

## Specifications

### Edge Controller SCC-1224A

#### Power Input

<b>Power supply voltage*</b>	120 VAC 50/60Hz (Terminals A1 and A2) 24 VAC 50/60Hz or 24 VDC (Terminals B1 and B2)
<b>Operating voltage range</b>	-10% to +10% of rated power supply voltage
<b>Power consumption (with sensors connected)</b>	120 VAC: 3.8 VA max. 50 Hz, 3.5 VA max. 60 Hz 24 VAC: 1.2 VA max., 24 VDC: 1.5 W max.

\*Select either Terminals A1 and A2 or Terminals B1 and B2 according to the power supply voltage applied. Never apply both voltages simultaneously.

#### Inputs

<b>Sensor input</b>	SGE Safety Edge: A maximum of 5 edges can be connected in series. Maximum wiring length: 25 m max.
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#### Contacts

<b>Safety output</b>	230 VAC 3 A, 24 VDC 3 A (resistive load) 230 VAC 1 A (AC-15), 24 VDC 2 A (DC-13) (inductive load)
<b>Auxiliary output</b>	24 VAC/DC 2A (resistive load)

#### Characteristics

<b>Startup time *1</b>	300 ms max.	
<b>Operating time (Open to closed) *2</b>	550 ms max.	
<b>Response time (Closed to open) *3</b>	13 ms max.	
<b>Vibration resistance</b>	Malfunction: 10 to 55 Hz, Sinus, 0.15 mm amplitude, 10 cycles	
<b>Shock resistance</b>	Malfunction: 147 m/s <sup>2</sup>	
<b>Durability</b>	<b>Mechanical</b>	1,000,000 cycles min.
	<b>Electrical</b>	AC-15: 800,000 cycles min. (230 VAC, 1A) DC-13: 250,000 cycles min. (24 VDC, 2A)
<b>Ambient operating temperature</b>	-20 to 55°C (-4 to 131°F) (with no icing or condensation)	
<b>Ambient operating humidity</b>	0% to 90%	
<b>Degree of protection</b>	IP20	
<b>Material (Housing)</b>	Polyamide PA6.6, self-extinguishing according to UL 94-V2	
<b>Protection type</b>	Class II (protective insulation)	
<b>Pollution degree</b>	2	
<b>Overvoltage category (IEC/EN 60664-1)</b>	III	
<b>Rated insulation voltage</b>	250 V	
<b>Rated impulse voltage resistance</b>	4 kV	
<b>Dielectric strength</b>	1.5 kVAC	
<b>Terminal tightening torque</b>	0.5 to 0.6 N•m	
<b>Weight</b>	approx. 210 g (7.4 oz)	
<b>Conformity</b>	<b>Conforming to Standards</b>	EN ISO 13856-2, EN ISO 13849-1: 2015, EN 61000-6-2, EN 61000-6-3, ANSI/UL 508, CSA C22.2 No.14
	<b>PFHd</b>	6.5×10 <sup>-9</sup> (Nop 17,520)
	<b>MTTFd</b>	195 years
	<b>DC</b>	99% (Nop 17,520)

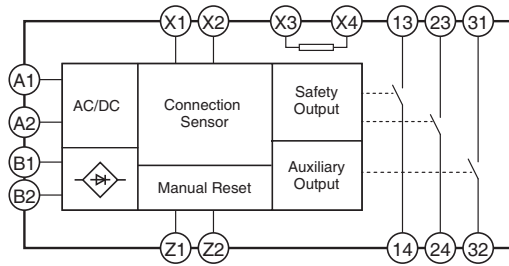
\*1. The startup time is the delay time from power-on to when the SCC-1224A Safety Mat/Edge Controller is ready to operate.

\*2. The operating time is the time it takes for the safety output contacts to be closed after the sensor is deactivated and the manual reset input contacts are closed. The contact bounce time is not included.

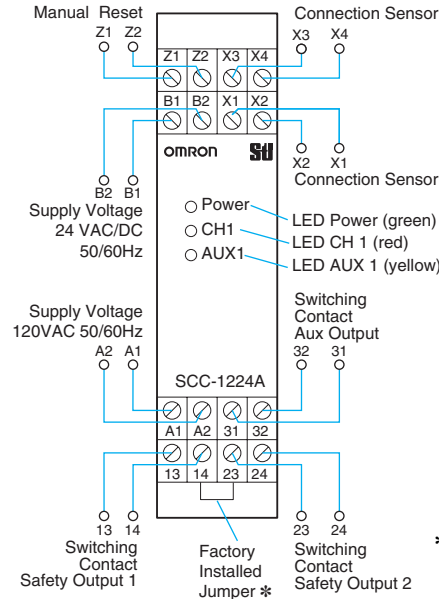
\*3. The response time is the time it takes for the safety output contacts to open after the sensor is activated. Contact bounce time is included.

SCC-1224A

Internal Connection Diagram



Wiring of Inputs and Outputs



\* Remove the factory-installed jumper between terminals 14 and 23 if safety outputs 1 and 2 are not connected in series.

Terminals

Signal	Terminal	Overview	Wiring
Supply Voltage 120 VAC	A1, A2	Input terminals of 120 VAC supply voltage.	Do not connect a supply voltage of 24 VAC or 24 VDC.
Supply Voltage 24 VAC/DC	B1, B2	Input terminals of 24 VAC or 24 VDC supply voltage.	Do not connect a supply voltage of 120 VAC. When using 24 VDC, connect 24 VDC line to B1 and 0 VDC line to B2.
Connection Sensor	X1, X2 X3, X4	Input terminals of sensor signal.	Connect signal lines of SGE Safety Edge. Do not connect any lines.
Manual Reset	Z1, Z2	Input terminals of a reset switch (NO contact). Also used as external device monitoring (EDM) terminals of contactors.	Do not connect any lines when in the automatic reset mode. Connect NC contacts of contactors when using the external device monitoring (EDM) function.
Safety Output 1	13-14	Closed or open according to sensor and manual reset inputs.	Do not connect any lines when not used. Remove the factory-installed jumper between terminals 14 and 23 if safety outputs 1 and 2 are not connected in series.
Safety Output 2	23-24		
Auxiliary Output	31-32	In the auxiliary output without delay mode, the auxiliary output is closed without delay when the safety outputs are open. In the auxiliary output delayed mode, the auxiliary output is closed with a delay of 0.5 s after the safety outputs are open, and remains closed for 3 s.	Do not connect any lines when not used. Do not use this as safety output.

LEDs

Label	Color	Name	Status	Description
Power	Green	Power LED	ON	Operating state
			Flashing	Fault alarm
CH1	Red	Sensor Input LED	ON	Sensor activated (Safety output OFF)
			Fast flashing (approx. 4 Hz)	Sensor faulty
			Slow flashing (approx. 1 Hz)	Waiting for reset switch input (Safety output OFF)
			OFF	Released from interlocked state (Safety output ON)
AUX1	Yellow	Auxiliary output LED	ON	Auxiliary output contact closed
			OFF	Auxiliary output contact open