



- [2] **EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC**
- [3] **EC-Type Examination Certificate Number:** Presafe 14 ATEX 4350X **Issue 1**
- [4] **Equipment or Protective System:** Uninterruptible Power Supply 12/NMH/288
- [5] **Applicant – Manufacturer or Authorized representative:** Austdac Pty Ltd
- [6] **Address:** Unit 1, 4 Packard Avenue
Castle Hill NSW 2154, Australia
- [7] **This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.**
- [8] **DNV Nemko Presafe AS, notified body number 2460 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system 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 confidential reports listed in section 14.
- [9] **Compliance with the Essential Health and Safety Requirements has been assured by compliance with: CENELEC EN 60079-0: 2012, CENELEC EN 60079-7: 2007, CENELEC EN 60079-11: 2012 and EN 60079-18: 2009**
- [10] **If the sign “X” is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.**
- [11] **This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.**
- [12] **The marking of the equipment or protective system shall include the following:**

	I M2	Ex ma eb ia [ia] I Mb	(AC Mains Input ON)
	I M1	Ex ma ia [ia] I Ma	(AC Mains Input OFF)

Date of issue: 2014-03-27

Asle Kaastad
For DNV Nemko Presafe AS
Information on electronic signature www.presafe.com



[13]

Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE No.:** Presafe 14 ATEX 4350X Issue 1

Certificate History

Issue	Description	Report no.	Issue date
1	Original issue	D0001229	2014-03-27

[15] Description of Equipment or Protective System

The Uninterruptible Power Supply Type 12/NHM/288 (UPS) is powered from nominal input voltage from 100V to 240V and provides a nominal output voltage of 12V at 1A to load. The UPS uses internal batteries to maintain the output in the event of a power failure. The UPS output can be controlled either by an internal timer, SILBUS or Ethernet.

The UPS operates in two modes:

- AC Mains Input ON: In this mode, mains input power is available through the Ex eb input in the top chamber of the UPS for the charging of the battery, display, SILBUS and Ethernet communications, and also to provide the intrinsically safe 12V 1A output
- AC Mains Input OFF: In this mode, no mains power is available. The internal battery provides the power for the display, SILBUS and Ethernet communications, and also to provide the intrinsically safe 12V 1A output.

The equipment consists of a stainless steel box with minimum IP55 rated cable glands and connectors to facilitate external connections. It contains a main board and two battery boards that provide the step down of the incoming mains input, charging of the self-contained batteries, and the intrinsic safety output. These boards are totally encapsulated and protected using encapsulation type of protection. It contains an intrinsically safe display that provides information on the status of the UPS using LED indicators. It has a single reset button on the display.

To facilitate the connection of the main input, either:

- the top chamber of the enclosure is fitted with a separately certified Group I or Group II, Ex e terminal box with terminals and cable glands, with the mains cable from the internal encapsulated main board terminated inside the terminal box by the manufacturer and where the incoming user mains cable is terminated inside the terminal box.
- or with a separately certified Ex e Group I terminal box and terminals fitted outside the enclosure with the mains input cable to the internal main board terminated inside this box
- or supplied with a heavy duty sheathed mains input cable connected directly to the main board with a condition that it shall be terminated at the time of installation in a manner suitable for Group I Mb

The equipment uses separately certified Ex e junction/terminal boxes with terminals and glands to facilitate the mains input connection. Stahl junction box Type 8118/112-0 certified under IECExPTB 06.0026 (DE/PTB/ExTR06.0048/01) can be utilised as it is always fitted inside of stainless steel box, which is protecting Ex e box from mechanical damage of Group I application.

Type Identification

Uninterruptible Power Supply 12/NMH/288

Electrical Data

Refer to point 1 in the Special Conditions for Safe Use

Degrees of protection (IP Code)

Refer to heading number 15

[16] Project No.: D0001229

Descriptive Documents

Number	Title	Rev.	Date
61-166-19	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Certification Schematic Diagram	01	2013-07-27
13-310-03	Display with Ethernet and Silbus Type DES1 PCB0306 Schematic Diagram	02	2013-07-26
13-311-21	Display with Ethernet and Silbus Type DES1 PCB0306A Artwork Details	02	2013-05-01
13-312-14	Display with Ethernet and Silbus Type DES1 PCB0306 Bill of Materials	02	2013-05-01
61-153-03	Intrinsically Safe Ex ia UPS Type 12/NMH/288 PCB0299A (Pages 0 to 6) PCB0298A (Page 7) Schematic Diagram	04	2013-07-25
61-155-14	Intrinsically Safe Ex ia UPS Type 12/NMH/288 PCB0298A Bill of Materials (Battery Board)	04	2013-08-07
61-158-14	Intrinsically Safe Ex ia UPS Type 12/NMH/288 PCB0299A Bill of Materials (Main Board)	03	2013-07-02
61-160-14	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Bill of Materials (UPS Assembly)	02	2013-08-07

61-165-04	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Assembly Diagram	02	2013-08-07
61-167-13	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Labels Mechanical Details	02	2014-03-27
61-173-04	Intrinsically Safe Ex ia UPS Type 12/NMH/288 PCB Stack Assembly Diagram	02	2013-07-24
61-241-21	Intrinsically Safe Ex ia UPS Type 12/NMH/288 PCB0298A Artwork Details (Battery Board)	02	2013-07-02
61-242-21	Intrinsically Safe Ex ia UPS Type 12/NMH/288 PCB0299A Artwork Details (Main PCB)	04	2013-07-02
61-247-04	Inductor_power_200uH_4A with 0.25mm_Infaliible_Insulation Mechanical Details	01	2013-05-30
61-248-24	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Transformer Certification Details	05	2013-03-21
61-280-06	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Enclosure Mechanical Details	02	2013-07-24
61-281-06	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Cover Mechanical Details	02	2013-05-23
61-282-06	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Gasket Mechanical Details	01	2013-07-26
61-284-06	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Base Heatsink Mechanical Details	01	2013-03-07
61-285-06	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Side Heatsink Mechanical Details	01	2013-03-08

61-286-06	Intrinsically Safe Ex ia UPS Type 12/NMH/288 U7 Heatsink Mechanical Details	01	2013-03-07
61-287-06	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Terminal Plate Mechanical Details	03	2013-07-29
61-289-06	Intrinsically Safe Ex ia UPS Type 12/NMH/288 Gland Plate Mechanical Details	02	2013-06-06
90-369-04	Encapsulated Barrier Network Fuse Type EBNF1 Assembly Diagram	02	2011-04-14

[17] Special Conditions for Safe Use

1. It is a condition of safe use that the following parameters shall be taken into account during connection of the equipment:

Electrical Parameters	AC Mains Input X200 on 61-166-19	DC Output X201 on 61-166-19	SILBUS Port X203 on 61-166-19 (X100 on 13-310-03)	Ethernet Port X202 on 61-166-19 (X102 on 13-310-03)	Console Port X2 on 61-166-19 (X2 on 13-310-03)
Um	250V	-	250V (when in safe area only)	-	-
Ui	-	-	12.6V	7.14V	7.14V
Ii	-	-	3.3A	0.48A	3.3A
Pi	-	-	-	1W	-
Ci	-	-	0uF	0.45uF	0uF
Li	-	-	0uH	0uH	0uH
Uo	-	12.6V	0V	7.14V	7.14V
Io	-	1A	-	0.48A	0.05A
Co	-	25uF	-	60uF	100uF
Lo	-	60uH	-	0.1mH	0.1mH
Lo/Ro	-	65uH/Ω	-	-	-

2. The Console Port shall only be used in safe area.

3. At the SILBUS port, the Um of 250V is only allowed when the apparatus is in safe area.

4. In Power On mode, option 1, a heavy duty sheathed mains cable (permanently attached) must be terminated within the encapsulation in accordance with Group I Mb, Ex m application by the manufacturer.

5. In Power On mode, option 2, a heavy duty sheathed mains cable must be terminated within the Ex e junction box within the main enclosure in accordance with Group I Mb Ex e application by the end user.

[18] Essential Health and Safety Requirements

See part 9 of this certificate

END OF CERTIFICATE