

[1]

EC-TYPE EXAMINATION CERTIFICATE



[2]

**Equipment or Protective System intended for use
in Potentially Explosive Atmospheres
Directive 94/9/EC**

[3]

EC-Type Examination Certificate Number: **DEMKO 11 ATEX 153714 Rev. 1**

[4]

Equipment or Protective System: **Battery Charging & Communication Cables**

[5]

Manufacturer: **Crowcon Detection Instruments**

[6]

Address: **2 Blacklands Way, Abingdon Business Park, Abingdon, Oxfordshire, OX14 1DY, U. K.**

[7]

This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8]

UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the 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 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 report no. **10CA31772/1**

[9]

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

EN 60079-0:2009

EN 60079-11:2007

[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, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

[12]

The marking of the equipment or protective system shall include the following:

 **II (1) G [Ex ia]**

Certification Manager

Jan-Erik Storgaard

Date of issue: 2011-05-04

Re-issued: 2011-10-07

Notified Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com

www.ul-europe.com



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Schedule
EC-TYPE EXAMINATION CERTIFICATE No.
DEMKO 11 ATEX 153714 Rev. 1
Report: 10CA31772/1

[15]

Description of Equipment or protective system

The equipment is associated apparatus for use as a battery charging and/or communications interface between safe area equipment and hazardous area equipment used in a safe area.

The equipment provides defined maximum output voltages, current-limited by non-user replaceable fuses..

The inputs to the equipment are supplied by power supplies of 6.5 Vdc, 12 Vdc or 24 Vdc and/or serial communications interfaces. The equipment power/communications outputs are via a bespoke connector design.

Equipment included:

Four variants of the equipment, the type designations and descriptions of which are listed below:

- Type: **POWER CABLE (6.5 Vdc input)**
- Type: **COMMUNICATION CABLE (USB communications only)**
- Type: **POWER AND COMMUNICATION CABLE (USB communications and power)**
- Type: **VEHICLE POWER CABLE (12 Vdc or 24 Vdc input)**

Temperature range

The ambient temperature range is 0 °C to +40 °C.

Electrical data

U_m : 250 V

U_o : 9.1 V

Routine tests

The manufacturer shall carry out the routine verifications and tests necessary to ensure that the equipment produced complies with the documentation.

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Report No.

Project Report No.: 10CA31772/1 (Hazardous Location Testing)

Documents:

Description:	Drawing No.:	Rev. Level:	Date:
Charging Cable Assemblies	1004-1096	01	09/04/2010
Harmony Comms Lead PCB – Circuit Diagram	1004-1052-CD-CERT	5	10/2/11
Harmony Comms Lead PCB	1004-1052-PCB-CERT	4	11/1/11
Harmony Comms Lead PCB – PCB Fabrication Drawing	1004-1052-PCB-MODIFICATION-01	1	8/3/11
Harmony Comms Lead PCB	1004-1052-PCB-CERT	8	11/1/11
Harmony Comms Lead PCB – Certified Parts List	1004-1052-PL-CERT	5	10/2/11
GasPro Charger Protection: USB – Circuit Diagram	1004-1053-CD-CERT	3	8/2/11
GasPro Charger Protection: USB	1004-1053-PCB-CERT	5	24/2/11
GasPro Charger Protection: USB – Certified Parts List	1004-1053-PL-CERT	3	8/2/11
GasPro Charger Protection Mains & 12/24V Mains Adapter Input – Circuit Diagram	1004-1054-CD-CERT	6	8/2/11
GasPro Charger Protection Mains & 12/24V	1004-1054-PCB-CERT	3	7/1/11
GasPro Charger Protection Mains & 12/24V	1004-1054-PCB-MODIFICATION-01	1	8/3/11
GasPro Charger Protection Mains & 12/24V	1004-1054-PCB-CERT	7	24/11/10
GasPro Charger Protection Mains & 12/24V – Certified Parts List	1004-1054-PL-CERT	6	8/2/11
GasPro Charger Protection Mains & 12/24V 12/24V input – Circuit Diagram	1004-1055-CD-CERT	6	8/2/11
GasPro Charger Protection Mains & 12/24V – Certified Parts List	1004-1055-PL-CERT	6	8/2/11
GasPro Charger Lead – Circuit Diagram	1004-1029-CD-CERT	1	8/11/10
GasPro Charger Lead	1004-1029-PCB-CERT	1	8/11/10
Gas Pro Charger Lead – Certified Parts List	1004-1029-PL-CERT	1	8/11/10
Main Cable Connecting to Harmony Connector	CAB HARM	4	19/11/2010
Harmony Connector General Assembly	MAIN_Issue 4 GA-HARMONY CONN_Issue 2	2	06/01/2011
Charger Certification Label	1004-1098	01	01/02/2011
Comms Certification Label	1004-2501	01	01/02/2011
Power & Comms Certification Label	1004-2502	01	01/02/2011
Car Charger Certification Label	1004-2503	01	01/02/2011
Minimum Manual Content for Power, Communication, Power and Communication & Vehicle Power Cable Assemblies – Certification Control Document	ENG-000031	2	13/04/2011



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Schedule

[14]

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Special conditions for safe use:
None

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Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the Annex III of ATEX directive only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

Additional information

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.



