

ETAL100.3200-1F

User's manual

Version: **1.00 (December 2020)**
Order no.: **User's manual**

Translation of the original documentation

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Chapter 1 • Introduction

1 Manual history

Version	Date	Change
0.10	May 2019	First internal version

1.1 INFOBOX: Current user's manual

Information:

B&R makes every effort to keep documents as current possible. The most current versions can be downloaded from the B&R website (www.br-automation.com).

2 Organization of notices

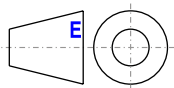
Safety guidelines

Contain **only** information that warns of dangerous functions or situations.

Signal word	Description
Danger!	Failure to observe these safety guidelines and notices will result in death, severe injury or substantial damage to property.
Warning!	Failure to observe these safety guidelines and notices can result in death, severe injury or substantial damage to property.
Caution!	Failure to observe these safety guidelines and notices can result in minor injury or damage to property.
Notice!	Failure to observe these safety guidelines and notices can result in damage to property.

Contain **useful** information for users and instructions for avoiding malfunctions.

Signal word	Description
Information:	Useful information, application tips and instructions for avoiding malfunctions.



European dimension standards apply to all dimension diagrams.

All dimensions in millimeters.

Unless otherwise specified, the following general tolerances apply:

Nominal dimension range	General tolerance per DIN ISO 2768 medium
Up to 6 mm	±0.1 mm
Over 6 to 30 mm	±0.2 mm
Over 30 to 120 mm	±0.3 mm
Over 120 to 400 mm	±0.5 mm
Over 400 to 1000 mm	±0.8 mm

Chapter 2 • Intended use

These products are developed and produced exclusively for training and development in the area of automation. Any use beyond this is not permitted, in particular the integration of these products or parts thereof in machines, systems or other devices and processes. B&R does not assume liability for damages of any kind that occur when using the products outside of training and development or for harm that results from modifying the products. Expansions using products from the ETA system or ETA light system series are permitted.

In addition, the products are only permitted to be used in closed rooms (such as laboratories, offices and classrooms) that do not require separate protective equipment. Trainers shall inform the trainees of the relevant safety guidelines and precautions before using the product.

Chapter 3 • Safety notices

1 Safety notices

Warning!

Observe safety notices

Disregarding safety notices can result in serious damage to property and personal injury.

The safety notices on the product and in the documentation must be observed.

Products that cannot be ensured as safe due to damage, for example, are not permitted to be started up under any circumstance. Disturbances that impair general safety must be eliminated immediately.

2 Usage

This product is designed and manufactured for training and development. General safety guidelines must be observed at all times.

Caution!

Risk of injury

Disregarding safety notices can result in serious damage to property and personal injury.

The data sheets of components and the safety notices contained therein must be observed.

For a list of the components used, see the technical data of this product.

3 Responsibilities of the operator

The operator is the person who operates the product or who provides it for use/application by a 3rd party while carrying legal product responsibility for the protection of the user, personnel or other 3rd parties.

- The operator is obliged to know and implement the applicable industrial safety regulations.
- The operator is obliged to know and implement national, local and plant-specific regulations.
- The operator is obliged to clearly define and manage responsibilities for installation, operation, fault correction, maintenance and cleaning.
- The operator is obliged to ensure that responsible personnel have read and understood this user's manual.

Chapter 4 • System characteristics

1 General information

This ETA light system includes a prewired X20TB1F terminal block, including label, for the easy power supply of your X20 components. The product can be connected directly to wide-range desktop power supply unit OTP650.07 from the ETA light system.

ETAL100.3200-1F- 24 VDC power supply with X20TB1F

- Prewired terminal block for CPU and I/O power supply
- Terminal block with label 0 / 24 V
- Direct connection with ETA light system power supply unit

2 Order data


Model number	Short description	Figure
	Accessories	
ETAL100.3200-1F	ETA light system 24 VDC power supply with X20TB1F terminal block for power supply of X20 components	
	Optional accessories	
	Accessories	
OTP370.76	Attachment cable to wide-range desktop power supply unit for office and laboratory use, CEE 7/7 to IEC C13 connector typical application: power supply for ETA light evaluation and training systems	
OTP650.07	Wide-range desktop power supply unit for office and laboratory use, output parameters: 24 VDC, 2.5 A, connection: low voltage connector 5.5 mm / 2.1 mm (+ pin inside), typical application: power supply for ETA light evaluation and training systems	

Table 1: ETAL100.3200-1F - Order data

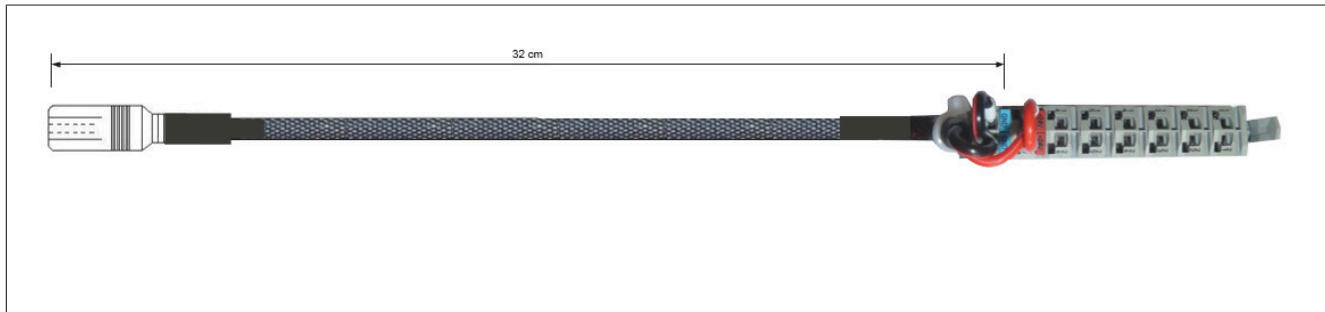
Chapter 5 • Technical data

Model number	ETAL100.3200-1F
General information	
Input voltage	24 VDC -15% / +20%
B&R ID code	0xEBE5
24 VDC power supply	
Connection	Low voltage female connector 5.5 mm / 2.1 mm (0TP650.07)
Cable construction	
Wire cross section	2x 0.4 mm ²
Properties	Wired to terminal block X20TB1F
Outer jacket	
Material	PVC
Mechanical properties	
Length	320 mm

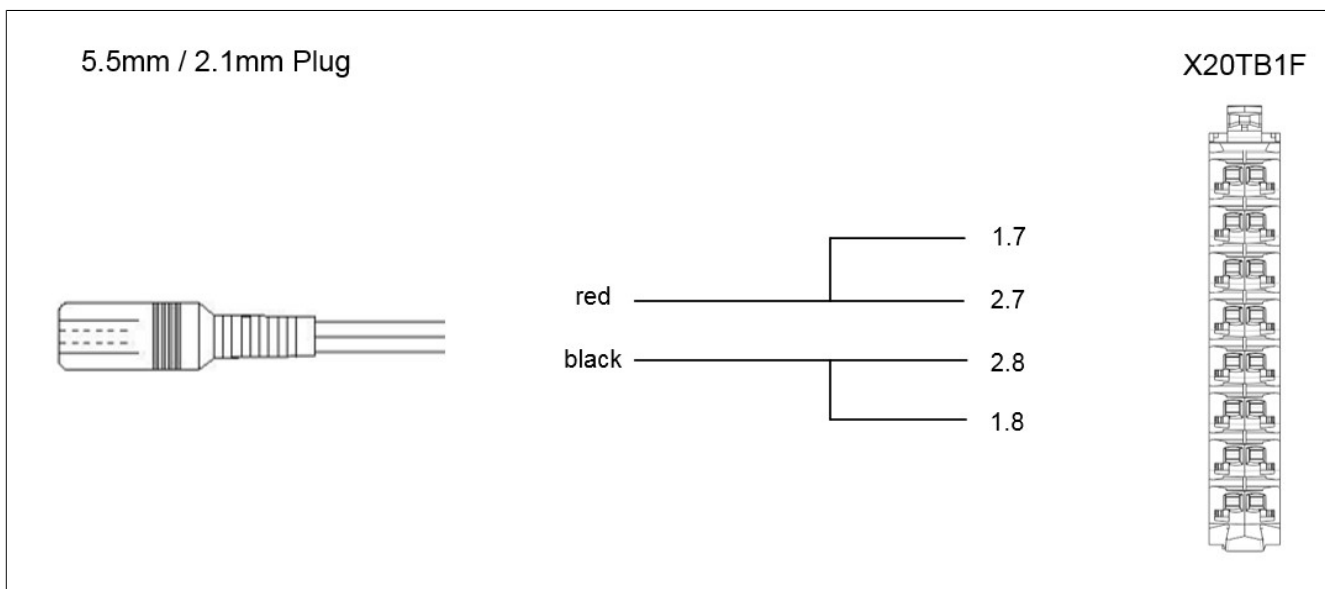
Table 2: ETAL100.3200-1F - Technical data

Chapter 6 • Wiring

1 Dimensions



2 Cable pinout



Chapter 7 • Compatibility

This product is compatible with X20 components that can be connected to an X20TB1F. This includes, among others, the following product groups.

- X20CP13xx

Information:

Check whether the terminal block can be used on the desired device. For additional information, see the data sheet of the product used.

1 CPU power supply

A power supply unit is integrated in these Compact CPUs. It is equipped with a supply for the CPU, X2X Link and the internal I/O power supply. The supply for the CPU and X2X Link is galvanically isolated.

The connections are located on the X3 I/O slot.

Power supply concept of Compact CPUs

To ensure proper operation of the Compact CPU, the following points must be observed:

Power supply concept	Description
CPU and I/O GND	The GND contact is provided 5 times on the terminal blocks of the integrated I/O slots. All GND contacts are connected to one another. The GND contacts of the CPU and I/O power supply therefore use the same electric potential.
Plug-in X20 I/O modules	Power supply of X20 I/O modules that are connected to the Compact CPU: <ul style="list-style-type: none"> • X2X Link: Supplied by the CPU power supply • I/O channels: Supplied by the I/O power supply
Integrated X1 I/O slot	All digital and analog signals as well as the RS232 and CAN bus interface are supplied by the CPU power supply. Their operation is therefore guaranteed even if there is no I/O power supply.
Integrated X2 I/O slot	<ul style="list-style-type: none"> • All digital signals are supplied by the CPU power supply. Their operation is therefore guaranteed even if there is no I/O power supply. • The encoder power supply is supplied by the I/O power supply. If the encoder should not be included in the EMERGENCY STOP chain, it must be connected to an external power supply or it will be supplied by the CPU's power supply unit.
Integrated X3 I/O slot	<ul style="list-style-type: none"> • All 12 digital signals are supplied by the I/O power supply. • The status messages for each channel also work without an I/O power supply. This guarantees that status messages will continue to be transferred during an emergency stop. • The state of the I/O power supply is indicated by a separate status message.

Caution!

Channels 5 to 8 are designed as mixed channels. If one of these channels is being used, it is absolutely essential to ensure that there is no external voltage present on the I/O channel when the I/O power supply is cut off. Otherwise, power will be regenerated back to the plus terminal of the I/O power supply via the I/O channel. This will result in defective components.

The following solutions are available for preventing power regeneration from occurring:

- The I/O power supply of the CPU is not permitted to be switched off, which allows the reference potential to be maintained.
- If the I/O power supply is switched off anyway (e.g. as part of the emergency stop chain), then the sensor/actuator power supplies must also be switched off. This prevents potential power regeneration and protects components from being destroyed.

Pinout

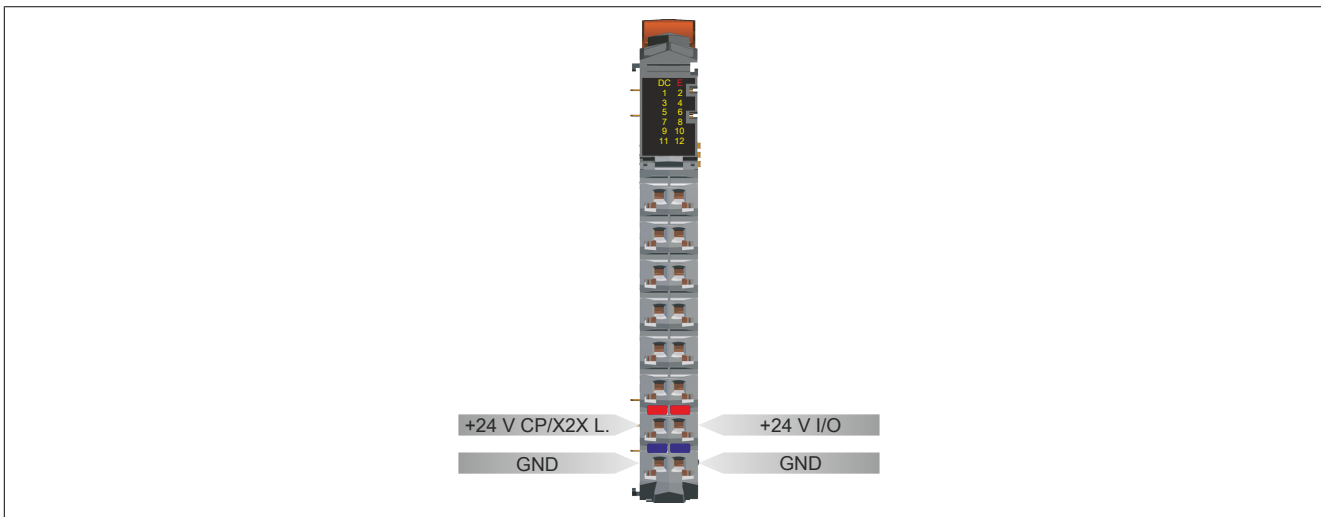


Figure 1: Integrated power supply unit - Pinout

Connection example

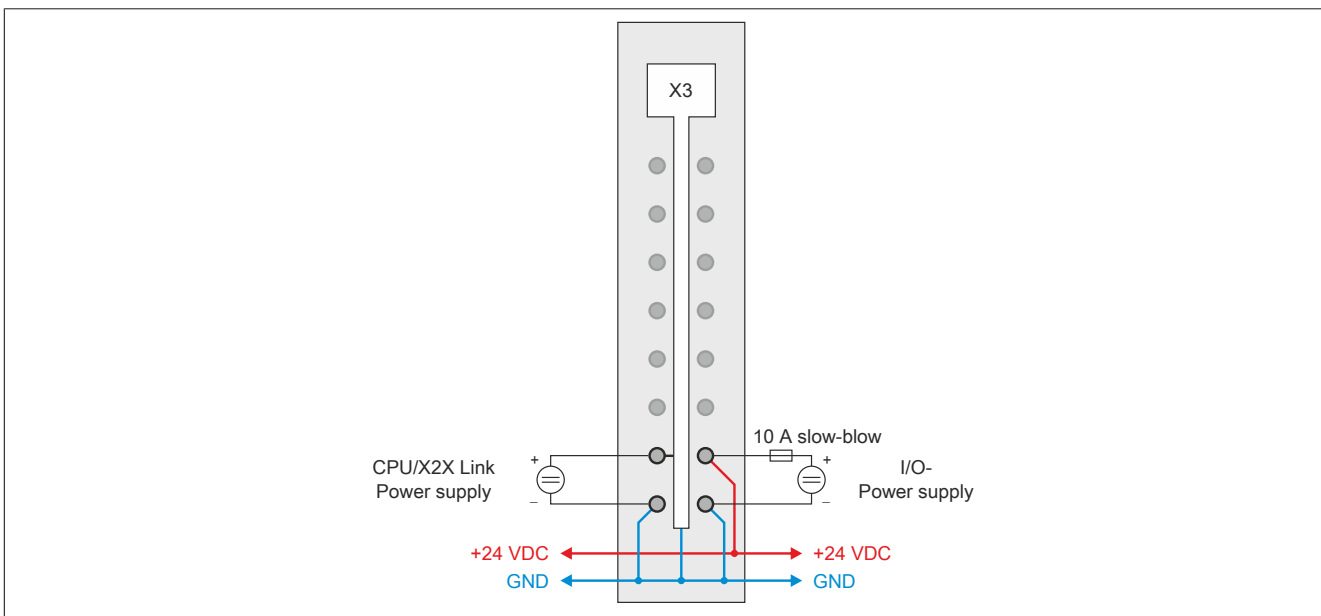


Figure 2: Connection example for the CPU power supply

Chapter 8 • Maintenance

The following chapter describes the maintenance work that can be carried out by a qualified and trained end user.

Information:

Only components approved by B&R are permitted to be used for maintenance work.

1 Repairs/Complaints and replacement parts

Danger!

Unauthorized opening or repair of a device may result in personal injury and/or serious damage to property. Repairs are therefore only permitted to be carried out by authorized qualified personnel at the manufacturer's premises.

To process a repair/complaint, a repair order or complaint must be created via the B&R Material Return Portal on the B&R website (www.br-automation.com).

Chapter 9 • Environmentally friendly disposal

All programmable logic controllers, operating and monitoring devices and uninterruptible power supplies from B&R are designed to have as little impact on the environment as possible.

1 Separation of materials

To ensure that devices can be recycled in an environmentally friendly manner, it is necessary to separate out the different materials.

Component	Disposal
Programmable logic controllers Operating and monitoring devices Uninterruptible power supplies Batteries and rechargeable batteries Cables	Electronics recycling
Paper/Cardboard packaging	Paper/Cardboard recycling
Plastic packaging material	Plastic recycling

Disposal must be carried out in accordance with applicable legal regulations.

Publishing information

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