CE-BC 30 M

D **Originalbetriebsanleitung**
Batterie-Ladegerät

GB **Original operating instructions**
Battery charger

F **Instructions d'origine**
Chargeur de batterie

I **Istruzioni per l'uso originali**
Carica batteria

DK/N **Original betjeningsvejledning**
Batterilader

S **Original-bruksanvisning**
Batteriladdare

CZ **Originální návod k obsluze**
Nabíječka baterií

SK **Originálny návod na obsluhu**
Batériová nabíjačka

NL **Originele handleiding**
Batterijlader

E **Manual de instrucciones original**
Cargador de batería

FIN **Alkuperäiskäyttöohje**
Akkulaturi

SLO **Originalna navodila za uporabo**
Baterijski polnilec

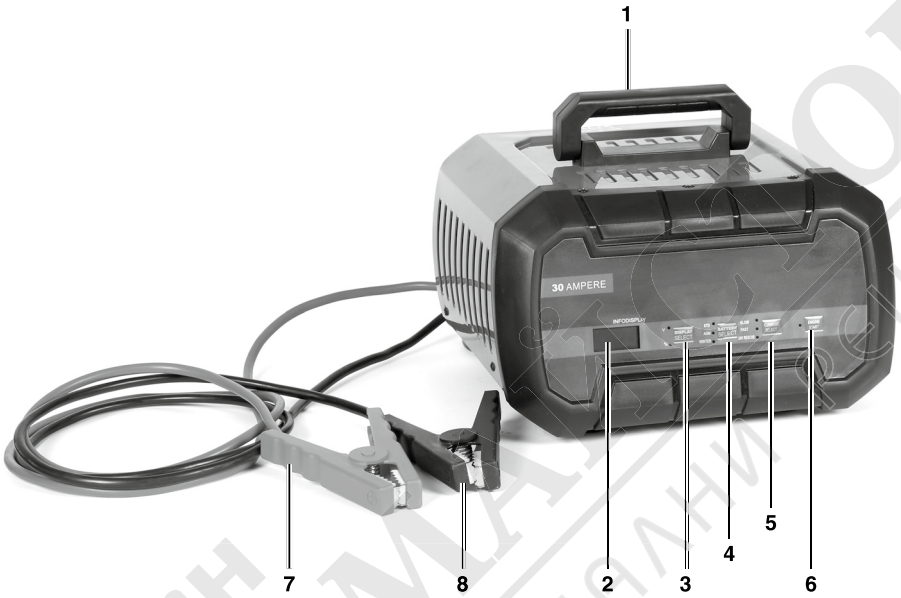
H **Eredeti használati utasítás**
Akkumulátor-töltő készülék

GR **Πρωτότυπες Οδηγίες χρήσης**
Φορτιστικο μπαταριας

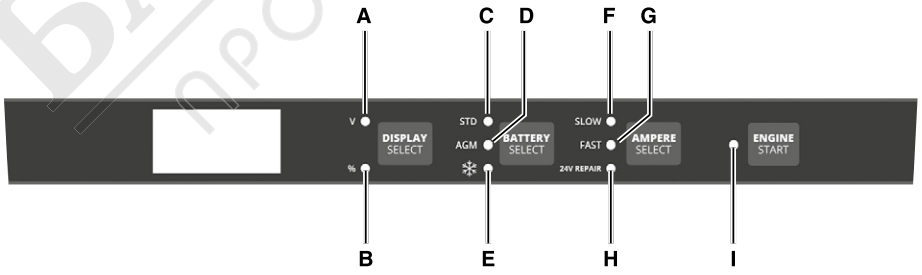
9

Art.-Nr.: 10.022.75 **I.-Nr.: 11019**

1



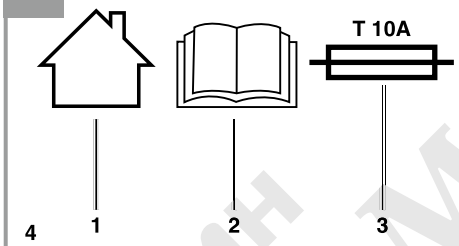
2



3

	12 V / 30 A	24 V / 15 A
■	80%	80%
30 Ah	1 h	2 h
60 Ah	2 h	4 h
150 Ah	5 h	10 h
300 Ah	10 h	20 h

4



Ⓓ Vom Netz trennen, bevor Verbindungen zur Batterie geschlossen oder geöffnet werden. ACHTUNG: Explosive Gase. Flammen und Funken vermeiden. Während des Ladens für ausreichende Belüftung sorgen.

ⒼⒷ Disconnect from the mains supply before connecting or disconnecting the battery to or IMPORTANT: Explosive gases. Avoid flames and sparks. Provide good ventilation during the charging process.

Danger!
When using the equipment, a few safety precautions must be observed to avoid injuries and damage. Please read the complete operating instructions and safety regulations with due care. Keep this manual in a safe place, so that the information is available at all times. If you give the equipment to any other person, hand over these operating instructions and safety regulations as well. We cannot accept any liability for damage or accidents which arise due to a failure to follow these instructions and the safety instructions.

1. Safety regulations

The corresponding safety information can be found in the enclosed booklet.
Danger!
Read all safety regulations and instructions. Any errors made in following the safety regulations and instructions may result in an electric shock, fire and/or serious injury.
Keep all safety regulations and instructions in a safe place for future use.

This equipment can be used by children of 8 years and older and by people with limited physical, sensory or mental capacities or those with no experience and knowledge if they are supervised or have received instruction in how to use the equipment safely and understand the dangers which result from such use. Children are not allowed to play with the equipment. Unless supervised, children are not allowed to clean the equipment and carry out user-level maintenance work.

Waste disposal
Batteries: Only dispose of these items through motor vehicle workshops, special collection points or special waste collection points. Ask your local council.

Explanation of the warning signs on the equipment (see Fig. 4)
1 = For indoor use only
2 = **CAUTION** - Read the operating instructions to reduce the risk of injury
3 = Fuse rating on rear of the equipment
4 = Disconnect from the mains supply before connecting or disconnecting the battery to or from the charger
IMPORTANT: Explosive gases. Avoid flames and sparks. Provide good ventilation during the charging process.

2. Layout and items supplied

2.1 Layout (Fig. 1)
1. Carry-handle
2. LED display
3. Pushbutton for „Display select“
4. Pushbutton for „Battery select“
5. Pushbutton for „Charging current“
6. Pushbutton for „Jump start“
7. Charging cable, red (+)
8. Charging cable, black (-)

2.2 Items supplied
- Open the packaging and take out the equipment with care.
- Remove the packaging material and any packaging and/or transportation braces (if available).
- Check to see if all items are supplied.
- Inspect the equipment and accessories for transport damage.
- If possible, please keep the packaging until the end of the guarantee period.

Danger!
The equipment and packaging material are not toys. Do not let children play with plastic bags, foils or small parts. There is a danger of swallowing or suffocating!

- Battery Charger
- Original operating instructions
- Safety instructions

3. Proper use

The charger is designed for charging non-maintenance-free or maintenance-free 12/24 V lead acid batteries (wet / Ca/Ca / EFB batteries) and for lead gel and AGM batteries which are used in motor vehicles.

If the 12/24 V starter battery is weak, the jump start process can be assisted by the jump start function. The jump start function cannot be used if the starter battery is discharged (indicated by Lo) or faulty (indicated by “BAt”) or there is no starter battery.

All batteries have a limited service life, which is partly dependent on the way the battery is looked after. When a 12V car battery (lead battery) has a value below 10.5V, it is considered to have undergone exhaustive discharge (below 21V for 24V batteries) and can become irreversibly damaged if stored for a prolonged period. The charger cannot charge up damaged or defective batteries (e.g. cell short circuit).

The equipment must not be used for charging lithium iron phosphate rechargeable batteries (e.g. LiFePO4) or other lithium rechargeable batteries. The equipment is designed for mobile use only and not for installation in caravans, mobile homes or similar vehicles. Do not expose the charger to rain or snow.

The equipment is to be used only for its prescribed purpose. Any other use is deemed to be a case of misuse. The user / operator and not the manufacturer will be liable for any damage or injuries of any kind caused as a result of this.

Please note that our equipment has not been designed for use in commercial, trade or industrial applications. Our warranty will be voided if the machine is used in commercial, trade or industrial businesses or for equivalent purposes.

4. Technical data

Mains voltage .....230 V~ 50Hz
Max. power rating ..... 600 W
Rated output voltage ..... 12V/24V d.c.
Rated output current for “SLOW” (12 V) .....3 A
Battery capacity for “SLOW” (12 V) ..... 3 - 60 Ah
Rated output current for “SLOW” (24 V) .....4 A
Battery capacity for “SLOW” (24 V) ..... 4 - 80 Ah
Rated output current for “FAST” (12 V) .....30 A
Battery capacity for “FAST” (12 V) .... 60 - 600 Ah
Rated output current for “FAST” (24 V) .....15 A
Battery capacity for “FAST” (24 V) .... 30 - 300 Ah
Max. output current for jump start: .....100 A
Miniature fuse: .....T10 A
Protection class: I
Protection type: IP20
Ambient temperature: ..... - 20°C – 40°C

5. Operation

Before you connect the equipment to the power supply make sure that the data on the specifications label are identical to the supply voltage.
Hazard! Do not charge any frozen batteries.

Please also refer to the instructions in the owner’s manuals for the car, radio, navigation system, etc.

About automatic charging (STD, AGM, Winter charging programs only)
The charger is a microprocessor controlled automatic charger, i.e. it is suitable in particular for charging maintenance-free batteries and for the long-term charging and maintenance-charging of batteries which are not in constant use, e.g. for classic cars, recreational vehicles, lawn tractors and the like. The integrated microprocessor enables charging in several steps. The final charging step, maintenance charging, maintains the battery capacity at 95 – 100 % and therefore keeps the battery fully charged at all times. The charging operation does not need to be monitored. However, do not leave the battery unattended if you charge it over an extended period of time, so that you can disconnect it from the mains power supply in the event of a fault in the charger.

5.1 Automatic 12V/24V battery recognition
The charger analyzes the connected battery and recognizes whether it is a 12V or a 24V battery. After completion of the analysis, the charging program will start up or an error message will be issued.

5.2 Description of the LED display (Fig. 1/ Item 2)

0.0 a) No battery connected
b) 12 V battery: Battery voltage below 3V -> The battery is either unsuitable for charging or is defective.
c) 24 V battery: Battery voltage below 15.5V -> The battery is either unsuitable for charging or is defective.

Lo Battery in activation mode

FUL Battery fully charged -> Disconnect the charger from the battery

Err Battery wrongly connected (+/- confused) or short circuit at the terminals -> Disconnect the charger from the battery and start the charging process from the beginning again.

Bat Battery defective -> Disconnect the charger

from the battery
StA Jump start function is switched on

5.3 Description of the LEDs (Fig. 2)
A Battery voltage indicated in information display
B Battery charge level indicated in information display
C Charging a standard battery / gel battery
D Charging an AGM battery
E Charging a standard / gel / AGM battery in winter mode
F Charging a battery at low current strength
G Charging a battery with high current strength
H Recovery function for a 24V battery
I Jump start function is switched on

5.4 Setting charging programs
Note:
- Connect the charger to the socket outlet (check the technical data). All the LEDs will flash briefly 2x.
- If the voltage of the 12V battery is less than 3V (less than 15.5V for a 24V battery), it cannot be charged.
- To select the battery types or winter mode, press the BATTERY SELECT button (Fig. 1/ Item 4). The corresponding LED indicator (Fig. 2 / Item C/D/E) lights up.
- Pressing the AMPERE SELECT button (Fig. 1/Item 5) allows you to set the maximum charging current strength or the 24V repair function. The LED for the applicable charging current strength (Fig. 2 / Item F/G) or the LED for the 24V repair function (Fig. 2 / Item H) lights up.
- The battery is charged in an automatic process consisting of not more than 6 charge settings, depending on the available battery voltage.
- The actual charging current depends on the charge setting the charger is currently in, and may be less than the set max. charging current.

5.4.1 Standard charging programs
A) STD: Charging program for lead acid batteries (wet, Ca/Ca, EFB batteries) and gel batteries. The “STD” LED lights up the first time the charger is used.
B) AGM: Charging program for AGM batteries. Press the “BATTERY SELECT” button to switch from the STD to the AGM charging program.

5.4.2 Special charging programs
C) Winter: Recommended charging program (higher end-of-charge voltage) in cold weather (ambient temperature -20 °C - +5 °C) for normal lead acid batteries (wet / Ca/Ca batteries) and AGM batteries.
Press the “BATTERY SELECT” button to switch from the AGM to the “Winter” charging program.

5.5 Charging the battery:
- Release or remove the battery stoppers (if fitted) from the battery.
- Check the acid level in the battery. If necessary, top up the battery with distilled water (if possible). Important! Battery acid is aggressive. Rinse off any acid splashes thoroughly with lots of water and seek medical advice if necessary.
- First connect the red charging cable to the positive pole of the battery.
- Then connect the black charging cable to the bodywork of the vehicle away from the battery and the petrol pipe.
- **Warning!** Under normal circumstances the negative battery pole is connected to the bodywork and you proceed as described above. In exceptional cases it is possible that the positive battery pole is connected to the bodywork (positive earthing). In this case, connect the black charger cable to the negative pole on the battery. Then connect the red charger cable to the bodywork at a point away from the battery and the petrol pipe.
- After the battery has been connected to the charger, you can connect the charger to a socket (see Technical Data). You can now change the charging settings (see section 5.3).
- **Important!** Charging may create dangerous explosive gas and therefore you should avoid spark formation and naked flames whilst the battery is charging. There is a risk of explosion! It is essential that you ventilate the rooms well.
- If “FUL” appears in the LED display, the charging process is completed. The charger holds the battery at 95 % – 100 % available battery capacity using pulsed charging. If the battery was discharged and the charger shows this after just a few minutes, this indicates that the battery capacity is low. The battery cannot be recharged any further.

Calculating the charging time (Fig. 3)
The charging time depends on the charge status of the battery. If the battery was discharged but is chargeable (not exhaustively discharged, “Lo” displayed, or defective), the approximate charging time up to approx. 80 % charged can be calculated using the following formula:

$$\text{Charging time/h} = \frac{\text{Battery capacity in Ah}}{\text{Amp. (charging current)}}$$

The charging current should be 1/10 to 1/6 of the battery capacity.

5.6 Finishing charging the battery
- Pull the power plug out of the socket outlet.
- First disconnect the black charging cable from the bodywork.
- Then release the red charging cable from the positive pole on the battery.
- Important! In case of positive earthing, first disconnect the red charging cable from the bodywork and then the black charging cable from the battery.
- Screw or push the battery stoppers back into position (if there are any).

Important! If the mains plug is pulled out but the charger cables are still connected to the battery, the charger will draw off a small amount of electricity from the battery. We therefore recommend that you always completely remove the charger from the battery when not in use.

5.7 24V Repair function
This function can be used to restore the functional performance of deeply discharged 24V starter batteries. In most cases deeply charged starter batteries have become damaged and can therefore only have their functional performance restored for a short time.

To switch on this function, press the AMPERE SELECT button for 5 seconds. The selected battery will be charged up to a level of 15.1 V and then analyzed.

a) If the battery voltage drops to above 14.5 V within the analysis time, it is a 24 V battery. The battery has undergone exhaustive discharge and will be charged up with low current strength. The battery could be damaged as a result of the exhaustive discharge and an error message may be displayed during charging. If this is the case, it cannot be charged.

b) If the battery voltage drops to below 14 V within the analysis time, the connected battery will be treated as a 12 V battery. The battery will be fully charged up as a 12 V battery with low current strength.

c) If the battery voltage drops to between 14 – 14.5 V within the analysis time, this means that the battery cannot be identified as either a 12V or a 24V battery. The battery will not be charged up and “Err” will be displayed.

5.8 Jump start function
Important! Do not press any button while the countdown or the starting process is continuing (indicated by “StA”). Should a malfunction occur because a button is pressed by mistake, pull out the power plug.
The battery voltage which is read off the LED display must be a minimum of 11.5 V for a 12 V battery (the higher the battery voltage, the better) (or a minimum of 23 V for a 24 V battery) for the jump starting function to be able to work. However, it is still possible that the jump starting function may not work nonetheless (e.g. if the battery is damaged or the starter is faulty). In any such case, proceed as described below.

1. Charge the battery as previously described for at least 15 minutes with a high charging current.
2. Press the “ENGINE START” pushbutton (Fig. 1/Item 6) for 5 seconds. This activates the jump start function.

The charger checks the existing battery voltage.

2.1 If the battery voltage is below 11.5 V (23 V), a jump start is not possible and the LED display will show “ERR”. Disconnect the charger from the power supply and the battery. Connect the charger to the battery and power supply again as described above. Charge the battery again for at least 15 minutes with a high charging current. Then repeat the jump start process from point 2 if the LED display indicates at least 11.5 V (23 V).

2.2 If the battery voltage is 11.5 V (23 V) or higher, a jump start is possible. “StA” appears on the LED display and the “I” LED lights up. You now have 1 minute in which to attempt a start. During this minute the equipment provides the jump start current (25 A – 100 A), depending on the battery voltage) for 5 seconds. After 5 seconds the equipment goes into quiescent state (no charging current) in order to cool down, and the LED display (Fig. 1/ Item 2) starts a countdown of 180 seconds. At the end of the countdown the charger analy-

zes the battery.

a) If the jump start was successful, pull out the mains plug and disconnect first the black charging cable and then the red charging cable (see section 5.5).

b) If the jump start was unsuccessful, charge the battery again for at least 15 minutes with a high charging current. Then repeat the jump start process from point 2 if the LED display indicates at least 11.5 V (23 V).

3. You can repeat the jump start process twice. If the 3rd jump start attempt is also unsuccessful, do not try it again. The jump start function is unable to provide sufficient assistance for the battery in the jump start process.

6. Safety devices

1. The charger is equipped with electronic protection against overload, short circuit and swapped poles. A short circuit on the terminals or swapped poles (+/- terminals at the battery poles the wrong way round) is indicated by the error message “ERR” (see section 5.1).
2. Depending on the equipment, there are also fuses inside the equipment for additional electronic protection. In the event of a fault, fuses inside the equipment can only be replaced by an after sales service outlet. Faulty fuses must be replaced with ones of the same rating.
3. There is a miniature fuse on the rear of the equipment. In the event of a fault, the user can replace this fuse with one of the same rating. To do so, use a suitable screwdriver to turn the top part of the fuse holder to the left. After replacing the fuse, turn the top part to the right again.

7. Maintenance and care of the battery

- Ensure that your battery is always fitted securely.
- A perfect connection to the cable network of the electrical system must be ensured at all times.
- Keep the battery clean and dry. Apply a thin coating of grease to the connection terminals using an acid-free, acid-resistant grease (Vaseline).
- Check the level of the acid in batteries that are not maintenance-free versions approximately every 4 weeks and top up with distilled water if necessary.

8. Cleaning, maintenance and ordering of spare parts

Danger!
Always pull out the mains power plug before starting any cleaning work.

8.1 Cleaning

- Keep all safety devices, air vents and the motor housing free of dirt and dust as far as possible. Wipe the equipment with a clean cloth or blow it with compressed air at low pressure.
- We recommend that you clean the device immediately each time you have finished using it.
- Clean the equipment regularly with a moist cloth and some soft soap. Do not use cleaning agents or solvents; these could attack the plastic parts of the equipment. Ensure that no water can seep into the device. The ingress of water into an electric tool increases the risk of an electric shock.
- The charger should be placed in a dry room for storage. Any corrosion must be cleaned off the charging terminals.

8.2 Maintenance

There are no parts inside the equipment which require additional maintenance.

8.3 Ordering replacement parts:

Please quote the following data when ordering replacement parts:

- Type of machine
- Article number of the machine
- Identification number of the machine
- Replacement part number of the part required

For our latest prices and information please go to www.isc-gmbh.info

9. Disposal and recycling

The equipment is supplied in packaging to prevent it from being damaged in transit. The raw materials in this packaging can be reused or recycled. The equipment and its accessories are made of various types of material, such as metal and plastic. Never place defective equipment in your household refuse. The equipment should be taken to a suitable collection center for proper disposal. If you do not know the whereabouts of such a collection point, you should ask in your local council offices.

10. Troubleshooting

If the equipment is operated properly you should experience no problems with malfunctions or faults. In the event of any malfunctions or faults, please check the following before you contact your customer services.

Fault	Possible cause	Remedy
Equipment does not charge up	- Charger clamps connected incorrectly	- Connect the red clamp to the positive pole and the back clamp to the bodywork
	- Contact between the charger clamps	- Prevent contact
	- Battery defective	- Have the battery checked by an expert and replace it if necessary

For EU countries only

Never place any electric power tools in your household refuse.

To comply with European Directive 2012/19/EC concerning old electric and electronic equipment and its implementation in national laws, old electric power tools have to be separated from other waste and disposed of in an environment-friendly fashion, e.g. by taking to a recycling depot.

Recycling alternative to the return request:
As an alternative to returning the equipment to the manufacturer, the owner of the electrical equipment must make sure that the equipment is properly disposed of if he no longer wants to keep the equipment. The old equipment can be returned to a suitable collection point that will dispose of the equipment in accordance with the national recycling and waste disposal regulations. This does not apply to any accessories or aids without electrical components supplied with the old equipment.

Warranty certificate

Dear Customer,
All of our products undergo strict quality checks to ensure that they reach you in perfect condition. In the unlikely event that your device develops a fault, please contact our service department at the address shown on this guarantee card. You can also contact us by telephone using the service number shown. Please note the following terms under which guarantee claims can be made:

1. These guarantee terms apply to consumers only, i.e. natural persons intending to use this product neither for their commercial activities nor for any other self-employed activities. These warranty terms regulate additional warranty services, which the manufacturer mentioned below promises to buyers of its new products in addition to their statutory rights of guarantee. Your statutory guarantee claims are not affected by this guarantee. Our guarantee is free of charge to you.
2. The warranty services cover only defects due to material or manufacturing faults on a product which you have bought from the manufacturer mentioned below and are limited to either the rectification of said defects on the product or the replacement of the product, whichever we prefer.
   Please note that our devices are not designed for use in commercial, trade or professional applications. A guarantee contract will not be created if the device has been used by commercial, trade or industrial business or has been exposed to similar stresses during the guarantee period.
3. The following are not covered by our guarantee:
   - Damage to the device caused by a failure to follow the assembly instructions or due to incorrect installation, a failure to follow the operating instructions (for example connecting it to an incorrect mains voltage or current type) or a failure to follow the maintenance and safety instructions or by exposing the device to abnormal environmental conditions or by lack of care and maintenance.
   - Damage to the device caused by abuse or incorrect use (for example overloading the device or the use or unapproved tools or accessories), ingress of foreign bodies into the device (such as sand, stones or dust, transport damage), the use of force or damage caused by external forces (for example by dropping it).
   - Damage to the device or parts of the device caused by normal or natural wear or tear or by normal use of the device.
4. The guarantee is valid for a period of 24 months starting from the purchase date of the device. Guarantee claims should be submitted before the end of the guarantee period within two weeks of the defect being noticed. No guarantee claims will be accepted after the end of the guarantee period. The original guarantee period remains applicable to the device even if repairs are carried out or parts are replaced. In such cases, the work performed or parts fitted will not result in an extension of the guarantee period, and no new guarantee will become active for the work performed or parts fitted. This also applies if an on-site service is used.
5. To make a claim under the guarantee, please register the defective device at: www.isc-gmbh.info. Please keep your bill of purchase or other proof of purchase for the new device. Devices that are returned without proof of purchase or without a rating plate shall not be covered by the guarantee, because appropriate identification will not be possible. If the defect is covered by our guarantee, then the item in question will either be repaired immediately and returned to you or we will send you a new replacement.

Of course, we are also happy offer a chargeable repair service for any defects which are not covered by the scope of this guarantee or for units which are no longer covered. To take advantage of this service, please send the device to our service address.

Also refer to the restrictions of this warranty concerning wear parts, consumables and missing parts as set out in the service information in these operating instructions.