W&T

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Manual

Startup and Application

USB 3.0-Hub Industry

valid for

#33603 USB 3.0-Hub Industry

Release 07/2023

Subject to errors and changes:

Since we can make mistakes, none of our statements should be used without checking. Please let us know of any mistakes or misunderstandings you are aware of, so that we can recognize and eliminate them quickly.

Perform work on and with W&T products only as described here and only if you have read and understood the manual fully. Unauthorized use can result in hazards. We are not liable for the consequences of unauthorized use. When in doubt, check with us or consult you dealer!

Inhalt

1. Legal notices

Warning notice system

This manual contains notices that must be observed for your personal safety as well as to prevent damage to equipment. The notices are emphasized using a warning sign. Depending on the hazard level the warning notices are shown in decreasing severity as follows:

⚠ DANGER
Indicates a hazard which results in death or severe injury if no appropriate preventive actions are taken.

⚠ WARNING
Indicates a hazard which can result in death or severe injury if no appropriate preventive actions are taken.

⚠ CAUTION
Indicates a hazard that can result in slight injury if no appropriate preventive actions are taken.

⚠ NOTE
Indicates a hazard which can result in equipment damage if no appropriate preventive actions are taken.

If more than one hazard level pertains, the highest level of warning is always used. If the warning sign is used in a warning notice to warn of personal injury, the same warning notice may have an additional warning of equipment damage appended.

Qualified personnel

The product described in this manual may be installed and placed in operation only by personnel who are qualified for the respective task.

The documentation associated with the respective task must be followed, especially the safety and warning notices contained therein.

Qualified personnel are defined as those who are qualified by their training and experience to recognize risks when handling the described products and to avoid possible hazards.

Disposal

Electronic equipment may not be disposed of with normal waste, but must be brought to a proper electrical scrap processing facility.

Symbols on the product

Symbol	Explanation
CE	CE-Mark The product conforms to the requirements of the relevant EU directives.
	WEEE-Mark The product may not be disposed of with normal waste, but rather in accordance with local disposal regulations for electrical scrap.

2. Safety Instructions

Intended use

The USB 3.0-Hub Industry from Wiesemann & Theis allows to connect up to 4 USB devices to one USB port. It is intended for data transfer and interface expansion of your computer. The USB 3.0-Hub Industry meets the special requirements of industrial applications

Any other use or modification of the USB-Hub Industry is not intended.

Electrical safety

Please ensure enough distance between upstream and downstream cables to avoid direct voltage flashovers between the cables.

The USB 3.0-Hub Industry may only be used in enclosed and dry areas. The device should not be exposed to high ambient temperatures and not be operated near heat sources. Please note the restrictions regarding the maximum ambient temperature.

The power supply unit used to supply the respective USB 3.0-Hub Industry must guarantee a safe separation of the low voltage side from the grid in accordance with EN62368-1 and have „LPS“ characteristics.

EMC

Only shielded cables may be used for connecting the USB 3.0-Hub Industry via USB.

In this case the USB 3.0-Hub Industry meets the noise immunity limits for industrial applications and the stricter emission limits for households and small businesses. Therefore, there are no EMC-related limitations with respect to the usability of the devices in such environments.

Declarations of conformity
The complete Declarations of Conformity for the USB-Hub described in the manual can be found on the corresponding datasheet page on the W&T homepage:

3. Introduction

The USB interface is finding its way into all thinkable applications, including in industrial environments. To meet the industry demand for reliable and robust USB solutions, W&T has developed an industry compatible USB hub.

The USB 3.0-Hub Industry differs from commercial office USB hubs in that the device is housed in a DIN rail enclosure. Additionally, the hub operates from the industry standard voltage of 24 V DC and can be used in an extended temperature range from 0 - 50 °C.

The hub features four downstream USB ports to which any USB device can be simply connected using plug & play. Both, the downstream ports as well as the uplink port, are USB 3.0 (SuperSpeed) compatible. Accordingly, they are also compatible with USB 2.0, USB 1.1 and USB 1.0 devices (High-, Full- and Low-speed).

By cascading multiple hubs (max. 5 in a row) it is possible to connect up to 127 different USB devices to one USB host.

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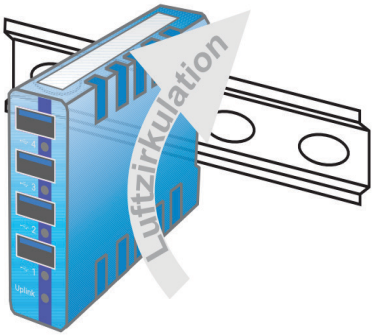
4. USB-Hub Industry, #33603

Mounting

The housing of the W&T USB 3.0-Hub Industry and the arrangement of the ventilation slots are designed for mounting on a standard DIN rail according to DIN EN 50022-35.

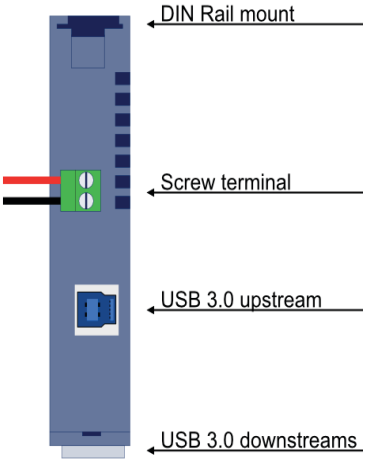


⚠ NOTE

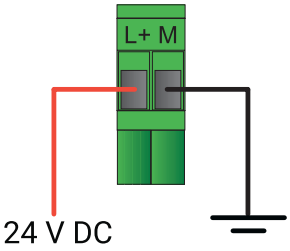
Especially in ambient operating conditions with elevated ambient temperature, adequate air circulation must be ensured at all times when using alternate mounting solutions.

Installation

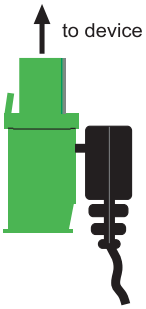
1. Connect the USB-Hub to a 24 V DC power supply using the provided screw terminal.



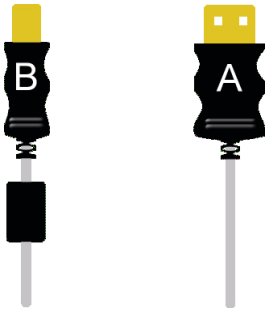
When connecting the DC power supply, please observe the correct polarity as indicated on the screw terminal adapter:



If you are using the W&T power supply, screw the power supply connector onto the screw terminal adapter:

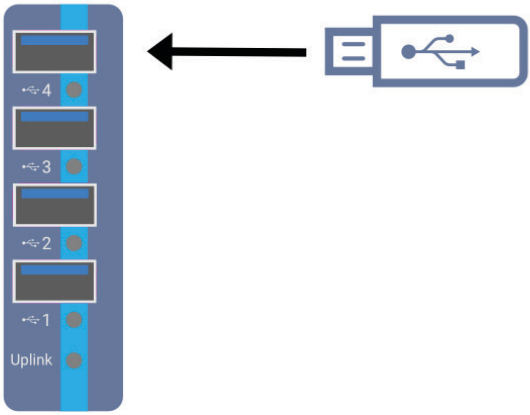


2. Plug the provided USB cable into the USB type-B plug of the USB-Hub and connect the USB-type A plug on the cable into the computer.



3. The operating system automatically detects the hub as a new USB device and installs the standard USB-Hub driver.

4. Plug a USB device into one of the four USB ports on the front side of the USB-Hub. The associated driver is installed and the USB device is ready to use.



Display Elements

Uplink LED

Off	No power
Red	No uplink
Green	USB 2.0 uplink
Blue	USB 3.0 uplink

Port status LEDs

Off	No device connected or device not working
Green	USB 2.0 device attached
Blue	USB 3.0 device attached
Red	Port supply is turned off or is overloaded

Technical Data

Upstream ports (USB-B)	1
Downstream ports (USB-A)	4
Power supply mode	External with power supply
Power supply	DC 24 V (+/-10%)
Port supply	DC 5 V / 900 mA per port max. 3,2 A at 50 °C max. 2,8 A at 40 °C
No-load current	typ. 10 mA @ 24 V
Max. current draw	1,5 A @ 24 V
Operating temperatures	
Storage	-40 ..... +85 °C
Non-cascaded	0 ..... +50 °C
Housing	Plastic compact housing for DIN rail mount per DIN EN 50022-35
Dimensions	105 x 75 x 22 mm
Weight	approx. 110 g
Scope of delivery	USB-Hub USB A/B cable