

**EN** **CE** **IP66/67 (SensorUnit)**  
**IP66 (Interface)**

**Operating Manual**

**HOTSPOT-X0  
Sensor Unit & Interface-X1**

ADICOS HOTSPOT-X0 Sensor Unit and Interface-X1 - Operating manual  
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– Translation –

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## Abstract

The Advanced Discovery System (ADICOS®) is used for early detection of fires in industrial environments. It is comprised of various, separate detector units. By parameterizing and arranging the detectors appropriately, the system fulfills a predefined detection goal. The ADICOS system ensures reliable early detection of embers and smoldering fires even in adverse environments.

The detectors of the HOTSPOT product series are equipped with thermal imaging sensors and use infrared measurement technology and intelligent signal analysis to detect all types of smoldering fires and open fires, even in the incipient stage. The fast response speed of 100 milliseconds enables the monitoring of conveyor belts or other conveyor systems, e.g. on moving embers.

ADICOS HOTSPOT-X0 consists of the sensor unit and the ADICOS HOTSPOT-X0 Interface-X1.

The ADICOS HOTSPOT-X0 Sensor Unit is an infrared sensor unit that, in combination with the ADICOS HOTSPOT-X0 Interface enables an optical and spatially resolved fire and heat detection in potentially explosive atmospheres of ATEX zones 0, 1, and 2.

The ADICOS HOTSPOT-X0 Interface-X1 is an interface between the ADICOS HOTSPOT-X0 Sensor Unit and the fire control panel within potentially explosive atmospheres of ATEX zones 1, and 2. Additionally it can be used as a connection and branching box (AAB) within these zones.

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## 1 About this Manual

### 1.1 Objective

These instructions describe the requirements on installation, wiring, commissioning, and operation of the ADICOS HOTSPOT-X0 Sensor Unit and ADICOS HOTSPOT-X0 Interface-X1. After commissioning it is used as reference work in the case of faults.

It is exclusively addressed to knowledgeable specialist personnel (→ Chap. 2, Safety instructions).

### 1.2 Explanation of Symbols

This manual follows a certain structure to make it easy to work with and understand. The following designations are used throughout.

#### Operational objectives

Operational objectives specify the result to be achieved by following the subsequent instructions. Operational objectives are shown in **bold print**.

#### Instructions

Instructions are the steps to be taken in order to achieve the previously stated operational objective.

Instructions appear like this

- ▶ Indicates a single instruction
  
- 1 First of a series of instructions
- 2 Second of a series of instructions
- 3 etc.

#### Intermediate states

When it is possible to describe intermediate states or events resulting from the instruction steps (e.g. screens, internal function steps, etc.), they are shown like this:

- ▷ Intermediate state

## Warnings

The following types of notes are used through this manual:



**DANGER!**

This combination of symbol and signal word indicates an immediately dangerous situation which could lead to death or severe injuries if it is not avoided.



**WARNING!**

This combination of symbol and signal word indicates a possibly dangerous situation which could lead to death or severe injuries if it is not avoided.



**CAUTION!**

This combination of symbol and signal word indicates a possibly dangerous situation which could lead to minor injuries if it is not avoided.



**NOTICE!**

This combination of symbol and signal word indicates a possibly dangerous situation which could lead to property damage if it is not avoided.



**Explosion protection**

This information type signals measures that must be implemented for maintaining the Explosion protection.



**Tips and recommendations**

This type of note provides information that is directly relevant for the further operation of the device.

## 1.3 Abbreviations

This manual uses the following abbreviations.

Abbr.	Meaning
ADICOS	Advanced Discovery System
X0	ATEX zone 0
X1	ATEX zone 1
LED	Light-emitting diode

## 1.4 Storing the Manual

Store this manual easily reachable and in direct vicinity of the detector to enable use as needed.

## 2 Safety Instructions

The ADICOS HOTSPOT-X0 Sensor Unit and the HOTSPOT-X0 Interface-X1 ensure operational safety assuming proper installation, commissioning, operation and maintenance. For this purpose, it is absolutely required to completely read, understand, and follow these instructions and the safety information contained.



### **WARNING!**

#### **Personal injury and property damage!**

Incorrect installation and operating errors can cause death, serious injury and damage to industrial equipment.

- **Read the entire manual and follow the instructions!**



### **Explosion Protection**

When using ADICOS detectors in potentially explosive atmospheres, follow the specifications of the ATEX operating directive.

## 2.1 Intended Use

The ADICOS HOTSPOT-X0 Interface-X1 is intended for use with the ADICOS HOTSPOT-X0 Sensor Unit and is designated for the detection of fire scenarios in potentially explosive atmospheres of ATEX zones 0, 1, and 2. It may be exclusively operated within ADICOS systems. In this context, the operating parameters described in Chap. 10, »Technical Data« must be met.

Compliance with this manual as well as all applicable country-specific provisions is also part of the intended use.

## 2.2 Standards and Regulations

The safety and accident prevention regulations applicable for the specific application must be observed during ADICOS HOTSPOT-X0 Sensor Unit and HOTSPOT-X0 Interface-X1 installation, commissioning, maintenance, and test.

The ADICOS HOTSPOT-X0 Sensor Unit and HOTSPOT-X0 Interface-X1 also meet the following standards and directives in their current version:

Standards and Regulations	Description
EN 60079-0	Explosive atmospheres - Part 0: Equipment - General requirements
EN 60079-1	Explosive atmospheres - Part 1: Equipment protection by flame proof enclosures „d“
EN 60079-11	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety ‚i‘
EN 60529	Degrees of protection provided by enclosures (IP Code)
2014/34/EU	ATEX product directive (about equipment and protective systems intended for use in potentially explosive atmospheres)
1999/92/EG	ATEX operating directive (on safety and health protection of workers potentially at risk from explosive atmospheres)

### 2.3 Personnel Qualification

Any work on ADICOS systems may only be performed by qualified personnel. Persons, who can perform work on electrical systems in potentially explosive atmospheres and recognize possible dangers based on their professional education, knowledge, and experience as well as knowledge of the applicable provisions, are considered qualified persons.



#### **WARNING!**

##### **Personal injury and property damage!**

Improperly performed work on and with the device can lead to malfunctions.

- **Installation, startup, parameterization and maintenance may be performed only by authorized and properly trained personnel.**

### 2.4 Handling Electrical Voltage



#### **DANGER!**

##### **Risk of explosion by electrical voltage in potentially explosive atmospheres!**

The electronics of ADICOS HOTSPOT-X0 Sensor Unit & Interface-X1 detectors requires an electrical voltage that can trigger an explosion in potentially explosive atmospheres.

- **Do not open enclosure!**
- **De-energize the entire detector system and secure against unintentionally reactivation for all wiring work!**



## 2.5 Modification



**WARNING!**

**Property damage or detector failure by any form of unauthorized modification!**

Any form of unauthorized modification or extension can lead to a failure of the detector system. The warranty claim expires.

- **Never make unauthorized modifications on your own authority.**

## 2.6 Accessories and Spare Parts



**WARNING!**

**Property damage due to short circuit or failure of the detector system**

The use of parts other than the manufacturer's original spare parts and original accessories may result in property damage due to short circuits.

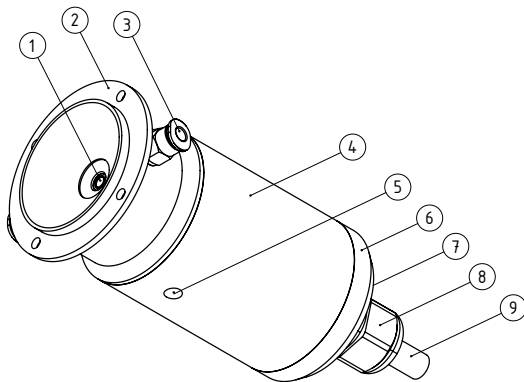
- **Only use original spare parts and original accessories!**
- **Original spare parts and accessories may only be installed by trained specialist personnel.**
- **Qualified personnel are persons as described in Chap. 2.3.**

The following accessories are available:

Art No.	Description
<b>410-2401-310</b>	HOTSPOT-X0 Sensor Unit
<b>410-2401-410</b>	HOTSPOT-X0-Interface X1
<b>410-2403-301</b>	HOTSPOT-X0 Mounting bracket with ball and axle joint
<b>83-09-06052</b>	Cable gland for non-reinforced and non-sealed cables
<b>83-09-06053</b>	Cable gland for reinforced and non-sealed cables
<b>83-09-06050</b>	Cable gland for non-reinforced and sealed cables
<b>83-09-06051</b>	Cable gland for reinforced and sealed cables

### 3 Structure

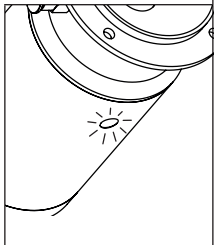
#### 3.1 Overview of HOTSPOT-X0 Sensor Unit



No.	Description	No.	Description
①	Infrared sensor	⑥	Enclosure cover
②	Purge air adapter with mounting flange (4 x M4 thread)	⑦	Mounting holes for mounting bracket (on the other side, not shown) (4 x M5)
③	Purge air connection for ø4 mm self-fastening compressed air hose (2 x)	⑧	Cable gland
④	Sensor enclosure (ø 47)	⑨	Intrinsically safe connection cable
⑤	Signal-LED		

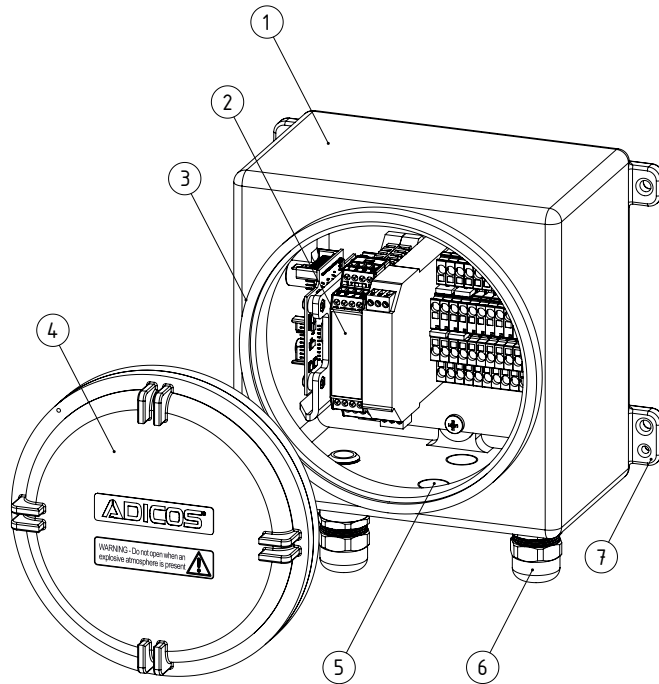
#### 3.1.1 Display Elements

Signal-LED	
For indicating operating conditions, the Signal-LED is recessed in the bottom side of the sensor enclosure.	
LED indicator light	Description
red	Alarm
yellow	Fault
green	Operation



The diagram shows a close-up of the bottom side of the sensor enclosure, highlighting the recessed Signal-LED. The LED is depicted with a sunburst symbol, indicating its location and function.

### 3.2 Overview of HOTSPOT-X0 Interface-X1



No.	Description
①	Flameproof enclosure
②	Top-hat rail with explosion protection barriers, connection terminals and interface circuit board
③	Thread for enclosure lid
④	Enclosure lid
⑤	Mounting place for additional cable glands
⑥	Cable gland (2 x)
⑦	Mounting bracket (4 x)

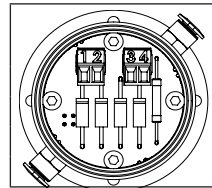
## 4 Connection Terminals

### 4.1 Connection Terminal of HOTSPOT-X0 Sensor Unit

#### 4.1.1 Terminals

The terminals are located inside the enclosure of the ADICOS HOTSPOT-X0 Sensor on the connection board. They are pluggable and can be removed from the board for easy assembly of the connecting wires.

T1/T2	Communication/voltage supply
1	Communication B (intrinsically safe circuit 1)
2	Communication A (intrinsically safe circuit 1)
3	Voltage supply + (intrinsically safe circuit 2)
4	Voltage supply – (intrinsically safe circuit 2)



The sensor is supplied with a pre-assembled connection cable ex-works.

#### 4.1.2 Cable Assignment

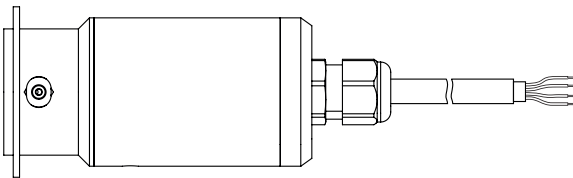


**WARNING!**

**Risk of explosion!**

The connection cable must be routed according to DIN EN 60079-14!

- **Only use approved, intrinsically safe connection cables provided by GTE!**
- **Consider minimum bending radius!**

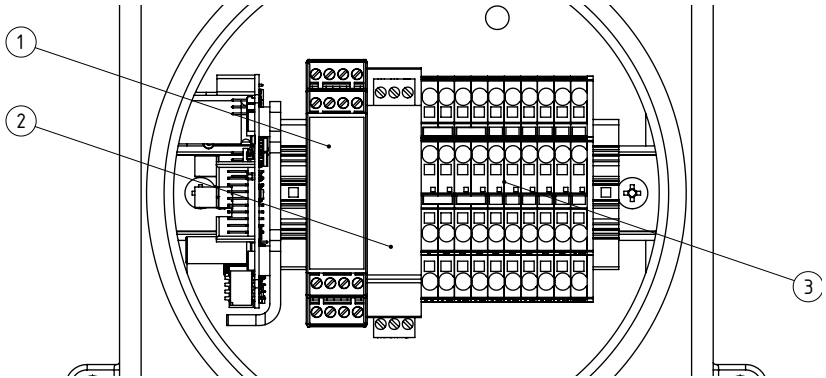


Color	Signal
green	Communication B (intrinsically safe circuit 1)
yellow	Communication A (intrinsically safe circuit 1)
brown	Voltage supply + (intrinsically safe circuit 2)
white	Voltage supply – (intrinsically safe circuit 2)

## 4.2 Connection Terminal of HOTSPOT-X0 Interface-X1

### 4.2.1 Connection terminals

The connection terminals are located inside the enclosure on the top-hat rail.



No.	Description
①	Explosion protection barrier 1: sensor communication (intrinsically safe circuit 1)
②	Explosion protection barrier 2: sensor power supply (intrinsically safe circuit 2)
③	System connection

### 4.2.2 Sensor communication (intrinsically safe circuit 1)

No.	Occupation
9	Cabinet shielding
10	Shield for intrinsically safe cable
11	-/-
12	-/-
13	Sensor communication B (green)
14	Sensor communication A (yellow)
15	-/-
16	-/-

### 4.2.3 Sensor power supply (intrinsically safe circuit 2)

No.	Occupation
1	Sensor power supply + (brown)
2	Sensor power supply - (white)
3	-/-

#### 4.2.4 System connection terminal

No.	Occupation
1	0 V
2	0 V
3	M-Bus A
4	M-Bus A
5	Alarm A
6	Error A
7	LOOP A in
8	LOOP A out
9	Shield
10	Shield
11	+24 V
12	+24 V
13	M-Bus B
14	M-Bus B
15	Alarm B
16	Error B
17	LOOP B in
18	LOOP B out
19	Shield
20	Shield

## 5 Installation



### **DANGER!**

#### **Explosion!**

Installation work may only be performed, if the potentially explosive area is released for work via a risk assessment.

- **De-energize the entire detector system and secure against unintentional reactivation!**
- **Installation work may only be performed by specialist personnel! (→ Chap. 2.3, Personnel qualification)**



### **Explosion Protection!**

#### **Risk of explosion**

In contrast to the ADICOS HOTSPOT-X0 Sensor Unit, the ADICOS HOTSPOT-X0 Interface X1 is not approved for installation within ATEX zone 0.

- **Interface-X1 may only be installed outside of ATEX zone 0.**

## 5.1 Mounting



### **WARNING!**

#### **Danger of malfunction and failure of the detector system**

Incorrect installation of ADICOS detectors can lead to faults and failures of the detector system.

- **Installation work may only be performed by specialist personnel! (→ Chap. 2.3, Personnel Qualification)**

## 5.2 Selecting the Mounting Location

### 5.2.1 Mounting Location of HOTSPOT-X0 Sensor Unit



### **WARNING!**

#### **Correct alignment**

Arrangement and alignment of ADICOS detectors are highly important for a reliable detection. Unfavorable placement can lead to complete ineffectiveness of the detector!

- **Only experienced specialist planners may define detector position and alignment!**



### **NOTICE!**

#### **Danger of sensitivity loss and failure of the detector system**

In dust environments with simultaneous high humidity, the functionality of the detector may be impaired.

- **Ensure that purge air is applied! This allows you to extend the cleaning-related maintenance intervals!**
- **In case of high dust exposure in combination with high air humidity, contact the manufacturer for consultation!**

### 5.2.2 Mounting Location of HOTSPOT-X0 Interface-X1



### **WARNING!**

#### **Explosion danger!**

Unlike the ADICOS HOTSPOT-X0 sensor unit, the ADICOS HOTSPOT-X0 interface-X1 is not approved for installation within ATEX zone 0, but only for zones 1 and 2.

- **Only install ADICOS HOTSPOT-X0 Interface X1 outside ATEX zone 0!**

The following aspects have to be considered when choosing the mounting location.

- Install device easily accessible and in direct vicinity to the connected sensor – but outside of ATEX zone 0.
- The mounting location must satisfy all environmental requirements specified in Chap. 10, »Specifications«.
- The mounting spot must be solid and free of vibrations.

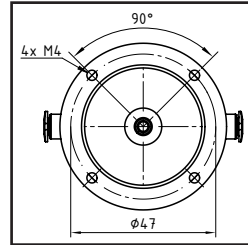
### 5.3 Mounting of HOTSPOT-X0 Sensor Unit

The ADICOS HOTSPOT-X0 sensor unit is designed for two types of assembly: Flange mounting as well as wall/ceiling mounting with quick mounting base.

Flange mounting is particularly suited for detection within not pressure-tight enclosures. Wall/ceiling mounting is particularly suited for standalone applications.

#### 5.3.1 Flange mounting

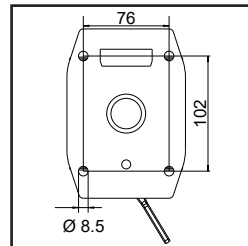
- 1 Cut circular cutout into enclosure using a  $\varnothing 40$  mm hole saw
- 2 Using a  $\varnothing 4$  mm drill, drill four holes along a  $\varnothing 47$  mm circular path at a distance of  $90^\circ$  each
- 3 Firmly bolt the HOTSPOT-X0 sensor unit to the enclosure using suitable M4 screws



#### 5.3.2 Wall mounting

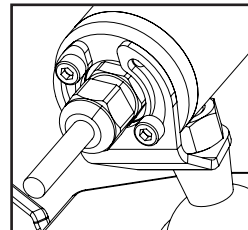
##### Mounting mounting base

- 1 Drill holes for dowels into the wall and/or ceiling at the mounting location at a distance of 76 mm x 102 mm
- 2 Press in dowels
- 3 Firmly bolt the mounting base to the wall and/or ceiling using 4 suitable screws and washers



##### Mounting HOTSPOT-X0 mounting bracket

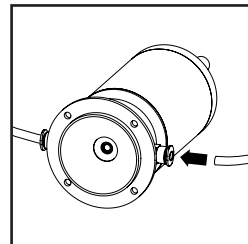
- ▶ Using the enclosed M5 cylinder-head screws, bolt the HOTSPOT-X0 mounting bracket through the radial elongated holes to the HOTSPOT-X0 sensor unit at minimum two points



#### 5.3.3 Connecting Purge Air

- ▶ Insert  $\varnothing 4$  mm compressed air hose into the purge air connections (2 x).

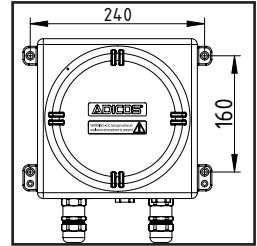
Purge air specification, see chap. 10, »Technical Data«





## 5.4 Wall Mounting of HOTSPOT-X0 Interface-X1

- 1 At the mounting location drill four holes (Ø 8,5 mm) in a pattern of 240 x 160 mm
- 2 Press in suitable dowels
- 3 Using the mounting brackets firmly bolt the enclosure to the wall using four suitable screws and washers



## 6 Wiring



### WARNING!

#### Explosion!

Installation work may only be performed, if the potentially explosive area is released for work via a risk assessment.

- **De-energize the entire detector system and secure against unintentionally reactivation for all wiring work!**
- **Wiring may only be performed by specialist personnel! (→ Chap. 2.3)**



### WARNING!

#### Risk of explosion

The connection cable must be routed per DIN EN 60079-14!

- **Only use approved, intrinsically safe connection cables provided by GTE!**
- **Consider minimum bending radius!**



### WARNING!

#### Risk of explosion

The ADICOS HOTSPOT-X0 Sensor Unit is subject to the protection principle and/ or the ignition protection type **equipment protection by intrinsic safety "I"**.

- **Explosion protection barriers must be used!**
- **Only wire to the ADICOS HOTSPOT-X0 Interface X1!**



### Explosion protection!

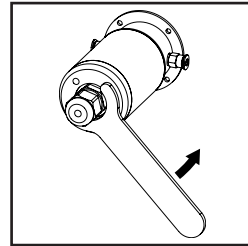
#### Risk of explosion

The ADICOS HOTSPOT-X0 Interface-X1 is subject to the protection principle and/or the ignition protection type **equipment protection by flameproof enclosures "d"**.

- **Only use approved cable glands!**
- **Firmly close enclosure lid after wiring!**

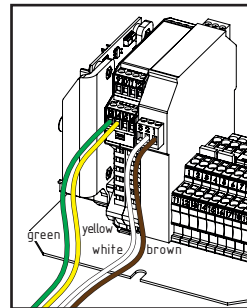
## 6.1 Connecting HOTSPOT-X0 Sensor Unit with Connection Cable

- 1 Open cable gland
- 2 Open the enclosure cover by turning counterclockwise (e.g., using a 31.5 mm two-hole wrench)
- 3 Push connection cable through cable gland
- 4 Wire connection cable to terminals
- 5 Screw enclosure cover clockwise onto the sensor enclosure and tighten hand-tight
- 6 Close cable gland



## 6.2 Wiring of ADICOS HOTSPOT-X0 Sensor Unit

- 1 Remove enclosure lid by rotating counter clockwise
- 2 Open cable gland
- 3 Insert sensor connection cable through cable gland
- 4 Connect green wire (communication B) to terminal 14 of Explosion protection barrier 1 (intrinsically safe circuit 1)
- 5 Connect yellow wire (communication A) to terminal 13 of Explosion protection barrier 1 (intrinsically safe circuit 1)
- 6 Connect brown wire (power supply +) to terminal 1 of Explosion protection barrier 2 (intrinsically safe circuit 2)
- 7 Connect white wire (power supply -) to terminal 2 of Explosion protection barrier 2 (intrinsically safe circuit 2)
- 8 Connect shield of sensor connection cable to terminal 3 of Explosion protection barrier 2 (intrinsically safe circuit 2)
- 9 Close cable gland
- 10 Mount enclosure lid by rotating clockwise and pulling tight

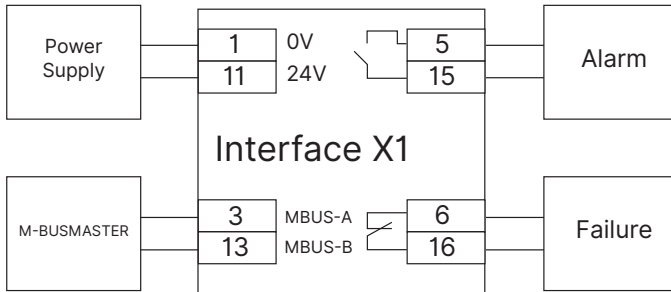


### 6.3 Wiring of the Fire Detection System

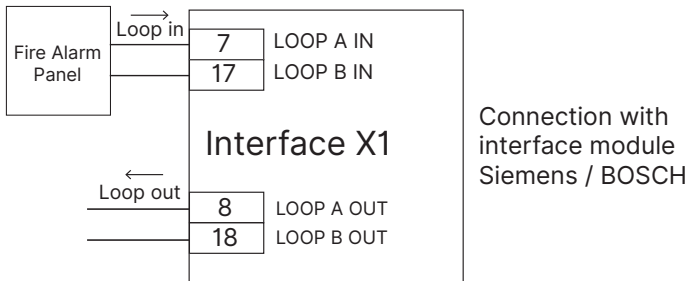
Depending on the system configuration connect the fire detection system to terminals 1 ... 20 of the system connection terminal (→ Chap. 3.2.3).

Also consult ADICOS manual No. 430-2410-001 (ADICOS AAB Operating manual).

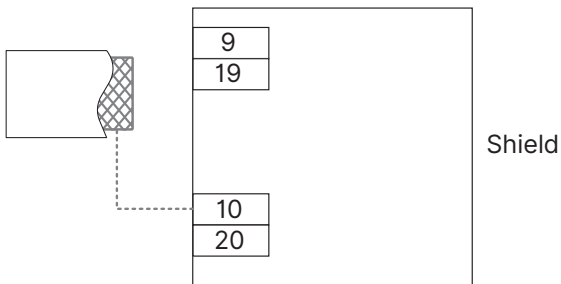
#### Power Supply / Alarm and Failure



#### Firedetector LOOP with...



#### Primary cable shield



## 7 Commissioning

**DANGER!****Property damage due to electrical voltage!**

ADICOS systems work with electrical current, which can cause equipment damage and fire if not installed properly.

- **Before switching on the system, verify that all detectors are properly mounted and wired.**
- **Startup may be performed only by properly trained personnel.**

**WARNING!****Risk of false alarms and device failure**

The degree of protection of ADICOS detectors specified in the technical data is only guaranteed when the enclosure cover is completely closed. Otherwise a false alarm can be triggered or the detector can fail.

- **Before startup, check that all of the detector enclosure covers are completely closed, otherwise the ADICOS system will not work properly.**

**WARNING!****Risk of explosion**

The ADICOS HOTSPOT-X0 sensor unit is subject to the protection principle and/or the ignition protection type **equipment protection by intrinsic safety "i"**.

- **Explosion protection barriers must be used!**
- **Only wire to the ADICOS HOTSPOT-X0 Interface X1!**

**WARNING!****Risk of explosion**

The ADICOS HOTSPOT-X0 Interface-X1 unit is subject to the protection principle and/or the ignition protection type equipment protection by flameproof enclosures "d".

- **Firmly close enclosure lid after wiring!**

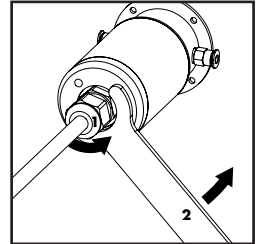
## 8 Maintenance

The ADICOS HOTSPOT-X0 Interface-X1 does not require maintenance.

### 8.1 Replacing Sensor Unit

#### Removing old sensor unit

- 1 Open cable gland
- 2 Open the enclosure cover by turning counterclockwise (e.g., using a 31.5 mm two-hole wrench)  
Make sure that the connection cable does not turn!
- 3 Disconnect connection cable from terminals
- 4 Pull enclosure cover from connection cable



**Mounting new sensor unit** (→ Chap. 6, Wiring)


## 9 Disposal

Return device to the manufacturer after the end of the useful life. The manufacturer ensures environmental-friendly disposal of all components.






## 10 Technical Data

### 10.1 Technical Data of HOTSPOT-X0 Sensor Unit

<b>General information</b>		
Model:		HOTSPOT-X0 Sensor Unit
Article number:		410-2401-310
Enclosure dimensions:	mm	54 x 98 (Ø Diameter x Length)
Full dimensions:	mm	123 x 54 x 65 (Length L x Ø Diameter x Width) (Length: connection cable incl., Width: diameter purge air adapter incl.)
Weight:	kg	0,6 (without connection cable)
Degree of protection:	IP	IP66/67
Enclosure:		Stainless steel
<b>Information regarding explosion protection</b>		
Explosion protection:		II 1G Ex ia IIC T4 Ga
Temperature class:		T4
Device group:		II, category 1G
Type approval:		Certificate per 2014/34/EU
<b>Electrical Data</b>		
$U_{i(1,2)}$	V	3,7
$I_{i(1,2)}$	mA	225
$P_{i(1,2)}$	mW	206
$C_{i(1,2)}$	µF	negligible
$L_{i(1,2)}$	mH	negligible
$U_{o(1,2)}$	V	5
$I_{o(1,2)}$	mA	80
$P_{o(1,2)}$	mW	70
$C_{o(1,2)}$	µF	80
$L_{o(1,2)}$	µH	200
$U_{i(3,4)}$	V	17
$I_{i(3,4)}$	mA	271
$P_{i(3,4)}$	W	1.152
<b>Thermal, physical data</b>		
Ambient temperature:	°C	-20 ... +65
Relative humidity:	%	≤ 95 (non-condensing)


<b>Purge air</b>		
Purity classes:		Dust $\geq 2$ , Water content $\geq 3$ Oil content $\geq 2$ ( $< 0.1 \text{ mg/m}^3$ ) Use non-ionized sealing air!
Air flow:	l/min	2 ... 8
<b>Sensor data</b>		
Sensor resolution:	pixel	32 x 31
Optical angle:	°	53 x 52
Reaktion time:	s	$< 1$
Temporal resolution:	s	0.1 oder 1 (depends on configuration)
<b>Other</b>		
Bending radius, connection cable	mm	$> 38$

### 10.1.1 ID plate

		<b>Advanced Discovery System</b>									
TYPE	ADICOS HOTSPOT-X0 Sensor	$U_{0(1,2)}$	3,7 V	$U_{0(3,4)}$	17 V	BVS 17 ATEX E 049 II 1G IECEX BVS 17.0055 Ex ia IIC T4C Ga					
ANR	410-2401-310	PROD	2017	IP	66 / 67			$I_{0(1,2)}$	225 mA	$I_{0(3,4)}$	271 mA
COM	- / -	TEMP	$-40^\circ\text{C} \leq T_a \leq +80^\circ\text{C}$	$P_{0(1,2)}$	206 mW			$P_{0(3,4)}$	1,152 W		
SNR	5000000	$V_{DC}/VA$	- / -	$U_{0(1,2)}$	5 V			$I_{0(1,2)}$	80 mA		
<b>GTE Industrieelektronik GmbH</b> D-41747 Viersen											

TYPE	Device Model					Electrical data			CE marking
ANR	Article number	Prod.	Production year	IP	Degree of Protection	$U_{I(1,2)}$	$U_{I(3,4)}$	Information on explosion protection	
COM	Communication number (variable)	TEMP	Ambient temperature		$I_{I(1,2)}$	$I_{I(3,4)}$			
SNR	Serial number (variable)	$V_{DC}/VA$	Supply voltage / Power consumption		$P_{I(1,2)}$	$P_{I(3,4)}$			
					$U_{0(1,2)}$	$U_{0(3,4)}$			





**10.2 Technical Data of HOTSPOT-X0 Interface-X1**

<b>General information</b>		
Model:		HOTSPOT-X0 Interface-X1
Article number		410-2401-410
Enclosure dimensions:	mm	220 x 220 x 180 (Length L x Width W x Depth D)
Full dimensions:	mm	270 x 264 x 180 (L x W x D) (Length: cable gland incl., Width: mounting brackets incl.)
Degree of protection:	IP	66
Weight:	kg	8
Enclosure:		Aluminum
		Stainless steel
<b>Information regarding explosion protection</b>		
Explosion protection:		II 2(1)G Ex db [ia Ga] IIC T4 Gb
Temperature class:		T4
Device group:		II, category 2G
Type approval:		Certificate according to 2014/34/EU
IECEx certificate:		IECEx KIWA 17.0007X
ATEX certificate:		KIWA 17ATEX0018 X
<b>Electrical Data</b>		
Supply voltage:	V	DC 20 ... 30
$U_{o[1,2]}$	V	$\geq 17$
$I_{o[1,2]}$	mA	$\geq 271$
$P_{o[1,2]}$	W	$\geq 1,152$
$U_{o[13,14]}$	V	$\geq 3,7$
$I_{o[13,14]}$	mA	$\geq 225$
$P_{o[13,14]}$	mW	$\geq 206$
$U_{i[13,14]}$	V	$\leq 30$
$I_{i[13,14]}$	mA	$\leq 282$
$C_{o[1,2]}$	$\mu\text{F}$	0,375
$L_{o[1,2]}$	mH	0,48
$L_o/R_{o[1,2]}$	$\mu\text{H}/\Omega$	30
$C_{o[13,14]}$	$\mu\text{F}$	100
$L_{o[13,14]}$	mH	0,7
$L_o/R_{o[13,14]}$	$\mu\text{H}/\Omega$	173



Thermal, physical data		
Ambient temperature	°C	-20 ... +60
Relative humidity:	%	≤ 95 (non-condensing)
<b>Other:</b>		
Bending radius connection cable:	mm	> 38

### 10.2.1 ID Plate

		Advanced Discovery System									
TYPE	ADICOS HOTSPOT-X0 Interface-X1	$U_{R(1,2)}$	17 V	$U_{E(3,4)}$	3,7 V	KIWA 17ATEX0018 X 					
ANR	410-2401-410	PROD	2017	IP	66			$I_{R(1,2)}$	271 mA	$I_{E(3,4)}$	225 mA
COM	G000001	TEMP	-20°C ≤ Ta ≤ +60°C		$P_{R(1,2)}$			1,152 W	$P_{E(3,4)}$	206 mW	
SNR	G000001	$V_{DC}/VA$	20 ...30 / 5		$U_{O(1,2)}$			30 V	$I_{O(1,2)}$	282 mA	
GTE Industrieelektronik GmbH D-41747 Viersen											

TYPE	Device Model					Electrical data			CE marking
ANR	Article number	Prod.	Production year	IP	Degree of protection	$U_{I(1,2)}$	$U_{I(3,4)}$	Information on explosion protection	
COM	Communication number (variable)	TEMP	Ambient temperature			$I_{I(1,2)}$	$I_{I(3,4)}$		
SNR	Serial number (variable)	$V_{DC}/VA$	Supply voltage / Power consumption			$P_{I(1,2)}$	$P_{I(3,4)}$		
						$U_{O(1,2)}$	$U_{O(3,4)}$		

## 11 Appendix

### 11.1 ADICOS Mounting Bracket

