

U.S. Department of Labor

Mine Safety and Health Administration
Industrial Park Road
RR1, Box 251
Triadelphia, West Virginia 26059



Approval No. 23-A080006-0
A&CC PAR No. 94159

May 2, 2008

12 MAY 2008

Extronics Ltd.
Attention: Mr. John Hartley
Meridian House, Roe St.
Congleton
CW12 1PG
United Kingdom

Dear Mr. Hartley:

The review of your application dated June 22, 2007, Company Code No. 318349, Model iTAG100/BWH3000 RFID Tag, is complete.

The design of this RFID Tag meets the requirements of Title 30 Code of Federal Regulations, Part 23 and is approved as permissible for use in gassy underground mines. We assign Approval No. 23-A080006-0 to this RFID Tag.

The following requirements apply to Approval No. 23-A080006-0:

1. You must build each subject RFID Tag bearing this approval number according to the drawings and specification on file at our center. Enclosed is a list of these drawings and specifications.
2. Our approval label information must be legibly reproduced with permanent lettering on a wear resistant material and must be prominently displayed on an exterior surface of each Model iTAG100/BWH3000 RFID Tag (see the enclosed official approval label). All of the approval label information must appear on the approval label. It must not be removable from the equipment.
3. You are not permitted to make changes to the design of this RFID Tag without our approval.
4. We may require you to make changes to the design, or to modify the RFID Tag in the field, in the interest of safety.
5. We have the right to revoke this approval, for cause, at any time.

6. This approval is only valid when used with the Xeno Energy XL-050F, 3.6 volt lithium battery. It is not to be replaced by the user.

You will receive an invoice for the cost to process your application.

If you have any comments or questions relative to this letter, please contact Wayne L. Carey at (304) 547-2086.

Sincerely,

A handwritten signature in cursive script, appearing to read "John P. Faini".

John P. Faini
Chief, Approval and Certification Center

Enclosures

Data Sheet 6
By: WLCarey
Date: 05-02-08

INVESTIGATION TL-23099

DRAWING LIST

Extronics Ltd. Model iTAG100/BWH3000, 3.6 Volt, DC RFID Tag
Built According to TAG MSHA GA 319625
Approval No. 23-A080006-0

<u>TITLE</u>	<u>DRAWING NO.</u>	<u>REVISION</u>
TAG MSHA GA	319625	REL01
Bill of Materials (2 sheets)	320913	01
iTAG100 Back Comparison	320162	PRE01
iTAG100 Schematic (6 sheets)	311975	03
iTAG100 PCB Layout (14 sheets)	313173	01
Call Button Detail	313113	02
Switch Information Drawing	313166	01
iTAG100/T2 Tag MSHA Main Label	319676	1
iTAG100/T2 Tag MSHA Battery Warning Label	320169	1

EXTONICS LTD.

MODEL iTAG100 / BHW3000

PERMISSIBLE RFID TAG



**APPROVAL NO.
23-A080006-0**

**TESTED FOR INTRINSIC SAFETY IN
METHANE-AIR MIXTURES ONLY**

WARNING:

1. This tracker is only permissible with a Xeno Energy XL-050F, 3.6 volt lithium battery. It is not to be replaced by the user.

19 JUL 2010



Revised Approval Modification Program (RAMP) Acceptance issued to:

Company: Extronics Limited

Investigation No.: TL-23099

Attention: Mr. Nick Saunders

Co Appl Code No.: 000000

Address: Meridian House

Approval/Cert. No.: 23-A080006-0

Roe Street

Congleton CW12 1PG, UK

Model(s): iTAG100/BWH3000 RFID Tag

Description of change(s): The following changes are included in the RAMP:

1. Changed iTAG100/BWH3000 Schematic, Bill of Material, and PCB layout to accommodate new design.
2. Changed the part number of the BWH3000 to TAG2000.

Title	Drawing Number	Revision
Bill of Materials for iTAG100	320913, Shts. 1-14	02
TAG MSHA GA	319625	REL02
iTAG100 PCB Layout	313173, Shts. 1-15	02
Switch Information Drawing	313166	02
iTAG100/T2 Tag MSHA Main Label Drawing	319676	2
iTAG100/T2 Tag MSHA Battery Warning Label	320169	2

Title	Drawing Number	Revision
Call Button Detail	313113	03
iTAG100 Schematic	311975, Shts. 1-6	05
MSHA iTAG100 TAG20000 Drawing List	328500	1

Attachments (check all that are applicable):

☒ Evaluation Report ☒ Test Sheet(s) ☐ Revised Approval Plate Design ☐ Revised Conditions of Use

Approved by:

Kim Adenri

Date:

07-14-2010



14 SEP 2012

Revised Approval Modification Program (RAMP) Acceptance issued to:

Company: Extronics Ltd.	Investigation No.: TL-23099
Attention: Mr. Ben Seaby	Co Appl Code No.: 331648
Address: 1 Dalton Way, Midpoint 18 Middlewich, Cheshire UK CW10 0HU,	Approval/Cert. No.: 23-A080006-0

Models: iTAG100-M, iTAG100-M-CB, TAG2000-X4, TAG2000-C-X4**Description of changes**

1. Add the use of an alternate Xeno Energy XLP-050F lithium cell.
2. Revised the safe distance requirements for use near detonators.
3. Changed the material for the enclosure to Lexan 920 polycarbonate as an alternate.
4. Updated MSHA drawings to document the various Extronics RFID Tag model numbers issued Approval No. 23-A080006-0.

Revised Condition of Use: The first requirement listed in the original approval is revised and a third requirement has been added:


1. MSHA approved for use with the following batteries only: Xeno Energy XL-050F or XLP-050F, 3.6 volt lithium batteries only.
3. A minimum safe distance of 14.76 inches shall be maintained between the Model iTAG100-M, iTAG100-M-CB, TAG2000-X4 or TAG2000-C-X4 Tag and any blasting circuits, explosives and detonators.

The approval label information must be legibly reproduced with permanent lettering on a wear resistant material and must be prominently displayed on an exterior surface of the Model iTAG100-M, iTAG100-M-CB, TAG2000-X4 or TAG2000-C-X4 Tag. All of the approval label information must appear on the approval label.

<u>Title</u>	<u>Drawing No.</u>	<u>Revision</u>
MSHA iTAG100 TAG2000 Drawing List	328500	2
iTag100-M / iTAG100-M-CB / TAG2000-X4 / TAG2000-C-X4 TAG MSHA GA	319625	REL03
iTAG100-M/iTAG100-M-CB/TAG2000-X4/ TAG2000-C-X4 MSHA Battery Warning Label	320169	03
iTAG100-M/iTAG100-M-CB/TAG2000-X4/ TAG2000-C-X4 MSHA Main Label Drawing	319676	03
Tag-2000/iTAG100 Separation from Commercial Electric Detonators Justification	333244, (Sheets 1 – 4)	01

Attachments (check all that are applicable):

☒ Evaluation Report ☒ Test Sheet(s) ☒ Revised Approval Plate Design ☒ Revised Conditions of Use

Approved by:  Date: 09-06-2012

Extronics, Ltd.

Models

**iTAG100-M, iTAG100-M-CB,
TAG2000-X4, TAG2000-C-X4**



APPROVAL NO. 23-A080006-0

TESTED FOR INTRINSIC SAFETY IN METHANE-AIR MIXTURES ONLY

WARNINGS:

1. MSHA approved for use with the following batteries only: Xeno Energy XL-050F or XLP-050F, 3.6 volt lithium batteries only.
2. Batteries are technician replaceable and must be replaced in fresh air.
3. A minimum safe distance of 14.76 inches shall be maintained between the Model iTAG100-M, iTAG100-M-CB, TAG2000-X4 or TAG2000-C-X4 Tag and any blasting circuits, explosives and detonators.