



Description

The Safedge controllers are designed to operate with the Safedge profiles. The controller continuously monitors the profile for actuation and generates an output signal when the profile is depressed.

The Safedge controller provides a low voltage to the profile. When the profile is pressed, the controller detects a change in resistance and turns off its output relays. When pressure is released from the profile, the output relays of the controller return to an on state. The controller has redundant voltage free positively-guided output relays which can be used to interface with a machine control system.

The '251' controller comes capable of operating at 24V AC/DC, or 120/230V AC from separate terminals. An internal switch changes the operating voltage from 120V AC to 230V AC. The '252' controller operates at 24V AC/DC.

An auxiliary output relay is available to provide a signal about the controller's status. Three LEDs indicate whether the controller is in RUN, STOP or OPEN condition. The controller operates in manual or automatic reset mode.




Features

- 1 N.O. or 2 N.O. Safety Outputs
- 1 N.C. Auxiliary Output
- 24V AC/DC or 120/240V AC
- Output Monitoring
- LED Indicators for RUN, STOP and OPEN
- Automatic/Manual Reset

Specifications

| | |
|--|---|
| Standards | EN1760-2, EN954-1, ISO 13849-1, AS4024.5, EN954-1, ANSI B11.19 |
| Safety Category | Cat. 3 per EN954-1 |
| Approvals | CE marked for all applicable directives, cULus, TuV |
| Power Supply 251 252 | 24V AC/DC or 110/230V AC 50/60Hz 24V AC/DC 50/60Hz |
| Power Consumption 251 252 | <6VA <4VA |
| Fuses, Internal 251D, 251P 251P 252D | 500mA Power Supply, Replaceable 2 x 2A Safety Output, Replaceable 500mA, Resettable |
| Fuses, External | 4A on AC, 2A on DC |
| Safety Input Profile | 6K Ω 12V DC open circuit, 4V DC run condition |
| Monitoring | 1 N.O. |
| Maximum Input Impedance Profile Monitoring Circuit | 9K Ω 1K Ω |
| Outputs 251 Safety 252 Safety 251, 252 Auxiliary | 2 N.O. 1 N.O. 1 N.C. |
| Output Rating | 2A/250V AC, 2A/125V AC 1A/30V DC |
| Min. Switching Current/Volt. | 10mA/10V |
| Max. Response Time | 13ms |
| Indication LEDs | Green = Run Yellow = Open Circuit Red = Stop |
| Impulse Withstand Voltage | 2500V |
| Installation Group | C in accordance with VDE0110 |
| Pollution Degree | 3 |
| Operating Temperature | -10°C to 55°C (-14°F to 131°F) |
| Humidity | 90% RH |
| Enclosure Protection 251D, 252D 251P | IP40 (NEMA 1) IP65 (NEMA 13) |
| Terminal Protection | IP20 DIN 0470 |
| Max Conductor Size 251D, 252D | 1 x 4mm ² (10AWG) stranded 1 x 4mm ² (10 AWG) solid |
| 251P | 1 x 1.1mm ² (18AWG) stranded 1 x 1.5mm ² (16AWG) solid |
| Case Material | Polycarbonate |
| Weight 252D 251D 251P | 181g (0.4lbs) 450g (1.0lbs) 650g (1.4lbs) |
| Vibration | 0.15mm 10-55Hz |
| Shock | 10g, 11ms half sine |

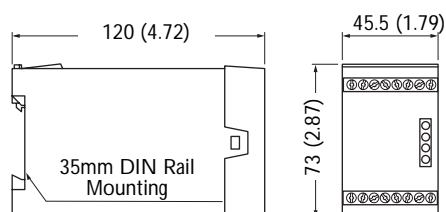
Product Selection

| Housing Type | Description | Catalogue Number |
|---|-------------------------|------------------|
|  | 35mm DIN Rail Mountable | 440F-C251D |
|  | | 440F-C252D |
|  | Surface Mountable | 440F-C251P |

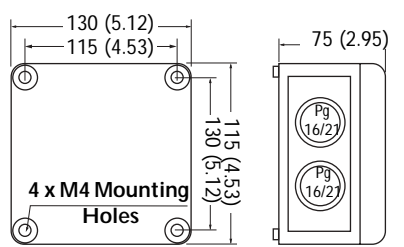
Approximate Dimensions—mm (inches)

Dimensions are not intended to be used for installation purposes.

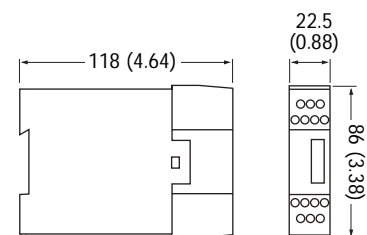
440F-C251D



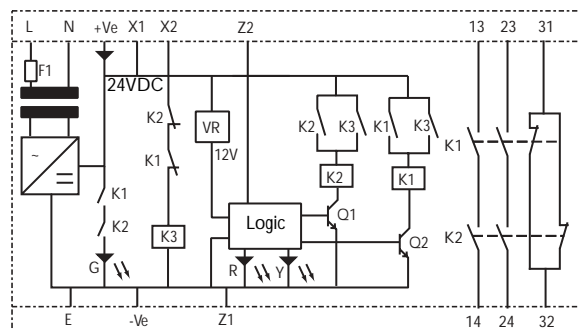
440F-C251P



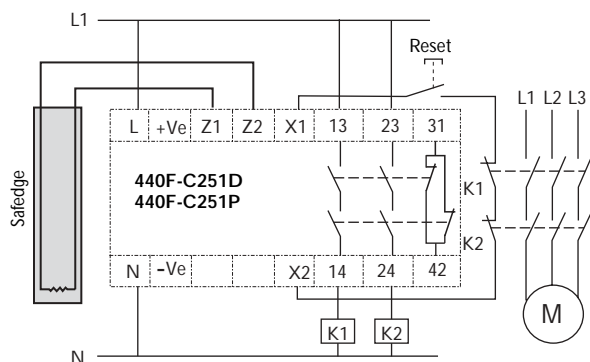
440F-C252D



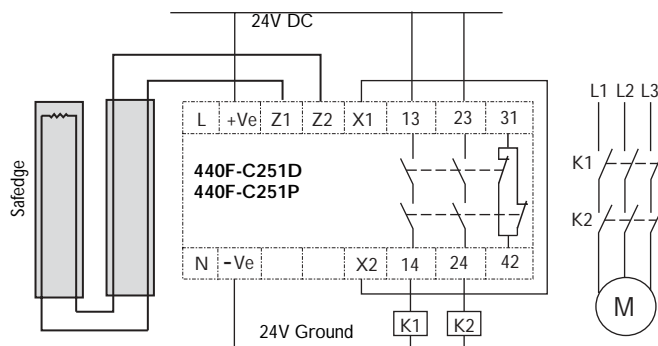
Block Diagram



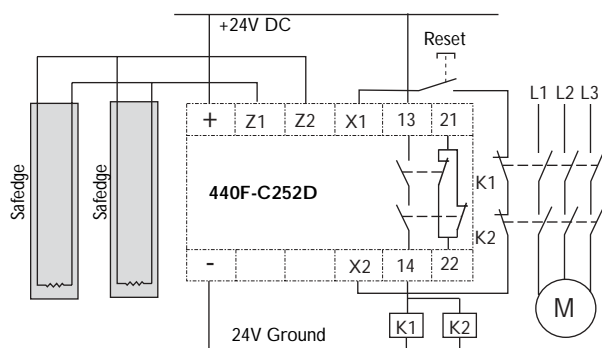
Typical Wiring Diagrams



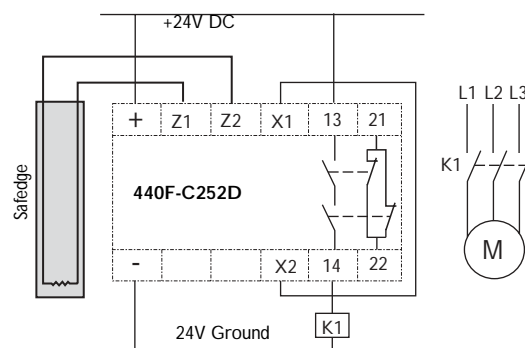
*Series Terminated, Safedge Input, Manual Reset,
Dual Channel Output, Monitored Output*



*Series Terminated, Cascaded, Safedge Input, Automatic
Reset, Dual Channel Output, No Output Monitored*



*Parallel Terminated, Safedge Input, Manual Reset,
Dual Channel Output, Monitored Output*



*Series Terminated, Safedge Input, Automatic Reset,
Single Channel Output, No Output Monitored*

Accessories

| Description | Page | Catalogue Number |
|-------------|------|------------------|
| Fuse, 500mA | 14-6 | 440R-A31562 |
| Fuse, 2A | 14-2 | 440A-A09197 |