

Translation

(1) **EC-Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 94/9/EC**




(3) **Certificate Number** TÜV 07 ATEX 554118
(4) for the component: IS Micro Reader type IGMA 125IS
(5) of the manufacturer: HI-G-TEK Ltd.
(6) Address: 16 Hacharoshet St.
Or-Yehuda 60375
ISRAEL

Order number: 8000554118

Date of issue: 2008-01-25

- (7) This component of an equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH, notified body No. 0044 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), 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 the confidential report No. 07203554118.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2006 EN 60079-11:2007 EN 60079-26:2007

- (10) If the sign "U" is placed after the certificate number, it indicates that this certificate must not be confounded with an EC-Type Examination Certificate which is destined for an equipment or protective system. This partial certificate must only be used as a basis for an EC-Type Examination Certificate.
- (11) This EC-type examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the component must include the following:

 **II 1 G Ex ia IIB T4**

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body

Schwedt

Hanover office, Am TÜV 1, 30519 Hanover, Fon +49 (0)511 986 1455, Fax +49 (0)511 986 1590

This certificate may only be reproduced without any change, schedule included.
Excerpts or changes shall be allowed by the TÜV NORD CERT GmbH

(13) **SCHEDULE**

(14) **EC-Type Examination Certificate No. TÜV 07 ATEX 554118**

(15) Description of component

The IS Micro Reader type IGMA 125IS is a handheld RFID reader. The reader performs two basic functions, it verifies the status of the sending device and it also resets the sending device for a new use. In the second case the identification of the reader is stored in the memory of the sending device.

Technical data:

Supply	3V Lithium-Batterie Renata CR2032
Transmitter power	16.2mW
Transmitter frequency	125kHz

Permissible range of the ambient temperature:	- 20°C thru +60°C
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(16) Test documents are listed in the test report No. 07203554118.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

Telecommunication, Safety & EX Proof Standards & Regulatory


Hi-G-Tek Product Certification List





December, 2008
Rev 1.1

1. Long Range (UHF) RFID Readers

1.1 AVL Reader


Europe AVL Reader : p/n IGAV143433 ,IGAV243433 (Certification covers as well Protection Unit : p/n IGPRT01 And Display Unit : p/n IGFLD01, IGFLD02)		
EMC , EMI, Radio	Tested to	
	EN 300 220-1 V1.3.1 : 2000	
	EN 300 220-3 V1.1.1 : 2000	
	EN 300 330-1 V1.3.1 : 2001	
	EN 300 330-2 V1.1.1 : 2001	
	EN 301 489-1 V1.5.1 : 2004	
	EN 301 489-3 V1.4.1 : 2002	
Safety	Tested to	
	EN 60950-1:2001 ITE	
Automotive	Tested to	
eMark ¹	Complies with the European Community's Automotive Equipment Directive (2004/104/EC)	
		<div style="border: 2px solid black; padding: 5px; display: inline-block;">e24</div>



USA & Canada AVL Reader : p/n IGAV143916 ,IGAV243916 (Approvals covers as well Protection Unit : p/n IGPRT01 And Display Unit : p/n IGFLD01, IGFLD02)		 
EMC, Radio	Tested to	
	FCC Part 15, Sub Part B	
	FCC Part 15, Sub Part C	
Industrial Safety	Tested to	
	UL 61010-1:2004 (TUV approved) ²	

¹ **e-Mark** is the proof of compliance with automotive regulation directives required by the European Union, it ensures that the electronic equipment installed in the vehicle does not give off emissions which will adversely affect other vehicle equipment.


² This UL standard specifies safety requirements for electrical equipment intended for professional and industrial process use in USA and Canada. On July 2004, It became an International safety standard. TUV as a NRTL notified body were approved the referred products.

1.2 Compact Reader

Europe Compact Reader : p/n IGCR46D433 , p/n IGCR86D433 (24VDC,48VDC respectively) (Certification covers as well: PSC unit models IGPS4RI and IGPS8RI)		
EMC , EMI, RADIO	Tested to	
	EN 300 220-1 V2.1.1 : 2006	
	EN 300 220-3 V2.1.1 : 2006	
	EN 55022: 2006,class B	
	EN 61000-4.4, 4.5, 4.6: 2006	
	EN 301 489-1 V1.5.1 : 2004	
	EN 301 489-3 V1.4.1 : 2002	
Safety	Tested to	
	EN 60950-1:2001 ITE	


USA & Canada Compact Reader : p/n IGCR46D916 , p/n IGCR86D916 (Certification covers as well: PSC unit models IGPS4RI and IGPS8RI)		 
EMC, RADIO	Tested to	
	FCC Part 15, Sub Part B	
	FCC Part 15, Sub Part C	
Industrial Safety	Tested to	
	UL 60950-1:2003, CAN/CSA C22.1 60950 -1-3 (TUV approved)	


1.3 Hi-G-Way Reader

Europe HiGway Reader³ : p/n IGHR4WD433		
EMC	Tested to	
	EN 301 489-1 V1.5.1 : 2004	
	EN 301 489-3 V1.4.1 : 2002	
Safety	Tested to	
	UL 60950-1:2003, CAN/CSA C22.1 60950 -1-3	

³ This is a basic HGW Reader without the backup battery, as this product is based on the CE certified Compact Reader, only partial EMC/Safety tests were required to get a full compliance with the CE mark.

1.4 Master Hand Held Terminals (MHHT, CF interface)


Europe MHHT Reader : p/n IGMA51433 	
EMC , EMI, RADIO	Tested to
	EN 300 220-1 V2.1.1 : 2006
	EN 300 220-3 V2.1.1 : 2006
	EN 55022: 2006,class B
	EN 61000-4.4, 4.5, 4.6: 2006
	EN 301 489-1 V1.6.1 : 2005
	EN 301 489-3 V1.4.1 : 2002
Safety	Tested to
	EN 60950-1:2006


USA & Canada MHHT Reader : p/n IGMA51916 	
EMC, RADIO	Tested to
	FCC Part 15, Sub Part B, Class B and Sub part C
Safety	Tested to
TBD ⁴	TBD


⁴ As per business/ marketing requirement

2. Short Range (LF) RFID Readers

2.1 Micro Readers/ HHT/LF Terminal (programming unit)

Europe Micro Reader : p/n IGMA125S IS Micro Reader p/n IGMA125IS Low freq. Terminal :p/n IGIU125PU Hand Held Data Reader Terminal (HHT): p/n IGMA31		
EMC , EMI , RADIO	Tested to	
		EN 300 220-1 V2.1.1 : 2006
		EN 300 220-3 V2.1.1 : 2006
		EN 301 489-1 V1.6.1 : 2005
		EN 301 489-3 V1.4.1 : 2002
Safety	Tested to	
		EN 60950-1:2001 ITE

Europe IS Micro Reader : p/n IGMA125S		
Explosion Proof/HazLoc	Tested to	
ATEX, Intrinsic Safety for potentially explosive environments ATEX Marking⁵: II 1 G Ex ia IIB T4		EN60079-0: 2006 EN60079-11: 2007 EN60079-26: 2007

USA & Canada Micro Reader : p/n IGMA125S IS Micro Reader p/n IGMA125IS Low freq. Terminal :p/n IGIU125PU Hand Held Data Reader Terminal (HHT): p/n IGMA31		
EMC, RADIO	Tested to	
		FCC Part 15, Sub Part B, Class B and Sub part C
Industrial Safety	Tested to	
TBD		TBD

⁵ **ATEX Marking interpretation::**

II – Equipment Group II: Surface (no-mining) equipment.

1 - Equipment Category 1: Very High degree of protection for use in Zone 0 (see below)

G – Atmosphere Group: Gases, Vapors, Mists

Ex- Explosion proof equipment: The Equipment that has been certified for use in a Potentially Explosive Atmosphere

ia - A protection technique based upon the restriction of electrical energy within the apparatus and in the interconnecting

wiring, exposed to a explosive atmosphere, to a level below that which can cause ignition by either sparking or heating

effects. "ia" - Indicates that the electric circuit is not able to cause an ignition when there are two failures ("ib" is for a single failure situation).



IIB - Gas group B: Ethylene - typical gas in petrochemical environment.



T4- Temperature classification (max.135°C)

Zone 0 - same as above only that the interaction with vapor /gas is likely to occur in normal operation **constantly**

3. RFID Seals & Tags

3.1 HazLoc /TTMS seals

Europe Valve Seal : p/n IGFL40433 Hatch Seal: p/n IGFLH40433 Hi-G-Lock: p/n IGFLK40433		
EMC ,EMI, Radio	Tested to	
	EN 300 220-3 V1.1.1 : 2000	
	EN 300 330-2 V1.1.1 : 2001	
	EN 301 489-1 V1.2.1 : 2004	
	EN 301 489-3 V1.4.1 : 2002	
Safety	Tested to	
	EN 60950-1:2001 ITE	
Explosion Proof/HazLoc	Tested to	
UL , Division 1 Class I (flammable gases, vapors, or flammable liquids) Groups C and D.	UL 913, Sixth Edition, CAN/CSA C22.2	
ATEX , Intrinsic Safety for potentially explosive environments ATEX Marking⁶ : II 2 G Ex ia IIB T4	CENELEC EN50014: 1997 CENELEC EN50020: 2002	

USA & Canada Valve Seal : p/n IGFL40916, IGFL41916 Hatch Seal: p/n IGFLH40916, IGFLH41916 Hi-G-Lock: p/n IGFLK40916			
EMC, Radio	Tested to		
	FCC Part 15, Sub Part C		
Explosion Proof/HazLoc	Tested to		
UL Intrinsic Safety⁷ EXia : Division 1 Class I Groups C and D for potentially explosive environments (flammable gases, vapors, or flammable liquids)	UL 913, Sixth Edition, CAN/CSA C22.2 FILE No. E256795		

⁶ [ATEX marking interpretation:](#)

Same as written in page 5 , but with equipment Category 2 : Zone 1(A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapor or mist is likely to occur in normal operation **occasionally**)

⁷ [UL marking interpretation](#)

Division 1 – Area classification, where ignitable concentrations can exist all of the time or some of the time under normal operating conditions.

Class 1 – Equipment Category 1: operation in the presence of flammable and explosive mixtures of specific vapors and gases with air
Gas Group C,D – Propane, Ethylene

Exia- Protection method – Intrinsic safety, explosion proof for use in **Zone 0** - Where ignitable concentrations exist all of the time or for long periods of time under normal operating conditions.

Environmental Durability Tests


Valve Seal : p/n IGFL40XXX (where XXX= 433,916)


Hatch Seal: p/n IGFLH40XXX

Hi-G-Lock: p/n IGFLK40XXX


Type of environmental test	Tested to
Temperature Cycling	SAE J1455 paragraph 4.1.3.1.
Thermal shock cycling	SAE J1455 paragraph 4.1.3.2.
Mechanical shock	MIL-STD-810 D method 516.3 procedures 1 modified.
Random vibration	SAE J1455 Paragraph 4.9.3.2
Temperature and humidity	MIL-STD-810D, method 507.2 procedure I through III modified
Resistance to Splash	SAE J1455 paragraphs 4.4 ,4.4.3
Solar radiation durability	HGT-QA-3006 (paragraphs 4.1& 4.2.1)
Salt fog durability	MIL-STD-810D, method 509.2 modified
Free fall (drop)	HGT-QA-3006 (paragraphs 5.1)
Dust test	SAE J1455 paragraph 4.7


3.2 Data Tag, Dry contact /Wire/Magnetic/Barrier/Snap Seal


Europe 	
DataSeal433 Family: p/n IGRS40/40M/DC/BR..433 DataTag433 Family: IGDTeX433 (where XX :40-44 as per tilt/motion sensors combination)	
EMC ,EMI, Radio	Tested to
	EN 300 220-3 V1.1.1 : 2000
	EN 300 330-2 V1.1.1 : 2001
	EN 301 489-1 V1.2.1 : 2004
	EN 301 489-3 V1.4.1 : 2002
Safety	Tested to
	EN 60950-1:2001 ITE


USA & Canada 	
DataSeal916 Family: p/n IGRS40/40M/DC/BR.. DataTag916 Family: IGDTeX916 (where XX :40-44 as per tilt/motion sensors combination)	
EMC, Radio	Tested to
	FCC Part 15, Sub Part C

4. Additional product certifications - International Regulatory :

Brazil AVL Reader : p/n IGAV143433 Compact Reader: p/n IGCR46D433 Valve Seal : p/n IGFL40433 Hatch Seal: p/n IGFLH40433 Data Tag: p/n IGDT41433 IS Micro Reader: p/n IGMA125IS	
	
Mandatory EMC	
ANATEL (Regulator) certified	In accordance with EN 301 489-3 and 301 489-1
EX proof /Hazloc In process... (TBD Jan.2009) (For Valve/Hatch/Lock Seals only)	Based on ATEX test report

Republic of South Africa AVL Reader : p/n IGAV143433 Valve Seal : p/n IGFL40433 Hatch Seal: p/n IGFLH40433 Lock Seal: p/n IGLK40433	
	
Mandatory EMC, Radio & Safety	Tested to
ICASA (Regulator) certified	In accordance with EN 301 489-1 , EN 330 220-3 and EN 60950-1
EX proof /Hazloc SAEX (For Valve/Hatch/Lock Seals only)	Based on ATEX test report

Israel AVL Reader : p/n IGAV143433 Compact Reader: p/n IGCR46D433 DataSeal 433 Family DataTag: 433 Family HHT p/n: IGMA31 Programming unit: p/n IGIU125PU	
	
Mandatory EMC & Radio	Tested to
Type approval for telecom equipment by the MOC (Regulator)	In accordance with EN 301 489-1 , EN 330 220-3

Japan Compact Reader: p/n IGCR46D433	
	
Mandatory EMC & Radio	Tested to
Type approval for telecom equipment by TELEC (Regulator)	

IA - C E R T I F I C A T E



SA Explosion Prevention CC

IN TERMS OF REGULATION 21.17.2 OF THE MINERALS ACT INCORPORATED IN THE MINE HEALTH AND SAFETY ACT) AND REGULATION 8(2) OF THE ELECTRICAL MACHINERY REGULATIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT



03 December 2008

HI-G-Tek Ltd
16 Hacharoshet Street
New Industrial Zone
Or-Jehuda
60375
ISRAEL

IA CERTIFICATE: SAEx S/08-482
Lock, Hatch and Valve Data Seal
(INTRINSICALLY SAFE)

Page 1 of 2

Expiry Date: 30 December 2009 (Annual Review)

DESCRIPTION:

This IA certificate is based on certificate No. DEMKO 07 ATEX 0621521 and must be read in conjunction with the said ATEX certificate.

The lock, hatch and valve data seals are devices that monitor the open or closed state of locks, hatches and valves. The devices send a RF signal to a unit in the safe area containing information on the state of the equipment which it is monitoring. The devices are included in a combined stainless steel and plastic enclosure with an IP20 rating. The devices are powered from a non rechargeable 3,7 V sealed, gas tight lithium-thionyl chloride battery.

Safety Parameters:

None

MARKING:

Manufacturer	:	Hi-G-Tek Ltd
Supplier	:	Hi-G-Tek Ltd
Model	:	IG-LK-433, IG-FL-433, IG-FLH-433
Ex rating	:	EEx ia IIB T4 (-20°C=T _{amb} =70°C)
Serial No	:	(all serial Nos. imported into South Africa up to 30 December 2009)
*IA No	:	SAEx S/08-482

* In addition to the original marking, the SAEx IA number must be applied on each unit in a visible, legible and indelible manner.

X - Special conditions of safe use:

None

Compliance: The units as described above and in Certificate No DEMKO 07 ATEX 0621521 is hereby certified "Explosion Protected" Ex ia IIB T4 (-20°C=T_a=+70°C) and is suitable for use in hazardous locations as stated below, as determined during assessments of the DEMKO certificate and in accordance with the relevant requirements of equivalent SANS Standards:

Document must be reproduced in full

IA CERTIFICATE: SAEx S/08-482 Lock, Hatch and Valve Data Seal

- SANS (IEC) 60079-0 : 2005 (Edition 4.0) "General Requirements";
- SANS (IEC) 60079-11 : 1999 (Edition 4) "Intrinsic Safety 'i'";

Locations	Zone 0 and 1	Surface
Hazardous Frequency		Continuous as could occur under normal operations
Environment	Group IIB	Ethylene
Limiting Temperature	T4	135°C
Ambient Temperature	-20°C to +70°C	

The use of the apparatus in hazardous locations is subject to the following provision, which shall be adhered to:

- i) SANS 10086 requirements;
- ii) Any relevant requirements of the MHS Act or the OHS Act;
- iii) Codes of Practice enforced in terms of Regulations 21.17/2 of the Minerals Act, by the Chief Inspector of Mines;
- iv) Any restrictions and conditions enforced by the Chief Inspector of Mines, Principal Inspector (Group I equipment) or Chief Inspector of Factories (Group II equipment); and

Conditions of certification:

1. This certificate covers all units sold in South Africa from the date of this certificate to 30 December 2009.
2. The apparatus must be additionally marked in a clear, legible, visible and indelible manner with the SAEx IA number.
3. This certificate of approval only covers the equipment as certified above and does not include any scheduled additions or variations/amendments/new issues to the certificates, made after the above date.
4. The equipment does not need to be retested when used on the conditions and with such restrictions as prescribed by DEMKO and in certificate DEMKO 07 ATEX 0621521.
5. The DEMKO certification must remain valid.
6. The requirements in the ARP 0108 (or regulations) and SANS 10108 do not change.
7. The Ex quality assurance notification for the equipment remains valid.



**WA de Beer Pr Eng.
Specialist Engineer
SA EXPLOSION PREVENTION**

Document must be reproduced in full

Date : 09/26/2007

I.T.L (PRODUCT TESTING) Ltd.
1 Bat Sheva St, POB 87
71100 Lod
Israel

Attn: Shmuel Gnatt

Re. : CU US+Canada NRTL-Certificate

Type of Equipment : Tanker Truck Monitoring System
Model Designation : See Certificate
Certificate No. : CU 72072127 0001
File No. : 30782377 001
Engineer/Contact : Francis Saliga
Standard(s) : UL 61010-1:2004
CAN/CSA-C22.2 61010-1:2004

Dear Sir or Madame,

The above referenced technical equipment has been tested and was found to be in accordance with the listed test requirement(s). Enclosed, please find the TUV Rheinland Certification document No. CU 72072127 0001.

Please forward the original to the license holder.

Call the TUV hotline at 1-TUV-Rheinland (1-888-743-4652) to get answers for all your compliance needs.

If we can be of any further assistance to you, please do not hesitate to contact us.

Sincerely yours,
Certification Body

for *msale*
Dipl.-Ing. M. Raap
QA Certification Officer

Enclosure

TUV Rheinland
of North America, Inc.
North American Headquarters

12 Commerce Road
Newtown, CT 06470

Tel 203-426-0888
Fax 203-426-4009
Toll Free TUV-RHEINLAND
Mail info@tuv.com
Web www.tuv.com

Member of TÜV Rheinland
Berlin Brandenburg Group

Date : 09/26/2007

Hi-G Tek Ltd.
16 Haharoshet St
60375 Or Yehuda
Israel

Attn: Yossi Hershko

Re. : CU US+Canada NRTL-Certificate

Type of Equipment : Tanker Truck Monitoring System
Model Designation : See Certificate
Certificate No. : CU 72072127 0001
File No. : 30782377 001
Engineer/Contact : Francis Saliga
Standard(s) : UL 61010-1:2004
CAN/CSA-C22.2 61010-1:2004

Dear Sir or Madame,

The above referenced technical equipment has been tested and found to be in accordance with the listed test requirement(s). Enclosed, please find TUV Rheinland cTUVus Certificate of Approval No. CU 72072127 0001.

This authorizes you to place the "cTUVus Mark" on your equipment. This Mark must be on the approved unit, the packaging or the enclosed documentation for compliance.

Your product is subject to annual factory follow-up inspections as well as annual certificate (\$73.50 per point) and factory registration fees (\$200 per factory).

Call the TUV hotline at 1-TUV-Rheinland (1-888-743-4652) to get answers for all your compliance needs

If we can be of any further assistance to you, please do not hesitate to contact us.

Sincerely yours,
Certification Body

for Sales:
Dipl.-Ing. M. Raap
QA Certification Officer

TUV Rheinland
of North America, Inc.
North American Headquarters

12 Commerce Road
Newtown, CT 06470

Tel 203-426-0888
Fax 203-426-4009
Toll Free TUV-RHEINLAND
Mail info@tuv.com
Web www.tuv.com

Member of TUV Rheinland
Berlin Brandenburg Group

Enclosure

Certificate



Certificate no.

CU 72072127 01

License Holder:

Hi-G Tek Ltd.
16 Haharoshet St
60375 Or Yehuda
Israel

Manufacturing Plant:

Hi-G Tek Ltd.
16 Haharoshet St
60375 Or Yehuda
Israel

Test report no.: USA-FS 30782377 001

Client Reference: Yossi Hershko

Tested to: UL 61010-1:2004
CAN/CSA-C22.2 61010-1:2004

Certified Product: Tanker Truck Monitoring System

License Fee - Units

Model Designation: AVL Reader: IG-AV1-43-433, IG-AV2-43-433 7
IG-AV1-43-916, IG-AV2-43-916
Protection Unit: IG-PRT-01
Display Unit: IG-FLD-02

Rated Voltage: DC 9-32V
Rated Current: 7W max.
Protection Class: III
Rated Ambient Temperature: 50°C max.

7

Appendix: 1, 1-2

Licensed Test mark:

Signatures

Date of Issue

(day/mo/yr)

19/09/2007



Stephan Schmitt
President

Dipl.-Ing. M. Raap
QA Certification Officer

Constructional Data Form for Electrical Products

License Holder: HI-G-Tek
Type of Product: Tanker Truck Monitoring System
Model Number: Tanker Truck Monitoring System

List of Critical Components:

Object/part no.	Manufacturer/ Trademark	Type/Model	Technical Data	Standard	Mark(s) of Conformity
AVL Reader, models IG-AV1-43-433, IG-AV2-43-433, IG-AV1-43-916, IG-AV2-43-916					
Connectors J1, J2	Molex or equivalent	43045	Rated: 250V, 5A, V-0		UL Recognized
PTC F4 At Input	Littelfuse or equivalent	SMD2016P050T S	Rated: 60VDC, I _{HOLD} 0.55A, I _{TRIP} 1.1A	UL1434	UL Recognized TUV
Rechargeable Lithium Battery	Tadiran	HLC-1550A	Rated: 3.6VDC, max. charging voltage 3.95VDC, max. charging current 100mA Protection over excessive charge: IC U17, Resistor R70	UL1642	UL Recognized
Charge Current Limiting Resistor R70	Any	Any	Rated: 40 Ohm		Evaluated in the appliance
Voltage Regulator U17	Torex or equivalent	XC6201P391MR N	Rated: max. output current 250mA, output voltage 3.9VDC		Evaluated in the appliance
Choke L10	Any	Any	Rated: min. 105°C		Evaluated in the appliance
Diode D6 (Reverse Polarity Protection)	JGD or equivalent	SS26	Rated: 2A, Maximum DC blocking voltage 60VDC		Evaluated in the appliance
PCB	Any	Any	Rated: min. V-1, 105°C		UL Recognized
Protection Unit, model IG-PRT-01					
Connectors J1-J3	Molex or equivalent	Any	Flame Rated: min. V-1		UL Recognized
Fuse F1	Littelfuse or equivalent	R452 01.5	Rated: 125V, 1.5A		UL Recognized CSA

[Handwritten signature]

OR - YEHUDA
ISRAEL (Place)



Hi-G-Tek Ltd.
Wireless Monitoring Platform (Date)

19-AUG-07

TUV Rheinland of North America, Inc.

(Stamp and signature of applicant)

Constructional Data Form for Electrical Products

Object/part no.	Manufacturer/ Trademark	Type/Model	Technical Data	Standard	Mark(s) of Conformity
DC/DC converter	Traco Electronic AG	TEN 5-2412WI	Rated: Input: 18-36V Rated Output: 12VDC/500mA	UL1950 3 rd UL60950-1	UL Recognized CSA
Fuse F2	Littelfuse or equivalent	R451.500	Rated: 125V, 0.5A		UL Recognized CSA
Fuses F3, F4	Littelfuse or equivalent	R451.250	Rated: 125V, 0.25A		UL Recognized CSA
Diode D1 (Reverse Polarity Protection)	JGD or equivalent	SS26	Rated: 2A, Maximum DC blocking voltage 60VDC	---	Evaluated in the appliance
PCB	Any	Any	Rated: min. V-1, 105°C		UL Recognized
Display Unit, model IG-FLD-02					
PCB	Any	Any	Rated: min. V-1, 105°C		UL Recognized
Plastic Enclosure (Box)	Hammond	1554 Series	Rated: UL 94 5V	UL508	UL Listed
J1 Terminal	Wieland Electric or equivalent	8543 Series P/N Z5.531.0525.0	Rated: 300V 10A UL94V-0	UL1059	UL Recognized
Cable Gland	Hugro or equivalent	178.0707.00	Rated: 3-6.5mm cable, IP68 UL94V-0		UL Recognized
General					
Wiring/Cables	Any	Any	PVC, TFE, PTFE, FEP, Neoprene or Polyimide Rated: min. VW-1, 60°C	UL758	UL Recognized
Note: non approved components were evaluated and tested for compliance in end use equipment listed in this report only					



Hi-G-Tek Ltd.
Wireless Monitoring Platform

[Signature] CR-YEHUDA 19-AUG-07
ISRAEL (Place) (Date)
[Signature]

TUV Rheinland of North America, Inc.

(Stamp and signature of applicant)



THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and
THE STANDARDS INSTITUTION OF ISRAEL
hereby certify that the organization

HI-G-TEK LTD.

OR YEHUDA, ISRAEL

for the following field of activities

DESIGN AND MANUFACTURE BY SUBCONTRACTORS OF

MICROELECTRONICS PRODUCTS, ASSET TRACKING SYSTEMS

AND ELECTRONIC CONTROL AND MONITORING SYSTEMS.

has implemented and maintains a

Management System

which fulfills the requirements of the following standard/s

ISO 9001:2008

Issued on : 29 . 05 . 2013
Date of expiration: 28 . 05 . 2016
Date of initial approval: 22 . 01 . 1997

Registration number:

IL- 50110



Michael Drechsel
President of IQNet

Daniel Goldstein
Director General, SII



IQNet (01/11)

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www.sii.org.il



National Standards Authority of Ireland

EC TYPE-APPROVAL CERTIFICATE

With regard to Radio Interference of Motor Vehicles

Communication concerning the type-approval of a type of ~~vehicle/component~~/separate technical unit with regard to Directive 72/245/EEC as last amended by Directive 2006/28/EC.

EC Type-approval No: *e24*72/245*2004/104*1424*00*

EC Type-approval mark to be affixed on ESA: *e24031424 (See directive for size of font).*

Reason for extension: *N/A.*

SECTION I

0.1 Make (trade name of manufacturer's): *HI-G-TEK Ltd.*

0.2 Type and general commercial description: *TTMS
Tanker truck monitoring system*

0.3 Means of identification of type, if marked on the separate technical unit/~~component~~:
*TESTED MODEL:
AVL Reader Model:IG-AV2-43-433
Protecton unit Model:IG-PRT-01
2 display units Model:IG-FLD-02
Antenna
TECHNICAL VARIANT:
AVL Reader Model:IG-AV1-43-433
Display unit Model:IG-FLD-01*

0.3.1 Location of that marking: *Label on the equipment*

0.4 Category of vehicle:



0.5 Name and address of manufacturer: *Hi-G-Tek Ltd.
16-Hacharoshet,
Or-Yehuda 60375
Israel*

Name and address of authorised representative, if any: *N/A.*

0.7 In the case of components and separate technical units, location and method of affixing of the EC approval mark: *Label on the equipment*

0.8 Address(es) of assembly plant(s): *Hi-G-Tek Ltd.
16-Hacharoshet,
Or-Yehuda 60375
Israel*

SECTION II

1. Additional information (where applicable): *See Appendix.*
 2. Technical service responsible for carrying out the tests: *Nemko S.p.A.
Via del Carroccio snc,
20046 Biassono (MI),
Italy.*
 3. Date of test report: *09.03.2007.*
 4. Number of test report: *80413TRFEMC*
 5. Remarks (if any): *See Appendix.*
 6. Place: *Dublin.*
 7. Date: *18th April 2006.*
 8. Signature:  
 9. The type approval file deposited at the Administrative Service having delivered the type-approval may be obtained on request.
- Documentation: *83 sheets.*

Appendix

To EC Type Approval Certificate No.: *e24*72/245*2004/104*1424*00*

Concerning the type approval of an electrical/electronic sub-assembly with regard to Directive 72/245/EEC,
as last amended by Commission Directive 2006/28/EC.

- | | | |
|-------|--|---|
| 1. | Additional information | |
| 1.1. | Electrical system rated voltage: | <i>24 volts Dc</i> |
| 1.2. | This ESA can be used on any vehicle type with the following restrictions: | <i>Equipment classification M,N,O</i> |
| 1.2.1 | Installation conditions, if any: | <i>See manufacturer's specifications.</i> |
| 1.3. | This ESA can only be used on the following vehicle types: | <i>N/A.</i> |
| 1.3.1 | Installation conditions, if any: | <i>N/A.</i> |
| 1.4. | The specific test method(s) used and the frequency ranges covered to determine immunity were (please specify precise method used from Annex IX): | <i>N/A.</i> |
| 1.5 | Approved/recognised laboratory responsible for carrying out the tests: | <i>Nemko Spa
Via del Carroccio snc,
20046 Biassono (MI),
Italy.</i> |
| 5. | Remarks: | <i>N/A.</i> |

Concerning the type approval of a vehicle with regard to Directive 72/245/EEC, as last amended
by Commission Directive 2006/28/EC.

- | | | |
|------|---|-------------|
| 1. | Additional information | |
| 1.1. | Electrical system rated voltage:
(Positive/negative ground) | |
| 1.2. | Type of bodywork: | <i>N/A.</i> |
| 1.3. | List of electronic functions (concerned by that Directive) installed in the vehicle(s): | <i>N/A.</i> |
| 1.4 | Laboratory accredited to ISO 17025 and recognised by the Approval Authority (for the purpose of this directive) responsible for carrying out the tests: | <i>N/A.</i> |
| 5. | Remarks: | <i>N/A.</i> |

IA - C E R T I F I C A T E



SA Explosion Prevention CC

IN TERMS OF REGULATION 21.17.2 OF THE MINERALS ACT INCORPORATED IN THE MINE HEALTH AND SAFETY ACT) AND REGULATION 8(2) OF THE ELECTRICAL MACHINERY REGULATIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT



03 December 2008

Hi-G-Tek Ltd
16 Hacharoshet Street
New Industrial Zone
Or-Jehuda
60375
ISRAEL

IA CERTIFICATE: SAEx S/08-482
Lock, Hatch and Valve Data Seal
(INTRINSICALLY SAFE)

Page 1 of 2

Expiry Date: 30 December 2009 (Annual Review)

DESCRIPTION:

This IA certificate is based on certificate No. DEMKO 07 ATEX 0621521 and must be read in conjunction with the said ATEX certificate.

The lock, hatch and valve data seals are devices that monitor the open or closed state of locks, hatches and valves. The devices send a RF signal to a unit in the safe area containing information on the state of the equipment which it is monitoring. The devices are included in a combined stainless steel and plastic enclosure with an IP20 rating. The devices are powered from a non rechargeable 3,7 V sealed, gas tight lithium-thionyl chloride battery.

Safety Parameters:

None

MARKING:

Manufacturer :	Hi-G-Tek Ltd
Supplier :	Hi-G-Tek Ltd
Model :	IG-LK-433, IG-FL-433, IG-FLH-433
Ex rating :	EEx ia IIB T4 (-20°C=T _{amb} =+70°C)
Serial No :	(all serial Nos. imported into South Africa up to 30 December 2009)
*IA No :	SAEx S/08-482

*** In addition to the original marking, the SAEx IA number must be applied on each unit in a visible, legible and indelible manner.**

X - Special conditions of safe use:

None

Compliance: The units as described above and in Certificate No DEMKO 07 ATEX 0621521 is hereby certified "Explosion Protected" Ex ia IIB T4 (-20°C=T_a=+70°C) and is suitable for use in hazardous locations as stated below, as determined during assessments of the DEMKO certificate and in accordance with the relevant requirements of equivalent SANS Standards:

Document must be reproduced in full

IA CERTIFICATE: SAEx S/08-482 Lock, Hatch and Valve Data Seal

- SANS (IEC) 60079-0 : 2005 (Edition 4.0) "General Requirements";
- SANS (IEC) 60079-11 : 1999 (Edition 4) "Intrinsic Safety 'i'";

Locations	Zone 0 and 1	Surface
Hazardous Frequency		Continuous as could occur under normal operations
Environment	Group IIB	Ethylene
Limiting Temperature	T4	135°C
Ambient Temperature	-20°C to +70°C	

The use of the apparatus in hazardous locations is subject to the following provision, which shall be adhered to:

- i) SANS 10086 requirements;
- ii) Any relevant requirements of the MHS Act or the OHS Act;
- iii) Codes of Practice enforced in terms of Regulations 21.17/2 of the Minerals Act, by the Chief Inspector of Mines;
- iv) Any restrictions and conditions enforced by the Chief Inspector of Mines, Principal Inspector (Group I equipment) or Chief Inspector of Factories (Group II equipment); and

Conditions of certification:

1. This certificate covers all units sold in South Africa from the date of this certificate to 30 December 2009.
2. The apparatus must be additionally marked in a clear, legible, visible and indelible manner with the SAEx IA number.
3. This certificate of approval only covers the equipment as certified above and does not include any scheduled additions or variations/amendments/new issues to the certificates, made after the above date.
4. The equipment does not need to be retested when used on the conditions and with such restrictions as prescribed by DEMKO and in certificate DEMKO 07 ATEX 0621521.
5. The DEMKO certification must remain valid.
6. The requirements in the ARP 0108 (or regulations) and SANS 10108 do not change.
7. The Ex quality assurance notification for the equipment remains valid.



**WA de Beer Pr Eng.
Specialist Engineer
SA EXPLOSION PREVENTION**

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Certificate

Certificate no.

CU 72071984 01

License Holder:

Hi-G Tek Ltd.
16 Haharoshet St
60375 Or Yehuda
Israel

Manufacturing Plant:

Hi-G Tek Ltd.
16 Haharoshet St
60375 Or Yehuda
Israel

Test report no.: USA-ZZ 30782186 001

Client Reference: Yossi Hershko

Tested to: UL 60950-1:2003

CAN/CSA-C22.2 No.60950-1-03

Certified Product: Compact Reader Unit of Monitoring Electronic Locks Sensor System
License Fee - Units

Model Designation: 1) IG-CR-86D-433, IG-CR-86D-916
2) IG-CR-46D-433, IG-CR-46D-916

7

Rated Voltage: 1) DC 48V, 2) DC 24V
Rated Power: 1W max.
Protection Class: I

Special Remarks: DC 48V/DC 24V powered through network cable (min. 22AWG) from the associated PSC unit IGPS8RI/IGPS4RI. To be installed according to the licensee's installation instructions.

Appendix: 1 Inh. = 749213 / Deb. = 749213 / Fert. = 749213

7

Licensed Test mark:

Signatures

Date of Issue

(day/mo/yr)

11/09/2007



S. Schmitt

Stephan Schmitt
President

R. Behrends

Dipl.-Ing. R. Behrends
QA Certification Officer



Certificate of Conformance

*This will certify that, on this date,
the United States Department of Homeland Security issued to*

Hi-G-Tek, Inc.

*A Delaware Corporation
a Certification for its*

DataSeal

*as an 'Approved Product for Homeland Security' under the
Support Anti-terrorism by Fostering Effective Technologies Act of 2002 (the SAFETY Act).*

Jay M. Cohen

Jay M. Cohen

Under Secretary for Science and Technology

Jan 6, 2009

Date



**Underwriters
Laboratories Inc.®**

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fax: 1 847 272 8129
Customer service: 1 877 854 3577

NOTICE OF AUTHORIZATION TO APPLY THE UL MARK

2006-08-07

Mr. Roni Cohen
Hi-G-Tek Ltd
16 Hacharroshet St
Or-Yahuda,
Israel

E-mail: rcohen@higtek.com
Reference: File E256795 Project 06NK18748
Product(s): USL, CNL - Lock Datasel, Model IG-LK-40-XXX

Dear Mr. Cohen,

UL's investigation of your product has been completed under the above project number and the subject product was determined to comply with the applicable requirements.

This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Listing Mark only at the factory under UL's Follow-Up Service Program to the subject product(s), which is (are) constructed as described below:

Identical to the subject models, which were submitted to UL for this investigation. The UL Records covering the product will be in the Follow-Up Services Procedure, File E256795, Volume 1.

This authorization applies only to the address on this letter.

This authorization is effective from the date of this Notice and only for products at the indicated manufacturing locations. Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent to the indicated manufacturing locations in the near future. Please note that Follow-Up Services Procedures are sent to the manufacturers only unless the Applicant specifically requests this document.

Products that bear the UL Mark shall be identical to those that were evaluated by UL and found to comply with UL's requirements. If changes in construction are discovered, appropriate action will be taken for products not in conformance with UL's requirements and continued use of the UL Mark may be withdrawn.

Sincerely,

Joshua A. Saunders
Engineer
Hazardous Locations, Gas & Oil
Conformity Assessment Services
Tel: 847-664-3429
Fax: 847-313-3429
E-mail: joshua.saunders@us.ul.com

Reviewed by:

David P. Malohn
Staff Engineer
Hazardous Locations, Gas & Oil
Conformity Assessment Services
E-mail: david.p.malohn@us.ul.com



UL International Demko A/S

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Telephone: +45 44856565
Fax: +45 44856500
e-mail: info.dk@dk.ul.com
www.ul-europe.com
CVR-nr. 19195597



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Underwriters Laboratories Inc.
333 Pfingsten Road
Northbrook
IL-60062
USA

Ref. 06NK21521

Contact Person	Examiner	Our reference	Direct phone	Date
Benjamin Schaefer	Ulla Jakobsen	142946-01	+45 44 85 6327	2007-04-25

Dear Sirs,

Your order executed by UL International Demko A/S

UL International Demko A/S has the pleasure of enclosing EC-Examination Certificate No. DEMKO 07 ATEX 0621521.

Your attention is also drawn to UL International Demko A/S Standard Terms and Conditions. Should you have any questions regarding the above, please contact UL International Demko A/S.

UL International Demko A/S is at your disposal should you require additional information about our services, such as information on the LVD, EMC, Machinery Directives, ISO Certification, export certification or seminars tailored to meet the needs of your company.

We would like to take the opportunity to thank you for the co-operation and hope you will make use of our services in the future.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ulla 7'.

Ulla Jakobsen
Certification Project Handler



[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 07 ATEX 0621521

[4] Equipment or Protective System: Lock, Hatch, and Valve DataSeal

[5] Manufacturer: Hi-G-Tek Ltd.

[6] Address: 16 Hacharroshet St., OR-Yehuda, 602520, Israel

[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. 0621521

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014: 1997 E incl. A1+A2 EN 50020: 2002

[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 2 G EEx ia IIB T4

On behalf of UL International Demko A/S

Herlev, 2007-04-24


Karina Christiansen
Certification Manager

Schedule

[13]

[14]

EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 07 ATEX 0621521

[15] Description of Equipment or protective system

The lock, hatch, and valve DataSeals are devices that monitor the open or closed state of locks, hatches, and valves. The devices send a RF signal to a unit in a safe location containing information on the state of what it is monitoring.

Nomenclature for type: IG-LK-433, IG-FL-433, or IG-FLH-433.

Temperature range

The ambient temperature range is -20 °C to +70 °C.

Electrical data

All units are powered by a non-replaceable 3.6V lithium battery manufactured by Tadiran, part number TL-2135.

Routine tests

None.

[16] Report No.

Project Report No.: 06NK21521 (Hazardous Location Testing)

Drawings:

Number	Revision	Description
47AV5080	1A	Label
47E60700	1A	Assembly Drawing
47E00380	2A	Enclosure Jacket
47S10300	4A	Main PCB Schematics
SA4768	B01	Main PCB Bill of Materials
47S70400	B	Main PCB Layout
47G10090	1A	Secondary PCB Schematics
SA4804	01A	Secondary PCB Bill of Materials
47E00100	5A	Fluid DataSeal Metal Pin Construction
47E00300	4A	Hatch DataSeal Metal Pin Construction
47B00370	1A	Lock DataSeal Metal Pin Construction

[17] Special conditions for safe use:

None.

[18] Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the Ex standards only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

UL International Demko A/S

Lyskaer 8, P.O. Box 514
DK-2730 Herlev, Denmark
Telephone: +45 44856565
Fax: +45 44856500

Certificate: 07 ATEX 0621521
Report: 06NK21521

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[13]

Schedule

[14]

EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 07 ATEX 0621521

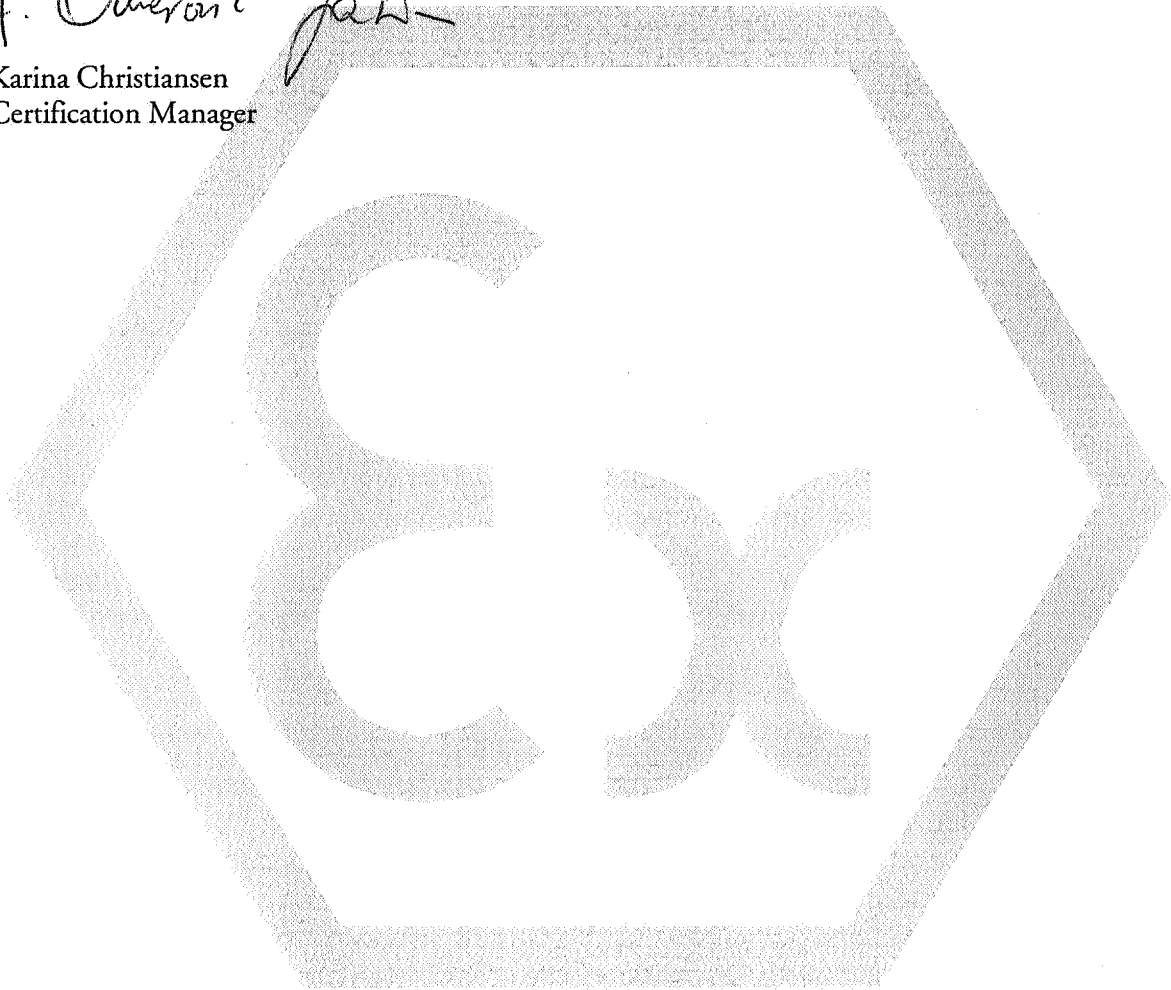
The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

On behalf of UL International Demko A/S

Herlev, 2007-04-24

f. Overoie JAW

Karina Christiansen
Certification Manager



UL International Demko A/S

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