Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(1) # EC-TYPE-EXAMINATION CERTIFICATE

(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 00 ATEX 2049 X

(4) Equipment: SN-sensors, types NJ... and SJ...

(5) Manufacturer: Pepperl + Fuchs GmbH

(6) Address: D-68307 Mannheim

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

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC 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 confidential report PTB Ex 00-29268.

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

EN 50014:1997 **EN 50020:1994**

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

(11) This EC-type-examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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

Ex II 2 G EEx ia IIC T6

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, October 05, 2000

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 24

(13) # SCHEDULE

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2049 X

(15) Description of equipment

The SN-sensors, types NJ... and SJ... are used to convert displacements into electrical signals.

The SN-sensors, types NJ... and SJ... may be operated with intrinsically safe circuits certified for categories and explosion groups [EEx ia] IIC or IIB resp. [EEx ib] IIC or IIB. The category as well as the explosion group of the SN-sensors depends on the connected supplying intrinsically safe circuit.

Electrical data

Evaluation and
supply circuit..... type of protection Intrinsic Safety EEx ia IIC/IIB
resp. EEx ib IIC/IIB
only for connection to certified intrinsically safe circuits
maximum values:

type 1	type 2	type 3	type 4
U_i = 16 V	U_i = 16 V	U_i = 16 V	U_i = 16 V
I_i = 25 mA	I_i = 25 mA	I_i = 52 mA	I_i = 76 mA
P_i = 34 mW	P_i = 64 mW	P_i = 169 mW	P_i = 242 mW

The assignment of the type of the connected circuit to the maximum permissible ambient temperature and the temperature class as well as the effective internal reactances for the individual types of SN-sensors is shown in the following table:

types	C_i	L_i	type 1			type 2			type 3			type 4		
			maximum permissible ambient temperature in °C for application in temperature class											
	[nF]	[µH]	T6	T5	T4-T1	T6	T5	T4-T1	T6	T5	T4-T1	T6	T5	T4-T1
NJ 2-11-SN...	50	150	73	88	100	66	81	100	45	60	89	30	45	74
NJ 2-11-SN-G...	50	150	76	91	100	73	88	100	62	77	81	54	63	63
NJ 2-12GK-SN...	50	150	73	88	100	69	84	100	51	66	80	39	54	61
NJ 3-18GK-S1N...	70	200	73	88	100	69	84	100	51	66	80	39	54	61
NJ 4-12GK-SN...	70	150	73	88	100	69	84	100	51	66	80	39	54	61
NJ 5-18GK-SN...	120	200	73	88	100	69	84	100	51	66	80	39	54	61
NJ 5-30GK-S1N...	100	200	73	88	100	69	84	100	51	66	80	39	54	61
NJ 6-22-SN...	110	150	73	88	100	69	84	100	51	66	80	39	54	61
NJ 6-22-SN-G...	110	150	76	91	100	73	88	100	62	77	81	54	63	63
NJ 6S1+U.+N...	180	150	73	88	100	69	84	100	51	66	80	39	54	61
NJ 8-18GK-SN...	120	200	73	88	100	69	84	100	51	66	80	39	54	61
NJ 10-30GK-SN...	120	150	73	88	100	69	84	100	51	66	80	39	54	61
NJ 15-30GK-SN...	120	180	73	88	100	69	84	100	51	66	80	39	54	61
NJ 15S-U.-N...	180	150	73	88	100	66	81	100	45	60	89	30	45	74
NJ 20S-U.-N...	200	150	73	88	100	66	81	100	45	60	89	30	45	74
NJ 40-FP-SN...	370	300	73	88	100	66	81	100	45	60	89	30	45	74
SJ 2-SN...	30	100	73	88	100	66	81	100	45	60	78	30	45	57
SJ 2-S1N...	~~30~~ 60*	100	73	88	100	66	81	100	45	60	78	30	45	57
SJ 3,5-S1N...	30	100	73	88	100	66	81	100	45	60	89	30	45	74
SJ 3,5-SN...	30	100	73	88	100	66	81	100	45	60	89	30	45	74

* Amendment of data by LABOM GmbH
Amendment according to Safety Information from Pepperl + Fuchs dated Nov 13th 2015.

(16) Test report PTB Ex 00-29268

(17) Special conditions for safe use

1. For the application within a temperature range of -60 °C to -20 °C the SN-sensors, types NJ... and SJ... must be protected against damage due to impact by mounting into an additional housing.
2. The connection facilities of the SN-sensors, types NJ... and SJ... shall be installed as such that at least a degree of protection of IP20 according to IEC-publication 60529:1989 is met.
3. The assignment of the type of the connected circuit to the maximum permissible ambient temperature and the temperature class as well as the effective internal reactances for the individual types of SN-sensors is shown in the table given under item (15) of this EC-type-examination certifcate.

4. With the application in group IIC inadmissible electrostatic charge of the plastic housing has to be avoided for following types of SN-sensors (warning label on the device).:

   NJ 40-FP-SN...

5. Inadmissible electrostatic charge of parts of the metal houising has to be avoided for the following types of SN-sensors. Dangerous electrostatic charges of parts of the metal housing can be avoided by grounding of these parts whereas very small parts of the metal housing (e.g. screws) don't need to be grounded:

   NJ 2-11-SN-G...
   NJ 6-22-SN-G...
   NJ 6S1+U3+N...
   NJ 6S1+U4+N...
   NJ 15S+U3+N...
   NJ 15S+U4+N...
   NJ 20S+U3+N...
   NJ 20S+U4+N...
   NJ 40-FP-SN-P3...
   NJ 40-FP-SN-P4...

(18) Essential health and safety requirements

Met by the standards mentioned above

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor

Braunschweig, October 05, 2000

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2049 X

(Translation)

Equipment: SN-sensors, types NJ... and SJ...

Marking: ⟨Ex⟩ **II 2 G EEx ia IIC T6**

Manufacturer: Pepperl + Fuchs GmbH

Address: Königsberger Allee 87, 68307 Mannheim, Germany

Description of supplements and modifications

The SN-sensors of type series NJ... and SJ... listed below may in future also be used in hazardous areas where equipment of catagory-1 is required.

The modifications exclusively concern the „Electrical data" (change of maximum permissible ambient temperatures for application as category-1 equipment, reduction of the intrinsically safe evaluation and supply circuit to category ia) as well as the marking of the SN-sensors listed below.

NJ 2-11-SN...
NJ 2-11-SN-G...
NJ 2-12GK-SN...
NJ 3-18GK-S1N...
NJ 4-12GK-SN...
NJ 5-18GK-SN...
NJ 5-30GK-S1N...
NJ 6-22-SN...
NJ 6-22-SN-G...
NJ 6S1+U.+N...
NJ 8-18GK-SN...
NJ 10-30GK-SN...
NJ 15-30GK-SN...
NJ 15S-U.-N...
NJ 20S-U.-N...
SJ 2-SN...
SJ 2-S1N...
SJ 3,5-S1N...
SJ 3,5-SN...

For application as category-1 equipment the marking of the slot-type initiators listed above will be in the future:

⟨Ex⟩ **II 1 G EEx ia IIC T6**

The „Special conditions" are also valid for application as category-1 equipment without changes.

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2049 X

Electrical data

Evaluation and supply circuit

type of protection Intrinsic Safety EEx ia IIC/IIB
only for connection to certified intrinsically safe circuits
Maximum values:

type 1	type 2	type 3	type 4
U_i = 16 V	U_i = 16 V	U_i = 16 V	U_i = 16 V
I_i = 25 mA	I_i = 25 mA	I_i = 52 mA	I_i = 76 mA
P_i = 34 mW	P_i = 64 mW	P_i = 169 mW	P_i = 242 mW

The assignment of the type of the connected circuit to the maximum permissible ambient temperature and the temperature class as well as the effective internal reactances for the individual types of slot-type intiators are shown in the following table:

types	C_i	L_i	type 1			type 2			type 3			type 4		
			maximum permissible ambient temperature in °C for application in temperature class											
	[nF]	[µH]	T6	T5	T4-T1	T6	T5	T4-T1	T6	T5	T4-T1	T6	T5	T4-T1
NJ 2-11-SN...	50	150	56	68	96	49	61	89	28	40	68	13	25	53
NJ 2-11-SN-G...	50	150	59	71	99	56	68	96	45	57	81	37	49	63
NJ 2-12GK-SN...	50	150	57	69	97	52	64	92	34	46	74	22	34	61
NJ 3-18GK-S1N...	70	200	57	69	97	52	64	92	34	46	74	22	34	61
NJ 4-12GK-SN...	70	150	57	69	97	52	64	92	34	46	74	22	34	61
NJ 5-18GK-SN...	120	200	57	69	97	52	64	92	34	46	74	22	34	61
NJ 5-30GK-S1N...	100	200	57	69	97	52	64	92	34	46	74	22	34	61
NJ 6-22-SN...	110	150	57	69	97	52	64	92	34	46	74	22	34	61
NJ 6-22-SN-G...	110	150	59	71	99	56	68	96	45	57	81	37	49	63
NJ 6S1+U.+N...	180	150	57	69	97	52	64	92	34	46	74	22	34	61
NJ 8-18GK-SN...	120	200	57	69	97	52	64	92	34	46	74	22	34	61
NJ 10-30GK-SN...	120	150	57	69	97	52	64	92	34	46	74	22	34	61
NJ 15-30GK-SN...	120	180	57	69	97	52	64	92	34	46	74	22	34	61
NJ 15S-U.-N...	180	150	56	68	96	49	61	89	28	40	68	13	25	53
NJ 20S-U.-N...	200	150	56	68	96	49	61	89	28	40	68	13	25	53
SJ 2-SN...	30	100	56	68	96	49	61	89	28	40	68	13	25	53
SJ 2-S1N...	~~30~~ 60*	100	56	68	96	49	61	89	28	40	68	13	25	53
SJ 3,5-S1N...	30	100	56	68	96	49	61	89	28	40	68	13	25	53
SJ 3,5-SN...	30	100	56	68	96	49	61	89	28	40	68	13	25	53

* Amendment of data by LABOM GmbH
Amendment according to Safety Information from Pepperl+Fuchs dated Nov13th 2015.

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2049 X

Test report: PTB Ex 03-23134

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, October 29, 2003

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2049 X

(Translation)

Equipment: SN-Sensors, types NJ... and SJ...

Marking: ⟨Ex⟩ **II 1 G EEx ia IIC T6**

Manufacturer: Pepperl + Fuchs GmbH

Address: Lilienthalstraße 200
68307 Mannheim, Germany

Description of supplements and modifications

In the future the SN-Sensors, types NJ... and SJ... may also be manufactured and operated according to the test documents listed in the assessment and test report.

The modifications concern the introduction of the new sensor types NJ4-12GK-SN-Y197959 and NJ4-12GK-SN-Y197960 providing a modified enclosure, alternative casting compounds and materials for the type label as well as a different enclosure material and additional types of LEDs. The manufacturer´s address changes as given above. Furthermore, the test specification is adapted to the current state of the standards which causes an alteration of the marking.

The marking will read in future:

⟨Ex⟩ **II 1 G Ex ia IIC T6** **or** ⟨Ex⟩ **II 2 G Ex ia IIC T6**

The Special Condition No. 4 is supplemented as follows:

1. For the application in group IIC inadmissible electrostatic charge of the plastic housing shall be avoided and an appropriate warning note shall be provided on the device for following types of SN-sensors: NJ 40-FP-SN...

   For the application as category 1-equipment in group IIC inadmissible electrostatic charge of the plastic housing shall be avoided and an appropriate warning note shall be provided on the device for following types of SN-sensors:

   NJ4-12GK-SN-Y197959 NJ4-12GK-SN-Y197960

   An overview of all types of sensors for which the risc of an inadmissible electrostatic charge is to be considered as well as their permissible field of application dependent on the design size is presented in the operating instructions manual.

All further Special Conditions and specifications of the EC-type examination certificate including the 1st supplement apply without changes also to this 2nd supplement.

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2049 X

Applied standards

EN 60079-0:2006 **EN 60079-11:2007** **EN 60079-26:2007**

Assessment and test report: PTB Ex 11-21240

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, November 24, 2011

Dr.-Ing. U. Johannsmeyer
Direktor und Professor

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

3. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2049 X

(Translation)

Equipment: SN sensors, types NJ... and SJ...

Marking: **II 1 G Ex ia IIC T6 or II 2 G Ex ia IIC T6**

Manufacturer: Pepperl+Fuchs GmbH

Address: Lilienthalstraße 200, 68307 Mannheim, Germany

Description of supplements and modifications

The modifications concern the consideration of the current state of the applied standards and – resulting from this – the marking of the SN sensors, types NJ... and SJ... , the "Special Conditions" as well as the internal construction (inclusion of further alternative casting resin materials).

The "electrical data", the "special conditions" as well as all other specifications apply without changes.

In the future the marking will read:

II 1 G Ex ia IIC T6...T1 Ga or II 2 G Ex ia IIC T6...T1 Gb

In principle the „electrical data" apply without changes compared to the state of the 2nd supplement to EC-type examination certificate PTB 00 ATEX 2049 X, they are, however, presented in updated and summarized form for improved clarity.

All other specifications apply without changes.

The SN-sensors, types NJ... and SJ... are used to convert displacements into electrical signals.

The SN-sensors, types NJ... and SJ... may be operated with intrinsically safe circuits certified for protection levels and explosion groups [Ex ia] IIC or IIB resp. [Ex ib] IIC or IIB. The protection level as well as the explosion group of the intrinsically safe SN-sensors depend on the connected supplying intrinsically safe circuit.

3. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2049 X

Electrical data

Evaluation and
supply circuit..... type of protection Intrinsic Safety Ex ia IIC/IIB
resp. Ex ib IIC/IIB
only for connection to certified intrinsically safe circuits
Maximum values:

type 1	type 2	type 3	type 4
U_i = 16 V	U_i = 16 V	U_i = 16 V	U_i = 16 V
I_i = 25 mA	I_i = 25 mA	I_i = 52 mA	I_i = 76 mA
P_i = 34 mW	P_i = 64 mW	P_i = 169 mW	P_i = 242 mW

For relationship between type of the connected circuit, maximum permissible ambient temperature for the application as category-2 equipment and temperature class as well as the effective internal reactances for the individual types of SN-sensors, reference is made to the following table:

Types	C_i	L_i	type 1			type 2			type 3			type 4		
			Maximum permissible ambient temperature in °C for application in temperature class											
	[nF]	[µH]	T6	T5	T4-T1	T6	T5	T4-T1	T6	T5	T4-T1	T6	T5	T4-T1
NJ 2-11-SN...	50	150	73	88	100	66	81	100	45	60	89	30	45	74
NJ 2-11-SN-G...	50	150	76	91	100	73	88	100	62	77	81	54	63	63
NJ 2-12GK-SN...	50	150	73	88	100	69	84	100	51	66	80	39	54	61
NJ 3-18GK-S1N...	70	200	73	88	100	69	84	100	51	66	80	39	54	61
NJ 4-12GK-SN...	70	150	73	88	100	69	84	100	51	66	80	39	54	61
NJ 5-18GK-SN...	120	200	73	88	100	69	84	100	51	66	80	39	54	61
NJ 5-30GK-S1N...	100	200	73	88	100	69	84	100	51	66	80	39	54	61
NJ 6-22-SN...	110	150	73	88	100	69	84	100	51	66	80	39	54	61
NJ 6-22-SN-G...	110	150	76	91	100	73	88	100	62	77	81	54	63	63
NJ 6S1+U.+N...	180	150	73	88	100	69	84	100	51	66	80	39	54	61
NJ 8-18GK-SN...	120	200	73	88	100	69	84	100	51	66	80	39	54	61
NJ 10-30GK-SN...	120	150	73	88	100	69	84	100	51	66	80	39	54	61
NJ 15-30GK-SN...	120	180	73	88	100	69	84	100	51	66	80	39	54	61
NJ 15S-U.-N...	180	150	73	88	100	66	81	100	45	60	89	30	45	74
NJ 20S-U.-N...	200	150	73	88	100	66	81	100	45	60	89	30	45	74
NJ 40-FP-SN...	370	300	73	88	100	66	81	100	45	60	89	30	45	74
SJ 2-SN...	30	100	73	88	100	66	81	100	45	60	78	30	45	57
SJ 2-S1N...	~~30~~ 60*	100	73	88	100	66	81	100	45	60	78	30	45	57
SJ 3,5-S1N...	30	100	73	88	100	66	81	100	45	60	89	30	45	74
SJ 3,5-SN...	30	100	73	88	100	66	81	100	45	60	89	30	45	74

* Amendment of data by LABOM GmbH
Amendment according to Safety Information from Pepperl + Fuchs dated Nov 13th 2015.

3. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2049 X

For relationship between type of the connected circuit, maximum permissible ambient temperature for the application as category-1 equipment and temperature class as well as the effective internal reactances for the individual types of SN-sensors, reference is made to the following table:

Types	C_i [nF]	L_i [µH]	type 1			type 2			type 3			type 4		
			Maximum permissible ambient temperature in °C for application in temperature class											
			T6	T5	T4-T1	T6	T5	T4-T1	T6	T5	T4-T1	T6	T5	T4-T1
NJ 2-11-SN...	50	150	56	68	96	49	61	89	28	40	68	13	25	53
NJ 2-11-SN-G...	50	150	59	71	99	56	68	96	45	57	81	37	49	63
NJ 2-12GK-SN...	50	150	57	69	97	52	64	92	34	46	74	22	34	61
NJ 3-18GK-S1N...	70	200	57	69	97	52	64	92	34	46	74	22	34	61
NJ 4-12GK-SN...	70	150	57	69	97	52	64	92	34	46	74	22	34	61
NJ 5-18GK-SN...	120	200	57	69	97	52	64	92	34	46	74	22	34	61
NJ 5-30GK-S1N...	100	200	57	69	97	52	64	92	34	46	74	22	34	61
NJ 6-22-SN...	110	150	57	69	97	52	64	92	34	46	74	22	34	61
NJ 6-22-SN-G...	110	150	59	71	99	56	68	96	45	57	81	37	49	63
NJ 6S1+U.+N...	180	150	57	69	97	52	64	92	34	46	74	22	34	61
NJ 8-18GK-SN...	120	200	57	69	97	52	64	92	34	46	74	22	34	61
NJ 10-30GK-SN...	120	150	57	69	97	52	64	92	34	46	74	22	34	61
NJ 15-30GK-SN...	120	180	57	69	97	52	64	92	34	46	74	22	34	61
NJ 15S-U.-N...	180	150	56	68	96	49	61	89	28	40	68	13	25	53
NJ 20S-U.-N...	200	150	56	68	96	49	61	89	28	40	68	13	25	53
SJ 2-SN...	30	100	56	68	96	49	61	89	28	40	68	13	25	53
SJ 2-S1N...	~~30~~ 60*	100	56	68	96	49	61	89	28	40	68	13	25	53
SJ 3,5-S1N...	30	100	56	68	96	49	61	89	28	40	68	13	25	53
SJ 3,5-SN...	30	100	56	68	96	49	61	89	28	40	68	13	25	53

* Amendment of data by LABOM GmbH
Amendment according to Safety Information from Pepperl + Fuchs dated Nov 13th 2015.

Special conditions for safe use

1. For the application within a temperature range of -60 °C to -20 °C the SN-sensors, types NJ... and SJ... must be protected against damage due to impact by mounting into an additional housing.
2. The connection facilities of the SN-sensors, types NJ... and SJ... shall be installed as such that at least a degree of protection of IP20 according to EN 60529 is met.
3. For relationship between type of the connected circuit, maximum permissible ambient temperature and temperature class as well as the effective internal reactances for the individual types of SN-sensors, reference is made to tables 1 and 2 presented in this 3rd supplement to EC-type examination certificate PTB 00 ATEX 2049 X.

3. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2049 X

4. When the following types of SN-sensors are applied according to the explosion groups and equipment categories specified in the following table inadmissible electrostatic charge of the plastic housing shall be avoided and a corresponding warning note shall be provided on the equipment:

Types	Application as category-1 equipment	Application as category-2 equipment
NJ 3-18GK-S1N...	IIC	-
NJ 4-12GK-SN-Y197959	IIC	-
NJ 4-12GK-SN-Y197960	IIC	-
NJ 5-18GK-SN...	IIC	-
NJ 5-30GK-S1N...	IIC	-
NJ 6-22-SN...	IIC	-
NJ 6S1+U.+N...	IIC	IIC
NJ 8-18GK-SN...	IIC	-
NJ 10-30GK-SN...	IIC	-
NJ 15-30GK-SN...	IIC	-
NJ 15S-U.-N...	IIC	IIC
NJ 20S-U.-N...	IIC	IIC
NJ 40-FP-SN...	not permitted	IIC

5. Inadmissible electrostatic charge of metal parts of the enclosure shall be avoided for the following types of SN-sensors. Dangerous electrostatic charge of parts of the metal housing can be avoided by grounding these parts whereas very small parts of the metal housing (e.g. screws) do not need to be grounded:

NJ 2-11-SN-G...
NJ 6-22-SN-G...
NJ 6S1+U3+N...
NJ 6S1+U4+N...
NJ 15S+U3+N...
NJ 15S+U4+N...
NJ 20S+U3+N...
NJ 20S+U4+N...
NJ 40-FP-SN-P3...
NJ 40-FP-SN-P4...

3. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2049 X

6. The maximum permissible mass fractions of metallic materials are exceeded for the following types of SN-sensors when applied as EPL Ga-equipment. In hazardous areas requiring the application of EPL Ga-equipment it shall be ensured by appropriate measures that an ignition hazard due to impact or friction effects cannot occur.

   NJ 6S1+U3+N...
   NJ 6S1+U4+N...
   NJ 15S+U3+N...
   NJ 15S+U4+N...
   NJ 20S+U3+N...
   NJ 20S+U4+N...

Applied standards

EN 60079-0:2012 **EN 60079-11:2012** **EN 60079-26:2007**

Test report: PTB Ex 15-24244

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, April 27, 2015

Dr.-Ing. U. Johannsmeyer
Direktor und Professor