Direct Discrimination Unit

# E63-WF

CSM_E63-WF_DS_E_4_4

## Detects the Rotary Encoder Direction

- Input phase difference signal from the Encoder to detect the direction of rotation.
- High-speed response at 120 kHz.
- Mounts to DIN Track. Thin design enables superb mounting efficiency.
- Front-panel switch enables reversing phase Z logic. Enables connecting either voltage outputs or open-collector outputs.

⚠ Be sure to read *Safety Precautions* on page 3.

## Ordering Information

| Power supply voltage | Output configuration | Model |
|---|---|---|
| 12 to 24 VDC | Open-collector output | **E63-WF5C** |

## Ratings and Specifications

### Direct Discrimination Unit [Refer to *Dimensions* on page 4.]

| Item | | Model E63-WF5C |
|---|---|---|
| **Power supply voltage** | | 12 VDC –10% to 24 VDC +15%, ripple (p-p): 5% max. |
| **Current consumption** | | 50 mA max. |
| **Input** | **Input signal** | Phases A, B, and Z (phase difference signals) |
| | **Phase difference** | 90° ±45° max. |
| | **ON** | 6 mA max. at 0 to 2 V |
| | **OFF** | 1.5 mA max. at 8 to 24 V |
| | **Input short current** | 9 mA |
| | **Max. applied voltage** | 30 V max. |
| | **Input impedance** | Approx. 1 Ω |
| **Output** | **Output signal** | UP/DOWN (direction detection), COUNTS output (count), OUT Z |
| | **Output configuration** | Open-collector output |
| | **Output capacity** | Applied voltage: 30 VDC max.<br>Sink current: 80 mA max.<br>Residual voltage: 1 V max. (at sink current of 80 mA)<br>Residual voltage: 0.4 V max. (at sink current of 20 mA) |
| **Maximum response frequency** | | 120 kHz |
| **Output response time** | | 2 μs max. |
| **Indicators** | | Power indicator (red), Phase Z output indicator (green) |
| **Ambient temperature range** | | Operating: –10 to 55°C (with no icing), Storage: –25 to 80°C (with no icing) |
| **Ambient humidity range** | | Operating/Storage: 35% to 85% (with no condensation) |
| **Vibration resistance** | | Destruction: 10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions |
| **Shock resistance** | | Destruction: 300 $m/s^2$ 3 times each in X, Y, and Z directions |
| **Connection method** | | Terminal block |
| **Material** | | Case: ABS |
| **Weight (packed state)** | | Approx. 100 g |
| **Accessories** | | Instruction manual (S3D8 Connector is not provided.) |