

Installation manual portable distributors

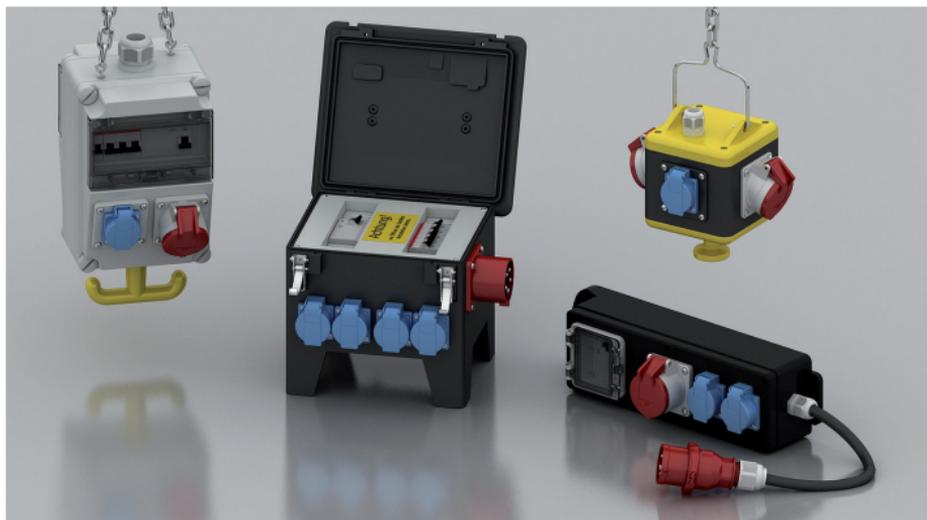


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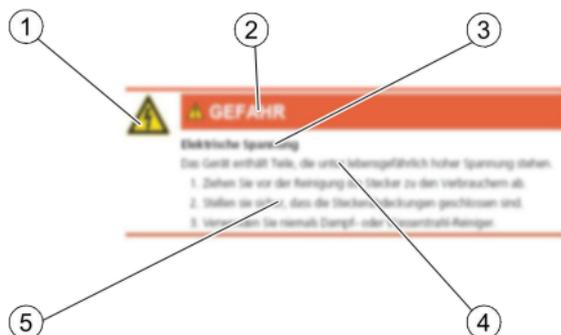
1 About this manual

This manual

- describes the assembly and disassembly of portable distributors from Bals Elektrotechnik GmbH & Co. KG
- is an integral part of the product and must be kept in safe custody during the product service life
- must be read carefully and understood before use and any work.

1.1 Structure of the warnings

The following picture illustrates the structure of a sample warning.



1	Hazard-specific symbol
2	Signal word
3	Type and source of the hazard
4	Possible consequences of failing to comply
5	Procedure for avoiding hazards

1.2 Symbols used

	General warning of a hazardous area
	Warning – dangerously high voltage
	Notice

1.3 Signal words used

All warnings in this manual are clearly highlighted. The following signal words are used for warnings:

DANGER	Warns of dangers which will lead to serious injuries or to death if the instructions are not followed.
WARNING	Warns of dangers that may lead to serious injuries or to death and/or cause considerable damage to property if the instructions are not followed.
CAUTION	Warns of dangers that may lead to reversible injuries and/or considerable damage to property if the instructions are not followed.
NOTICE	Warns of dangers that may lead to operational disruptions and/or considerable damage to property. Damage to the environment, too, may occur if the instructions are not followed.

2 Intended use

Portable distributors are built for professional use. The installation and the fixed connection to the mains supply should be carried out only by trained and qualified experts.

Any use going beyond the intended use is considered to be improper. The manufacturer is not liable for damages resulting from improper use. Any such risk shall be borne solely by the user.

In case of unauthorised modifications or conversions, the CE conformity becomes null and void, and thus, also all claims for warranty. Modifications may lead to risks for life and limb as well as damage to the plugs and sockets or loads connected.

Factory-fitted labels and markings on the distributors should not be removed, modified or blurred.

Protect against foreign bodies and impact of weather

The product meets either the protection degree IP44, IP54 or IP67 in accordance with DIN EN 60529 (VDE 0470-1), depending on the respective design. Each of these mean:

- Protection degree IP44:
 - Protected against solid bodies with a diameter beyond 1.0 mm, e.g. a wire
 - Protection against water sprayed from all sides
- Protection degree IP67:
 - Dust-proof
 - Complete protection against contact
 - Protection against temporary immersion.

Environment

The following operating conditions apply for the safe operation of the product:

Size	Value
Temperature	-25 °C ... +40 °C
Humidity	10 %rH ... 90 %rH

3 General safety instructions



- Safe use is ensured only if this manual is followed completely.
- Before installation, commissioning or operation, read this manual thoroughly.
- The product must be installed, maintained and put into operation properly by qualified experts in accordance with the laws, ordinances and standards.
- Keep easily combustible and explosive materials away from the product.
- Handle the cables with care,
 - by always pulling at the plug and not the cable when unplugging,
 - by preventing the cable from getting damaged mechanically,
 - by keeping intense heat away.
- Never operate defective products.
- Avoid tripping hazards.

4 Packaging, transport and storage

4.1 Packaging



Packaging materials are valuable raw materials and can be reused. The packaging materials should therefore be brought to an appropriate recycling facility. If this is not possible, dispose of the packaging materials according to the locally applicable regulations.

4.2 Transport

Check the delivery for completeness and integrity. If you identify transit damage or if the delivery is incomplete, notify your dealer or supplier immediately.

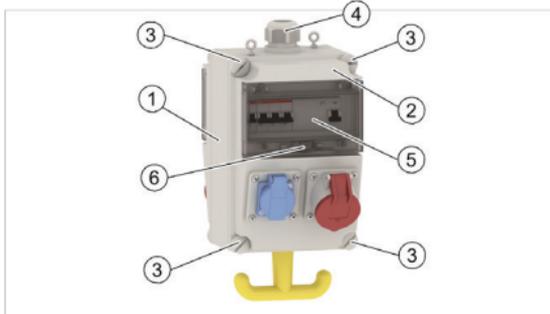
4.3 Storage

The product must be stored in clean condition and protected from dust and humidity. The original packaging is best suited for this purpose.

5 Design

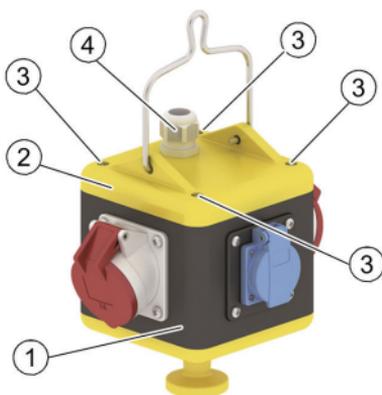
Based on examples, the following figures illustrate the different types of distributors.

Hanging distributor - plastic distributor, hanging



1	Housing
2	Housing cover
3	Captive housing screws
4	Cable gland
5	Fuse panel
6	Fastener for fuse panel window

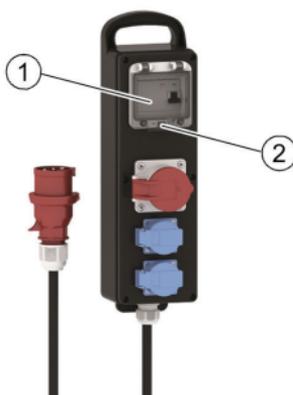
Uni-Block - solid rubber distributor, hanging distributor



1	Bottom part of housing
2	Housing cover
3	Housing screws
4	Cable gland

Free-standing distributor - solid rubber distributor, portable


1	Housing
2	Housing cover
3	Housing cover sealing flaps

Block distributor - solid rubber distributor, portable


1	FI circuit breaker viewing window
2	Fastener for FI circuit breaker viewing window

Technical specifications

The technical specifications of the product depend on the design. You will find them in our catalogue or on our website <http://www.bals.com>.

6 Installation and operation

The distributors are suitable for mobile use. The following describes the supply cable connection for the hanging distributors (see supply cable connection for the hanging distributor - plastic distributor, hanging).

The two other types of distributors are already equipped with a connection system; no assembly is required.



DANGER

Electrical voltage

The supply cable may carry high electrical voltage that is fatal. Pay attention to the five safety rules of electricity:

1. De-energise
2. Secure the supply from being switched on again
3. Ensure the de-energised condition
4. Connect to earth and short circuit
5. Cover or cordon off adjacent live parts

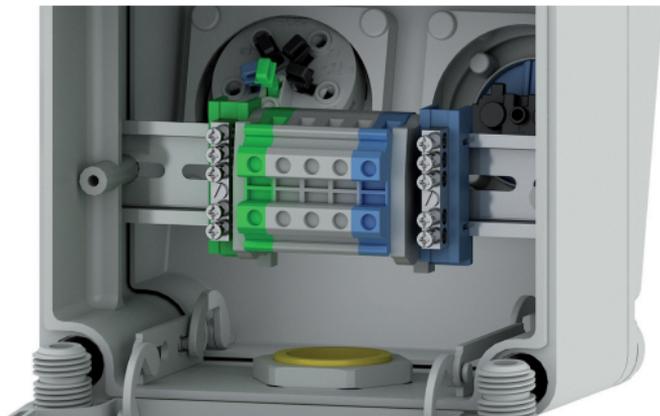
Choose the required cable cross-sections and line fuses based on the specifications given on the nameplates (see design).

6.1 Supply cable connection for the hanging distributor - plastic distributor, hanging

1. Loosen the captive housing screws and open the distributor.



2. Strip the cable such that the sheath reaches about 1 cm wide through the cable gland in the distributor. Remove the insulation from the cable cores.
3. Guide the stripped and uninsulated supply cable through the cable gland and below the automatic fuse (in case of supply from above) up to the terminal strip. Once the cable length required for the wiring has been reached, fix the cable gland with screws.
4. Connect the cores to the terminal strip.



5. Close the cover of the distributor and tighten the captive cover screws.
6. If necessary, switch the fuse elements and the FI circuit breaker on.

⇒ Your distributor has now been installed completely and is ready for operation.

6.2 Supply cable connection for the Uni-Block, solid rubber distributor, hanging distributor

1. Loosen the cover screws and remove the cover.



2. Strip the cable such that the sheath reaches about 1 cm wide through the cable gland in the distributor. Remove the insulation from the cable cores.
3. Guide the stripped and uninsulated supply cable through the cable gland. Once the cable length required for the wiring has been reached, fix the cable gland with screws.
4. Connect the cores to the terminal strip.



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5. Close the cover of the distributor and tighten the cover screws.
 6. If necessary, switch the fuse elements and the FI circuit breaker on.
- ⇒ Your distributor has now been installed completely and is ready for operation.

6.3 Routine inspections

Before each use

Check the distributor including the flaps and viewing window for any externally visible signs of damage. Inform a qualified electrician if you identify any damage.

Every six months

If in the respective design of the distributor an FI circuit breaker is installed, it must be tested regularly. The test intervals depend on the specific application and may vary.

With the hanging distributors, the FI circuit breaker is located behind a viewing window. With the free-standing distributors, it is under the housing cover.

1. Put the switch lever to the "I" position.
2. Press the "T" test button.
⇒ The FI circuit breaker trips and the switch lever jumps to the "0" position.
3. If the FI circuit breaker does not trip, the distributor must be put out of operation. Inform an electrician.

7 Cleaning and care

It is recommended to clean the device as required. Use a dry cloth to clean the device. Use a wet cloth if the device is very dirty.



DANGER

Electrical voltage

The device contains parts that carry hazardous voltage that may be fatal.

1. Pull out the plugs to the loads before cleaning them.
2. Make sure that the plug covers are closed.
3. Never use steam or water jet cleaners.



NOTICE

Damage to the plastic parts.

Corrosive cleaning agents may attack or destroy the plastic parts.

1. Use only a cloth moistened with water for cleaning.

8 Faults and their rectification



DANGER

Electrical voltage

The device contains parts that carry hazardous voltage that may be fatal.

1. Entrust all repair work to employees of specialist workshops.
2. Never operate a defective distributor.

If one of the loads connected is no longer supplied with power, proceed as follows:

1. Disconnect the distributor from the power supply.
2. Check whether the associated fuse element or the FI circuit breaker has tripped. If this is the case, continue with step 3, otherwise inform a qualified electrician.
⇒ This completes the troubleshooting here.
3. Open the viewing window of the corresponding fuse element (hanging distributor) or loosen the flap fasteners and open the housing cover (free-standing distributor).





4. Switch the fuse element or the FI circuit breaker on.
5. If the fuse elements trip once again, the fault lies in the distributor. Continue with step 6. If the fuse elements are not tripping, continue with step 8.
6. Close the viewing window (hanging distributor) or close the housing cover and the flap fasteners (free-standing distributor).
7. Put the distributor out of operation and notify your supplier immediately.
 - ⇒ This completes the troubleshooting here.
8. Reconnect the power supply. If the fuse elements trip again, then the fault lies in the load or its supply cable.
9. Close the viewing window (hanging distributor) or close the housing cover and the flap fasteners (free-standing distributor).
10. Inform an electrician.
 - ⇒ This completes the troubleshooting here.

9 Decommissioning and disposal



Send the worn-out product for recycling or for proper disposal. Always make sure to observe and follow the local regulations.

The product should not be disposed of in household waste. Environmental damage and risk to personal health are avoided with proper disposal.

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