

## Translation

# (1) EC-Type Examination Certificate

- (2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC
- (3) No. of EC-Type Examination Certificate: **BVS 12 ATEX E 090 X**
- (4) Equipment: **Repeater power supply and input isolating amplifier type 707530/38**
- (5) Manufacturer: **JUMO GmbH & Co. KG**
- (6) Address: **Moritz-Juchheim-Straße 1, 36039 Fulda, Germany**
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this type examination certificate.
- (8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council 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 test and assessment report BVS PP 12.2140 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
- EN 60079-0:2009 General requirements**  
**EN 60079-11:2012 Intrinsic safety „i“**  
**EN 60079-15:2010 Equipment protection by type of protection „n“**  
**EN 60079-26:2007 Equipment with equipment protection level (EPL) Ga**
- (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 appendix to this certificate.
- (11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the equipment shall include the following:

 **II (1)G [Ex ia Ga] IIC/IIB**  
**II (1)D [Ex ia Da] IIIC**  
**II 3(1)G Ex nA [ia Ga] IIC/IIB T4 Gc**

DEKRA EXAM GmbH  
Bochum, dated 11. October 2012

Signed: Simanski

\_\_\_\_\_  
Certification body

Signed: Eickhoff

\_\_\_\_\_  
Special services unit



- (13) Appendix to
- (14) **EC-Type Examination Certificate  
BVS 12 ATEX E 090 X**
- (15) 15.1 Subject and type

Repeater power supply and input isolating amplifier type 707530/38

15.2 Description

The Repeater power supply and input isolating amplifier, which will be installed outside the hazardous area or in an enclosure which is in accordance with EN 60079-15, is used for transmission of 0(4)...20 mA signals between one intrinsically safe and one non-intrinsically safe signal circuit.

The intrinsically safe circuit type of protection Ex ia can be led into areas which require Category 1G equipment. This circuit can also be connected to apparatus which are located in areas where combustible dust can be present. It must be guaranteed, that only apparatus may be connected to this circuit which are designed and certified for use in category 1D or 2D.

15.3 Parameters

15.3.1 Power supply circuit (terminals 1.1 – 1.2)

|                 |       |       |                |
|-----------------|-------|-------|----------------|
| nominal voltage | $U_n$ | AC/DC | 19.2 ... 253 V |
| max. voltage    | $U_m$ | AC/DC | 253 V          |

15.3.2 Non-intrinsically safe interface (terminals 3.1 – 3.2 resp. 3.2 – 3.3)

|                |       |                      |
|----------------|-------|----------------------|
| nominal signal |       | 0(4) ... 20 mA       |
| max. voltage   | $U_m$ | AC 253 V<br>DC 125 V |

15.3.3 Intrinsically safe interface

The intrinsically safe interface is galvanically isolated from the non-intrinsically safe circuits and from earth.

15.3.3.1 Output (terminals 4.1 – 4.2)

|                              |       |    |        |
|------------------------------|-------|----|--------|
| max. output voltage          | $U_o$ | DC | 25.2 V |
| max. output current          | $I_o$ |    | 93 mA  |
| max. output power            | $P_o$ |    | 587 mW |
| linear output characteristic |       |    |        |

For Group IIC:

|                           |       |        |
|---------------------------|-------|--------|
| max. external capacitance | $C_o$ | 107 nF |
| max. external inductance  | $L_o$ | 2 mH   |

For Group IIB:

|                           |       |        |
|---------------------------|-------|--------|
| max. external capacitance | $C_o$ | 820 nF |
| max. external inductance  | $L_o$ | 4 mH   |

The values for group IIB can be used for areas of category 1D or 2D.

15.3.3.2 Eingang (Klemmen 4.2 – 4.3)

|                           |       |    |            |
|---------------------------|-------|----|------------|
| max. input voltage        | $U_i$ | DC | 30 V       |
| max. input current        | $I_i$ |    | 150 mA     |
| max. external capacitance | $C_i$ |    | negligible |
| max. internal inductance  | $L_i$ |    | negligible |

15.3.4 Ambient temperature range

|       |                   |
|-------|-------------------|
| $T_a$ | -20 °C bis +60 °C |
|-------|-------------------|



(16) Test and assessment report

BVS PP 12.2140 EG as of 11.10.2012

(17) Special conditions for safe use

- For installation of the Repeater power supply and input isolating amplifier in areas, where category 3 equipment is required, they have to be mounted in enclosures which are in accordance with EN 60079-15.
- The setting of the DIL-switches has to be done, when the Repeater power supply and input isolating amplifier is not energized.

---

We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH  
44809 Bochum, 11. October 2012  
BVS-Rip/Sp                      A 20120414

\_\_\_\_\_  
Certification body

\_\_\_\_\_  
Special services unit

- (13) Appendix to
- (14) **1<sup>st</sup> Supplement to the EC-Type Examination Certificate  
BVS 12 ATEX E 090 X**
- (15) 15.1 Subject and type  
Repeater power supply and input isolating amplifier type 707530/38

15.2 Description

The Repeater power supply and input isolating amplifier was tested in accordance to the standard EN 60079-0:2012+A11:2013.  
The mechanical construction and the internal electronic circuit are unchanged.

15.3 Parameters

Unchanged

- (16) Test and Assessment Report  
BVS PP 12.2140 EG as of 2015-04-27
- (17) Special conditions for safe use  
Unchanged

---

We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH  
44809 Bochum, 2015-04-27  
BVS-Rip/Ma A 20150410



Certification body



Special services unit



# Translation

# (1) 1<sup>st</sup> Supplement to the EC-Type Examination Certificate

- (2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC Supplement accordant with Annex III number 6
- (3) No. of EC-Type Examination Certificate: **BVS 12 ATEX E 090 X**
- (4) Equipment: **Repeater power supply and input isolating amplifier type 707530/38**
- (5) Manufacturer: **JUMO GmbH & Co. KG**
- (6) Address: **Moritz-Juchheim-Straße 1, 36039 Fulda, Germany**
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this supplement.
- (8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council 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 Test and Assessment Report BVS PP 12.2140 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
 

|                                   |   |
|-----------------------------------|---|
| <b>EN 60079-0:2012 + A11:2013</b> | <b>General requirements</b>                               |
| <b>EN 60079-11:2012</b>           | <b>Intrinsic safety „i“</b>                               |
| <b>EN 60079-15:2010</b>           | <b>Equipment protection by type of protection „n“</b>     |
| <b>EN 60079-26:2007</b>           | <b>Equipment with equipment protection level (EPL) Ga</b> |
- (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 appendix to this certificate.
- (11) This supplement to the EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the equipment shall include the following:


**II (1)G [Ex ia Ga] IIC/IIB**  
**II (1)D [Ex ia Da] IIIC**  
**II 3(1)G Ex nA [ia Ga] IIC/IIB T4 Gc**

DEKRA EXAM GmbH  
Bochum, dated 2015-04-27

Signed: Simanski

Signed: Dr. Wittler

Certification body

Special services unit





13 **Appendix**

14 **EU-Type Examination Certificate**

**BVS 12 ATEX E 090 X  
Supplement 2**

15 **Product description**

15.1 **Subject and type**

Repeater power supply and input isolating amplifier type 707530/38

15.2 **Description**

With this supplement the certificate is changed to Directive 2014/34/EU.  
(Annotation: In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.)

Reason for the supplement:

Change to Directive 2014/34/EU

The repeater power supply and input isolating amplifier was slightly modified.

The special conditions for use were enhanced.

Description of Product:

The repeater power supply and input isolating amplifier, which will be installed outside the hazardous area or in an enclosure which is in accordance with EN 60079-15, is used for transmission of 0(4)...20 mA signals between one intrinsically safe and one non-intrinsically safe signal circuit.

The intrinsically safe circuit type of protection Ex ia can be led into areas which require Category 1G (EPL Ga) equipment.

This circuit can also be connected to apparatus which are located in areas where combustible dust can be present. It must be guaranteed, that only apparatus may be connected to this circuit which are designed and certified for use in category 1D (EPL Da) or 2D (EPL Db).

15.3 **Parameters**

15.3.1 Power supply circuit (terminals 1.1 – 1.2)

|                 |       |       |            |   |
|-----------------|-------|-------|------------|---|
| nominal voltage | $U_n$ | AC/DC | 20 ... 253 | V |
| maximum voltage | $U_m$ | AC/DC | 253        | V |

15.3.2 Non-intrinsically safe interface (terminals 3.1 – 3.2 resp. 3.2 – 3.3)

|                 |       |    |             |    |
|-----------------|-------|----|-------------|----|
| nominal signal  |       |    | 0(4) ... 20 | mA |
| maximum voltage | $U_m$ | AC | 253         | V  |
|                 |       | DC | 125         | V  |

15.3.3 Intrinsically safe interface, the intrinsically safe interface is galvanically isolated from the non-intrinsically safe circuits and from earth.

15.3.3.1 Output (terminals 4.1 – 4.2)

|                              |       |    |      |    |
|------------------------------|-------|----|------|----|
| maximum output voltage       | $U_o$ | DC | 25,2 | V  |
| maximum output current       | $I_o$ |    | 93   | mA |
| maximum output power         | $P_o$ |    | 587  | mW |
| linear output characteristic |       |    |      |    |

|                              |       |     |    |
|------------------------------|-------|-----|----|
| For Group IIC:               |       |     |    |
| maximum external capacitance | $C_o$ | 107 | nF |
| maximum external inductance  | $L_o$ | 2   | mH |
| For Group IIB:               |       |     |    |
| maximum external capacitance | $C_o$ | 820 | nF |
| maximum external inductance  | $L_o$ | 4   | mH |

The values for Group IIB can be used for areas of category 1D (EPL Da) or 2D (EPL Db).

15.3.3.2 Input (terminals 4.2 – 4.3)

|                              |       |    |     |            |
|------------------------------|-------|----|-----|------------|
| maximum input voltage        | $U_i$ | DC | 30  | V          |
| maximum input current        | $I_i$ |    | 150 | mA         |
| maximum internal capacitance | $C_i$ |    |     | negligible |
| maximum internal inductance  | $L_i$ |    |     | negligible |

15.3.4 Ambient temperature range  $T_a$  - 20 °C up to + 60 °C

16 **Report Number**

BVS PP 12.2140 EU, as of 2017-02-06

17 **Special Conditions for Use**

17.1 For installation of the repeater power supply and input isolating amplifier in areas, where category 3G equipment is required, they have to be mounted in enclosures which are in accordance with EN 60079-15.

The setting of the DIL-switches has to be done, when the repeater power supply and input isolating amplifier is not energized.

17.2 Maximum overvoltage category II according to IEC 60664- 1 is permitted for the non-intrinsically safe circuits.

17.3 The equipment shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.

18 **Essential Health and Safety Requirements**

The Essential Health and Safety Requirements are covered by the standards listed under item 9.

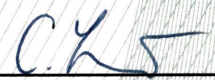
19 **Drawings and Documents**

Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH  
Bochum, dated 2017-02-06  
BVS-Rip/Nu A 20170007

  
\_\_\_\_\_  
Certifier

  
\_\_\_\_\_  
Approver