

Intelligent Building Solutions

Installation Manual



CBC 21 DR DUBLE BIND CONTROLLER UNIT

- for AC and DC motors
- DIN-rail mounting

CIB-tech

Introduction

The CBC 21 DR is a unit for controlling up to two blinds, roller shutters, gates, or other devices with bi directional motors and limit switch at both ends.

Additional Equipment Required

1. Functional CIB-tech system

A minimal number of essential CIB-tech components to make a functional CIB-tech system¹

2. Double command buttons (optional)

Double normally-open type (contact is closed when button is pressed) push buttons for manually controlling the blind in the desired direction. Most types of flush mounted or DIN-rail mounted double push buttons are suitable² along with a series of mechanical blind control buttons. Note that it is not necessary to use exclusive double push buttons (only one contact can be closed at one time) like in the case of direct blind control. Also note that the command buttons must be bush-button type (contact is only closed while the button is pressed). Some mechanical blind control switches use ON-OFF switches to run the blind to the end without keeping the button pressed. These blind control switches are not suitable.

3. Blinds with limit switch

The device that the CBC 21 DR controls. Blind, roller shutter, gate or other motorized device that is controllable in different directions by supplying different wires of the motor (typically in case of bi-directional AC motors) or by changing the polarity of the supply (typically in case of DC motors). Tease blinds must be equipped with mechanical or electrical limit switches (as they normally are) to stop the motor when the blind reaches the end position eave if the CBC 21 DR keeps supplying it. In this document we refer as "Blind" or "Blind motor" to all of these devices.

Technical Specifications

Electrical characteristics

● Power Supply

The CBC 21 DR functions as a node in a CIB-tech system, being powered from the CIB-tech system's power supply via the CIB-tech connectors.

- Operating voltage range: 17.5 to 28V DC (nominal 24V DC)
- Supply current (at nominal voltage)
 - Standby current : 13mA
 - Maximum current: 50mA

● Power rating (2 voltage-free blind control outputs)

- Rated AC voltage: 250V AC
- Rated DC voltage: 30V DC
- Rated current: 4A

● Signal Input

- 2 pares of command buttons: N.O. with voltage free contacts

Mechanical characteristics

The CBC 21 DR has a standard 3-module wide enclosure for M36 type DIN-Rail

- Dimensions: 96mm W x 52mm L x 60mm D
- Weight: 135g

¹ See "CIB-tech installation manual" for details.

² For DIN-rail type duple push-button, IBS product BSD 10 DM might be used.

Environmental characteristics

- Operating temperature: -10°C to 85°C
- Storage temperature: -25°C to 100°C

Key Features

- Can control up to two AC or DC blinds;
- Can handle blind with tilt function;
- Blind position and tilt position (if it is the case) controllable in 100 steps;
- Scheduled blind positioning possibility, individually settable for each output;
- Blind position remotely controllable via the CIB-tech system;
- Internal bi-color LED, indicating the output state (green: all blinds are stopped / red: at least one blind is supplied);

Installation

The CBC 21 DR is meant to be installed on a standard M36 type DIN-Rail.

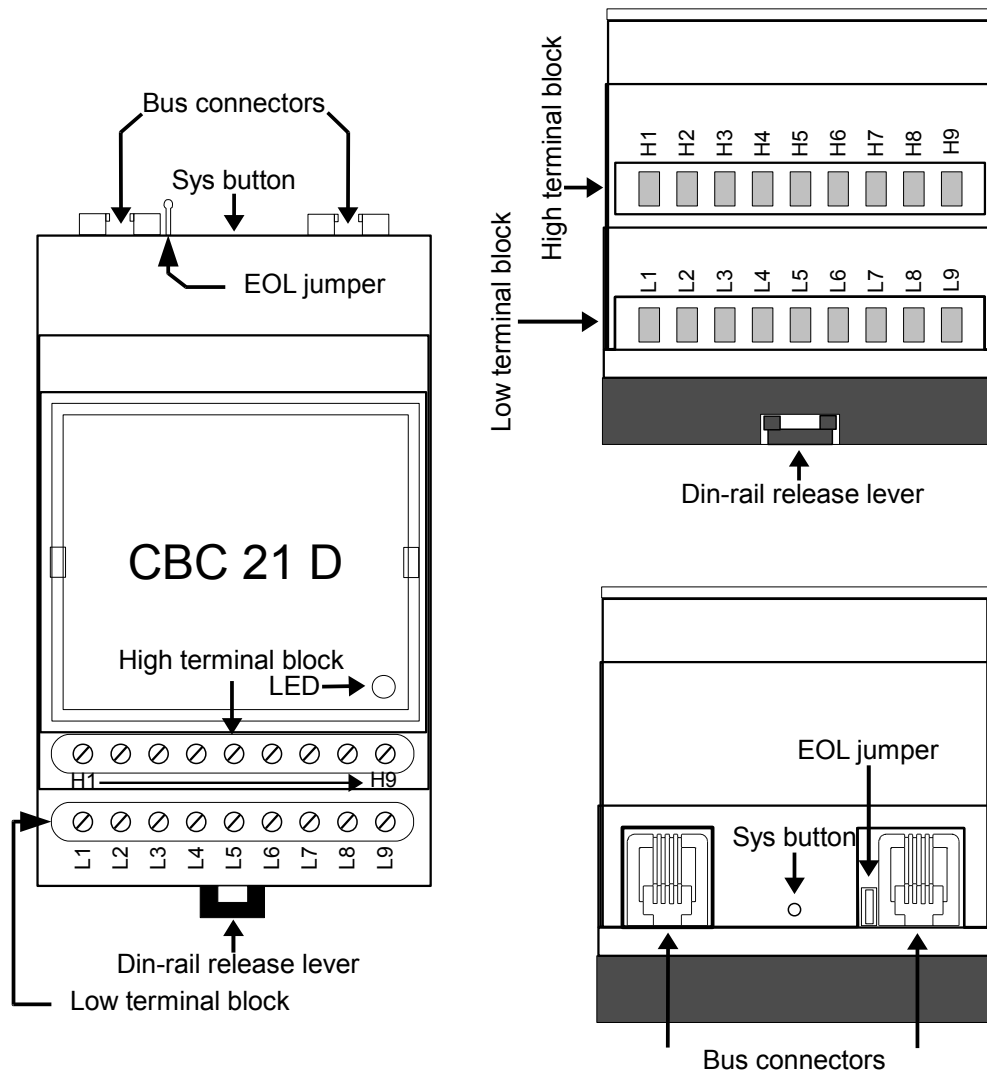
Part description

- **Bus connectors:**
 - 4P4C modular jack connectors for CIB-tech connection¹
- **Sys button:**
 - push button for CIB-tech system configuration
- **EOL jumper:**
 - CIB-tech system's End Of Line jumper¹
- **LED:** indicator LED for output state
- **DIN-rail release lever:**
 - lever for removing the device from the M36 DIN-Rail

- **Low terminal block:** terminals for connecting external devices
 - L1. Blind 1 control contact 1
 - L2. Blind 1 control contact 2
 - L3. Blind 1 control contact 3
 - L4. Blind 1 – Close blind push button – Normally open contact
 - L5. Blind 1 – Common contact for push buttons
 - L6. Blind 1 – Open blind push button – Normally open contact
 - L7. Blind 1 control contact 4
 - L8. Blind 1 control contact 5
 - L9. Blind 1 control contact 6

- **High terminal block:** terminals for connecting external devices
 - H1. Blind 2 control contact 1
 - H2. Blind 2 control contact 2
 - H3. Blind 2 control contact 3
 - H4. Blind 2 – Close blind push button – Normally open contact
 - H5. Blind 2 – Common contact for push buttons
 - H6. Blind 2 – Open blind push button – Normally open contact
 - H7. Blind 2 control contact 4
 - H8. Blind 2 control contact 5
 - H9. Blind 2 control contact 6

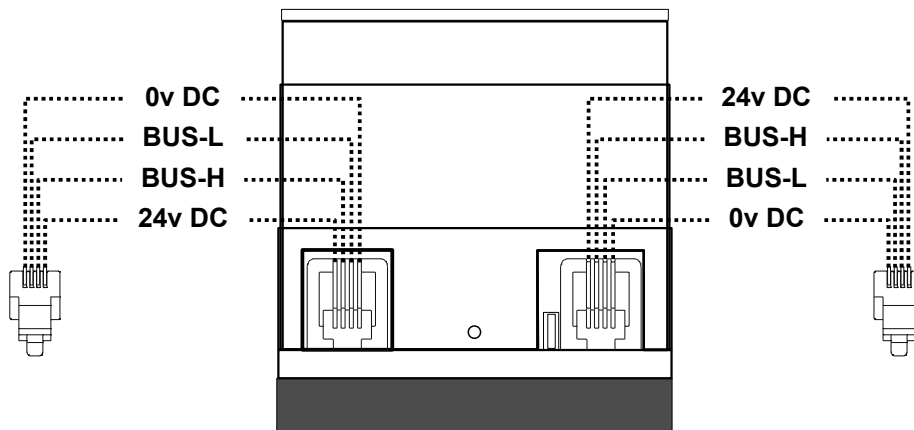
¹ See “CIB-tech installation manual” for details.



Wiring diagrams

Connection to CIB-tech system:

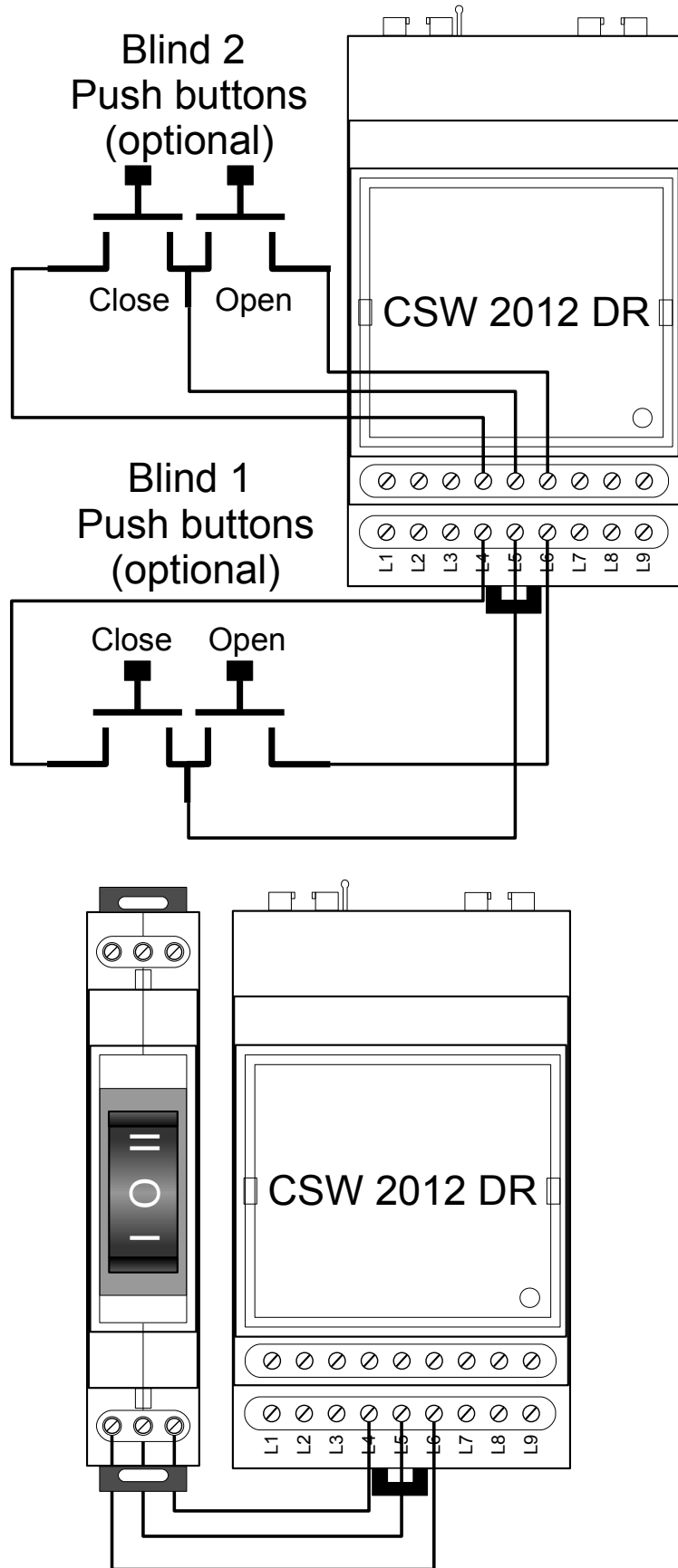
Use the CBC 21 DR device's two 4P4C modular jack connectors to connect it to the CIB-tech systems (chain like) bus. Do not forget to remove the EOL jumper if the device is not the last element of the chain¹



¹ See "CIB-tech installation manual" for details.

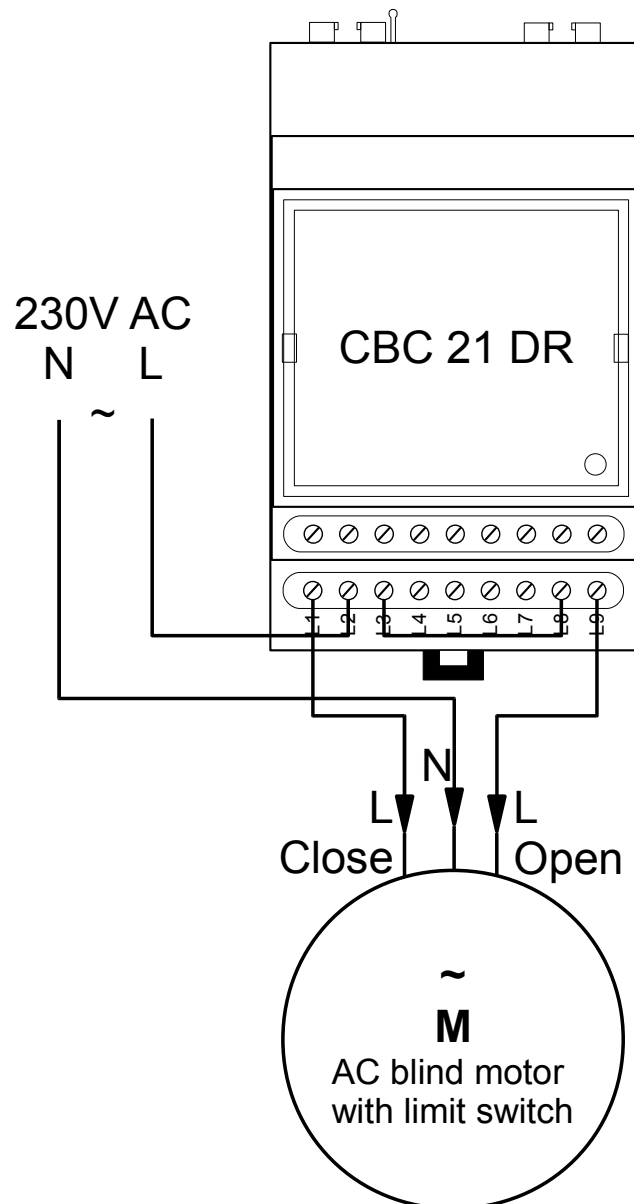
Connecting the input devices

Connecting the push buttons, used for controlling manually the two blinds.



Connecting the outputs:

Connecting an AC type blind motor to the CBC 21 DR:

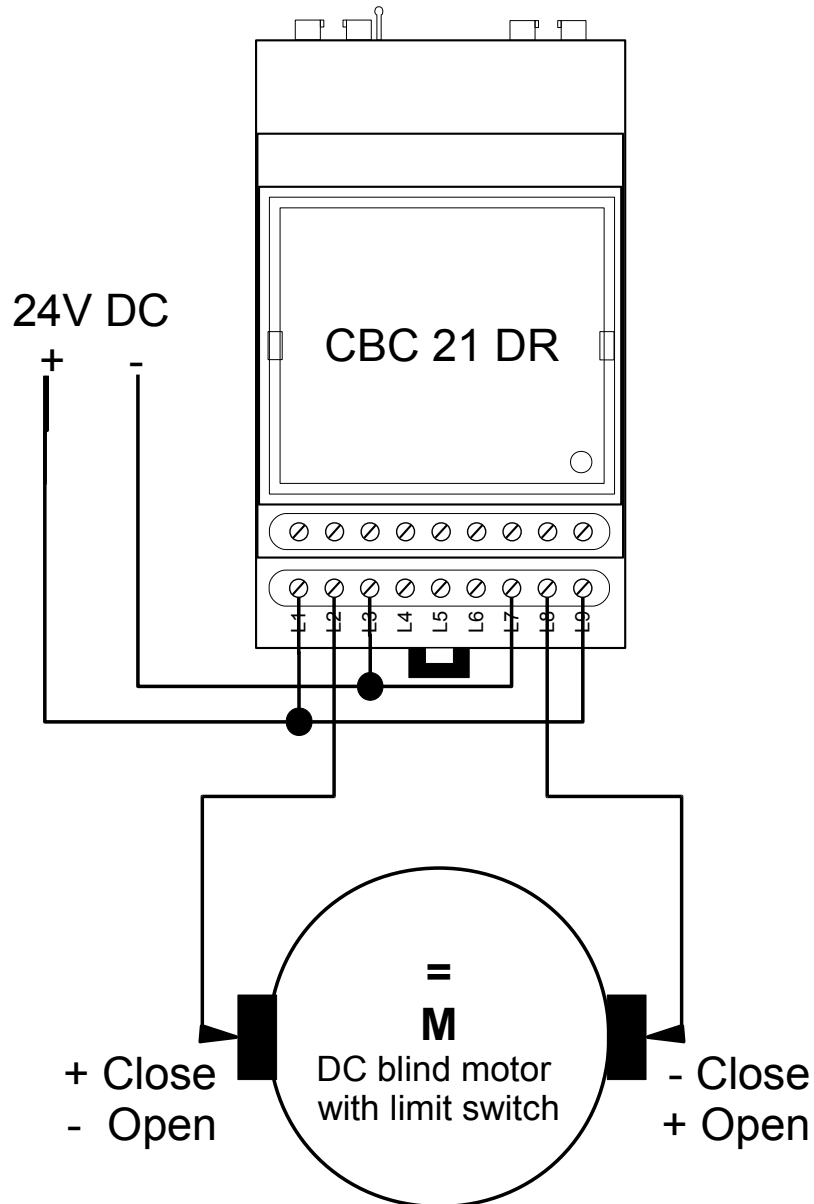


The connection is identical for the second blind control output.

Warning: Do not use any other connection for AC blind motors. If the motor is connected in any other way, the CBC 21 DR and/or the blind motor will suffer permanent damage.

Note: If this connection type is not suitable for your AC blind motor, contact IBS technical support.

Connecting an DC type blind motor to the CBC 21 DR:



The connection is identical for the second blind control output.

Warning: Do not use any other connection for DC blind motors. If the motor is connected in any other way, the CBC 21 DR and/or the blind motor will sufferer permanent damage.

Note: If this connection type is not suitable for your DC blind motor, contact IBS technical support.

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Technical Support:

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