



# Beluk CX Plus Power Factor Controller Instruction Manual

[Home](#) » [Beluk](#) » Beluk CX Plus Power Factor Controller Instruction Manual 



Rev. 1.0  
2023-01

## Contents

- [1 CX Plus Power Factor Controller](#)
- [2 Product specifications](#)
- [3 General safety notes](#)
- [4 Installation and commissioning](#)
- [5 First Setup:](#)
- [6 Documents / Resources](#)
- [7 Related Posts](#)

## CX Plus Power Factor Controller

### Instruction Manual

#### Gebrauchsanweisung

Please read the operating instructions carefully before operating the unit.

Functional description: Power factor controller in the NV range for controlling capacitor contactors.

Installation place: Control cabinet installation of compensation systems

## Product specifications

**Type** :CXplus

**Voltage range** : 90-550 V AC

**Fuse** : 6 A

**Measuring voltage** : 90-550 V AC

**Measuring current** : 5 mA – 5 A

**Switching outputs** : 6R /12R | 6T/12T

**Inputs** :Digitaleingang

**Communication interfaces** : Optional:

This product contains

2x mounting brackets



**DANGER**



### **General safety notes**

Failure to observe the following instructions may result in serious injury or death!

#### **! DANGER**

There is a risk of electric shock during installation!

Therefore, electrical devices may only be installed, operated, serviced and maintained by qualified professionals. A professional is someone who has the ability, experience and knowledge required for the construction, installation and operation of electrical equipment and who has been instructed in identification and avoidance of possible hazards.

During installation and maintenance, the relevant regulations for the installation of switchgear and accident prevention must be observed and adhered to. Devices with damaged or open housings or terminals must not be operated on the power grid and must be disconnected immediately.

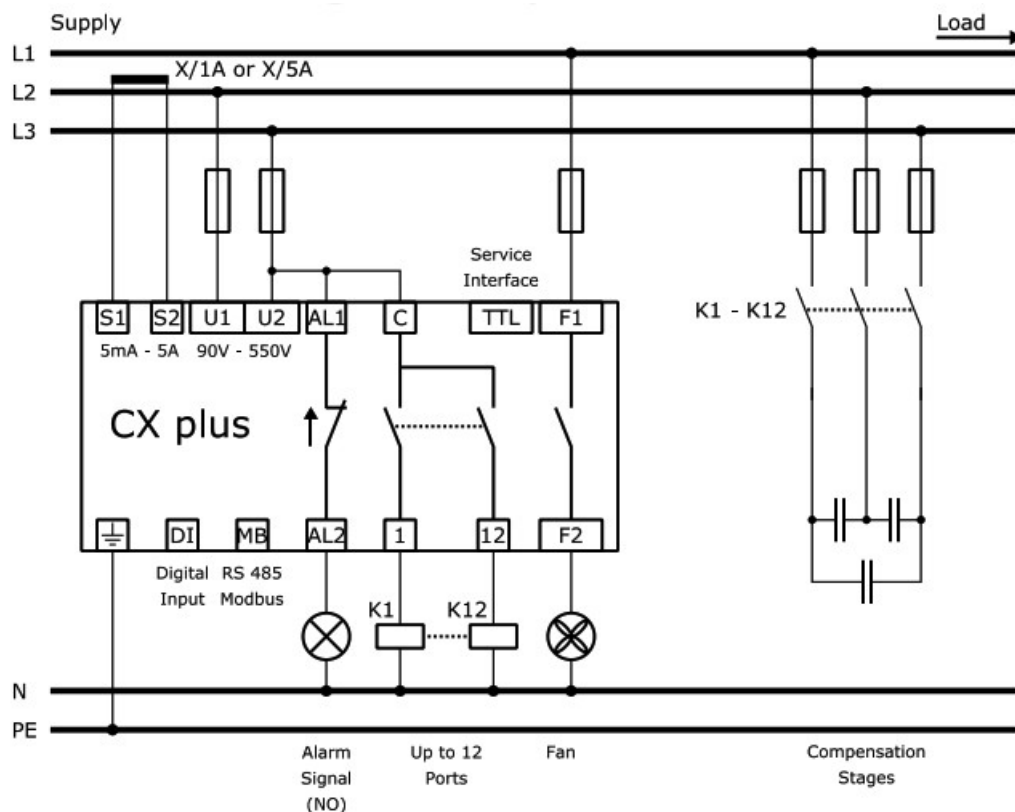
After disconnecting the device, 10 minutes must be waited until the capacitors have been discharged. Subsequently, doors or covers may be removed. It must be checked whether the disconnected area is voltage-free using a standardized measuring instrument.

Ther BELUK GmbH assumes no responsibility or warranty for damage to persons and equipment caused by improper installation and use.



Mounting:	
Installation location:	in door of switch cabinet
Mounting position:	vertical
IP protection class:	front: IP41 / rear: IP20
Mounting type:	2x mounting brackets

**Connection diagram: CX plus -12R**



**NOTE:** The CX plus is designed to control capacitive or inductive stages. Operating both stage types simultaneously is not possible.

## Installation and commissioning



The working area must be de-energised and secured against unauthorised and unintentional reconnection. The absence of voltage must be determined with a standardised measuring device. The de-energised system must be earthed and short-circuited. Neighbouring live parts must be covered and/or cordoned off.

1. Before installation, the connection specifications of the CX plus must be compared with the data of the power grid.
2. The current transformer must be short-circuited.



**NOTE:** A current transformer which has been open-circuited generates a life-threatening voltage. This can lead to a destruction of the current transformer.

3. Insert the CX plus into the panel cut-out and fix it by using both fixing clamps.
4. Connect the grounding cable to the intended terminal on the backside of the device.
5. All cables must be connected as it is depicted in the connection diagram.
6. Fuse protection of the unit with 6A
7. Remove the short-circuit bridge at the current transformer.
8. The voltage can now be switched on.
9. If the device is connected correctly, the display will light up for one second and all symbols will be displayed during a display test.

## First Setup:



[www.beluk-gr.de/download/Video\\_AI\\_BLR\\_CXplus\\_EN\\_01.mp4](http://www.beluk-gr.de/download/Video_AI_BLR_CXplus_EN_01.mp4)

Select: First Setup

YES / No

ENTER -> YES

Make the most important settings!

Un Nominal voltage

Ct Current transformer factor

External current transformer in the supply. Primary and secondary windings result in the factor e.g., 150 | 750/5A.

Pt Voltage transformer factor

In the case that no voltage transformer is connected | 1

Ai Automatic initialization

The phase angle between voltage and current is determined and which stage outputs are used.

YES: ALL stages are connected 3x

All connected stages "AUTO" unused outputs "OFF"

10) After a successful First Setup, the display shows AUTO. The control starts after the set discharge time has been expired.

PFC	Control ON, OFF, Hold Switching on, off or suspend the control
CP1	Target-cos $\phi$ 1 Compensation target
St	Switching time Delay between switching different stages
Out	Stage type AUTO, FON, FOFF, Flty

### Main menu

A menu can be selected by pushing ▲ ▼ ; Submenus are entered with ►



### AUTO or

no display: Measurement menu

INFO: Stage database

### More Information:



[www.beluk.de](http://www.beluk.de)

BELUK GmbH | Taubenstraße  
D-86956 Schongau  
Tel. +49 8861 2332-0

## Documents / Resources

[illegible]