**PANEL POWER PDP**

**1. Description  
Main power distribution panel that feeds all electrical components of the conveyor system.**

**2. Functions**

* **Provides power to motors, sensors, and control panels.**
* **Monitors power status of subsystems.**

**3. I/O and Signals**

| **Signal Name** | **Type** | **Description** | **Panel** |
| --- | --- | --- | --- |
| **POWER\_OK** | **DI** | **Power good status** | **PANEL\_POWER\_PDP** |
| **POWER\_FAIL** | **DO** | **Power failure alarm** | **PANEL\_POWER\_PDP** |

**4. Interlocks & Safety**

* **Power failure leads to a system shutdown.**
* **Power OK signal required for system startup.**

**5. Dependencies**

* **Supplies power to all panels and components.**

**6. Alarms**

| **Alarm ID** | **Condition** | **Message** |
| --- | --- | --- |
| **A\_PWR\_01** | **Power loss** | **"Power Loss"** |

**7. HMI / Operator Interaction**

* **Power status displayed on HMI.**