

CQM1-SF200

# Safety Relay Unit

- Reduces wiring effort and installation space for safety circuits.
- Monitors the following four statuses of the safety circuit
  1. Safety Circuit Output Status  
Monitors if the safety circuit is operating and producing outputs.
  2. Safety Circuit Power Status  
Monitors the status of the power supply to the safety circuit.
  3. K1 Relay Operating Status
  4. K2 Relay Operating Status  
Monitors the status of the internal relays that form the safety circuit. This helps troubleshooting safety circuit problems.
- General-purpose Inputs  
In addition to the safety circuit, a general-purpose input section (4 inputs and 1 common) is provide, which can be used for general controls.



## Specifications

### General

Item	Specifications	
Contact resistance (See note 1.)	100 mΩ	
Operating time (See note 2.)	300 ms max.	
Response time (See notes 2 and 3.)	10 ms max.	
Durability	Mechanical	5 million operations min. (switching frequency: 7,200 times/hour)
	Electrical	100,000 operations min. (rated load, switching frequency: 1,800 times/hour)
Error rate (P level: reference value)	1 mA at 5 V DC	
Weight	260 g max.	

- Note:**
1. Measurement conditions: 1 A at 5 V DC voltage drop method
  2. Bounce time is not included.
  3. The response time is from when the input is turned OFF to when the main contact turns OFF.

### Ratings (Safety Circuit)

#### Power Supply Section

Item	Specifications
Supply voltage	24 V DC
Permissible voltage fluctuation range	-15%/+10% of supply voltage
Power consumption	24 V DC: 1.7 W max.

#### Input Section

Item	Specifications
Input current	75 mA max.

#### Switching Section

Item	Specifications
Load	Resistive load (cos=φ1)
Rated load	5 A at 250 V AC
Rated switching current	5 A

### Ratings (General-purpose Input)

Item	Specifications
Rated input voltage	24 V DC -15%/+10%
Input impedance	4.0 kΩ
Input current	6 mA typical (24 V DC)
ON voltage/ON current	14.4 V DC min./3 mA min.
OFF voltage/OFF current	5 V DC max./1 mA max.
ON/OFF response time	8 ms max. (selectable from 1 to 128 ms using System Setup.)
Number of circuits	4 inputs and 1 common
Number of points that turn ON simultaneously	100% simultaneously ON
Internal current consumption	50 mA max.

Circuit Configuration (Inputs)

