

430-2410-002 EN10



### Supplementary Instructions

# Branching and Connection Box X22



Supplementary Instructions for Branching and Connection Box X22  
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– *Translation* –

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*Subject to technical changes!*

## **Abstract**

The *Advanced Discovery System* (in short: *ADICOS*) is used for early detection of fire scenarios in the industrial environment. It comprises different, independent detector units that enable interference-resistant fulfillment of the detection objective defined during planning via suitable layout and parameterization.

The detector units are connected using the *ADICOS M-bus* to a central unit, which enables voltage supply and parameterization of every individual detector, and which stores all sensor data for statistical analyses.

*ADICOS branching and connection boxes X22* are used as a wiring accessory in explosive atmospheres of ATEX zone 22.

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## 1 About this manual

### 1.1 Objective

This manual describes the special requirements on installation, wiring, commissioning, and operation of *ADICOS branching and connection boxes X22* for explosive atmospheres of ATEX zone 22.

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

### 1.2 Explanation of symbols

This manual features a continuous structure for best possible comprehension. The following labels are used.

#### Warning signs

This manual uses the following information types.

**NOTE!**

This information type provides information directly important for further system operation.

**WARNING!**

This information type signals a danger that can lead to fatal or severe injuries.

**DANGER!**

This information type signals a danger that directly leads to fatal or severe injuries.

### 1.3 Storing the manual

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

## 2 Safety instructions

ADICOS *branching and connection boxes X22* (in short: *AAB-X22*) 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!**

Installation and operating errors can lead to fatal and severe injuries and damage to the industrial plant.

- **Read and follow this manual carefully!**

### 2.1 Intended use

ADICOS AAB-X22 are distribution boxes for the electrical connection of *ADICOS detectors* with the fire alarm cable of *ADICOS systems* in explosive atmospheres of ATEX zone 22.

They additionally enable feeding-in an external voltage supply using the *ADICOS power supply NT V40-A3*. In this context, the operating parameters described in Chap. 9, »Technical data« must be met. Any deviating use requires prior consultation with the manufacturer.

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 installation, commissioning, maintenance, and test.

The following standards and directives are of particular importance when working in explosive atmospheres:

Regulation	Description
DIN EN 60079	Explosive atmospheres
DIN EN 60529	Degrees of protection provided by enclosures
94/9/EC	European ATEX Directive
1999/92/EC	European ATEX Operation Directive
89/686/EEC	European Personal Protective Equipment Directive

### 2.3 Personnel qualification

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

**WARNING!**

Installation, commissioning, parameterization, and maintenance may only be performed by authorized and respectively trained personnel

### 2.4 Handling electrical voltage

**DANGER!**

The electronics of the ADICOS AAB-X22 works with an electrical voltage that can trigger an explosion in explosive atmospheres.

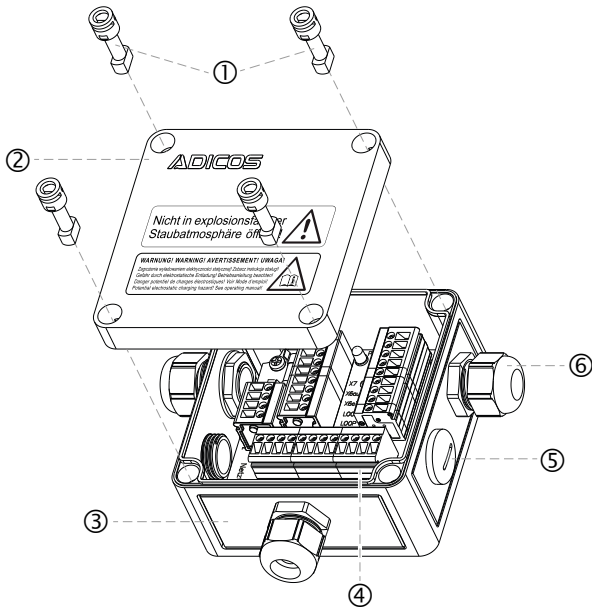
- **Do not open enclosure!**
- **De-energize the entire detector system and secure against unintentionally reactivation for all wiring work!**

### 2.5 Modification

Any form of unauthorized modifications or extensions are expressly prohibited! In case of doubt, contact the manufacturer.

### 3 Structure

#### 3.1 Overview

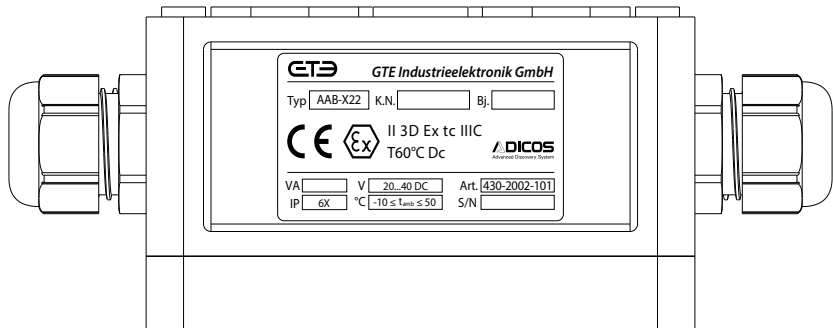


No.	Description
①	Enclosure screws (4x)
②	Enclosure cover
③	Lower enclosure part
④	AAB circuit board with connection terminals
⑤	Blind cable glands with seal (2x)
⑥	Cable glands with lock nuts (3x)



### 3.2 Type plate information

The type plate of the ADICOS AAB contains the following information:



## 4 Installation



### **WARNING!**

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!**

### 4.1 Wiring



### **DANGER!**

The electronics of the ADICOS AAB-X22 works with an electrical voltage that can trigger an explosion in explosive atmospheres.

- **Route all cables into the enclosure through the cable glands and securely tighten the glands!**
- **Securely tighten the enclosure cover after wiring completion!**
- **Do not bend connection cable! Observe the minimum bending radius of the cables used!**

## 5 Commissioning



### **DANGER!**

The electronics of the ADICOS AAB-X22 works with an electrical voltage that can trigger an explosion in explosive atmospheres.

- **Prior to switching on, check that all detectors are properly mounted and wired!**

## 6 Operation



### **DANGER!**

The electronics of the ADICOS AAB-X22 works with an electrical voltage that can trigger an explosion in explosive atmospheres.

- **Never open the enclosure or loosen the cable gland during operation!**

## 7 Fault



### WARNING!

Fault correction measures may only be performed, if the explosive area is released for work via a risk assessment.

- **De-energize the entire detector system and secure the entire detector system against unintentionally reactivation for all fault correction measures!**

## 8 Maintenance



### DANGER!

The plastic enclosure of the ADICOS-ANN can statically charge in the case of friction and trigger an explosion.

- **Avoid friction on plastic surfaces!**
- **Use a damp cloth for cleaning!**



### WARNING!

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

- **De-energize the entire detector system and secure against unintentionally reactivation for all maintenance work!**

## 9 Technical data

Specifications regarding explosion protection		
Explosion protection class:		II 3D Ex tc IIIc T60°C Dc
Surface temperature:	°C	< 60
Device group:		II, category 3D
Connection cable bending radius	mm	> 7.5 × Ø <sub>Cable</sub>



### NOTE!

ADICOS AAB-X22 are rated **Protection by enclosure "tc"**.

- **An Ex barrier is not mandatory!**

