



# CU8004-0000

4 port USB 2.0 hub

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# BECKHOFF

# Table of Contents

<b>1</b>	<b>Foreword</b>	<b>1</b>
1.1	Notes on the documentation	1
1.1.1	Liability Conditions	1
1.1.2	Conditions of delivery	1
1.1.3	Copyright	1
1.2	Safety Instructions	2
1.2.1	State at Delivery	2
1.2.2	Description of safety symbols	2
<b>2</b>	<b>Product Overview</b>	<b>3</b>
2.1	Introduction	3
2.2	Technical Data	4
2.3	LED diagnostics	5
<b>3</b>	<b>Installation</b>	<b>6</b>
3.1	Mounting	6
3.2	Power Supply	6
3.2.1	UL requirements	6
<b>4</b>	<b>Approvals for USA and Canada</b>	<b>7</b>
4.1	FCC Approval for USA	7
4.2	FCC Approval for Canada	7
<b>5</b>	<b>Appendix</b>	<b>8</b>
5.1	Beckhoff support and service	8
5.1.1	Beckhoff support	8
5.1.2	Beckhoff service	8
5.2	Beckhoff headquarters	8

# 1 Foreword

## 1.1 Notes on the documentation

This description is only intended for the use of trained specialists in control and automation engineering who are familiar with the applicable national standards. It is essential that the following notes and explanations are followed when installing and commissioning these components.

### 1.1.1 Liability Conditions

The responsible staff must ensure that the application or use of the products described satisfy all the requirements for safety, including all the relevant laws, regulations, guidelines and standards.

The documentation has been prepared with care. The products described are, however, constantly under development. For that reason the documentation is not in every case checked for consistency with performance data, standards or other characteristics. None of the statements of this manual represents a guarantee (Garantie) in the meaning of § 443 BGB of the German Civil Code or a statement about the contractually expected fitness for a particular purpose in the meaning of § 434 par. 1 sentence 1 BGB. In the event that it contains technical or editorial errors, we retain the right to make alterations at any time and without warning. No claims for the modification of products that have already been supplied may be made on the basis of the data, diagrams and descriptions in this documentation.

### 1.1.2 Conditions of delivery

Furthermore the general conditions of delivery of company Beckhoff Automation GmbH apply.

### 1.1.3 Copyright

© This documentation is copyrighted. Any reproduction or third party use of this publication, whether in whole or in part, without the written permission of Beckhoff Automation GmbH, is forbidden.

## 1.2 Safety Instructions

### 1.2.1 State at Delivery

All the components are supplied in particular hardware and software configurations appropriate for the application. Modifications to hardware or software configurations other than those described in the documentation are not permitted, and nullify the liability of Beckhoff Automation GmbH.

### 1.2.2 Description of safety symbols

The following safety symbols are used in this operating manual. They are intended to alert the reader to the associated safety instructions.



**Danger**

This symbol is intended to highlight risks for the life or health of personnel.



**Warning**

This symbol is intended to highlight risks for equipment, materials or the environment.



**Note**

This symbol indicates information that contributes to better understanding.

## 2 Product Overview

### 2.1 Introduction



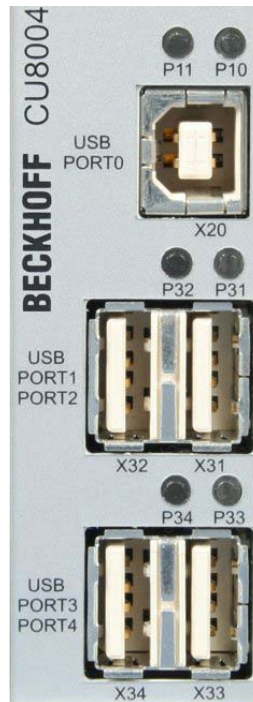
The CU8004-0000 Beckhoff USB hub offers 4 USB downstream ports (type A). It can be used universally in automation and office applications. The hub meets the special requirements of industrial applications through several outstanding features:

- User-friendly installation via integrated top-hat rail adapter
- 24 V<sub>DC</sub> supply voltage – the standard in industrial environments
- delivers up to 1 A supply current from each USB downstream port
- 480 Mbit, 12 Mbit, and 1,5 Mbit support for compatibility to all USB standards
- compact industrial design
- clear quick diagnosis by separate LEDs for each USB port

## 2.2 Technical Data

<b>Product name</b>	<b>CU8004-0000</b>
Number of USB type B ports (upstream)	1
Number of USB type A ports (downstream)	4
Supported standard	USB 2.0
Supported baud rates	480 Mbit, 12 Mbit, 1,5 Mbit
Output current per port	up to 1.0 A (at 5 V)
Status display	via LEDs
USB wiring length	maximum 5 meters
Power supply	24 V <sub>DC</sub> (-25% / +50%), protected against polarity reversal. To meet the UL requirements use 4 A fuse or class 2 power supply!
Current consumption from 24 V	open circuit operation: 80 mA if connected with host: 110 mA maximum: 1 A
Dimensions (w x h x d)	app. 34mm x 100mm x 86mm (with power supply terminal and lug for mounting rail release)
Weight	app. 120 g
Permissible ambient temperature	-0°C to +55°C (operation) -25°C to +70°C (transport/storage)
Permissible relative humidity	5% to 95%, no condensation
EMC resistance burst / ESD	EN 60000-6-2 / EN 60000-6-4
Vibration / Shock resistance	EN 60068-2-6 / EN 60068-2-27, EN 60068-2-29
Assembly	on 35 mm mounting rail conforms to EN 50022
Installation position	any
Protection class	IP20
Approvals	CE UL (see chapter UL requirements)

## 2.3 LED diagnostics



LED	Allocation	State	Meaning
P10	Power supply	off	no supply voltage
		shining green	5 V <sub>DC</sub> for downstream ports is provided
P11	Current control	shining green	the total current of all 4 downstream ports is less than 2,5 A
		shining red	the total current of all 4 downstream ports is bigger than 2,5 A
P31	USB Port 1	off	port not operational
		shining green	port fully operational
		blinking green	software attention
		shining red	Error condition e.g. overcurrent (port current > 1 A or short circuit)
		blinking red	hardware attention
P32	USB Port 2	off	port not operational
		shining green	port fully operational
		blinking green	software attention
		shining red	Error condition e.g. overcurrent (port current > 1 A or short circuit)
		blinking red	hardware attention
P33	USB Port 3	off	port not operational
		shining green	port fully operational
		blinking green	software attention
		shining red	Error condition e.g. overcurrent (port current > 1 A or short circuit)
		blinking red	hardware attention
P34	USB Port 4	off	port not operational
		shining green	port fully operational
		blinking green	software attention
		shining red	Error condition e.g. overcurrent (port current > 1 A or short circuit)
		blinking red	hardware attention

## 3 Installation

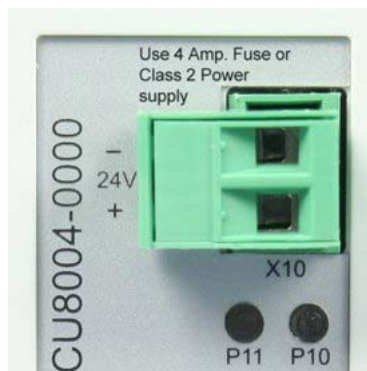
### 3.1 Mounting

The USB hub CU8004-0000 can be snapped onto a 35 mm mounting rail conforms to EN 50022.

To release the CU8004-0000 from the C mounting rail

- first pull the lug at the bottom of the hub downwards by using a screw driver
- then pull the hub from the mounting rail

### 3.2 Power Supply



The USB hub CU8004-0000 requires a 24 V<sub>DC</sub> supply for its operation. The connection is made by means of the terminal X10, labeled 24 V. This supply feeds the hub electronics and, over the USB downstream ports, the connected USB devices (5 V<sub>DC</sub>). It is protected against polarity reversal.

#### 3.2.1 UL requirements



**Danger**

For the compliance of the UL requirements the USB hub CU8004-0000 should only be supplied

- by a 24 V<sub>DC</sub> supply voltage, supplied by an isolating source and protected by means of a fuse (in accordance with UL248), rated maximum 4 Amp.
- by a 24 V<sub>DC</sub> power source, that has to satisfy NEC class 2.  
A class 2 power supply shall not be connected in series or parallel with another (class 2) power source!



**Danger**

To meet the UL requirements, the USB hub CU8004-0000 must not be connected to unlimited power sources!



## 4 Approvals for USA and Canada

### 4.1 FCC Approval for USA

**FCC: Federal Communications Commission Radio Frequency Interference Statement**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### 4.2 FCC Approval for Canada

**FCC: Canadian Notice**

This equipment does not exceed the Class A limits for radiated emissions as described in the Radio Interference Regulations of the Canadian Department of Communications.

## 5 Appendix

### 5.1 Beckhoff support and service

Beckhoff and their partners around the world offer comprehensive support and service, making available fast and competent assistance with all questions related to Beckhoff products and system solutions.

#### 5.1.1 Beckhoff support

Support offers you comprehensive technical assistance, helping you not only with the application of individual Beckhoff products, but also with other, wide-ranging services:

- world-wide support
- design, programming and commissioning of complex automation systems
- and extensive training program for Beckhoff system components

Hotline: + 49 (0) 5246/963-157  
Fax: + 49 (0) 5246/963-9157  
e-mail: [support@beckhoff.com](mailto:support@beckhoff.com)

#### 5.1.2 Beckhoff service

The Beckhoff Service Center supports you in all matters of after-sales service:

- on-site service
- repair service
- spare parts service
- hotline service

Hotline: + 49 (0) 5246/963-460  
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You will find further support and service addresses on our internet pages under <http://www.beckhoff.com>.

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The addresses of Beckhoff's branch offices and representatives round the world can be found on her internet pages: <http://www.beckhoff.com>

You will also find further documentation for Beckhoff components there.