



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx KIWA 16.0024X Issue No: 0 Certificate history:
Issue No. 0 (2017-04-13)

Status: Current Page 1 of 3

Date of Issue: 2017-04-13

Applicant: Hans Turck GmbH & Co. KG
Witzlebenstraße 7
45472 Mulheim an der Ruhr
Germany

Equipment: 2-Wire Proximity Sensors, ModelY1.....
Optional accessory:

Type of Protection: Ex i

Marking: Ex ia IIC T6 ... T4 Ga or
Ex ia IIC T6 ... T4 Gb or
Ex ia III C T95 °C or T115 °C Da

Approved for issue on behalf of the IECEx
Certification Body:

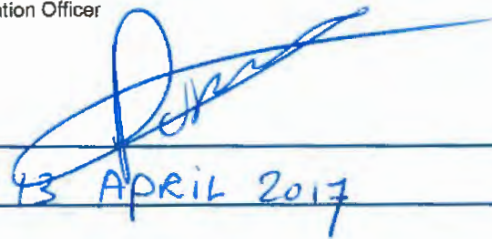
Pieter van Breugel

Position:

Certification Officer

Signature:
(for printed version)

Date:


13 APRIL 2017

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Kiwa Nederland B.V. (Unit Kiwa ExVision)
Wilmsdorf 50
7327 AC Apeldoorn
P.O. Box 137
The Netherlands

kiwa 
Partner for progress



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Manufacturer: **Werner Turck GmbH & Co. KG**
Goethestraße 7
58553 Halver
Germany

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[NL/KIWA/ExTR16.0026/00](#)

Quality Assessment Report:

[DE/PTB/QAR06.0013/04](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Two Wire Proximity Sensors are used for initiation of signalling or switching functions once a pre-set distance value from the sensor has been reached. The apparatus has a digital output signal.

The apparatus model codes are listed in table 1 of Annex 1.

The apparatus has various constructional variants divided into seven type groups. The type group is related to the constructional variant as can be determined from table 2 of Annex 1.

Equipment Protection Level (EPL) Ga only applies to the constructional variants included in table 3 of Annex 1.

The ambient temperature range of special apparatus types is included in table 4 of Annex 1.

The ambient temperature range for all other apparatus types is -25 °C to + 70 °C.

For explosive gas atmospheres, the temperature class for different sensor models, depends on the following parameters: maximum ambient temperature, values of I_i and P_i . The temperature class can be determined based on tables 2 and 5 to 8 of Annex 1.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to manufacturer's instructions for precautions against the risk of electrostatic charging. Apparatus to which applies are provided with a warning marking.

Annex:

[Annex 1 to CoC IECEx KIWA 16.0024X, Iss 0.pdf](#)

Type groups and design

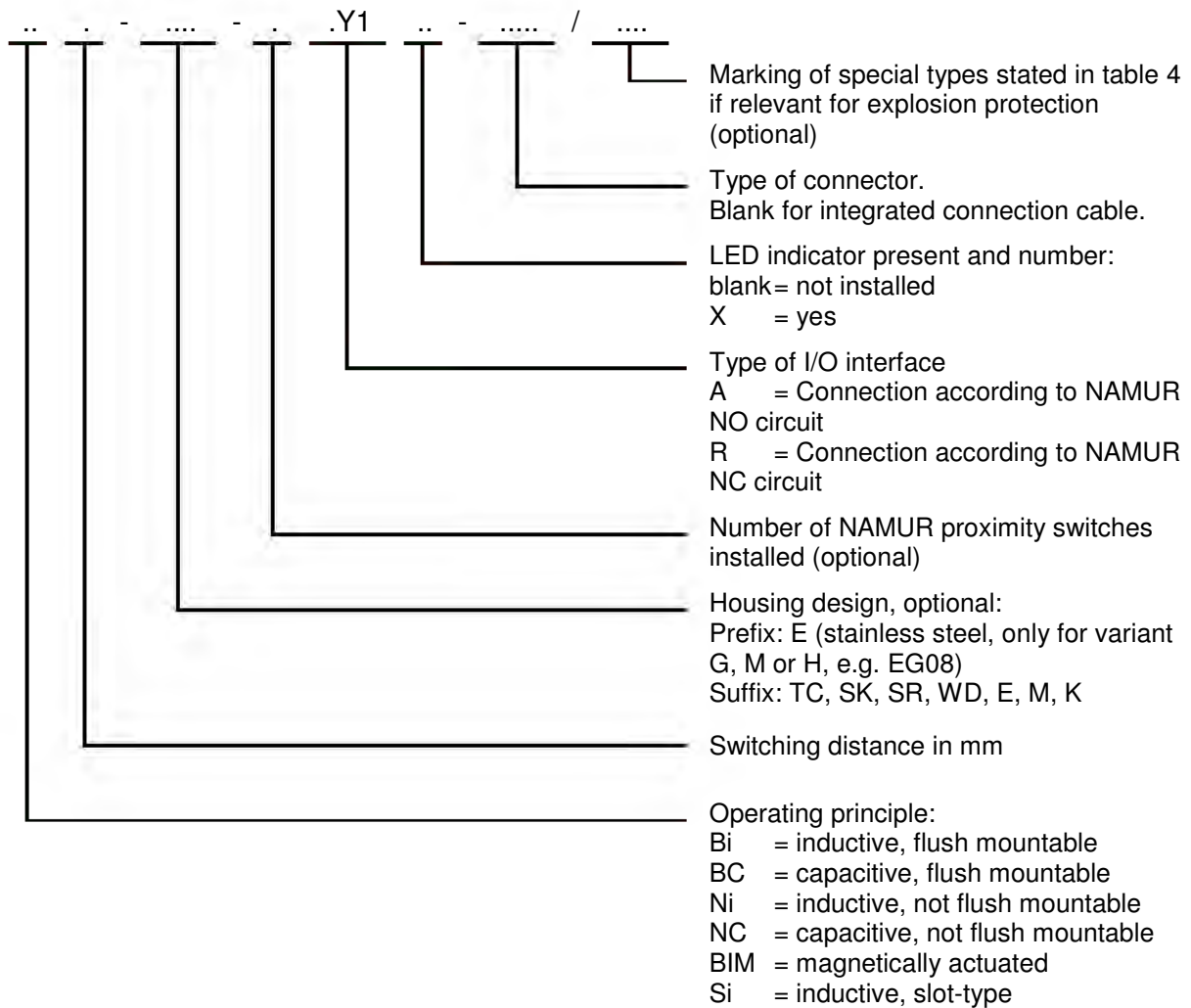


Table 1. Model code breakdown.

Design	Type group	Design	Type group	Design	Type group	Design	Type group
AKT	B	G19...Y1...	B	K14	B	PST	N
BKT	BD	G19...Y1X...	BX	K20...Y1...	B	Q06	N
BRY	BD	G28	B	K20...Y1X...	BX	Q08	N
CA25	B	G30...Y1...	B	K30	B	Q10	B
CA40	B	G30...Y1X...	BX	K33	B	Q10S	B
CK40	B	G47	B	K34	B	Q11	N
CP40	B	GS880	N	K40	B	Q11S	B
CP80	B	H04	L	K90...Y1...	B	Q12	B
DS13,5	BD	H08	N	K90...Y1X...	BX	Q14	B
DS20	BD	H12	B	M12...Y1...	B	Q20	B
DSC26	ND	H14	B	M12...Y1X...	BX	Q25	B
DSU26	BD	H6,5	L	M12EE	B	Q30	B
DSU35	BD	H6,5-2	LD	M18...Y1...	B	Q5.5	L
FMG	LD	HLM	N	M18...Y1X...	BX	Q6.5	L
FST	N	HS540	L	M30...Y1...	B	Q42	B
G05	L	HS865	N	M30...Y1X...	BX	Q80	B
G08	N	IKE	B	MP ...Y1...	B	QF5,5	L
G10	N	IKT	B	MP ...Y1X...	BX	QN26	B
G12...Y1...	B	INT	L	NST	N	QST	N
G12...Y1X...	BX	ISM	B	P12...Y1...	B	S12...Y1...	B
G13	B	K08	N	P12...Y1X...	BX	S12...Y1X...	BX
G14...Y1...	B	K09	N	P18...Y1...	B	S18...Y1...	B
G14...Y1X...	BX	K10	N	P18...Y1X...	BX	S18...Y1X...	BX
G18...Y1...	B	K11...Y1...	B	P30...Y1...	B	S30...Y1...	B
G18...Y1X...	BX	K11...Y1X...	BX	P30...Y1X...	BX	S30...Y1X...	BX
G180	B	K11...Y1X...	BX	P30...Y1X...	BX	T12	B
G181	B	K12	B	PSM	N	UNT	L
G182	B						

Table 2. Type group in relation to the design.

DS20	G30...Y1X..	INT	M12...Y1X..
FMG	GS880	ISM	M18...Y1...
G05	H04	K08	M18...Y1X..
G08	H08	K09	M30...Y1...
G10	H12	K10	M30...Y1X..
G12...Y1...	H14	K11	Q10S
G12...Y1X..	H6,5	K12	QF5,5
G18...Y1...	H6,5-2	K14	UNT
G18...Y1X..	HLM	K20	
G30...Y1...	HS540	M12...Y1...	

Table 3. Designs of device with EPL Ga.

EPL	Type code	Ambient temperature range
Ga, Gb	...-...-Y1.-... / S80	-25°C ... +80 °C
Gb	...-...-Y1.-... / S85	-25°C ... +85 °C
Ga, Gb	...-...-Y1.-... / S97	-40°C ... +70 °C
Gb	...-...-Y1.-... / S100	-25°C ... +100 °C

Table 4. Exceptions for ambient temperature range.

Technical data

In type of protection intrinsic safety Ex ia IIC and Ex ia IIIC, only for connection to a certified intrinsically safe circuit. Maximum values:

$U_i = 20 \text{ V}$; I_i and $P_i =$ see table 5 to 8 of Annex 1 to this certificate; $C_i = 180 \text{ nF}$; $L_i = 350 \text{ }\mu\text{H}$.

For dual sensors with two electrically isolated circuits, which are classified into type groups BD, LD or ND the parameters U_i and I_i apply to each sensor circuit and parameter P_i to the combined circuits. The values for C_i and L_i must be doubled.

Tables 5 to 8 list the temperature class, respectively the maximum surface temperature in relation to maximum ambient temperature, EPL and values of circuit parameters I_i and P_i .

Maximum ambient temperature	EPL	Temperature class	I_i (mA) (resistance limited)	P_i (mW)
+100 °C	Gb	T4	60	200
+85 °C	Gb	T5	60	200
+80 °C	Ga, Gb	T5	60	200
+70 °C	Ga, Gb	T6	60	200
+70 °C	Da	T95 °C	60	200

Table 5. Temperature class and circuit parameters for type groups B and BD.

Maximum ambient temperature	EPL	Temperature class	I_i (mA) (resistance limited)	P_i (mW)
+100 °C	Gb	T4	60	200
+85 °C	Gb	T5	60	130
+80 °C	Ga, Gb	T5	60	130
+70 °C	Ga, Gb	T6	60	130
+70 °C	Da	T95 °C	60	130

Table 6. Temperature class and circuit parameters for type groups N and ND

Maximum ambient temperature	EPL	Temperature class	I_i (mA) (resistance limited)	P_i (mW)
+100 °C	Gb	T4	60	200
+80 °C	Ga, Gb	T4	60	200
+85 °C	Gb	T5	60	80
+80 °C	Ga, Gb	T5	60	80
+70 °C	Ga, Gb	T5	60	200
+70 °C	Ga, Gb	T6	60	80
+70 °C	Da	T95 °C	60	80
+60 °C	Ga, Gb	T6	60	150
+60 °C	Da	T95 °C	60	150

Table 7. Temperature class and circuit parameters for type groups L and LD.

Maximum ambient temperature	EPL	Temperature class	I _i (mA) (resistance limited)	P _i (mW)
+100 °C	Gb	T4	50	200
+80 °C	Ga, Gb	T4	50	200
+70 °C	Ga, Gb	T4	60	200
+85 °C	Gb	T5	20	200
+80 °C	Ga, Gb	T5	20	200
+70 °C	Ga, Gb	T5	40	200
+70 °C	Ga, Gb	T6	20	200
+70 °C	Da	T95 °C ¹⁾	60	200
+70 °C	Da	T115 °C ²⁾	60	200

Note 1: Versions with internal LED indicator

Note 2: Versions with external LED indicator

Table 8. Temperature class and circuit parameters for type group BX.