83327-500
Camera interface
ABB-Welcome

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1 Safety

Warning

**Electric voltage!**
Risk of death and fire due to electrical voltage of 100-240 V.
- Work on the 100-240 V supply system may only be performed by authorized electricians!
- Disconnect the mains power supply prior to installation and/or disassembly!

2 Intended use

This device integrates analog camera into the ABB-Welcome door entry system. Up to 4 analog cameras can be connected to 1 camera interface. Each external camera is powered independently.

3 Environment

**Consider the protection of the environment!**
Used electric and electronic devices must not be disposed of with household waste.
- The device contains valuable raw materials that can be recycled. Therefore, dispose of the device at the appropriate recycling facility.

3.1 ABB devices

All packaging materials and devices from ABB bear the markings and test seals for proper disposal. Always dispose of the packaging material and electric devices and their components via an authorized recycling facilities or disposal companies.
ABB products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.
(EU-Directive 2002/96/EG WEEE and 2002/95/EG RoHS)
(EU-REACH ordinance and law for the implementation of the ordinance (EG) No.1907/2006)
4 Operation

4.1 Control elements

Fig. 1: Overview of control buttons

<table>
<thead>
<tr>
<th>No.</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bus in</td>
</tr>
<tr>
<td>2</td>
<td>Bus out</td>
</tr>
<tr>
<td>3</td>
<td>CVBS out</td>
</tr>
</tbody>
</table>
| 4   | Switch on camera power supply. For details, please see *Chapter 4.4 With & Without permanent power supply*
| 5   | Working mode  
There are 4 modes for the camera interface, For details, please see *Chapter 4.3 Operation mode.* |
| 6   | Set the address of the associated devices. |
| 7   | Set the address of the camera interface. |
| 8   | Operating status notification LED  
- Green: ready for operation  
- Orange: in setting mode  
- Red: fault |
| 9   | Dip switch to switch on/off the video channel. |
| 10  | Program button to enter the programming mode. |
| 11  | 4 video in. (supports CVBS signal input) |
4.2 Operating modes

4.2.1 Mode=1, works as an independent outdoor station

![Diagram showing Mode=1, works as an independent outdoor station]

**Fig. 2:** Mode=1, works as an independent outdoor station

<table>
<thead>
<tr>
<th>Rotary</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>1</td>
<td>Camera interface works as an independent camera interface.</td>
</tr>
<tr>
<td>Addr</td>
<td>null</td>
<td>——</td>
</tr>
<tr>
<td>ID</td>
<td>2</td>
<td>ID starts from 1 to 9 sequentially, and should not be the same address of camera interface or other camera interface.</td>
</tr>
</tbody>
</table>

**Dip Switch 1-4**

Turn to ON when a camera is connected.

**Capacity**

Each camera interface supports 4 analog cameras.

A total 9 camera interfaces (mode=1) in one system.

**Operation**

Press to view the cameras individually during surveillance.
4.2.2 Mode=2, works associated with outdoor station

Fig. 3: Mode=2, works associated with outdoor station

<table>
<thead>
<tr>
<th>Rotary</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>2</td>
<td>Camera interface work associated with outdoor station.</td>
</tr>
<tr>
<td>Addr</td>
<td>1</td>
<td>Address of the associated outdoor station, from 1-9.</td>
</tr>
<tr>
<td>ID</td>
<td>1</td>
<td>ID can be set from 1-9, and should be unique.</td>
</tr>
</tbody>
</table>

**Dip Switch 1-4**

Turn to ON when a camera is connected.

**Capacity**

Each camera interface supports 4 analog cameras.

A total of 15 cameras can be associated with each outdoor station (including 2 built-in cameras in outdoor station).

**Operation**

4.2.3 Mode=3, works associated with guard unit

**Fig. 4:** Mode=3, works associated with guard unit

<table>
<thead>
<tr>
<th>Rotary</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>3</td>
<td>Camera interface work associated with guard unit.</td>
</tr>
<tr>
<td>Addr</td>
<td>1</td>
<td>Address of guard unit, from 1-9.</td>
</tr>
<tr>
<td>ID</td>
<td>1</td>
<td>ID can be set from 1-9, and should be unique.</td>
</tr>
</tbody>
</table>

**Dip Switch 1-4**

Turn to ON when a camera is connected.

**Capacity**

Each camera interface supports 4 analog cameras.

A total of 15 cameras can be associated with each guard unit.

**Operation**

During communication, image can be sent from guard unit to indoor station by pressing the "Enable" button.
4.2.4 Mode=4, programming mode

Fig. 5: mode=4, programming mode

<table>
<thead>
<tr>
<th>Rotary</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>4</td>
<td>Camera interface works in programming mode.</td>
</tr>
<tr>
<td>Addr</td>
<td>null</td>
<td>Camera interface mode, camera interface address and associated device address can all be programmed with software. In mode=4, besides camera interface and guard unit, camera interface can also be associated with video indoor station. If camera interface is associated with video indoor station, ID should start from 1 to 9 sequently. For details, see Chapter 4.3 Programming mode.</td>
</tr>
<tr>
<td>ID</td>
<td>null</td>
<td></td>
</tr>
</tbody>
</table>

**Dip Switch 1-4**

Turn to ON when a camera is connected.

**Capacity**

Each camera interface supports 4 analog cameras. Each camera can be associated with different devices (i.e., outdoor station, guard unit, video indoor station).

A total of 36 cameras can be associated with each video indoor station. Each camera can be associated with 250 indoor stations.
4.3 Programming mode

1. Long press “Prog” button for 3s to enter programming mode

2. Choose cameras to set by dip switch V1/V2/V3/V4

3. Assign the address of the camera interface by R3

4. Set the working mode by R1
   Mode=1, Camera interface works as an independent **outdoor station**.
   Mode=2, Camera interface works associated with **outdoor station**.
   Mode=3, Camera interface works associated with **guard unit**.
   Mode=4, Camera interface works associated with **indoor station**

5. Short-press “Prog” button to save current setting

6. Set the address of the associated device by these three rotary switches (R1&R2&R3)
   Address=R1*100+R2*10+R3

7. Short-press “Prog” button to save current setting

8. Long press “Prog” button 3s to exit programming mode

**End**
4.4 With and without permanent power supply

Camera with permanent power supply

Camera without permanent power supply
4.5 Video signal from third party DVR

Fig. 6: Video signal from third party DVR

Note:
1) DVR output can be one of the inputs for camera interface in modes 1, 2, 3, and 4.
2) Each camera Interface supports 4 DVR signals.
4.6 Video signal to be stored to third party DVR

Fig. 7: Video signal to be stored to third party DVR

Note:
1) Camera interface sends video to video indoor station and also to DVR/TV through the CVBS output port.
2) Each camera interface supports 1 CVBS output.
3) After connecting CVBS output to DRV/TV, there are two options for sending video to DVR:
   - Camera interface mode=2, video outdoor station calls video indoor station.
   - Camera interface mode=3, "Enable" button is pressed at guard unit.
4) Camera interface doesn’t send video to DVR/TV during video Indoor station surveillance.
5  Technical data

5.1  Overview table

<table>
<thead>
<tr>
<th>Designation</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-wire clamps</td>
<td>2 x 0.28 mm² - 2 x 0.75 mm²</td>
</tr>
<tr>
<td>Fine-wire clamps</td>
<td>2 x 0.28 mm² - 2 x 0.75 mm²</td>
</tr>
<tr>
<td>Bus voltage</td>
<td>20-30V DC</td>
</tr>
<tr>
<td>Protection</td>
<td>IP30</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-25 °C - +55 °C</td>
</tr>
<tr>
<td>Video input</td>
<td>1Vp-p, PAL/NTSC</td>
</tr>
<tr>
<td>Video output</td>
<td>1Vp-p@75Ω, PAL/NTSC</td>
</tr>
<tr>
<td>Camera interface to camera</td>
<td>Coax cable, Max 100 metres other cables, 10-50 metres</td>
</tr>
<tr>
<td>Size</td>
<td>77 mm x 61 mm x 25 mm</td>
</tr>
</tbody>
</table>

5.2  Device connection diagram
6 Mounting/Installation

Warning

Electric voltage!
Risk of death and fire due to electrical voltage of 100-240 V.
– Low-voltage and 100-240 V cables must not be installed together in a flush-mounted socket!
In case of a short-circuit there is the danger of a 100-240 V load on the low-voltage line.

6.1 Requirements for the electrician

Warning

Electric voltage!
Install the device only if you have the necessary electrical engineering knowledge and experience.
• Incorrect installation endangers your life and that of the user of the electrical system.
• Incorrect installation can cause serious damage to property, such as a fire.
The minimum necessary expert knowledge and requirements for the installation are as follows:
• Apply the “five safety rules” (DIN VDE 0105, EN 50110):
  1. Disconnect from power;
  2. Secure against being re-connected;
  3. Ensure there is no voltage;
  4. Connect to earth;
  5. Cover or barricade adjacent live parts.
• Use suitable personal protective clothing.
• Use only suitable tools and measuring devices.
• Check the type supply network (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).
6.2 General installation instructions

- Terminate all branches of the wiring system via a connected bus device (e.g., indoor station, outdoor station, system device).
- Do not install the system controller directly next to the bell transformer and other power supplies (to avoid interference).
- Do not install the wires of the system bus together with 100-240 V wires.
- Do not use common cables for the connecting wires of the door openers and wires of the system bus.
- Avoid bridges between different cable types.
- Use only two wires for the system bus in a four-core or multi-core cable.
- When looping, never install the incoming and outgoing bus inside the same cable.
- Never install the internal and external bus inside the same cable.
6.3 Mounting
6.3.1 Surface-mounted installation

6.3.2 Flush-mounted installation

6.3.3 DIN installation
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