_a -50 °C up to +60 °C

The minimum ambient and process fluid temperature for dust is -40 °C

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than +60 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.44

Sensor type	
with J-box	T025*****(R,H,S,T)*V*****
	T050*****(R,H,S,T)*V*****
	T075*****(R,H,S,T)*V*****
	T100*****(R,H,S,T)*V*****
	T150*****(R,H,S,T)*V*****



Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

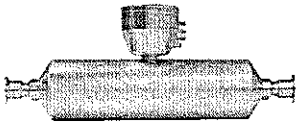
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3 to T1: 182 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

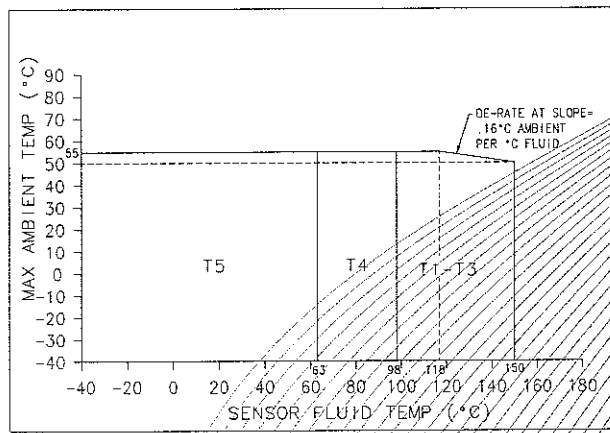
Ambient temperature range:

Ta -40 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.45

Sensor type	
With 2400S	T025***** (0,1)*V*****
	T050***** (0,1)*V*****
	T100***** (0,1)*V*****
	T150***** (0,1)*V*****
With FMT	T025***** (K,L,M,N)*V*****
	T050***** (K,L,M,N)*V*****
	T100***** (K,L,M,N)*V*****
	T150***** (K,L,M,N)*V*****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.


Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3 to T1: T 182 °C.

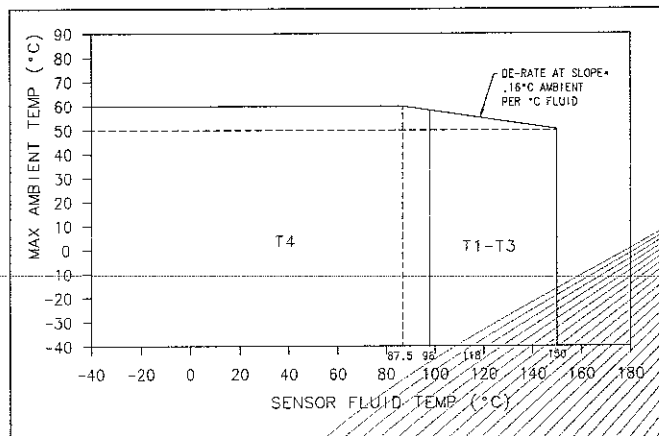
Ambient temperature range:

Ta

-40 °C up to +55 °C

15.3.4.46


Sensor type	
With 2200S	T025***** (J,U)*V*****
	T050***** (J,U)*V*****
	T100***** (J,U)*V*****
	T150***** (J,U)*V*****

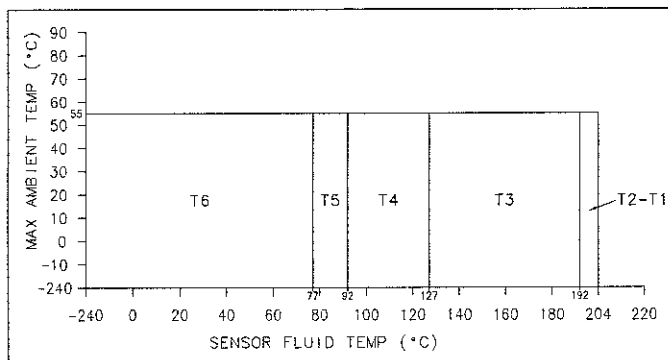


Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3 to T1: T 182 °C.

Ambient temperature range: T_a -40 °C up to +60 °C

Sensor type	
with J-box	CMFS010*****(R,H,S,T)*V****
	CMFS015*****(R,H,S,T)*V****



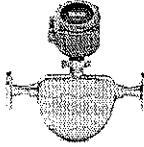
Note: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

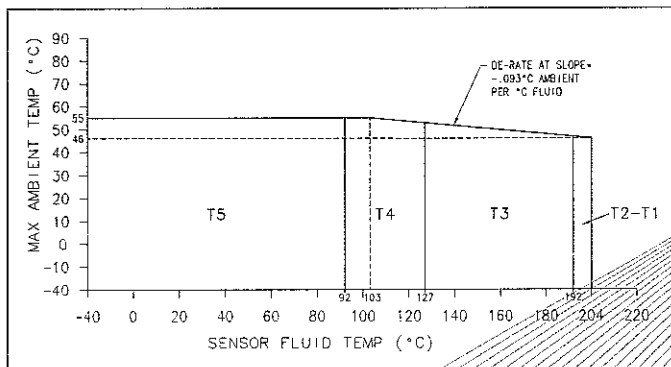
The maximum surface temperature T for dust is as follows: T6: 80 °C, T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 to T1: 207 °C. The minimum ambient temperature allowed for dust is -40 °C. When marked with ETO 18748 the minimum ambient and process fluid temperature allowed for dust is -50 °C.

Ambient temperature range: T_a -240 °C up to +55 °C

The use of the sensor at higher ambient temperatures is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

15.3.4.48

Sensor type	
With 2400S	CMFS010*****(0,1)*V****
	CMFS015*****(0,1)*V****
With FMT	CMFS010*****(K,L,M,N)*V****
	CMFS015*****(K,L,M,N)*V****

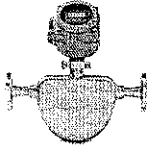


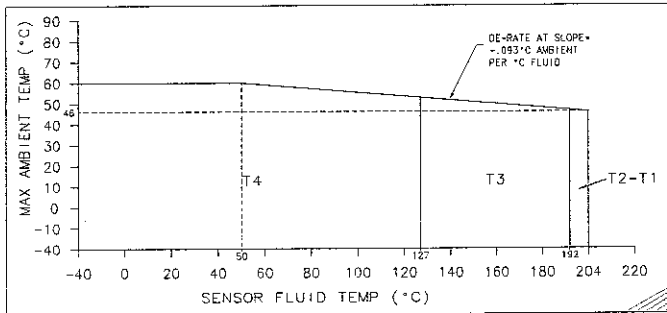
Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Note 2: The maximum surface temperature for dust is as follows: T5: T 95 °C, T4: T 130 °C, T3: T 195 °C, T2 to T1: T 207 °C.

Ambient temperature range: T_a $-40\text{ }^\circ\text{C}$ up to $+55\text{ }^\circ\text{C}$

15.3.4.49

Sensor type	
With 2200S	CMFS010***** (J,U)*V****
	CMFS015***** (J,U)*V****



Note 1: Use the above graph to determine the temperature class for a given fluid and ambient temperature.

Note 2: The maximum surface temperature for dust is as follows: T4: T 130 °C, T3: T 195 °C, T2 to T1: T 207 °C.

Ambient temperature range: T_a -40 °C up to +60 °C

(16) Test and assessment report

BVS PP 06.2082 EG as of 29.07.2011

(17) Special conditions for safe use

The sensor without j-box is designed for use in connection with a suitable transmitter, e. g. type 24*****L**** in accordance with BVS 05 E 116 X resp. type 2200S*****L**** in accordance with BVS 08 ATEX E 112 X resp. type FMT*****L**** in accordance with BVS 10 ATEX E 115 X; only the assemblage of the sensor and the transmitter guarantees the necessary degrees of protection.

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.

DEKRA EXAM GmbH
44809 Bochum, 29.07.2011
BVS-Hk/Sch A 20110075



Certification body



Special services unit