

Translation

EU-Type Examination Certificate Supplement 1

Change to Directive 2014/34/EU

Equipment intended for use in potentially explosive atmospheres
Directive 2014/34/EU

EU-Type Examination Certificate Number: **BVS 06 ATEX E 091**

Product: **Level Limit Switch type Solido 500*******

Manufacturer: **Adpro Instruments Ltd.**

Address: **KW 20B Industrial Estate, Corradino PLA 08 (Malta), Malta**

This supplementary certificate extends EC-Type Examination Certificate No. BVS 06 ATEX E 091 to apply to products designed and constructed in accordance with the specification set out in the appendix of the said certificate but having any acceptable variations specified in the appendix to this certificate and the documents referred to therein.

DEKRA EXAM GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products 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 No. PP 06.2077 EU.

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

IEC 60079-0:2017
EN 60079-31:2014

General requirements
Protection by Enclosure "t"

Except in respect of those requirements listed under item 18 of the appendix.

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

The marking of the product shall include the following:



II 1/2D Ex ta/tb III C T* Da/Db

* see manual

DEKRA EXAM GmbH
Bochum, 2018-06-18

Signed: Jörg Koch

Certifier

Signed: Dr Michael Wittler

Approver



13 **Appendix**

14 **EU-Type Examination Certificate**

**BVS 06 ATEX E 091
Supplement 1**

15 **Product description**

15.1 **Subject and type**

Level Limit Switch type
Solido 500*****



No relevance for explosion protection

Process connection

- A - 230 V AC, 50 – 60 Hz, (1 rev/min)
- S - 230 V AC, 50 – 60 Hz, (5 rev/min)
- B - 115 V AC, 50 – 60 Hz, (1 rev/min)
- T - 115 V AC, 50 – 60 Hz, (5 rev/min)
- C - 48 V AC, 50 – 60 Hz, (1 rev/min)
- U - 48 V AC, 50 – 60 Hz, (5 rev/min)
- D - 24 V AC, 50 – 60 Hz, (1 rev/min)
- V - 24 V AC, 50 – 60 Hz, (5 rev/min)
- E - 24 V DC, (1 rev/min)
- W - 24 V DC, (5 rev/min)

- W - ATEX II 1/2 D
- N - FM DIP Cl. II, III Div. 1 Gr. E, F, G
- L - ATEX II 1/2 D
FM DIP Cl. II, III Div. 1 Gr. E, F, G

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.)

The Level Limit Switch type Solido 500***** is a level switch which is designed for monitoring levels in any kind of containers, bins, silos, hoppers and pipes. It is able to detect granulated, grained, powdery or dusty materials. A low revolution synchronous induction gearing motor drives a measuring vane which is fixed to a shaft and which stops as soon as it is covered with the bulk material. The freely suspended motor then operates a micro switch which stops the motor and triggers a signal in an electrical circuit. If the bulk material level drops, the rotating vane becomes free again, the motor will be drawn back by a tension spring to its initial position and will be switched on again. The mechanical version varies according to the spatial and thermal requirements.

Reasons for this supplement:

- Change to Directive 2014/34/EU
- Updating to the current standards
- Change of the minimum ambient temperature to -45 °C
- IP tests carried out without any sealings

15.3 **Parameters**

15.3.1 Electrical data

15.3.1.1 AC-version

Voltage AC 24 V, 48 V, 115 V, 230 V
 Frequency 50 / 60 Hz
 Max. power dissipation 4 VA

15.3.1.2 DC-Version

Voltage DC 24 V
 Max. power dissipation 2.5 W
 Maximum speed of rotating vane of both types 5 U/min

15.3.1.3 Contact rating of micro switches

	AC	DC
Max. voltage	250 V	30 V
Max. current	5 A	3 A

15.3.2 Thermal data

Permitted ambient temperature (Cat. 2D)	Permitted process temperature (Cat. 1D) considering min. 200 mm dust layer	Max. surface temperature T
-45 °C... +40 °C -49 °F...+104 °F	-45 °C... +80 °C -19 °F...+ 176 °F	85 °C 185 °F
-45 °C... +50 °C -49 °F...+122 °F		95 °C 203 °F
-45 °C... +60 °C -49 °F...+140 °F		105 °C
		221 °F

15.3.2 Degrees of protection according to EN 60529

IP66

16 **Report Number**

BVS PP 06.2077 EU, as of 2018-06-18

17 **Special Conditions for Use**

None

18 **Essential Health and Safety Requirements**

The Essential Health and Safety Requirements are covered by the standards listed under item 9. The standard IEC 60079-0:2017 is equivalent to the harmonized Standard EN 60079-0:2012 + A11:2013 in terms of safety.

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 2018-06-18
 BVS-Hk/Mu A 20170914

 Certifier

 Approver