

# Operation Manual



## *Control and Terminal Box*

*Type A21-\*\*-\*\*\*\*\**

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- 1. Product Description ..... 3
- 2. Normal Handling ..... 3
- 3. Used Standards ..... 3
- 4. Technical Data ..... 4
- 5. Electrical Data ..... 4
- 6. Components / Cable Glands..... 4
- 7. Safety references ..... 5
- 8. Installation ..... 5
  - Mounting ..... 5
  - Installation..... 5
- 9. Starting ..... 6
- 10. Operation, Maintenance and Elimination of Disturbances ..... 6
- 11. Accessories and spare parts ..... 6
- 12. Service adress ..... 6



## 1. Product Description

The Control and Terminal Box Type A21-\*\*-\*\*\*\*\* is built with an enclosure made of polyester, aluminium, sheet steel or stainless steel.

For **category 2G** control and terminal boxes, the boxes are assembled with certified cable glands, terminals, signal and control units made in the types of protection Ex e, Ex d, Ex q, Ex m and also for intrinsically safe circuits Ex i.

For **category 2D** control and terminal boxes, the boxes are assembled with IP 6x approved cable glands, control and signal units. Inside the box, on demand, it is fitted with control, signal and connection devices in industrial quality.

The construction and functionality of the control and terminal boxes for the use in the marked Ex zones is tested and documented by Exepd GmbH piece by piece. The passed quality test is shown by marking the box with the Ex type label.

## 2. Normal Handling

The Control and Terminal Box Type A21-\*\*-\*\*\*\*\* is built for local installation in Ex zone 1 and zone 21. It is not allowed to install the product in zone 0 or zone 20.

Inside the control and terminal box there are explosion protected electrical and mechanical equipment and their accessories installed.

The individual Type label shows all the electrical and for the installation in hazardous area required data.

If there is no information about the ambient temperature on the type label, the boxes can be used in the temperature range of -20°C up to 40°C.

It is prohibited to make any changes on the Control and Terminal Boxes without contacting the manufacturer.

## 3. Used Standards

EN 60079-0;  
EN 60079-7;  
EN 60079-31

Depending on the assembled components further standards can be used and labelled, e.g. EN 60079-11 for intrinsically safe circuits "Ex I" and EN 60079-1 flameproof enclosures "Ex d".

## 4. Technical Data

### Enclosure material

Type A21-*1-*****	Polyester black
Type A21-*2-*****	Aluminium AlSi 12
Type A21-*3-*****	Stainless steel 1.4301 (V2A)
Type A21-*4-*****	Stainless steel 1.4404 (V4A)
Type A21-*5-*****	Painted sheet steel

**Mechanical strength according to DIN EN 60079-0:** 7 Nm

**Protection according to 60529/IEC 60529:** min. IP 54

### Ambient temperature range:

Temperature class T4 or T 135°C	max. -50°C up to + 60°C
Temperature class T6 or T 80°C	max. -50°C up to + 60°C

An expanded ambient temperature range up to 90°C is possible.

**Explosion protection:**  
**(Please refer to type label for details)**

⊕ II 2(1) G/D

Ex e IIC T4/T6 Gb  
Ex e ia IIC T6 Gb  
Ex e [ia] IIC T6 Gb  
Ex tb IIIC T80°C

**EC type examination certificate:** TPS 07 ATEX 61951 1

## 5. Electrical Data

(please refer to type label )

Maximum rated voltage:	1100 V
Maximum rated current:	125 A
Maximum cross section:	35 mm <sup>2</sup>
Maximum power loss:	1000W


## 6. Components / Cable Glands

With the Control and Terminal Box only separate certified components like terminals, switches and control and signal units are used. Not used holes for cable glands or operators have to be closed by certified plugs. Assembly and safety instruction of the component manufacturer must be considered.

## 7. Safety references

Devices in hazardous area must be installed, supervised, maintained and kept in good conditions by the owner of the plant. Part of this is an inspection after the transport to identify possible damages caused during the transport.

Only qualified workers are allowed to install and dismount as well as doing maintenance work on the control and terminal boxes. All universally valid rules and laws and other binding directives for the safety of people and environment must be kept.

 WARNING	<p style="text-align: center;"><b>DO NOT OPEN WHILE ENERGIZED!!</b> <b>DUST LAYERS &gt;5 mm MUST BE REMOVED!</b> <b>DO NOT USE DEFECT EQUIPMENT!</b></p>
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## 8. Installation

### Mounting

The control and terminal boxes must be protected against aggressive and unusual environmental conditions which could cause damages on the equipment. This could be e.g. acids or high and low temperatures.

For installation, please refer to IEC / EN 60079-14 and other valid standards and directivities on the place of erection.

Information on the type label must be kept!

If cable glands marked with and „X“ are in use, please refer to the operation manual of the gland supplier.

### Installation

The wire connection must be made in such a manner, that the insulation material and the cores itself will not be damaged. Regarding the maximum possible cross connection and electrical data, please refer to the information written on the type label.

Metal enclosures, installed in hazardous area, must be connected to the general earth system via a cable with minimum 4 mm<sup>2</sup> cross section.

If intrinsically safe circuit installed in one box together with increased safe or energy limited circuits, the installation must protect the Ex i circuit from an increase of capacity, voltage and inductivity.

The air and creeping distance between Ex e and Ex i circuits must be kept by the internal installation.

## 9. Starting

Before the Control and Terminal Box is put into operation, the qualification for the use in the predominant hazardous area must be proofed according to the type label and the zone declaration.

It is not allowed to exceed the written data on the type label.

By using the equipment in hazardous area with combustible dust, dust layers > 5 mm must be removed. To protect the equipment from these circumstances also the installation of protection hoods are possible.

The functionality of the control and terminal box itself, as well as its combination with the plant or machine must be tested before the first use.

Only use the Control and Terminal Box in clean and intact condition.

## 10. Operation, Maintenance and Elimination of Disturbances

Devices in hazardous area must be installed, supervised, maintained and kept in good conditions by the owner of the plant. For information, refer to IEC / EN 60079-17. Only skilled workers are allowed to do maintenance and the elimination of disturbance work. Before doing this work, the safety requirements must be kept!

For elimination of disturbances, only original spare parts after consulting with Exepd are allowed to use. Before using them again, the safety requirements must be kept!

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## 11. Accessories and spare parts

Please refer to [www.exepd.de](http://www.exepd.de)

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## 12. Service adress

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EU-Konformitätserklärung  
EU Declaration of Conformity



Dokument A21-00-C0001-11

Hersteller/Manufacturer:

Exepd GmbH, i\_PARK TAUBERFRANKEN 23, D-97922 Lauda-Königshofen

Gegenstand der Erklärung/Object of the declaration: \*  
Steuer- und Klemmenkasten Typ A21-\*\*-\*\*-\*\*\*\*\*  
Control and terminal box type A21-\*\*-\*\*-\*\*\*\*\*

Der oben beschriebene Gegenstand der Erklärung erfüllt die einschlägigen Harmonisierungsvorschriften der Union/The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

2014/34/EU (valid from/gültig ab 20. April 2016 -ABI. L 96 / 29.03.2014-)

Die Anwendung der folgenden einschlägigen harmonisierten Normen oder technischen Spezifikationen wurde als hilfreich erachtet, ganz oder teilweise die Konformität mit den wesentlichen Anforderungen zu erfüllen/The use of the following relevant harmonised standards or references to other technical specifications were helpfully, to fulfil totally or partly the conformity with the requirements:

EN 60079-0:2012 (IEC 60079-0:2011, mod. + Cor.:2012);  
EN 60079-7:2007 (IEC 60079-7:2006);  
EN 60079-11:2012 (IEC 60079-11 :2011 + Cor.:2012);  
EN 60079-31:2009 (IEC 60079-31:2008 + Corrigendum 1:2009)

Kennzeichnung und Hauptzündschutzart/Marking and main type of protection: \*

Ⓜ II 2(1) G/D

Ex e IIC T4/T6 Gb  
Ex e ia IIC T4/T6 Gb

Ex e [ia] IIC T4/T6 Gb  
Ex tb IIIC T80°C/135°C

CE 0123 TPS 07 ATEX 61951 1  
TÜV Süd Product Service GmbH (0123),  
Ridlerstrasse 65, 80339 München Germany

Qualitätssicherung Produktion gemäß/Production quality system according:

2014/34/EU

Zertifiziert durch/ certified by

TÜV Süd Product Service GmbH (0123)  
Ridlerstrasse 65, 80339 München Germany

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller/This declaration of conformity is issued under the sole responsibility of the manufacturer.

Lauda-Königshofen, den 14.04.2016

  
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Stefan Höger, GF/CEO, Exepd GmbH

\*Die vollständige Produktbeschreibung und verwendete Zündschutzprinzipien sind in der zugehörigen Artikelbeschreibung zur Artikelnummer beschrieben (-> Auftragsdokumentation)  
The product and used protection principles are described in the relevant article description according the article number (-> order documents)