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[1] **EU – TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 20 ATEX 0014** Issue: **1**

[4] Product: **Control unit**

Type: **WA and WS series**

[5] Manufacturer: **SOLEXY S.r.l.**

[6] Address: **Via Enrico Fermi 2, I-25015 Desenzano Del Garda (BS), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 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 of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 20 CR 014**

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

EN IEC 60079-0:2018 **EN 60079-1:2014** **EN 60079-11:2012**

EN 60079-18:2015+A1:2017 **EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

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



I M2 Ex db I Mb
II 2G Ex db IIA/IIB/IIC T6...T4 Gb
II 2D Ex tb IIIC T110°C...T140°C Db

Units without antenna coupler



I M2 (M1) Ex db mb [ia Ma] I Mb
II 2(1)G Ex db mb [ia Ga] IIA/IIB/IIC T6...T5 Gb
II 2(1)D Ex mb tb [ia Da] IIIC T80°C...T100°C Db

Units with antenna coupler

FIDITAS Ltd.
Certification department

Our ref.: 20.CRT.028

Approved:

Date: 29.06.2020.

Fiditas d.o.o. ZAGREB

Marino Kelava, M.E.Eng.

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[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 20 ATEX 0014**

[15] **Description of product**

The control units WA and WS consist of an Ex db / Ex tb enclosure with threaded cover, made of aluminum for WA type or stainless steel for WS type. They can be used to enclose a wide range of electronic devices, such as radio modems, transceivers, repeaters, ethernet access point, ethernet switches, terminals, RF connectors, etc...

Enclosures have max 4 cable/conduit entries. To provide IP6X for Ex tb, an elastomeric O-ring is placed between the cover and the body of the enclosure.
Only WS type is suitable for underground mining applications.

As an option, WA and WS units can be completed with certified Antenna Coupler RX and SX series (TUV CY 18 ATEX 0206158X; I M2 (M1) Ex db mb [ia Ma] I Mb; II 2(1)G Ex db mb [ia Ga] IIA/IIB/IIC T5...T6 Gb; II 2(1)D Ex mb tb [ia Da] IIIC T80°C...T100°C Db).

Marking:

X	**WA**	**xxx**	**xx**	-	**xx**	**x**	**xx**	-	**xxxxx**
1	2	3	4		5	6	7		8

1 – Family, (1 digit)	**H** - Enclosure completed of terminals / connectors **S** - Enclosure supplied with electronics device
2 – Housing, (2 digits)	**WA** - WA series made in aluminum **WS** - WS series made in stainless steel
3 – Device, (3 digits)	1 digit for device type installed (S family) or terminals / connectors type (H family) 2 digits for device / terminal version
4 – Antenna coupler, (2 digits)	2 digits for Solexy antenna coupler used (optional components) **00** - for unit without Solexy antenna coupler
5 – Cable Entries, (2 digits)	2 digits for cable entries combination
6 – Color Brand, (1 digit)	1 digit for housing's color and/or brand in case of private label
7 – Standard Reference, (2 digits)	2 digits for certification marking: **X0** - ATEX and IECEx (group II) **M0** - ATEX and IECEx (group I and group II) **X*** - ATEX and IECEx (group II) + a second standard marking **M*** - ATEX and IECEx (group I and group II) + a second standard marking (* any alphanumeric digit)
8 – Special, (up to 5 digits)	Up to 5 digits for special execution in terms of marking, labelling, instruction, execution package, etc....

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Technical data:

Max. input voltage:	125 Vdc /250 Vac
Max input frequency:	60 Hz
Max. current:	16 A
Max. dissipation:	24 W
Mechanical protection	IP66 / IP68
Ambient temperature range:	-60°C to +105°C for S - type without antenna coupler -40°C to +85°C for S - type with antenna coupler -60°C to +80°C for H - type without antenna coupler -40°C to +80°C for H - type with antenna coupler Ambient temperature range for each unit will be determined on the basis of thermal calculation and specification of installed components.

Temperature class (T6 ... T4) and maximum surface temperature (T110°C...T140°C) depend on maximum ambient temperature and internal dissipation of control unit. Manufacturer will for each unit calculate internal disipation and based on thermal coefficient of the enclosures define overtemperature of external surface to define temperature class for gas atmosphere and/or maximum surface temperature for dust atmosphere.

In case of unit complete of radio device, the maximum radio transmitting power of installed radio equipment and antenna gain is chosen so that Table 5 from EN IEC 60079-0 is satisfied. In case of device with multiple antennas, maximum threshold powers of each antenna are considered separately due to different working frequency of each antenna circuit. Based on below values, control units will be marked with specific equipment group.

Equipment Group	Threshold power (W)
I, IIA and III	6
IIB	3,5
IIC	2

Manufacturing conditions for version with Antenna coupler:

- Solexy RX and SX series antenna couplers must be connected to an RF source with a minimum internal impedance of 50 Ω.
- It is considered inappropriate to provide conventional IS parameters for this equipment. For connection to external antenna, refer to the Instruction and Operating Manual for clarification of the antenna requirements and calculation of the RF power.
- Solexy RX and SX series antenna coupler does not provide any RF power limitation. The threshold power must be limited by the user to achieve the levels defined in EN IEC 60079-0 Table 5.
- Antenna coupler marked with an ambient temperature of -40°C to +70°C/+85°C is limited to a max RF input of 2 W.

[16] Confidential Report No. FIDI 20 CR 014

[16.1] Routine testing

None

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[17] Specific Conditions of Use

None

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9.

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical file	TDTF-0006	00	29.01.2020.
WS&WA Installation & Operation manual	IM0022	00	06.2020.
HWA & HWS Series, Installation & Operation manual	IM0023	00	06.2020.
WA Body	DDDM-0011-S	00	21.02.2019.
WA Cover	DDDM-0012-S	00	21.02.2019.
WS Body	DDDM-0013-S	00	21.02.2019.
WS Cover	DDDM-0014-S	00	21.02.2019.
O-Ring WA-WS Cover	DDDM-0015-S	00	21.02.2019.
Product marking WA series, ATEX - IECEx	DDMD-0014-S	00	13.02.2019.
Product marking WS series, ATEX - IECEx	DDMD-0015-S	00	13.02.2019.
Product marking WA series with SOLEXY Antenna barrier, ATEX - IECEx	DDMD-0016-S	00	13.02.2019.
Product marking WS series, with SOLEXY Antenna barrier, ATEX - IECEx	DDMD-0017-S	00	13.02.2019.

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[1] # SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 20 ATEX 0014/1**

[4] Product: **Control unit**

Type: **WA and WS series**

[5] Manufacturer: **SOLEXY S.r.l.**

[6] Address: **Via Enrico Fermi 2, I-25015 Desenzano Del Garda (BS), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 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 of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 21 CR 015**

[10] The marking of the new product shall include the following:

I M2 (M1) Ex db mb [ia Ma] I Mb
II 2(1)G Ex db mb [ia Ga] IIA/IIB/IIC T6...T5 Gb
II 2(1)D Ex mb tb [ia Da] IIIC T80°C...T100°C Db

Invenio units with antenna coupler

FIDITAS Ltd.
Certification department
Approved:

Our ref.: 21.CRT.034

Date: 17.05.2021.

Fiditas d.o.o. ZAGREB

Marino Kelava, M.E.Eng.

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[11] **SCHEDULE**

[12] # SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 20 ATEX 0014/1

[13] **Description of the variation to the Product**

This supplement cover:

- adding a new electronics device Invenio GW-1 industrial gateway unit to the list of equipment allowed. The electronic include optional battery backup,
- revision of certification drawings regarding remain thickness of enclosure at blind holes.

Marking:

New devices will be bear mark **G01 - G38** or **G51 - G88** in device designation code.

Technical data of new version of the unit with Invenio GW-1 (device code G01 - G38 and G51 - G88):

Input voltage:	230Vac or 24 Vdc or 5 Vdc		
Max. dissipation:	4,9 W		
Mechanical protection	IP66 / IP68		
Ambient temperature range:	SWA	G01 ... G38	-40°C to +78°C
	SWS		-40°C to +71°C
	SWA	G51 ...G88	-20°C to +53°C
	SWS		-20°C to +46°C

[14] **Confidential Report No.** FIDI 21 CR 015

[14.1] **Routine testing**

None

[15] **Specific Conditions of Use**

None

[16] **Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

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[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Addendum to Technical file	TDTF-0010	00	02.04.2021.
SWA & SWS G51-G88 Installation & Operation Manual ATEX - IECEx	IM0038	00	04.2021.
Drawings:			
WA Body	DDDM-0011-S	01	05.03.2021.
WA Cover	DDDM-0012-S	01	05.03.2021.
WS Body	DDDM-0013-S	01	05.03.2021.
WS Cover	DDDM-0014-S	01	05.03.2021.

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[1] # SUPPLEMENTARY EU – TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] Supplementary EU-Type Examination Certificate Number: **FIDI 20 ATEX 0014/2**

[4] Product: **Control unit**

Type: **WA and WS series**

[5] Manufacturer: **SOLEXY S.r.l.**

[6] Address: **Via Enrico Fermi 2, I-25015 Desenzano Del Garda (BS), Italy**

[7] This supplementary certificate extends EU (EC) – Type Examination Certificate to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule to this certificate and the documents therein referred to.

[8] FIDITAS Ltd., Notified Body number 2829 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 of the Directive.

[9] The examination and test results are recorded in confidential Report No: **FIDI 22 CR 043**

[10] The marking of the product shall include the following:

I M2 (M1) Ex db mb [ia Ma] I Mb
II 2(1)G Ex db mb [ia Ga] IIA/IIB/IIC T6...T5 Gb
II 2(1)D Ex mb tb [ia Da] IIIC T80°C...T100°C Db

Marking of new device J25

FIDITAS Ltd.
Certification department
Approved:

Fiditas d.o.o. ZAGREB

Marino Kelava, M.E.Eng.

Our ref.: 22.CRT.160

Date: 29.07.2022.

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[11] **SCHEDULE**

[12] **SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE No.: FIDI 20 ATEX 0014/2**

[13] **Description of the variation to the Product**

The supplement covers:

- add a new electronic device to the devices listed,
- add the new antenna barrier UX series (TUV CY 18 ATEX 0206158X) and
- review the enclosure's thermal evaluation.

Technical data of new device J25:

Input voltage:	9 - 30 Vdc
Power consumption:	5 W max
RF Port Impedance:	50 Ω
RF Power Output (each)	13 dBm +2 dB
Ambient temperature range:	-40°C to +85°C Ambient temperature range for each unit will be determined on the basis of thermal calculation and specification of installed components.

Manufacturing conditions for version with new antenna barrier UX series:

Solexy UX series antenna couplers must be connected to an RF source with a minimum internal impedance of 50 Ω.

It is considered inappropriate to provide conventional IS parameters for this equipment. For connection to external antenna, refer to the Instruction and Operating Manual for clarification of the antenna requirements and calculation of the RF power.

Solexy UX series antenna coupler does not provide any RF power limitation. The threshold power must be limited by the user to achieve the levels defined in EN IEC 60079-0 Table 5.

UX series antenna coupler is limited to a max RF input of 7 W.

[14] **Confidential Report No.** FIDI 22 CR 043

[14.1] **Routine testing**

None

[15] **Specific Conditions of Use**

None

[16] **Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

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[17] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Addendum to Technical file	TDTF-0014	00	24.05.2022
IOM xx Series ATEX – IECEx -Template	IM0019	01	07.202.
WS&WA Installation & Operation manual	IM0022	01	07.2022

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