IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEx BVS 17.0029X**

Certificate history:
Issue 0 (2017-04-21)

Status: **Current**

Issue No: 1

Date of Issue: 2019-03-27

Applicant: **Pepperl+Fuchs GmbH**
Lilienthalstraße 200
68307 Mannheim
Germany

Equipment: **Remote Monitor resp. Personal Computer * see ”Subject and Type” in ”General product information”**

Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "i", Equipment dust ignition protection by enclosure "t", Equipment protection by powder filling “q”, Equipment protection by increased safety "e"**

Marking: Type **-GXP1100-*****-*-*****-**-X
Ex eb q ib [ib] IIC T4 IP66 Gb
Ex tb [ib] IIIC T85°C IP66 Db

Type **-GXP1200-*****-*-*****-**-X
Ex ec q [ib] IIC T4 IP66 Gc
Ex tc [ib] IIIC T85°C IP66 Dc

Approved for issue on behalf of the IECEx Certification Body: **Dr Franz Eickhoff**

Position: **Deputy Head of Certification Body**

Signature:
(for printed version)

Date:

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 www.iecex.com or use of this QR Code.

Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

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Date of issue: 2019-03-27 Issue No: 1

Manufacturer: **Pepperl+Fuchs GmbH**
Lilienthalstraße 200
68307 Mannheim
Germany

Additional manufacturing locations: **.**
This product may be manufactured at all additional manufacturing locations/product sites listed in DE/PTB/QAR06.0008 and having congruent types of protection and congruent product types as defined in this certificate.

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 equipment 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

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-5:2015 Explosive atmospheres –Part 5: Equipment protection by powder filling “q”
Edition:4.0

IEC 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

This Certificate **does not** indicate compliance with 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:

DE/BVS/ExTR17.0032/01

Quality Assessment Report:

DE/PTB/QAR06.0008/09

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

General product information:

The Remote Monitor type RM-GXP1100-*****-*-*****-**-X resp. Personal Computer type PC-GXP1100-*****-*-*****-**-X consists of the following three equipments:
1) Display unit type DPU1100-J1-*****-**-**-X acc. to BVS 16 ATEX E 084 X resp. IECEx BVS 16.0061X.
2) Thin Client Unit type TCU1100-J1-**-**-**-X resp. Personal Computer Unit type PCU1100-J1-**-**-**-X acc. to BVS 16 ATEX E 083 X resp. IECEx BVS 16.0060X.
3) Power supply unit type PSU1100-J1-**-* acc. to BVS 16 ATEX E 098 X resp. IECEx BVS 16.0063X.

The Remote Monitor type RM-GXP1200-*****-*-*****-**-X resp. Personal Computer type PC-GXP1200-*****-*-*****-**-X consists of the following three equipments:
1) Display unit type DPU1200-J2-*****-**-**-X acc. to BVS 16 ATEX E 081 X resp. IECEx BVS 16.0061X.
2) Thin Client Unit type TCU1200-J2-**-**-**-X resp. Personal Computer Unit type PCU1200-J2-**-**-**-X acc. to BVS 16 ATEX E 082 X resp. IECEx BVS 16.0060X.
3) Power supply unit type PSU1200- J2-**-* acc. to BVS 16 ATEX E 097 X resp. IECEx BVS 16.0063X.

The Thin Client Unit / Personal Computer Unit is connected to the Display Unit via a plug and socket construction. The construction fulfills the requirements of type of protection Increased Safety “eb” and Intrinsic Safety “ib” resp. Protection by enclosure “tb”.
The supply of the TCU / CPU coming from the PSU is realized by a cable entry which is separately certified for this purpose. This leads in the terminal compartment of the TCU / CPU which fulfils the requirements of type of protection Increased Safety "e".

Subject and type

See Annex

Parameters

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The danger of ignition due to propagating brush discharges must be avoided by mounting the apparatus in areas without intensive electrostatical charging mechanism.
2. The intrinsically safe circuits are connected to earth. Along the intrinsically safe circuits potential equalization must exist.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
- Type **-GXP1***-*****-*-*****-H3-X is added
- Modification in “Manufacturer`s location”
- Changed or added electrical data

Annex:

BVS_17_0029X_PepperlFuchs_issue1_Annex.pdf

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Certificate No.: **IECEx BVS 17.0029X issue No.: 1**
Annex

Subject and type

-GXP1*-*****-*-*****-**-X

- Without influence on explosion protection
- Housing
  - NN no additional enclosure
  - S* bezel for mounting into enclosure (*: various sizes)
  - H1 built into standard system enclosure AG-XX00
  - H2 built into standard system enclosure AG1
  - H3 built into standard system enclosure AG1 (Basic-Line pedestal)
  - XX other housings without influence on explosion protection
- Computing unit
  - XXXXX computing unit variants of product family TCU1* or PCU1* according to IECEx BVS 16.0060X
- Power supply
  - D 24 V DC
  - A 115/230 V AC according to IECEx BVS 16.0063X
- Display
  - XXXXX variants of product family DPU1* according to IECEx BVS 16.0061X
- Ex-protection
  - 100 Zone 1/21
  - 200 Zone 2/22
- Unit Type
  - RM Remote Monitor
  - PC Personal Computer

Parameters

1	Electrical data			
1.1	Input data for the Power Supply Unit			
1.1.1	Type PSU1*00-J*-DC-*:			
	Input	DC		18…36 V, 5.3 A
1.1.2	Type PSU1*00-J*-AC-*:			
	Input	AC		115/230 V, 1.5 A
1.2	Non-intrinsically safe USB interface Connection terminals X1.5 (VCC), X1.6 (D-), X1.7 (D+), X1.8 (GND)			
	Maximum input voltage Only for connection to a SELV / PELV-circuit.	U_m	DC 60 V	

1.3 Only for variants with model code "U1":
additional non-intrinsically safe USB-interface
terminal block X4 resp. X5

The equipment may have one or two additional modules (Module A, Module B) with 2 non-intrinsically safe USB-interfaces.

For variant *CU1***-**-**-U1-**-X:	2xUSB-interface at terminal block X4
For variant *CU1***-**-**-**-U1-X:	2xUSB-interface at terminal block X5
For variant *CU1***-**-**-U1-U1-X:	2xUSB-interface at terminal block X4 and X5

Connection terminals X4.1 (VCC), X4.2 (D-), X4.3 (D+), X4.4 (GND)
Connection terminals X4.5 (VCC), X4.6 (D-), X4.7 (D+), X4.8 (GND) resp.
Connection terminals X5.1 (VCC), X5.2 (D-), X5.3 (D+), X5.4 (GND)
Connection terminals X5.5 (VCC), X5.6 (D-), X5.7 (D+), X5.8 (GND)

Each:

Rated voltage		DC	5	V
Maximum input voltage	U_m	DC	60	V

Only for connection to a SELV / PELV-circuit

1.4 Non-intrinsically safe Ethernet interface
Connection terminals X2.1… X2.8

Maximum input voltage	U_m	DC	60	V

Only for connection to a SELV / PELV-circuit

1.5 Only for variants with model code “ET”:
additional non-intrinsically safe Ethernet-interface
terminal block X4 resp. X5

The equipment may have one or two additional modules (Module A, Module B) with non-intrinsically safe Ethernet-interface.

For variant *CU1***-**-**-ET-**-X:	Ethernet-interface at terminal block X4
For variant *CU1***-**-**-**-ET-X:	Ethernet-interface at terminal block X5
For variant *CU1***-**-**-ET-ET-X:	Ethernet-interface at terminal block X4 and X5

Connection terminals X4.1… X4.8 resp.
Connection terminals X5.1… X5.8
Each:

Rated voltage		DC	3.3	V
Maximum input voltage	U_m	DC	60	V

Only for connection to a SELV / PELV-circuit

1.6 Intrinsically safe interface for the connection of an external, passive keyboard
Connection terminals X3.1 (VCC), X3.2 (D-), X3.3 (D+), X3.4 (GND)

Maximum output voltage	U_o	DC	4.92	V
Maximum output current	I_o		182	mA
Maximum output power	P_o		570	mW

Maximum external capacitance	C_o
At maximum external inductance	L_o
(combined values) according to tables below	

For Group IIC:

C_o [µF]	57	36	26	19	11
at L_o [µH]	1	2	3	4	9

For Group IIB resp. Group IIIC:

C_o [µF]	174	544	634	764	994
at L_o [µH]	9	4	3	2	1

e.g. for connection to the keyboard type EXTA* certified under IEXExBVS 08.0022X. In this configuration, the cable length can be up to 20 m.

1.7 Intrinsically safe interface for the connection of an external, passive mouse
Connection terminals X3.5 (VCC), X3.6 (D-), X3.7 (D+), X3.8 (GND)

Maximum output voltage	U_o	DC	4.92	V
Maximum output current	I_o		182	mA
Maximum output power	P_o		570	mW

Maximum external capacitance	C_o
At maximum external inductance	L_o
(combined values) according to tables below	

For Group IIC:

C_o [µF]	57	36	26	19	11
at L_o [µH]	1	2	3	4	9

For Group IIB resp. Group IIIC:

C_o [µF]	174	544	634	764	994
at L_o [µH]	9	4	3	2	1

e.g. for connection to the keyboard type EXTA* certified under IEXExBVS 08.0022X. In this configuration, the cable length can be up to 20 m.

1.8 Only for variants with model code „S1“:
Non intrinsically safe RS232-interface
terminal block X4 resp. X5

The equipment may have one or two additional modules (Module A, Module B) with non-intrinsically safe RS232-interface.

For variant *CU1***-**-**-S1-**-X:	RS232-interface at terminal block X4
For variant *CU1***-**-**-**-S1-X:	RS232-interface at terminal block X5
For variant *CU1***-**-**-S1-S1-X:	RS232-interface at terminal blocks X4 and X5

Connection terminals X4.5 (RX), X4.6 (TX), X4.7 (GND) resp.
Connection terminals X5.5 (RX), X5.6 (TX), X5.7 (GND)
each:

Rated voltage		DC	±15	V
Maximum input voltage	U_m	DC	60	V

Only for connection to a SELV / PELV-circuit

1.9 Only for variants with model code „S2“:
Non-intrinsically safe RS485-interface
terminal block X4 resp. X5

The equipment may have one or two additional modules (Module A, Module B) with non-intrinsically safe RS485-interface.

For variant *CU1***-**-**-S2-**-X:	RS485-interface at terminal block X4
For variant *CU1***-**-**-**-S2-X:	RS485-interface at terminal block X5
For variant *CU1***-**-**-S2-S2-X:	RS485-interface at terminal block X4 and X5

Connection terminals X4.1 (120A), X4.2 (Y), X4.3 (120Z), X4.4 (A), X4.5 (B), X4.6 (Z), X4.7 (GND), X4.8 (HD/FD) resp.
Connection terminals X5.1 (120A), X5.2 (Y), X5.3 (120Z), X5.4 (A), X5.5 (B), X5.6 (Z), X5.7 (GND), X5.8 (HD/FD)
Each:

Rated voltage		DC	±12	V
Maximum input voltage	U_m	DC	60	V

Only for connection to a SELV / PELV-circuit

Terminal X4.8 resp. X5.8 shall either be unused or connected to X4.7 resp. X5.7 via a jumper.

1.10 Only for variants with model code „S3“:
Intrinsically safe RS232-interface
terminal block X4 resp. X5

The equipment may have one or two additional modules (Module A, Module B) with intrinsically safe RS232-interface.

For variant *CU1***-**-**-S3-**-X:	RS232-interface at terminal block X4
For variant *CU1***-**-**-**-S3-X:	RS232-interface at terminal block X5
For variant *CU1***-**-**-S3-S3-X:	RS232-interfaces at terminal blocks X4 and X5

Connection terminals X4.1 (Us), X4.6 (RxD), X4.2 (GND) resp.
X5.1 (Us), X5.6 (RxD), X5.2 (GND)

Maximum output voltage	U_o	DC	4.9	V
Maximum output current	I_o		217	mA
Maximum output power	P_o		1.06	W

For IIC:

Maximum external capacitance	C_o	112.47	µF
at maximum external inductance	L_o	1	µH

For IIB resp. IIIC:

Maximum external capacitance	C_o
at maximum external inductance	L_o

(combined values) according to table below

C_o [µF]	177	557	997
at L_o [µH]	10	5	2

e.g. for connection to the hand-held scanner type IDM160-D-J1-SU-*-N0 certified under IECExIBE18.0008 or for the connection to the base station IDMx61-B-J1-BT-N0 certified under IECExIBE18.0009. In this configuration, the cable length can be up to 20m.

1.11 Only for variants with model code "BR":
Intrinsically safe TTY-interface
Terminal block X4 resp. X5
The apparatus may contain one additional module with an intrinsically safe TTY-interface (Module A or Module B assembled)

For variant *CU1***-**-**-BR-**-X:	TTY-interface at terminal block X4
For variant *CU1***-**-**-**-BR-X:	TTY-interface at terminal block X5
For variant *CU1***-**-**-BR-BR-X:	TTY-interfaces at terminal blocks X4 and X5

1.11.1 X4.1 (Us), X4.4(TxD), X4.6(RxD) – X4.2 (GND) resp.
X5.1 (Us), X5.4(TxD), X5.6(RxD) – X5.2 (GND)

Maximum output voltage	U_o	DC	8.95	V
Maximum output current	I_o		150	mA
Rectangular output characteristics				
Maximum output power	P_o		1.4	W
Maximum external capacitance	C_o		400	nF
At maximum external inductance	L_o		199	µH

1.11.2 X4.4(TxD), X4.6(RxD) – X4.2(GND) resp.
X5.4(TxD), X5.6(RxD) – X5.2(GND)

Maximum output voltage	U_o	DC	8.95	V
Maximum output current	I_o		58	mA
Linear output characteristics				
Maximum output power	P_o		128	mW
Maximum external capacitance	C_o		1.9	µF
At maximum external inductance	L_o		199	µH

2 Thermal data

Permissible ambient temperature range at the place of installation	-20 °C…+50 °C
Temperature class	T4
Maximum surface temperature T	85 °C