IBExU Institut für Sicherheitstechnik GmbH

An-Institut der TU Bergakademie Freiberg

[1] **EC-TYPE EXAMINATION CERTIFICATE**

according to Directive 94/9/EC, Annex III

(Translation)

[2] Equipment and Protective Systems intended for use in Potentially Explosive Atmospheres, Directive 94/9/EC

[3] EC-Type Examination Certificate Number: **IBExU10ATEX1122 X**

[4] Equipment: **Pressure transmitter**
Type DX9-DMP..., DX9-DMK..., DX9-LMP..., DX9-LMK...and DX9- 17.600G

[5] Manufacturer: BD SENSORS s.r.o.

[6] Address: Hradistska 817
687 08 Buchlovice
CZECH REPUBLIC

[7] The design of the equipment mentioned under [4] and any acceptable variation thereto are specified in the schedule to this EC-Type Examination Certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH, NOTIFIED BODY number 0637 in accordance with article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that the under [4] mentioned equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The test results are recorded in the test report IB-10-3-065 of 31 August 2010.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2009, EN 60079-11:2007 and EN 60079-26:2007.

[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 under [17] in the schedule to this EC-Type Examination Certificate.

[11] This EC-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this directive apply to the manufacture and supply of this equipment.

[12] The marking of the equipment mentioned in [4] shall include the following:

All types, exept DX9-DMK KRO: **Ex II 1G Ex ia IIC T4 Ga**

Type DX9-DMK KRO: **Ex II 1G Ex ia IIB T4 Ga**

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Authorised for certifications Explosion protection

By order

(Dr. Wagner)

Zertifizierungsstelle Explosionsschutz IBExU Institut für Sicherheitstechnik GmbH * Kenn-Nr. 0637 *
- Seal-
(ID no. 0637)

Freiberg, 31 August 2010

Certificates without signature and seal are not valid.
Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Schedule

[13] **Schedule**

[14] **to the EC-TYPE EXAMINATION CERTIFICATE IBExU10ATEX1122 X**

[15] **Description of equipment**

The Pressure transmitters DX9 are different pressure measurement devices or level sonde in stainless steel enclosure with different pressure ports. As measuring cell and evaluation electronic serves a separately approved electronic modules. The devices are intended for use in potentially hazardous areas, where Category 1G devices are required. They are supplied by an intrinsically safe power supply of the Category „ia".

Type code:

DX9- D M P nnn I

D - pressure measurement devices; L – level sonde

M - transmitter

P – stainless steel cell; K - ceramic cell

nnn - design

I - precision; P - process pressure port

Exception: DMK457 KRO with EMV 45 as clamp platine 17.600G conform to DMP

Type extent:

Name	Type	Electronic-module	Measurement cell
DMP 343	DMU	ELMO-STA	DSP 210 / ELV 66 = DSP 210 Z
DMP 331	DMU	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
DMP 333	DMU	ELMO-STA	DSP 4XX / ELV 66 = DSP 4XX Z
DMP 335	DMU	ELMO-STA	MSP 12X / ELV 57 = MSP 12X Z
17.600G	DMU	ELMO-STA	MSP 12X / ELV 57 = MSP 12X Z
DMK 331	DMU	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
LMP 331	DMU	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMK 331	PS	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
LMK 307	PS	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
DMP 331 I	DMU	ELMO-PRE	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
DMP 333 I	DMU	ELMO-PRE	DSP 4XX / ELI 20 = DSP 4XX X
LMP 331 I	PS	ELMO-PRE	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
DMP 331 P	DMU	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative DSP 1XX / ELV66 = DSP 1XX Z
DMK 331 P	DMU	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
DMK457 KRO	DMU	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z additional with EMV 45 as clamp platine.
LMP 307	PS	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMP 307 I	PS	ELMO-PRE	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16

LMP 308	PS	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMP 308 I	PS	ELMO-PRE	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16

Technical Data

supply electric circuit in type of protection Intrinsic Safety Ex ia IIC

(supply + and -)	U_i	28 V DC
	I_i	93 mA
	P_i	660 mW
effective inner capacity	C_i	negligible
effective inner inductivity	L_i	negligible

plus line inductivities 1 µH/m and line capacities 160 pF/m (cable supplied by the manufacturer)

The supply connections have an inner capacity of max. 27 nF to the housing.

Type DX9-DMK457 KRO in type of protection Intrinsic Safety Ex ia IIB

effective inner capacity	C_i	105 nF
effective inner inductivity	L_i	5 µH

The supply connections have an inner capacity of max. 91 nF to the housing.

Ambient temperature range -20 °C to +70 °C (type DX9-*** I to +65 °C)

[16] **Test report**

The test results are explained in detail in the test report IB-10-3-065. The test documents are part of the test report and listed there.

Summary of the test results:

The highest-pressure transmitters DX9 fulfil the requirements of type of protection Intrinsic Safety ‚ia' for an electrical equipment of the Equipment Group II, Category 1G, Explosion Group IIC or IIB and Temperature Class T4.

[17] **Special conditions**

- The equipment designed with connector have to be installed in such a way that the degree of protection IP 20 is always kept.
- The safety and assembly instructions contained in the operating instruction and the ambient temperature range -20 °C ≤ T_a ≤ +70 °C or at the types DX9-*** I -20 °C ≤ T_a ≤ +65 °C have to be taken into account.
- The device may be operated in explosive atmospheres which requires equipment of Category 1 only when there are atmospheric conditions (temperature of -20 °C to +60 °C, pressure of 0.8 bar to 1.1 bar).

[18] **Essential Health and Safety Requirements**

Confirmed by compliance with standards (see [9]).

By order

Freiberg, 31 August 2010

Wagner

(Dr. Wagner)

IBExU Institut für Sicherheitstechnik GmbH
An-Institut der TU Bergakademie Freiberg

[1] EU-TYPE EXAMINATION CERTIFICATE - Translation

[2] Equipment or protective systems
intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU10ATEX1122 X** | Issue 1

[4] Product: **Pressure transmitter**
Type: DX9-DMP..., DX9-DMK..., DX9-LMP...,DX9-LMK..., DX9-17.600G
DX9-17.605 and DX9-26.600

[5] Manufacturer: BD SENSORS s.r.o.

[6] Address: Hradistska 817
687 08 Buchlovice
CZECH REPUBLIC

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, Notified Body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report IB-17-3-0084.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN 60079-0:2012+A11:2013 and EN 60079-11:2012
except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the one of the following depending on the used components:

Non-metallic pressure connection	Ⓔx **II 2G Ex ia IIC T4 Gb** (type *457* only IIB) Ⓔx **II 2D Ex ia IIIC T85 °C Db**
Metallic pressure connection	Ⓔx **II 1G Ex ia IIC T4 Ga** (type *457* only IIB) Ⓔx **II 1D Ex ia IIIC T85 °C Da**

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By order

Dipl.-Ing. Willamowski

- Seal -
(Notified Body number 0637)

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Freiberg, 2017-11-22

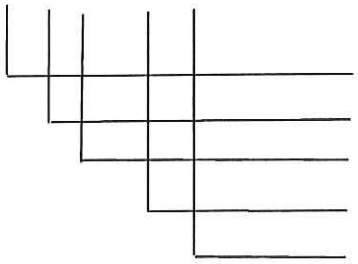
[13] **Schedule**

[14] **Certificate number IBExU10ATEX1122 X** | Issue 1

[15] **Description of product**
The Pressure transmitters DX9 are different pressure measurement devices or level sonde in stainless steel enclosure with different pressure ports. As measuring cell and evaluation electronic serves a separately approved electronic modules. The devices are intended for use in potentially hazardous areas, where Category 1G/1D or 2G/2D devices are required. They are supplied by an intrinsically safe power supply of the Category „ia".

Type code:

DX9- D M P nnn I



D - pressure measurement devices; L – level sonde
M - transmitter
P – stainless steel cell; K - ceramic cell
nnn - design
I - precision; P - process pressure port

Exceptions: DMK457 KRO with EMV 45 as clamp platine
17.600G, 17.605G, 26.600G conform to DMP

Type extent:

Name	Type	Electronic-module	Measurement cell
DMP 311	DMU	ELMO-STA ELV68 with EMV26	DSP4XX. ICS86, NPI15 with ELV66,ELV70, ELV86
DMP 321	DMU	ELMO-PRE ELI37 with EMV 52	DSP4XX, ICS86, NPI15, ST1 with ELV79, ELV67, ELI68, ELI69, ELI57, ELI63, ELI73
DMP 321 P	DMU	ELMO-PRE ELI37 with EMV 52	DSP4XX, ICS86, NPI15, ST1 with ELV79, ELV67, ELI68, ELI69, ELI57, ELI63, ELI73
DMP 321 PT	DMU	ELMO-PRE ELI93 with EMV 52 PD79	DSP4XX, ICS86, NPI15, ST1 with ELV79, ELV67, ELI68, ELI69, ELI57, ELI63, ELI73
DMP 331	DMU	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
DMP 331 P	DMU	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative DSP 1XX / ELV66 = DSP 1XX Z
DMP 333	DMU	ELMO-STA	DSP 4XX / ELV 66 = DSP 4XX Z alternative NPI 15
DMP 334	DMU	ELMO-STA ELV68 with EMV26 or ELV93 with EMV65	ST1 with ELV97
DMP 335	DMU	ELMO-STA	MSP12X / ELV57 = MSP12X Z alternative PSP 8/PSP10 / ELV 135
DMP 339	DMU	ELMO-STA ELMO-PRE	ICS 89 / ELV 66 / ELV 68 / EMV 26 ICS 89 / ELI 36 / ELI 37 / EMV 52
DMP 343	DMU	ELMO-STA	DSP 210 / ELV 66 = DSP 210 Z

DMP 457	DMU	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z EMV 58 replaces EMV 26 from ELMO-STA
17.600G	DMU	ELMO-STA	MSP12X / ELV57 = MSP12X Z alternative PSP 8/PSP10 / ELV 135
17.605G	DMU	ELMO-STA	SPS 1000 / ELV 49 / ELV 68 / EMV 26
26.600G	DMU	ELMO-STA	DSK611 / ELV 49 / ELV 68 / EMV 26
DMK 331	DMU	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
DMK 331 P	DMU	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
DMK 331	DMU	ELMO-STA ELV68 with EMV26 or ELV93 with EMV65	DSK 516 with ELV 94
DMK 457	DMU	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z EMV 58 replaces EMV 26 from ELMO-STA
DMK457 KRO	DMU	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z additional with EMV 45 as clamp platine.
DMP 331 I	DMU	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
DMP 333 I	DMU	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative NPI 15
LMP 307[1]	PS	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMP 308	PS	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMP 331	DMU	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMK 307	PS	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
LMK 331	PS	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
LMP 307[2]	PS	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
LMP 307 I	PS	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
LMP 308 I	PS	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
LMP 331 I	PS	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16

1) except for accuracy 0,1% or accuracies> = 0,25%
2) for accuracy 0.1%

Technical Data

Ambient temperature range:
Standard version: from -40 ° C / -20 ° C to +70 ° C
Precision instrument (I): from -40 ° C / -20 ° C to + 65 ° C

Electrical Data

Supply electric circuit in type of protection Intrinsic Safety Ex ia IIC

(+ and -)	Ui	28 V DC
	Ii	93 mA
	Pi	660 mW
effective inner capacity	Ci	negligible
effective inner inductivity	Li	negligible

plus line inductivities 1 µH/m and line capacities 160 pF/m (cable supplied by the manufacturer)

For all types except *457*, the supply connections have an internal capacity of max. 27 nF to the housing.

The effective internal capacitance is increased to Ci = 105 nF with the housing type *457* with field housing, with cable output Ci = 84.7 nF and with ISO 4400 Ci = 62.2 nF. The supply connections of these devices have an internal capacity of max. 90 nF (140 nF with field housing) to the housing.

Variations compared to the previous editions of this certificate:

Variation 1
Extension of the approval with the types DX9 DMP 321 P and DMP 321 PT.

Variation 2
Use of alternative electronic modules for signal processing.

Variation 3
Use of alternative measuring cells.

[16] **Test report**

The test results are recorded in the confidential test report IB-17-3-0084 of 2017-11-20.

The test documents are part of the test report and they are listed there.

Summary of the test results
The highest-pressure transmitters DX9-DMP..., DX9-DMK..., DX9-LMP..., DX9-LMK..., DX9-17.600G, DX9-17.605 and DX9-26.600 fulfil the requirements of type of protection Intrinsic safety ‚ia' on an electrical device for Equipment Group II Category 1G, 2G, 1D or 2D, Explosion Group IIC or IIB and temperature class T4.

[17] **Specific conditions of use**

- The equipment designed with connector has to be installed in such a way that the degree of protection IP 20 is always kept.
- The safety and assembly instructions contained in the operating instruction and the ambient temperature range depending on cable type -40 °C/ -20 °C ≤ T_a ≤ +70 °C or at the types DX9-*** I -40 °C/ -20 °C ≤ T_a ≤ +65 °C have to be taken into account.
- The device may be operated in explosive atmospheres which require equipment of Category 1 only when there are atmospheric conditions (temperature of -20 °C to +60 °C, pressure of 0.8 bar to 1.1 bar).

[18] **Essential health and safety requirements**
In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:
None

[19] **Drawings and Documents**
The documents are listed in the test report.

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg, GERMANY

By order

Dipl.-Ing. Willamowski

Freiberg, 2017-11-22

[1] EU-TYPE EXAMINATION CERTIFICATE - Translation

[2] Equipment or protective systems
intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU10ATEX1122 X** | Issue 2

[4] Product: **Pressure transmitter**
Type: DX9-DMP..., DX9-DMK..., DX9-LMP...,DX9-LMK..., DX9-17.600G
DX9-17.605 and DX9-26.600

[5] Manufacturer: BD SENSORS s.r.o.

[6] Address: Hradistska 817
687 08 Buchlovice
CZECH REPUBLIC

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, Notified Body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report IB-19-3-0209.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN IEC 60079-0:2018 and EN 60079-11:2012
except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the one of the following depending on the used components:

Non-metallic pressure connection
II 2G Ex ia IIC T4 Gb (type *457* only IIB)
II 2D Ex ia IIIC T85 °C Db

Metallic pressure connection
II 1G Ex ia IIC T4 Ga (type *457* only IIB)
II 1D Ex ia IIIC T135 °C Da or
II 2D Ex ia IIIC T85 °C Db

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By order

Dipl.-Ing. Willamowski

- Seal -
(Notified Body number 0637)

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Freiberg, 2020-06-24

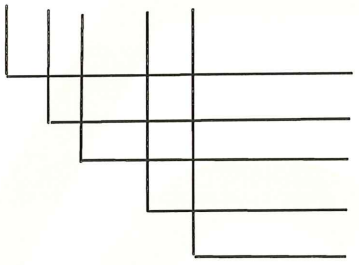
[13] **Schedule**

[14] **Certificate number IBExU10ATEX1122 X** | Issue 2

[15] **Description of product**
The Pressure transmitters DX9 are different pressure measurement devices or level sonde in stainless steel enclosure with different pressure ports. As measuring cell and evaluation electronic serves a separately approved electronic modules. The devices are intended for use in potentially hazardous areas, where Category 1G/1D or 2G/2D devices are required. They are supplied by an intrinsically safe power supply of the Category „ia".

Type code:

DX9- D M P nnn I



D - pressure measurement devices; L – level sonde
M - transmitter
P – stainless steel cell; K - ceramic cell
nnn - design
I - precision; P - process pressure port

Exceptions: DMK457 KRO — with EMV 45 as clamp platine
17.600G, 17.605G, 26.600G — conform to DMP

Type extent:

Name	Type	Electronic-module	Measurement cell
DMP 311	DMU	ELMO-STA ELV68 with EMV26	DSP4XX. ICS86, NPI15 with ELV66,ELV70, ELV86
DMP 321	DMU	ELMO-PRE ELI37 with EMV 52	DSP4XX, ICS86, NPI15, ST1 with ELV79, ELV67, ELI68, ELI69, ELI57, ELI63, ELI73
DMP 321 P	DMU	ELMO-PRE ELI37 with EMV 52	DSP4XX, ICS86, NPI15, ST1 with ELV79, ELV67, ELI68, ELI69, ELI57, ELI63, ELI73
DMP 321 PT	DMU	ELMO-PRE ELI93 with EMV 52 PD79	DSP4XX, ICS86, NPI15, ST1 with ELV79, ELV67, ELI68, ELI69, ELI57, ELI63, ELI73
DMP 331	DMU	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
DMP 331 P	DMU	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative DSP 1XX / ELV66 = DSP 1XX Z
DMP 333	DMU	ELMO-STA	DSP 4XX / ELV 66 = DSP 4XX Z alternative NPI 15
DMP 334	DMU	ELMO-STA ELV68 with EMV26 or ELV93 with EMV65	ST1 with ELV97
DMP 335	DMU	ELMO-STA	MSP12X / ELV57 = MSP12X Z alternative PSP 8/PSP10 / ELV 135
DMP 336	DMU	ELMO-STA ELV 133	PSP 8
DMP 339	DMU	ELMO-STA	ICS 89 / ELV 66 / ELV 68 / EMV 26

		ELMO-PRE	ICS 89 / ELI 36 / ELI 37 / EMV 52
DMP 343	DMU	ELMO-STA	DSP 210 / ELV 66 = DSP 210 Z
DMP 457	DMU	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z EMV 58 replaces EMV 26 from ELMO-STA
17.600G	DMU	ELMO-STA	MSP12X / ELV57 = MSP12X Z alternative PSP 8/PSP10 / ELV 135
17.605G	DMU	ELMO-STA	SPS 1000 / ELV 49 / ELV 68 / EMV 26
26.600G	DMU	ELMO-STA	DSK611 / ELV 49 / ELV 68 / EMV 26
DMK 331	DMU	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
DMK 331 P	DMU	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
DMK 331	DMU	ELMO-STA ELV68 with EMV26 or ELV93 with EMV65	DSK 516 with ELV 94
DMK 457	DMU	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z EMV 58 replaces EMV 26 from ELMO-STA
DMK457 KRO	DMU	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z additional with EMV 45 as clamp platine.
DMP 331 I	DMU	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
DMP 333 I	DMU	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative NPI 15
LMP 307[1]	PS	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMP 308	PS	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMP 331	DMU	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMK 307	PS	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
LMK 331	PS	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
LMP 307[2]	PS	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
LMP 307 I	PS	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
LMP 308 I	PS	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
LMP 331 I	PS	ELMO-PRE ELI 103 – ELI 121	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16

1) except for accuracy 0,1% or accuracies> = 0,25%
2) for accuracy 0.1%

Technical Data

Ambient temperature range:
Standard version: from -40 ° C / -20 ° C to +70 ° C
Precision instrument (I): from -40 ° C / -20 ° C to + 65 ° C

Electrical Data
Supply electric circuit in type of protection Intrinsic Safety Ex ia IIC
(+ and -) Ui 28 V DC
Ii 93 mA
Pi 660 mW
effective inner capacity Ci negligible
effective inner inductivity Li negligible
plus line inductivities 1 µH/m and line capacities 160 pF/m (cable supplied by the manufacturer)

For all types except *457*, the supply connections have an internal capacity of max. 27 nF to the housing.

The effective internal capacitance is increased to Ci = 105 nF with the housing type *457* with field housing, with cable output Ci = 84.7 nF and with ISO 4400 Ci = 62.2 nF. The supply connections of these devices have an internal capacity of max. 90 nF (140 nF with field housing) to the housing.

Variations compared to the previous editions of this certificate:

Variation 1
Extension of the approval with the type DX9 DMP 336.

Variation 2
Adaptation to the current standards and corresponding modification of the marking.

Variation 3
Other plug types can be used for the electrical connection.

[16] **Test report**

The test results are recorded in the confidential test report IB-19-3-0209 of 2020-06-22.
The test documents are part of the test report and they are listed there.

Summary of the test results
The highest-pressure transmitters DX9-DMP..., DX9-DMK..., DX9-LMP..., DX9-LMK..., DX9-17.600G, DX9-17.605 and DX9-26.600 fulfil the requirements of type of protection Intrinsic safety ‚ia' on an electrical device for Equipment Group II Category 1G, 2G, 1D or 2D, Explosion Group IIC or IIB and temperature class T4.

[17] **Specific conditions of use**

- The equipment designed with connector has to be installed in such a way that the degree of protection IP20 is always kept.
- The safety and assembly instructions contained in the operating instruction and the ambient temperature range depending on cable type -40 °C/ -20 °C ≤ T_a ≤ +70 °C or at the types DX9-*** I -40 °C/ -20 °C ≤ T_a ≤ +65 °C have to be taken into account.
- The device may be operated in explosive atmospheres which require equipment of Category 1 only when there are atmospheric conditions (temperature of -20 °C to +60 °C, pressure of 0.8 bar to 1.1 bar).

[18] **Essential health and safety requirements**
In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:
None

[19] **Drawings and Documents**
The documents are listed in the test report.

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By order

Dipl.-Ing. Willamowski

Freiberg, 2020-06-24