

# (1) EC-TYPE EXAMINATION CERTIFICATE

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

(3) EC-Type Examination Certificate Number: **KEMA 04ATEX1220**

Issue Number: 2

(4) Equipment: **Indicator Model DIP SI... and Model DGN SI...**

(5) Manufacturer: **Ardetem-Sfere**

(6) Address: **Route de Brindas, Parc d'Activité d'Arbora N° 2, 69510 Soucieu en Jarrest, France**

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment 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 test report number 212193200-3.

(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 "X" is placed after the certificate number, it indicates that the equipment 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 according 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 equipment shall include the following:



**II 1 G Ex ia IIC T6**

This certificate is issued on January 5, 2010 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

KEMA Quality B.V.



C.G. van Es  
Certification Manager

Page 1/2



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KEMA Quality B.V. Utrechtseweg 310, 6812 AR Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands  
T +31 26 3 56 20 00 F +31 26 3 52 58 00 customer@kema.com www.kema.com Registered Arnhem 09085396

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(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 04ATEX1220**

Issue No. 2

(15) **Description**

Indicator Model DIP SI... is a loop powered 4 - 20 mA indicator, optionally provided with two solid state alarm outputs.

Ambient temperature range -20 °C to +60 °C.

**Electrical data**

Indicator without alarm option

Supply and input circuit (terminals 5 and 6):  
in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

$U_i = 45 \text{ V}$ ;  $I_i = 500 \text{ mA}$ ;  $P_i = 0,9 \text{ W}$ ;  $C_i = 0 \text{ nF}$ ;  $L_i = 0 \text{ }\mu\text{H}$ .

Indicator with two alarm outputs

Supply and input circuit (terminals 5 and 6):  
in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

$U_i = 30 \text{ V}$ ;  $I_i = 450 \text{ mA}$ ;  $P_i = 0,7 \text{ W}$ ;  $C_i = 0 \text{ nF}$ ;  $L_i = 0 \text{ }\mu\text{H}$ .

Alarm output circuit (terminals 1, 2 and 3):  
in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

$U_i = 15 \text{ V}$ ;  $I_i = 50 \text{ mA}$ ;  $P_i = 0,2 \text{ W}$ ;  $C_i = 0 \text{ nF}$ ;  $L_i = 0 \text{ }\mu\text{H}$ .

**Installation instructions**

The manual provided with the equipment shall be followed in detail to assure safe operation.

(16) **Test Report**

KEMA No. 212193200-3.

(17) **Special conditions for safe use**

None.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 212193200-3.

**Test Report No. 212193200-3**

**Indicator Model DIP-SI ...  
and Model DGN-SI ...**

Laboratory: **KEMA Quality B.V.**  
**Utrechtseweg 310**  
**6812 AR Arnhem**  
**The Netherlands**

By order of: **Ardetem-Sfere**  
**Route de Brindas,**  
**Parc d'Activité d'Arbora N° 2**  
**69510 Soucieu en Jarrest**  
**France**

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Author : E. Giusti      2009-11-21      Reviewer : C.G. van Es      2010-01-04  
KEMA project no. : 212193200

Page 1 of 5

**Contents**

	page
1	KEMA project no. 207519700: .....3
1.1	Standards applied .....3
1.2	Description of the equipment .....3
1.3	Marking of the equipment.....3
1.4	Test documentation .....4
2	KEMA project no. 212193200: .....4
2.1	Standards applied .....4
2.2	Description of changes .....4
2.3	Marking of the equipment.....4
2.4	Test documentation .....4
3	Instructions for installation and use .....4
4	Test results .....5
5	Conclusion .....5

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KEMA Quality B.V. and/or its associated companies disclaim liability for any direct, indirect, consequential or incidental damages that may result from the use of the information or data, or from the inability to use the information or data.

This Test Report contains the test results related to the sample(s) tested. The tests results cannot be used for any statement related to the quality of the equipment from running production.



## 1 KEMA project no. 207519700:

### 1.1 Standards applied

Samples of the equipment as described under (1.2) below were subjected to the requirements and tests of the following standards:

EN 50014 : 1997 + A1, A2  
EN 50020 : 2002  
EN 50284 : 1999

The assessment of the equipment was conducted from June 10 to September 23, 2004.

### 1.2 Description of the equipment

Indicator Model DIP-SI... is a loop powered 4 - 20 mA indicator, optionally provided with two solid state alarm outputs.

Ambient temperature range -20 °C to +60 °C.

#### Electrical data

##### Indicator without alarm option

Supply and input circuit (terminals 5 and 6):  
in type of protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:  
 $U_i = 45 \text{ V}$ ;  $I_i = 500 \text{ mA}$ ;  $P_i = 0,9 \text{ W}$ ;  $C_i = 0 \text{ nF}$ ;  $L_i = 0 \text{ }\mu\text{H}$ .

##### Indicator with two alarm outputs

Supply and input circuit (terminals 5 and 6):  
in type of protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:  
 $U_i = 30 \text{ V}$ ;  $I_i = 450 \text{ mA}$ ;  $P_i = 0,7 \text{ W}$ ;  $C_i = 0 \text{ nF}$ ;  $L_i = 0 \text{ }\mu\text{H}$ .

Alarm output circuit (terminals 1, 2 and 3):  
in type of protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:  
 $U_i = 15 \text{ V}$ ;  $I_i = 50 \text{ mA}$ ;  $P_i = 0,2 \text{ W}$ ;  $C_i = 0 \text{ nF}$ ;  $L_i = 0 \text{ }\mu\text{H}$ .

### 1.3 Marking of the equipment



II 1 G EEx ia IIC T6

## 1.4 Test documentation

	<u>dated</u>
1. Description (7 pages)	27.05.2004
2. Document Schematic diagram Dipsi-A3, rev. A (5 pages)	15.06.2004
Component lay-out	17.06.2004
PCB lay-out (2 pages)	17.06.2004

## 2 KEMA project no. 212193200:

### 2.1 Standards applied

EN 60079-0: 2006  
EN 60079-11: 2007  
EN 60079-26: 2007

The assessment was conducted from November 26, 2008 to November 21, 2009.

### 2.2 Description of changes

The following changes have been assessed:

- Modification of the name of the company into Ardetem-Sfere;
- addition of Indicator Model DGN SI... with identical construction and electrical data and previously manufactured by Sfere;
- compliance of the equipment with the EN 60079 series standards.

### 2.3 Marking of the equipment



II 1 G Ex ia IIC T6

### 2.4 Test documentation

	<u>dated</u>
Notice Descriptive des DIP SI, DGN SI, rev. C (8 pages)	2008-10-13

## 3 Instructions for installation and use

The manual provided with the equipment shall be followed in detail to assure safe operation.

#### 4 Test results

The detailed test results are laid down in confidential files no. 207519700, 207764200 and 212193200. There were no deviations from, additions to or exclusions from the applicable test methods as described in the standards mentioned under 1.1 and 2.1. Where applicable, the estimated uncertainty of measurement meets the requirements of IECEx Operational Document OD012.

#### 5 Conclusion

The equipment as described under 1.2 and 2.2 meet all applicable requirements of the standards as mentioned under 1.1 and 2.1. Continued certification of the equipment is therefore recommended.

Author:



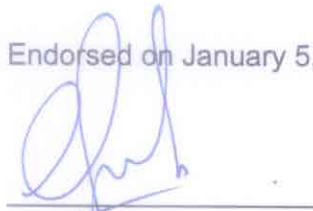
E. Giusti

Reviewer:



C.G. van Es

Endorsed on January 5, 2010 by:



C.G. van Es  
Certification Manager

**END OF TEST REPORT**