

Intelligent Building Solutions

Installation Manual



CCL 20 S **PTZ CAMERA CONTOLER UNIT**

- Surface mounting

CIB-tech

Introduction

The CCL 20 S is a PTZ (Pan Tilt Zoom) video camera control unit, part of the CIB-tech automation system. The CCL 20 S can control one PTZ video camera with PELCO-P protocol at the baud rate of 9600.

Additional Equipment Required

1. Functional CIB-tech system

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

Technical Specifications

Electrical characteristics

● Power Supply

Due to the galvanic isolation of the CIB-tech network from the video monitoring system, the CCL 20 S requires double power supply. Its powered both from the CIB-tech system's power supply via the CIB-tech connector and from the video camera's power supply via the dedicated terminal block.

- Power from CIB-tech system:
 - Operating voltage range: 20 to 28V DC (nominal 24V DC)
 - Supply current
 - Standby current : 17mA
 - Maximum current: 20mA
- Power from camera's power supply:
 - Operating voltage: 9-30V AC/DC
 - Supply current
 - Operating current (24V): 19mA
 - Operating current (12V): 35mA
 - Maximum current (9V): 50mA

● Communication with PTZ camera

- data carrier: RS485
- protocol: PELCO-P implementation for single camera on address 1
- baud rate: 9600
- voltage levels: 0 – 5V (differential and floating)

Mechanical characteristics

The CCL 20 S has a white, flat, wall-mounted enclosure with ventilation slots.

- Dimensions: 71mm W x 71mm L x 28mm D
- Weight: 75g

Environmental characteristics

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

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

Key Features

- Support for most widely used PTZ camera control protocol - PELCO-P
- Control of a single PTZ camera via the CIB-tech system
- Built-in RS485 terminator
- Wide voltage range accepted from camera power, ensuring compatibility with most PTZ cameras
- Internal bi-color LED, indicating PTZ activity (green: controls are inactive / red: at least one control is active)

Installation

The CCL 20 S is meant to be installed on a standard 60mm pattress box or on any flat surface such as a wall.

To install the device:

- remove the cover screw ornament, unscrew the cover screw and remove the top cover of the device;
- pull the cables through the cable hole on the base of the device or cut out the side cable hole;
- mount the base of the device via the two mounting holes;
- connect the wires to the device (see connection diagrams below);
- replace the top cover of the device, tighten the cover screw and replace the screw ornament.

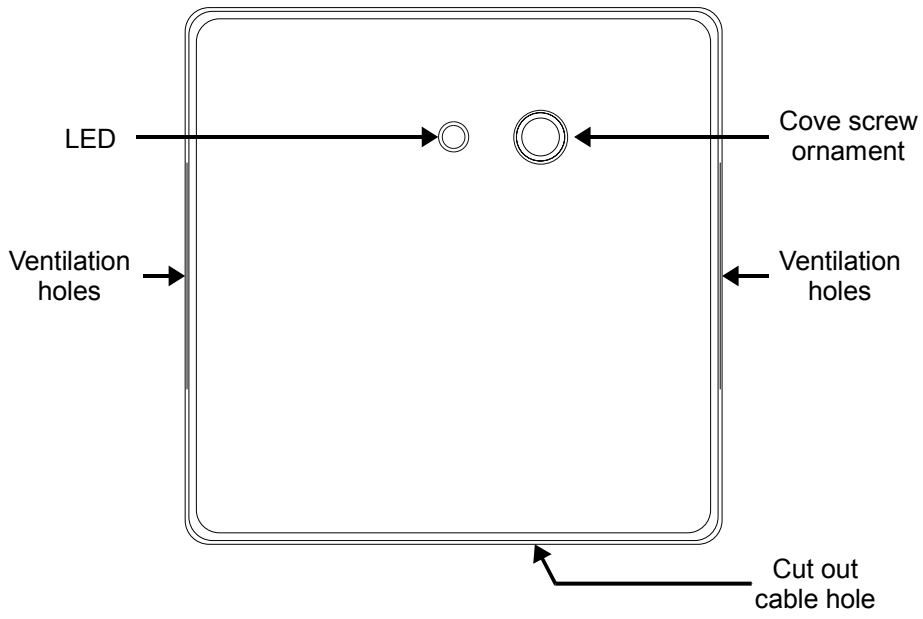
Part description

- **LED:**
 - indicator LED for PTZ control activity
- **Cover screw and ornament:**
 - fastening the top cover of the device
 - plastic ornament hiding the cover screw
- **Ventilation slots:**
 - slots on the sides of the enclosure
- **Cable hole:**
 - cable entry hole on the bottom of the device
- **Cut out cable hole:**
 - location where the plastic box can be cut out for an alternate cable entry point

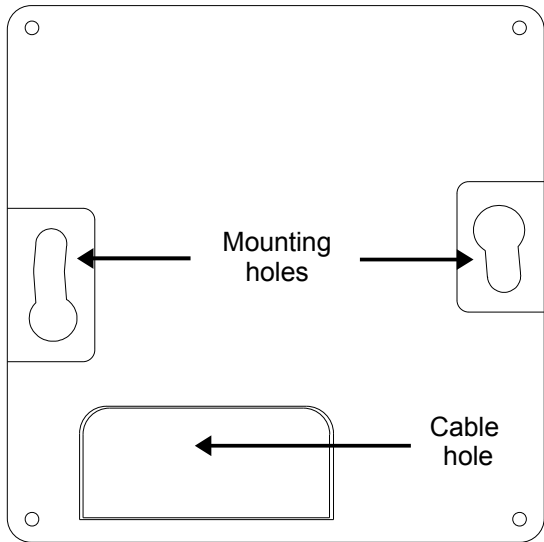
NOTE: This is only recommended if bottom cable entry is not possible

- **Mounting holes:**
 - holes for mounting the device on a standard 60mm pattress

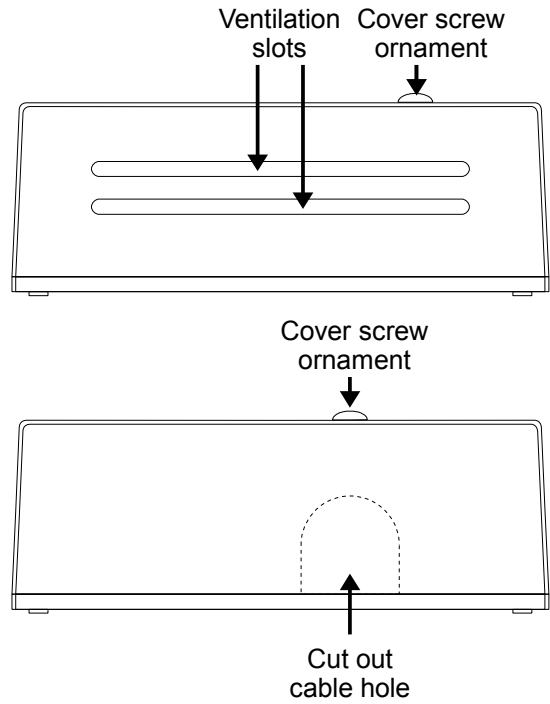
Top view



Botom view

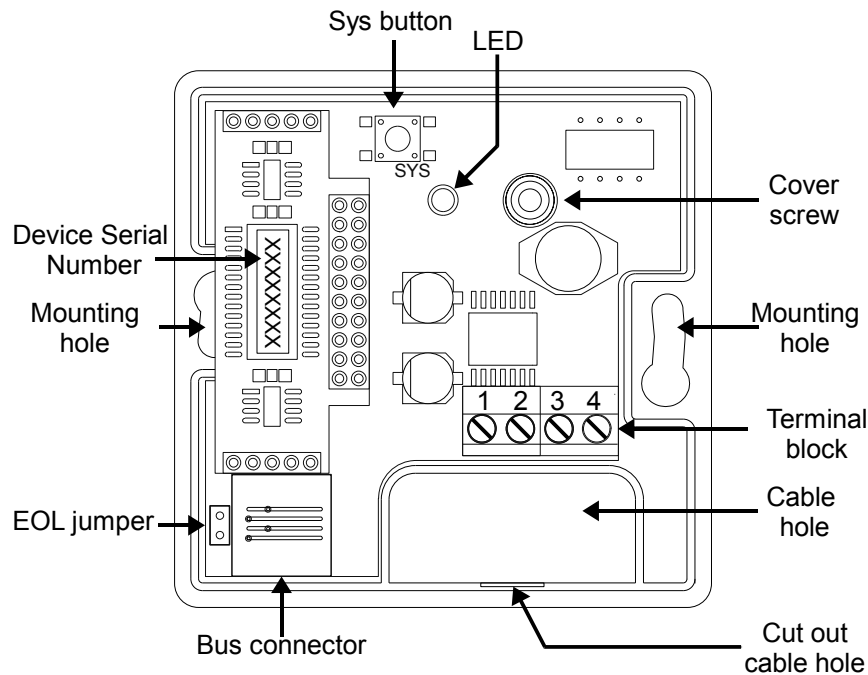


Side view



- **Sys button:**
 - pushbutton for CIB-tech system configuration
- **Bus connectors:**
 - 4P4C modular jack connectors for CIB-tech connection¹
- **EOL jumper:**
 - CIB-tech system's End Of Line jumper¹
- **Device serial number:**
 - Unique serial number
 - used to identify every CIB-tech device
 - this number is also electronically encoded in the device.
- **Terminal block:** terminals for connecting the PTZ video camera:
 1. Supply from PTZ camera – contact 1
 2. Supply from PTZ camera – contact 2
 3. PTZ camera control – RS485 (-) Inverting output²
 4. PTZ camera control – RS485 (+) Non-inverting output²

Top view with removed cover



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

² RS485 lines are also noted as line A and line B, but there is no globally accepted relationship between “A”, “B” and “+”, “-”. EIA485 states that “A” is “-” (inverting line) and “B” is “+” (non-inverting line), but many manufacturers state the opposite (“B” is inverting and “A” is non-inverting)

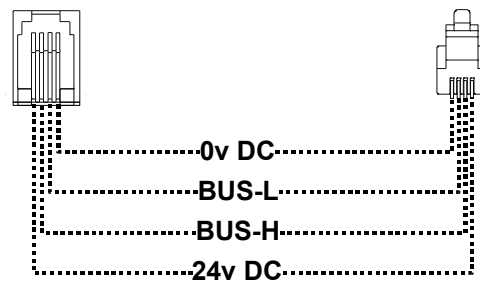
Wiring diagrams

Connection to CIB-tech system:

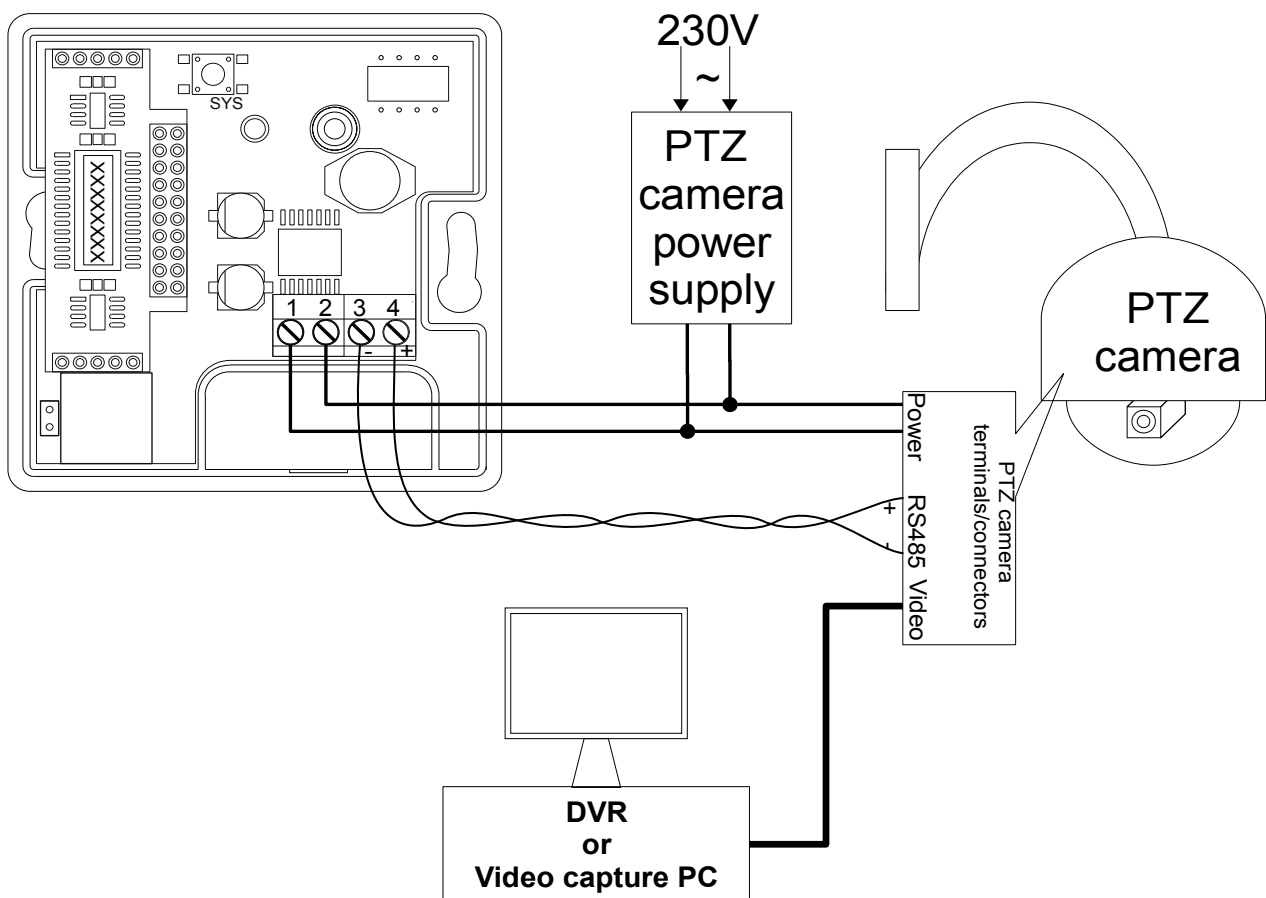
Use the CCL 20 S device's 4P4C modular jack connector to connect it to the CIB-tech systems bus. This device is meant to be the last element of a CIB-tech bus line.

If the device must be used as not the last element in the CIB-tech systems (chain-like) bus, a Bus Linker¹ can be used. In such situations the EOL jumper must be removed²:

BUS connection



Connecting to PTZ camera:



1 IBS product BL-1C2RJ92RJ or compatible device can be used. See IBS product list for details.

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

NOTES

PTZ camera power supply:

The PTZ camera's power supply depends on the type of the camera. It can be AC or DC in a wide voltage range. The CCL 20 S can be connected to most types of camera power supplies, with any polarity; note that in case of DC power supply, the polarity of the power supply is not important. The PTZ camera power supply GND can be connected CCL 20 S terminal bloc contact 1 or contact 2.

RS458 BUS:

It is recommended to use twisted pair cable for RS485 wiring.

Configuring PTZ video cameras

Most PTZ video cameras support different types of communication protocols at different baud rates, and are addressable. Typically the communication protocol, baud rate and camera address are settable using dip-switches. Consult your PTZ-camera's user manual to locate these switches and set the camera to PELCO-P protocol at 9600 baud and the camera address to 1 (one).

The RS485 bus needs to be terminated at both ends (at the PTZ camera and at the CCL 20 S). The CCL 20 S has a built-in permanent RS485 terminator, therefore no external terminator should be connected on its end. Most PTZ video cameras also have a built-in RS485 terminator that can be activated via dip-switches or a jumper. Consult your PTZ-camera's user manual regarding activation of its RS485 terminator.

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Technical Support:

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