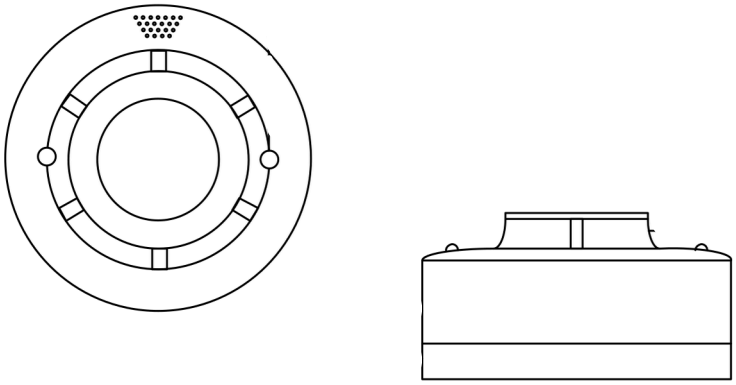
EVM-SDSM

Smoke Detector

Sensor Description

The smoke detector is a sensor designed to detect the presence of smoke in the environment. When smoke particles in the air exceed a certain threshold, the detector triggers an alert by sending a signal to the monitoring system, indicating a potential fire risk. This enables early warning and the implementation of safety measures.



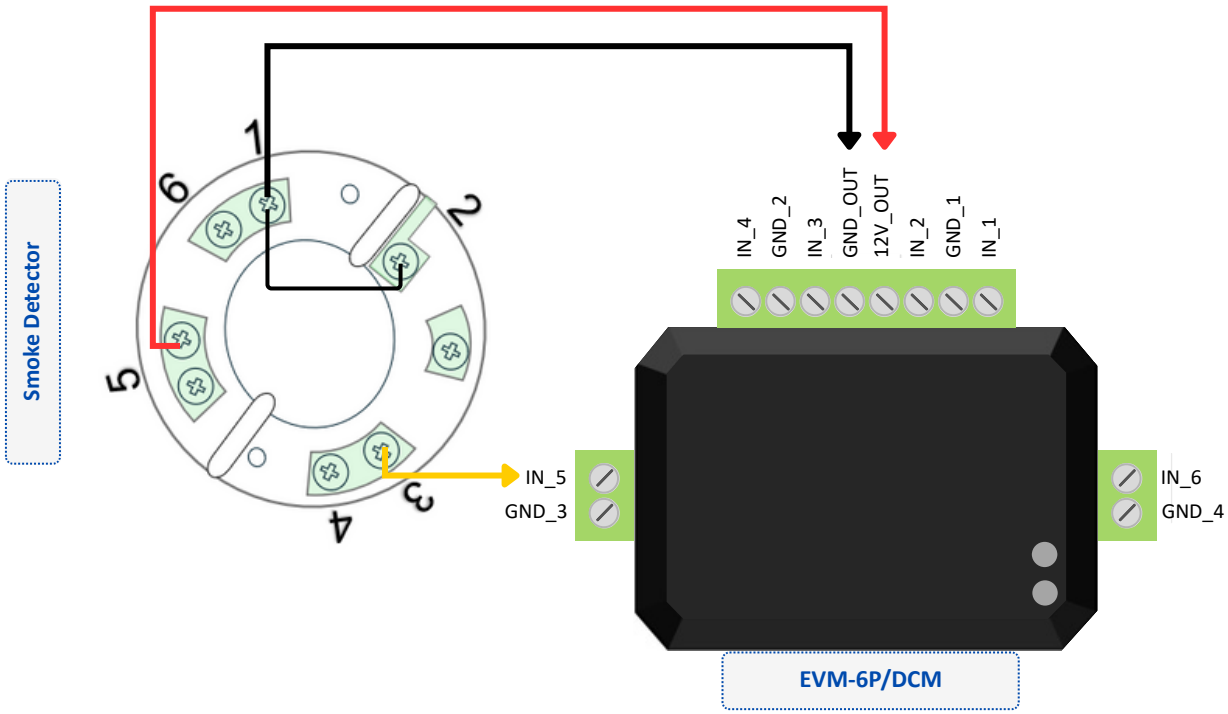
Connecting the EVM-SDSM to the PDU

Top Terminal Block of EVM-6P/DCM:

- IN_1 and IN_2 share the GND_1 terminal.
- IN_3 and IN_4 share the GND_2 terminal.
- 12V_OUT and GND_OUT provide power for external sensors.

Side Terminals of EVM-6P/DCM:

- IN_5 works with GND_3.
- IN_6 works with GND_4.



Step 1

Connect a dry contact sensor such as EVM-SDSM to the module, follow the steps below:

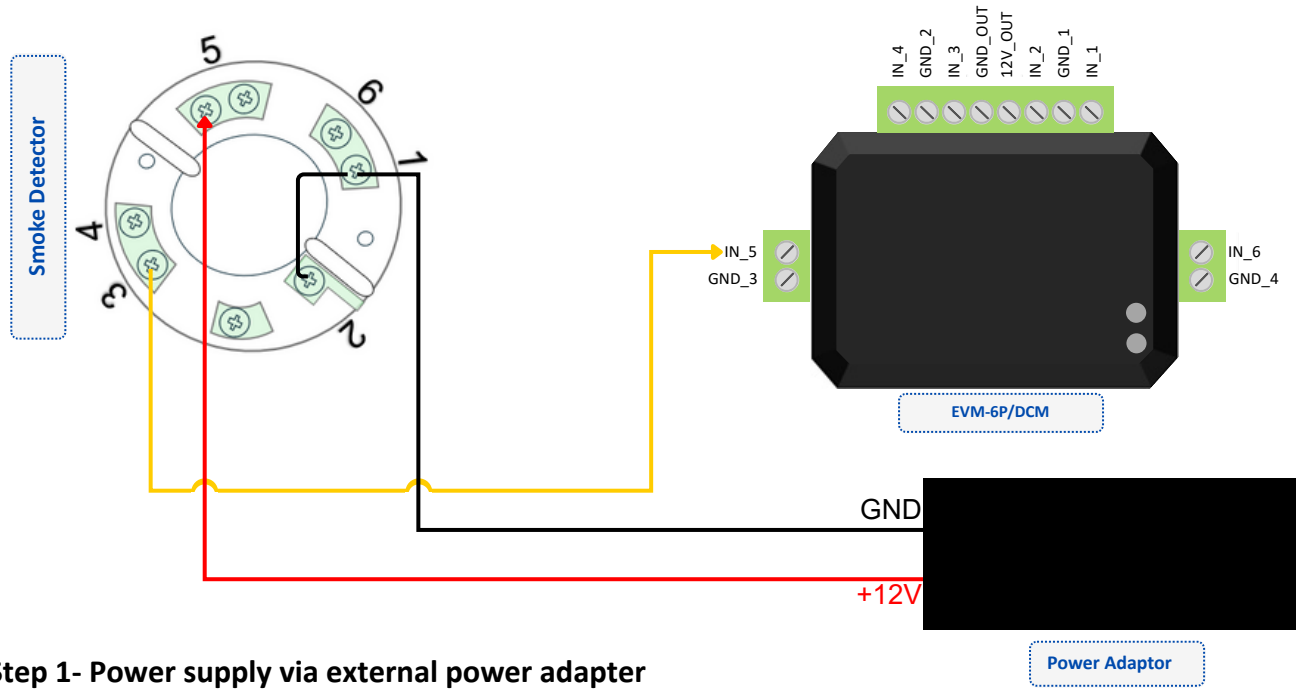
1. Determine an available input (IN_x) port on the module.
2. Connect the sensor's dry contact output to the selected IN_x terminal.
3. The sensor is powered through the 12V_OUT and GND_OUT terminals of the EVM-6P/DCM. In this connection, cable 1 should be connected to GND_OUT, and cable 5 should be connected to 12V_OUT.

Example:

- Detector Pin 3 (alarm output) → IN_5
- Detector Pin 5 (+12V) → 12V_OUT
- Detector Pin 1 (GND) → GND_OUT
- Connect Pin 1 and Pin 2 of the detector.

The smoke sensor can be powered via the 12V DC output of the EVM-6P/DCM (up to a maximum of 200 mA). However, if needed, it can also be powered by an external adapter even when the current requirement does not exceed 200 mA. If the 200 mA limit is exceeded, the use of an external adapter becomes mandatory. In such a case, the connection is as shown below.

Available adapter is the Belden EVM-PS-12V. This adapter comes with a 230V C14 inlet. A power cord with suitable plug can be selected from our PPC-series.



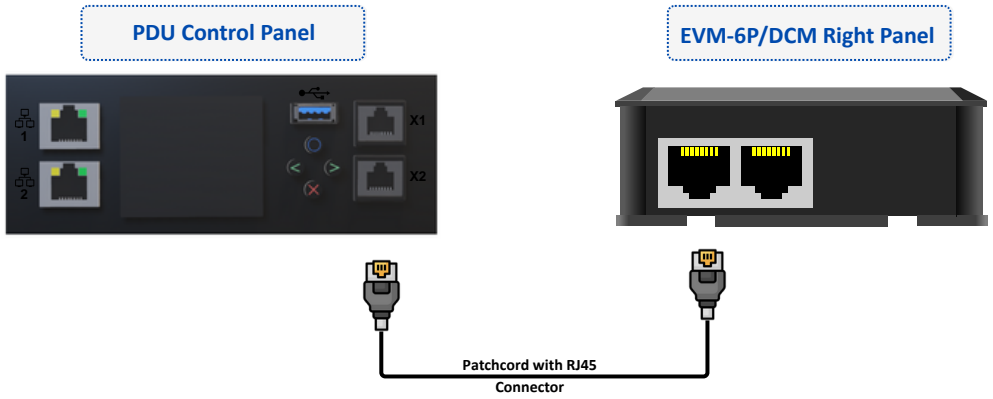
Step 1- Power supply via external power adapter

Connect a dry contact sensor such as EVM-SDSM to the module, follow the steps below:

1. Determine an available input (IN_x) port on the module.
2. Connect the sensor's dry contact output to the selected IN_x terminal.
3. The sensor is powered by an external power adapter. In this case, cable 1 should be connected to the GND terminal, and cable 5 should be connected to the +12V output.

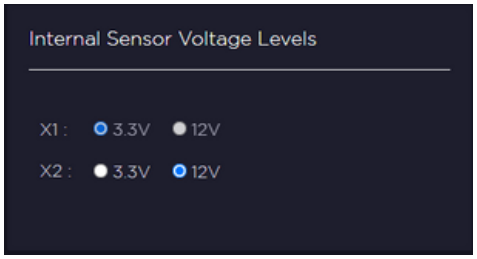
Example:

- Detector Pin 3 (alarm output) → IN_5
- Detector Pin 5 (+12V) → Power Adaptor 12V_OUT
- Detector Pin 1 (GND) → Power Adaptor GND_OUT
- Connect Pin 1 and Pin 2 of the detector.



Step 2

- Before connecting the dry contact module to X2, make sure to set the voltage level to 12V in the 'Internal Sensor Voltage Levels' section of the web interface. X1 is fixed and provides a default output of 3.3 V. This value is not user-configurable.



- The RJ45 port of the EVM-6P/DCM Module is connected to the X2 port of the PDU control panel using a standard Ethernet (RJ45) cable. Connection to the X2 port is recommended due to its appropriate voltage level.
- Once the system is powered on, the smoke detection status can be monitored in real time via the PDU interface.

Mounting the EVM-SDSM

- **Mounting Surface:** Mount the smoke sensor on a solid and stable surface, such as the ceiling or an upper wall, where smoke naturally rises and accumulates. This ensures reliable detection.
- **Positioning:** Avoid mounting the sensor near air vents, fans, or windows where strong airflow could prevent smoke from reaching the sensor promptly.
- **Orientation:** Install the sensor in the correct position. Improper alignment may lead to delayed or failed smoke detection.
- **Mounting Method:** Use screws for secure installation. In areas subject to vibration or movement, mechanical fastening is strongly recommended to maintain stability over time.
- **Wiring:** Route the sensor's cables along a protected path, avoiding sharp bends, stretching, or exposure to heat sources. Ensure connections are stable and insulated to prevent signal issues.

🏠 The smoke sensor is for indoor use only. Avoid installing it in areas with high humidity, dust, or condensation unless proper protective measures are taken.

📏 Regularly check the sensor's position and cleanliness. Dust or misplacement can affect its ability to detect smoke accurately.

🛠️ Avoid physical impact or pressure on the sensor. Mechanical stress may damage internal components and reduce detection reliability.

✅ After installation, test the sensor using test smoke.

🔧 Secure the sensor's cable and protect it from vibration or movement to prevent connection issues or signal loss.