

PC04, PC05 EV Portable Chargers

USER MANUAL



INTRODUCTION

METRON EV portable chargers PC04 and PC05 are designed to charge electric vehicles equipped with Type 2 charging sockets [European standard] from any standard industrial socket (e.g. 1-phase or 3-phase CEE sockets). Where's the in-line "bulky box"? **Metron portable chargers are truly unique because all the charging station electronics is placed inside Type 2 charging plug itself!**

GET STARTED

First plug the portable charger in the wall outlet. Immediately signal LED starts blinking: number of blinks tells you what is the saved power setting (see the next page). Afterwards LED glows constantly till AC power is present indicating standby/ready status.

The biggest advantage of this design is the fact that METRON portable chargers don't have that heavy in-line "bulky box" as others do, what makes them lighter, easier to install/connect and also easier to store in a carrier case. METRON portable chargers also offer the possibility to set desired charging current/power by simply pressing a button.

When you plug it into the vehicle Type 2 socket it starts blinking slowly which means the vehicle is charging. When your electric vehicle is fully charged the LED glows constantly again.

SETTING THE DESIRED CHARGING CURRENT/POWER

METRON portable chargers allow user to set desired charging current/power, before being plugged in the electric vehicle Type 2 socket, or even while the vehicle is charging! Procedure is simple:

- press and hold the push button: LED switches off immediately
- after 5 seconds LED starts blinking slowly
- Releasing the push button after a certain number of blinks determines charging current/power as follows:



PC04

Number of LED blinks	Charging current/power
1	6 A / 1,4 kW
2	8 A / 1,8 kW
3	10 A / 2,3 kW
4	13A / 3,0 kW
5	16A / 3,7 kW
6	20A / 4,6 kW
7	25A / 5,8 kW
8	32A / 7,4 kW

PC05

Number of LED blinks	Charging current/power
1	3 x 6 A / 4,1 kW
2	3 x 8 A / 5,5 kW
3	3 x 10 A / 6,9 kW
4	3 x 13A / 9,0 kW
5	3 x 16A / 11,0 kW



New charging current/power setting is stored in the memory and it stays the same (even after the power supply is not present anymore) until the next setting change is performed.

STATUS NOTIFICATION BY LED BLINKS

LED STATUS

Slow blinking when power supply is applied

Constantly on when not plugged in

Slow blinking when plugged in

Constantly on when plugged in

NOTIFICATION

Indicating previous saved current setting

Stand-by / Ready to charge

Charging

Electric vehicle fully charged

Slow blinking 2 times when plugged in	Electric vehicle requests room ventilation (no charging)
Slow blinking 3 times (plugged in or not plugged in)	Portable charger overheated (no charging); restarts charging automatically when it cools down
Slow blinking 5 times (plugged in or not plugged in)	Wall plug overheated (no charging); restarts charging automatically when it cools down; applies only to versions with wall plug integrated over-temperature protection
Rapid blinking (plugged in or not plugged in)	Fault



3-phase portable charger PC05 can also charge from domestic 1-phase wall socket (Schuko) or 1-phase 16A CEE "camper" socket if proper adaptor is used. In such case PC05 behaves like PC03 portable charger (same current/power).



1-phase portable charger PC04 can also charge from domestic 1-phase wall socket (Schuko) or 1-phase 16A CEE "camper" socket if proper adaptor is used. In such case be sure to set charging current to 16A or less, otherwise you risk damage to the socket or even blown fuse!



The use of portable charger versions without RCD protection is allowed exclusively on the installations, protected by RCD. Household 16A Schuko wall sockets must be designed for constant 16A current! In the event the cable has been damaged the product should be removed from use immediately!

TECHNICAL SPECIFICATIONS

PC04

PC05

EV Side Plug Type	Type 2 (IEC 62196) Female Plug	Type 2 (IEC 62196) Female Plug
Wall socket/grid side Standard Plug Types	CEE 32A (3-phase/3P+N+E), CEE 32A (1-phase/2P+E), ...	CEE 16A (3-phase/3P+N+E), CEE 32A (3-phase/3P+N+E)
Max. Charging Current	32A (1-phase)	3x16A (3-phase) or 1x16A (1-phase)
Possible charging current settings	6/8/10/13/16/20/25/32 A	6/8/10/13/16 A
Max. Charging Power	7,4 kW	3,7 kW (1-phase) 11 kW (3-phase)
Rated Voltage	230 Vac (1-phase)	230 Vac (1-phase) 400 Vac (3-phase)
Operating voltage/ frequency range	from 90 V to 270 V (50/60 Hz)	90 V to 270 V (1-phase) 155 V to 470 V (3-phase) (50/60 Hz)
PREMIUM quality cable (Made in Germany)	yes	yes
Cable length	3 m to 20 m (or on request)	3 m to 20 m (or on request)
Type B ground fault protection device (RCD)	optional	optional
UV resistance	yes (all parts)	yes (all parts)
Operating Ambient Air Temperature Range	from -30°C to +50°C	from -30°C to +50°C
IP Rating	IP54 (rain water resistant)	IP54 (rain water resistant)
Weight	2.3 kg (5 m cable) + 0.3 kg per each additional meter of cable	1.9 kg (5 m cable) + 0.22 kg per each additional meter of cable

Portable charger models PC04 and PC05 can have some additional designation next to the number such as PC04xyz and PC05xyz, where "x" and "y" and "z" may be any alphanumeric character or blank, representing a color or wall plug type, or lower than standard charging current limit or factory version, or any possible future product differentiations, which do not have an impact on general technical specifications.

WHAT IS RCD AND HOW DOES IT WORK?

RCD is an acronym for Residual Current Device - sometimes it can be called also Earth Leakage Circuit Breaker or Safety Switch. Its purpose is to prevent you from getting a fatal electric shock if you touch live part, such as a bare copper wire under high voltage. RCDs offer a level of personal protection that ordinary fuses/circuit-breakers cannot provide. RCD constantly monitors the electric current flowing through one or more circuits which it protects. If it detects electricity flowing down an unintended path, such as through a person who has touched a live part, the RCD will switch the circuit off very quickly, significantly reducing the risk of death or serious injury.

PC04 and PC05 are equipped with Metron RCD Type B device called **RCDB1** which represents maximum possible level of personal protection as it protects users from AC, pulsating DC, pure DC and also high frequency AC leakage currents. In order to ensure "BOXLESS" design of PC04/PC05 portable charger RCD is packed inside 3-phase 16/32A CEE plug itself what eliminates even the smallest unsafe section found on other portable chargers where there is at least 30cm of unprotected cable between wall plug and "bulky" in cable control box.



PC04 and PC05: Red LED indicates RCD cut-off the power because of leakage current detection.
To reset just unplug, wait a second, and plug it in again.



On request PC04/PC05 can be also supplied without RCDs. The use of PC04/PC05 portable charger version without RCD protection is allowed exclusively on the installations protected by RCD.



In the event the cable has been damaged the product should be removed from use immediately!

GREEN PRODUCTION

All our products are produced in a carbon neutral way by using "Sustainable energy cycle" method. Production plant where we make charging cables and portable charging stations is the first fully sustainable production facility for EV charging cables. All energy, needed for the heating and cooling of the building, production process and for transportation of goods and employees (except deliveries of heavy materials by trucks), is produced by 2 photovoltaic power plants and stored in 4 storage batteries. Almost all of the raw materials we use (cables, plugs) are produced in EU, to shorten supply routes and support local economy. Buying our products helps developing sustainable economy.

LIMITED WARRANTY

METRON warrants its product to the original consumer purchaser that it will repair, or replace, any product that is determined to be defective for the following terms: **Two (2) years from date of purchase on all components.**

To be eligible for repair or replacement under this warranty, the product in question must be sent back to METRON within the warranty period and the original consumer purchaser must comply with the following conditions: The product thereof must not have been modified or altered in any way by an unauthorized source; The product thereof must have been used in accordance with the user manual.

This limited warranty does not cover: Damage due to improper use; Accidental or intentional damage; Misuse, abuse, corrosion, or neglect; Product impaired by severe natural conditions, such as excessive hail storms, lightning strikes, tornados, flooding, ice or other natural occurrences; Damage due to improper packaging on return shipment.

Any and all labor charges for troubleshooting, removal or replacement of the product are not covered by this warranty and will not be honored by METRON. All shipping costs regarding repair or replacement of the product is to be pre-paid by the original consumer purchaser.