



(1) **UK - Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – **UKSI 2016:1107 (as amended)**

(3) UK - Type Examination Certificate Number

**EPS 22 UKEX 1 046 X**

**Revision 0**

(4) Equipment: BEx2-Remote IO, Type 24\*\*\*\*\*

(5) Manufacturer: BEx-Solution GmbH

(6) Address: Lange Straße 99  
76199 Karlsruhe  
Germany

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

(8) Bureau Veritas Consumer Products Services United Kingdom Limited, approved body No. 8507 in accordance with UKSI 2016:1107 (as amended) Part 4, 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 Schedule 1 of UKSI 2016:1107 (as amended). The examination and test results are recorded in the confidential documentation under the reference number 19TH0487.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

**EN IEC 60079-0:2018**

**EN IEC 60079-7:2015/A1:2018**

**EN 60079-11:2012**

**EN 60079-18:2015/A1:2017**

(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 annex to this certificate.

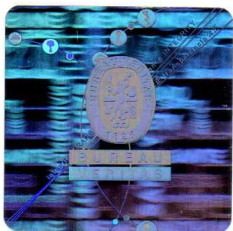
(11) This UK - Type Examination Certificate relates only to the design and construction of the specified equipment in accordance with UKSI 2016:1107 (as amended). Further requirements apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.

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



II 3(1) G Ex ec mc [ja Ga] IIC T4 Gc

II (1) D [Ex ia Da] IIIC



Certification department of explosion protection

Warrington, 2022-05-19

*N. Wilkinson*  
Natalie Wilkinson



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(13)

## Annex

(14) **UK - Type Examination Certificate EPS 22 UKEX 1 046 X**

**Revision 0**

(15) Description of equipment:

The equipment is a Remote IO system which isolates the non-intrinsically safe input circuits and the supply circuits from the intrinsically safe output circuits. It provides a transfer of non-intrinsically safe input signals to intrinsically safe output signals. The input circuits are suitable to be located in zone 2 (EPL Gc) and the output circuits are suitable to be connected to other intrinsically safe circuits in zone 0 (EPL Ga). The equipment is also suitable to be located outside a hazardous area and the output circuits to be connected to other intrinsically safe circuits in zone 20 (EPL Da). The Remote IO system includes a variety of different modules, differing in the bus type to be connected. The equipment has to be installed in a suitable housing (see special conditions).

### Electrical data:

$U_m = 30 \text{ V DC}$  (Terminals X9 / X10)

Terminal block X1 to X8 (output parameters of each clamp, clamps are not allowed to be combined):

Clamp (26 V):  
 $U_o = 26 \text{ V d.c.}$   
 $I_o = 82 \text{ mA}$   
 $P_o = 533 \text{ mW}$

Group IIC				
$L_o$	3 mH	1 mH	0.5 mH	0 mH
$C_o$	42 nF	62 nF	78 nF	99 nF
Group IIB / III				
$L_o$	20 mH	2 mH	0.5 mH	0 mH
$C_o$	350 nF	350 nF	490 nF	770 nF

Clamp (9.6 V):  
 $U_o = 9.6 \text{ V d.c.}$   
 $I_o = 31 \text{ mA}$   
 $P_o = 75 \text{ mW}$

Group IIC				
$L_o$	49 mH	10 mH	1 mH	0 mH
$C_o$	310 nF	640 nF	1.1 $\mu\text{F}$	3.6 $\mu\text{F}$
Group IIB / III				
$L_o$	100 mH	10 mH	1 mH	0 mH
$C_o$	2 $\mu\text{F}$	3.6 $\mu\text{F}$	6.1 $\mu\text{F}$	26 $\mu\text{F}$

Clamp (GND): Galvanically separated from input GND

	Type: 24200*00	Type: 24200*01	Type: 24200*02
Clamp 1	$U_o = 26 \text{ V d.c.}$	$U_o = 26 \text{ V d.c.}$	$U_o = 9.6 \text{ V d.c.}$
Clamp 2	GND	GND	GND
Clamp 3	$U_o = 26 \text{ V d.c.}$	$U_o = 9.6 \text{ V d.c.}$	$U_o = 9.6 \text{ V d.c.}$
Clamp 4	GND	GND	GND
Clamp 5	$U_o = 9.6 \text{ V d.c.}$	$U_o = 9.6 \text{ V d.c.}$	$U_o = 9.6 \text{ V d.c.}$
Clamp 6	GND	GND	GND
Clamp 7	$U_o = 26 \text{ V d.c.}$	$U_o = 26 \text{ V d.c.}$	$U_o = 9.6 \text{ V d.c.}$
Clamp 8	GND	GND	GND

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**UK - Type Examination Certificate EPS 22 UKEX 1 046 X**

**Revision 0**

(16) Reference number: 19TH0487

(17) Special conditions for safe use:

The BEx2-Remote IO of the types 2420010\*, 2420020\*, 2420030\*, 2420040\*, 2420050\* and 2420060\* have to be installed in a suitable housing according to UKSI 2016:1107 (as amended) in such a way that a degree of protection of at least IP 54 is reached.

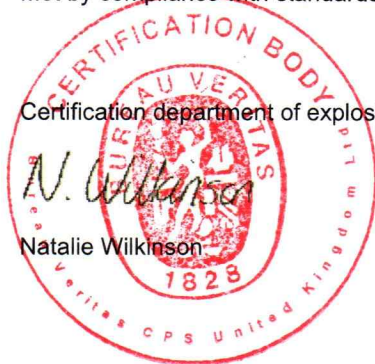
The non-intrinsically safe terminals of the equipment (terminals X9 and X10) shall be supplied by a source providing SELV output circuit or conforming to IEC 61010 or IEC 60950 (Um=30V DC).

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Warrington, 2022-05-19



Natalie Wilkinson

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