

Operation Manual



Control and Terminal Box

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

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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) GD

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 ²
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;">DO NOT OPEN WHILE ENERGIZED!! DUST LAYERS >5 mm MUST BE REMOVED! DO NOT USE DEFECT EQUIPMENT!</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 mm² 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!

11. Accessories and spare parts

Please refer to www.exepd.de

12. Service adress

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Erklärung der EG-Konformität
Declaration of EC-Conformity



Dokument A21-00-C0001 Rev10

Exepd GmbH, i_PARK TAUBERFRANKEN 23, 97922 Lauda-Königshofen

erklärt, dass das Produkt:
declare that the product

Steuer- und Klemmenkasten Typ A21-**-*****
Control and terminal box type A21-**-*****

den Bestimmungen der folgenden Richtlinien entspricht
is in accordance with the following directives

94/9/EG

Die Anwendung der folgenden Normen oder normativen Dokumenten wurde als hilfreich erachtet,
ganz oder teilweise die Konformität mit den wesentlichen Anforderungen zu erfüllen:
The use of the following standards or normative documents 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 Hauptzündschutzart: *
Marking main type of protection:

⊕ II 2(1) GD

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
Production quality system

gemäß/according 94/9/EG
TÜV Süd Product Service GmbH (0123)
Zertifikat/Certificate EX3 13 07 61951 006

Lauda-Königshofen, den 02.04.2015

Carsten Heitzmann, Ex-Beauftragter 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)

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