



KDBEX

EU TYPE EXAMINATION CERTIFICATE

[2] Equipment and protective systems intended for use in potentially explosive atmospheres. Directive 2014/34/EU (Rozporządzenie Ministra Rozwoju z dnia 06.06.2016r. Dz.U. z dnia 09.06.2016r. Poz. 817)

[3] EU type examination certificate (module B):

KDB 19ATEX0026

1st edition

[4] Equipment:

Intrinsically safe power supply - separator type ZS-30/1Ex

[5] Manufacturer:

APLISENS S.A.

[6] Address:

ul. Morelowa 7, 03-192 Warszawa, POLAND

[7] The equipment or protective system and any acceptable variations thereto are specified in the schedule to this certificate.

[8] Główny Instytut Górnictwa, Notified Body no 1453 according to Directive 2014/34/EU of February 26, 2014, approves that the equipment or protective system specified in this certificate has been found to comply with the essential health and safety requirements for the design and construction of equipment and protective systems intended for use in potentially explosive atmosphere given in Annex II to Directive 2014/34 /EU (Załącznik nr 2 Rozporządzenia Ministra Rozwoju z dnia 06.06.2016r. Dz.U. z dnia 09.06.2016r. Poz. 817). The results of the assessment and examinations as well as the list of agreed documentation are recorded in the confidential Report **KDB No 19.038-1 [T-7579]**

[9] The essential health and safety requirements have been met by compliance with the requirements of the following standards:

EN IEC 60079-0:2018; EN 60079-11:2012

[10] If sign "X" is placed after the certificate number, this means the special conditions of use set out in the schedule to this certificate.

[11] This EU type examination certificate relates only to the construction, assessment and testing of the specified product in accordance with Directive 2014/34 /EU (Rozporządzenie Ministra Rozwoju z dnia 06.06.2016r. Dz.U. z dnia 09.06.2016r. Poz. 817). The certificate shall not cover the remaining requirements of the Directive regarding the manufacturing process and placing the equipment or protective system on the market.

[12] The marking of the equipment shall include the following:



I (M1) [Ex ia Ma] I

II (1)G [Ex ia Ga] IIC

II (1)D [Ex ia Da] IIIC

Główny Instytut Górnictwa
Jednostka Oceny Zgodności
KIEROWNIK
Zespołu ds. Bezpieczeństwa Przeciwwybuchowego

mgr inż. Mirosław Krzystolik

ATEX Certification
Expert



Główny Instytut Górnictwa
Jednostka Oceny Zgodności
KIEROWNIK
Zespołu ds. Certyfikacji
mgr inż. Grzegorz Drabik

Date of issue: 24 April 2023

Page 1 of 5

Główny Instytut Górnictwa, 40-166 Katowice, Plac Gwarków 1, Poland, www.gig.eu
Jednostka Oceny Zgodności, 43-190 Mikołów, ul. Podleska 72, www.gigcert.com
Certification Body accredited by PCA [Polish Centre for Accreditation], No AC038.

This certificate may only be reproduced in its entirety together with schedules. The document without signatures and stamps shall be not valid.

[13]
[14]

SCHEDULE
EU type examination certificate
KDB 19ATEX0026 1st edition



[15] Description:

Intrinsically safe power supply - separator type ZS-30/1Ex is an associated apparatus designed for cooperation with two-wire transmitters generating an analogue signal 4...20mA, which are installed in the hazardous areas.

The power supply transforms the signal 4...20mA into one of the standard analog signals: 4...20mA, 0...20mA; 0...5mA; 0...10V, 0...5V, 1...5V, 2...10V. The supply voltage of intrinsically safe input circuit can be from 7.5V DC up to 24V DC. The input, output and power circuits are galvanically isolated. The device's power supply is located on the non-intrinsically safe part of separator. The power supply uses digital calibration of the output signal parameters due to the use of a 16-bit microcontroller and a 16-bit digital-analogue converter.

Intrinsically safe power supplies - separators type ZS-30/1Ex are intended for installation:

- in cabinets or closed enclosures, in dry environments, outside of an explosion hazardous zones,
- inside of a flameproof enclosure or inside of a pressurized enclosure in the case of an explosion hazardous zones.

Technical parameters:

Ambient temperature: +5°C ÷ +55°C
 -25°C ÷ +55°C (special version)

Degree of protection: IP 20

Power supply - terminals: L/+, N/-:
 Voltage Um: 20...253V AC/DC

Intrinsically safe parameters:

Intrinsically safe input circuits (depending on configuration)
- terminals: P+, P-

- 1.
- | | |
|------------------------|-----------|
| U _o =25,2V | Li~0 |
| I _o =88mA | Ci=49,2nF |
| P _o =0,555W | |

Group I

Lo [mH]	41,0	20,0	10,0	5,0	2,0	1,0	0,5	0,2
Co [µF]	0,53	0,83	0,84	0,84	0,84	0,84	0,93	1,1

Lo [mH]	0,1	0,05	0,02	0,01	0,005	0,002	0,001
Co [µF]	1,4	1,7	2,2	2,8	3,6	4,15	4,15



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KDB 19ATEX0026 1st edition



Group IIC

Lo [mH]	2,6	2,0	1,0	0,5	0,2	0,1	0,05	0,02
Co [μ F]	0,047	0,051	0,064	0,081	0,107	0,107	0,107	0,107

Lo [mH]	0,01	0,005	0,002	0,001
Co [μ F]	0,107	0,107	0,107	0,107

2.

U_o=23,1V Li~0
I_o=88mA Ci=49,2nF
P_o=0,507W

Group I

Lo [mH]	43,0	20,0	10,0	5,0	2,0	1,0	0,5	0,2
Co [μ F]	0,6	0,96	1,1	1,1	1,1	1,1	1,1	1,4

Lo [mH]	0,1	0,05	0,02	0,01	0,005	0,002	0,001
Co [μ F]	1,6	1,9	2,6	3,2	4,1	5,1	5,1

Grupa IIC

Lo [mH]	3,3	2,0	1,0	0,5	0,2	0,1	0,05	0,02
Co [μ F]	0,066	0,067	0,078	0,095	0,130	0,140	0,140	0,140

Lo [mH]	0,01	0,005	0,002	0,001
Co [μ F]	0,140	0,140	0,140	0,140

3.

U_o=21,0V Li~0
I_o=92mA Ci=49,2nF
P_o=0,482W

Group I

Lo [mH]	40,0	20,0	10,0	5,0	2,0	1,0	0,5	0,2
Co [μ F]	0,72	1,1	1,4	1,6	1,6	1,6	1,6	1,7

Lo [mH]	0,1	0,05	0,02	0,01	0,005	0,002	0,001
Co [μ F]	1,9	2,3	3,0	3,7	4,8	6,3	6,3

Group IIC

Lo [mH]	3,4	2,0	1,0	0,5	0,2	0,1	0,05	0,02
Co [μ F]	0,1	0,1	0,1	0,12	0,15	0,18	0,188	0,188

Lo [mH]	0,01	0,005	0,002	0,001
Co [μ F]	0,188	0,188	0,188	0,188



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4.
 $U_o=18,38V$ $Li\sim 0$
 $I_o=86mA$ $Ci=49,2nF$
 $P_o=0,395W$

Group I

Lo [mH]	48,0	20,0	10,0	5,0	2,0	1,0	0,5	0,2
Co [μF]	0,88	1,4	1,8	2,2	2,7	2,7	2,7	2,7

Lo [mH]	0,1	0,05	0,02	0,01	0,005	0,002	0,001
Co [μF]	2,8	3,1	3,9	4,8	6,1	8,5	8,5

Group IIC

Lo [mH]	4,7	2,0	1,0	0,5	0,2	0,1	0,05	0,02
Co [μF]	0,160	0,190	0,190	0,190	0,210	0,250	0,285	0,285

Lo [mH]	0,01	0,005	0,002	0,001
Co [μF]	0,285	0,285	0,285	0,285

5.
 $U_o=15,75V$ $Li\sim 0$
 $I_o=90mA$ $Ci=49,2nF$
 $P_o=0,353W$

Group I

Lo [mH]	45,0	20,0	10,0	5,0	2,0	1,0	0,5	0,2
Co [μF]	1,2	1,8	2,3	2,9	3,7	4,5	5,4	5,8

Lo [mH]	0,1	0,05	0,02	0,01	0,005	0,002	0,001
Co [μF]	5,8	5,8	6,3	7,4	9,2	13,0	13,6

Group IIC

Lo [mH]	4,7	2,0	1,0	0,5	0,2	0,1	0,05	0,02
Co [μF]	0,190	0,320	0,420	0,420	0,420	0,420	0,460	0,478

Lo [mH]	0,01	0,005	0,002	0,001
Co [μF]	0,478	0,478	0,478	0,478



SCHEDULE
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KDB 19ATEX0026 1st edition



6.
U₀=7,88V Li~0
I₀=89mA Ci=49,2nF
P₀=0,176W

Group I

Lo [mH]	51,0	50,0	20,0	10,0	5,0	2,0	1,0	0,5
Co [µF]	4,2	4,2	6,9	8,5	10,0	13,0	15,0	18,0

Lo [mH]	0,2	0,1	0,05	0,02	0,01	0,005	0,002	0,001
Co [µF]	23,0	29,0	38,0	58,0	90,0	180,0	1000	1000

Group IIC

Lo [mH]	6,1	5,0	2,0	1,0	0,5	0,2	0,1	0,05
Co [µF]	0,610	0,720	1,100	1,400	1,700	2,300	2,800	3,500

Lo [mH]	0,02	0,01	0,005	0,002	0,001
Co [µF]	4,800	6,300	8,600	8,800	8,800

[16] Test Report:

"ATEX assessment report" KDB No 19.038-1

[17] Special conditions of use:

- Not applicable.

[18] Essential health and safety requirements:

Met by fulfilling the requirements of the following standards:

EN IEC 60079-0:2018 (PN-EN IEC 60079-0:2018-09);
EN 60079-11:2012 (PN-EN 60079-11:2012)

Document history:

- EU type examination certificate KDB 19ATEX0026, 0 edition of 27.06.2019, initial certification.
- EU type examination certificate KDB19ATEX0026, 1st edition of 24.04.2023 replaces EU type examination certificate KDB 19ATEX0026, 0 edition of 27.06.2019.
The way of marking of the equipment has been changed. A new design of the printed circuit board was used. Parameters of intrinsically safe circuits were updated.

