**COMPONENT ENCODER SHAFT**

**1. Description  
Provides conveyor movement data (speed/distance)**

**2. Functions**

* **Tracks conveyor movement for encoder-based logic**

**3. I/O and Signals**

|  |  |  |  |
| --- | --- | --- | --- |
| **Signal Name** | **Type** | **Description** | **Panel** |
| **ENCODER\_A** | **DI** | **Encoder A channel** | **PANEL\_CONTROL\_RIO** |
| **ENCODER\_B** | **DI** | **Encoder B channel** | **PANEL\_CONTROL\_RIO** |

**4. Interlocks & Safety**

* **Speed mismatch can trigger alarm**

**5. Dependencies**

* **Used by tracking and spacing systems**

**6. Alarms**

|  |  |  |
| --- | --- | --- |
| **Alarm ID** | **Condition** | **Message** |
| **A\_ENC\_01** | **Encoder loss** | **"Encoder Error"** |

**7. HMI / Operator Interaction**

* **Live speed/distance feedback**