

NO: SR-111A
DATE: May 2021

PRODUCT: Safety Edge/UMA Mat Controller
TYPE: Discontinuation Notice

Safety Edge/UMA Mat Controller Discontinuation Notice

Final Order Entry: July 2, 2021

Discontinuation Date: July 2, 2021

Applicable Model:
SCC-1224A



Reason for change:

Simplify safety products offering and streamline product offering.

Difference between recommended replacement and discontinued model

Recommended replacement Model	Appearance	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
G9SP Series	-	-	-	-	-	-	-

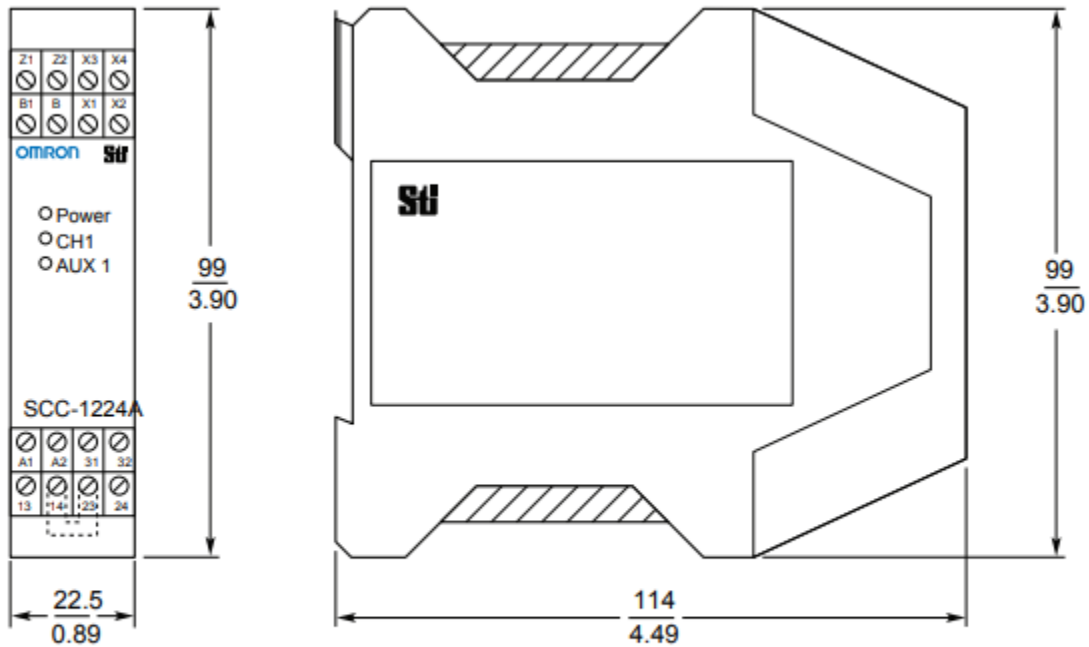
- ** : Compatible
- * : The change is almost compatible
- : Not compatible
- : No corresponding specification

Discontinued and Recommended Replacement Models

Discontinued Model			Recommended Replacement Model
Description	Part Number	OPC	
Safety Edge/UMA Mat Controller	SCC1224A	SGE 9991M	G9SP series

Appearance/Dimensions/Specifications

Discontinued Product SCC1224A Series



Power Input		
Power supply voltage (Terminals A1 and A2)		120V AC 50/60Hz
Power supply voltage (Terminals B1 and B2)		24V AC 50/60Hz or 24V DC
Operating voltage range		- 10% to +10% of rated power supply voltage
Power consumption (with sensors connected)		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		
Sensor input		UMA Safety Mat: A maximum of 10 mats can be connected in series. SGE Safety Edge: A maximum of 5 edges can be connected in series. Maximum wire length: 25 m max.
Contacts		
Safety output		230 VAC 3 A, 24 VDC 3 A (resistive load) 230 VAC 1 A (AC-15), 24 VDC 2 A (DC-13) (inductive load)
Auxiliary output		24 VAC/DC 2A (resistive load)
Auxiliary Output Contacts		
Switching current		2A (30V AC/DC)
Activation delay (S2 in ON)		<10 ms
Activation delay (S2 is OFF)		0.5 s
Activation duration (S2 is OFF)		3s
Terminating Resistor - Sensor		
Operating		8.2k Ω \pm 500 Ω
Maximum without fault		<12.0k Ω
Minimum without fault		>5.0k Ω
General Specifications		
Startup time *1		300 ms max.
Operating time (Open to closed) *2		550 ms.max.
Response time (Closed to open) *3		13 ms. max.
Maximum wire length		25 m max.
Vibration resistance		10 to 55 Hz, Sinus, 0.15 mm amplitude, 10 cycles
Shock resistance		Malfunction: 147 m/s ²
Durability	Mechanical	1,000,000 cycles min.
	Electrical	AC-15: 800,000 cycles min. (230 VAC, 1 A) DC-13: 250,000 cycles min. (24 VDC, 2 A)
Ambient operating temperature		-20 to 55 °C (-4 to 131°F) with no icing or condensation
Ambient operating humidity		0% to 90%
Pollution degree		IP20
Material (Housing)		Polyamide PA6.6, self-extinguishing according to UL 94-V2
Protection type		Class II (protective insulation)
Pollution degree		2
Overvoltage category (IEC/EN 60664-1)		III
Rated insulated voltage		250 V
Rated impulse voltage resistance		4 kv
Dielectric strength		1.5 kVAC
Terminal tightening torque		0.5 to 0.6N* m
Weight		approx. 210 g (7.4 oz)
Performance Level		PLe
Conformity	Conforming to Standards	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
	PFHd	6.5x10 ⁻⁹ (Nop 17,520)
	MTTFd	195 years
	DC	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		

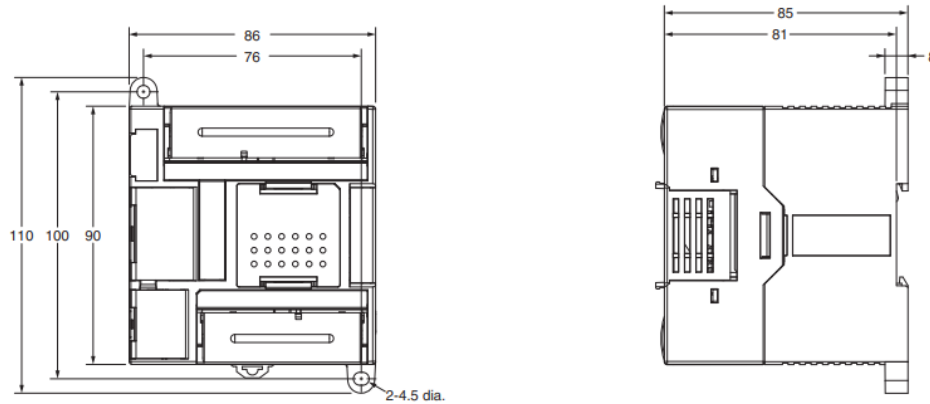
Replacement Product for SCC1224A

G9SP Series

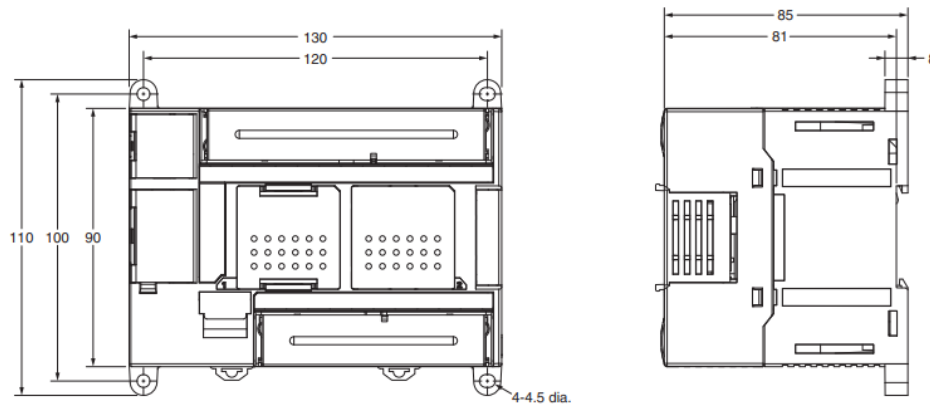
Dimensions

(Unit: mm)

Safety Controller
G9SP-N10S



Safety Controller
G9SP-N10D
G9SP-N20S



General Specifications

Power supply voltage	24 VDC (20.4 to 26.4 VDC -15% +10%)
Current consumption [✱]	G9SP-N10S: 400 mA (V1: 300 mA, V2: 100 mA) G9SP-N10D: 500 mA (V1: 300 mA, V2: 200 mA) G9SP-N20S: 500 mA (V1: 400 mA, V2: 100 mA)
Isolation class	Class III (SELV)
Overvoltage category	II
Noise immunity	Conforms to IEC61131-2
Vibration resistance	5 to 8.4 Hz: 3.5 mm, 8.4 to 150 Hz: 9.8 m/s ²
Shock resistance	147 m/s ² ; 11 ms
Mounting	DIN track mounting (IEC60715 TH35-7.5/TH35-15) or M4 screws
Ambient operating temperature	0 to +55°C
Ambient operating humidity	10% to 90% (with no condensation)
Ambient storage temperature	-20°C to +75°C
Atmosphere	No corrosive gas
Operating altitude	2,000 m max.
Pollution degree	Pollution degree 2
Degree of protection	IP20 except terminal blocks
Terminal screws	M3 self-rising screws

[✱] Not including the current consumption of external devices.

Item	Model	G9SP-N10S	G9SP-N10D	G9SP-N20S
Safety inputs		10	10	20
Safety outputs		4	16	8
Test outputs		4	6	6
Standard outputs		4	-	-
Weight		290 g max.	440 g max.	430 g max.

Safety Input Specifications

Input type	Sinking inputs (PNP)
Input current	6 mA
ON voltage	11 VDC min. (between each input terminal and G1)
OFF voltage	5 VDC max. (between each input terminal and G1)
OFF current	1 mA max.

Test Output Specifications

Output type	Sourcing outputs (PNP)	
Rated Output Current	G9SP-N10S T0, T1 : 60 mA max. T2 : 30 mA max. ^{✱1} T3 : 300 mA max. ^{✱2} T0-2 total : 60 mA max.	
	G9SP-N10D T0, T1, T2 : 60 mA max. T3 : 300 mA max. ^{✱2} T4, T5 : 30 mA max. ^{✱1} Total of T0-2 and T4-5 : 60 mA max.	
	G9SP-N20S T0, T1, T2 : 100 mA max. T3 : 300 mA max. ^{✱2} T4, T5 : 30 mA max. ^{✱1} Total of T0-2 and T4-5 : 120 mA max.	
	ON residual voltage	1.8 V max. (between each output terminal and V1)
	Leakage current	0.1 mA max.

^{✱1}. Connection to OMRON D40A/D40Z Non-contact Door Switch is possible.

^{✱2}. With the Muting Lamp Output (open circuit detection)

Safety Output Specifications

Output type	Sourcing outputs (PNP)
Rated output current	0.8 A max./output 1.6 A max./4 outputs (G9SP-N10S/-N20S) ^{✱1} 1.2 A max./4 outputs (G9SP-N10D) ^{✱2}
ON residual voltage	1.2 V max. (between each output terminal and V2)
OFF residual voltage	2 V max.
Leakage current	0.1 mA max.

^{✱1}. Total current for So0 to So3 and So4 to So7

^{✱2}. Total current for So0 to So3, So4 to So7, So8 to So11 and So12 to So15

Note: When a safety output is set as a pulse output, make sure that the connected devices do not malfunction due to the OFF pulse (pulse width: 640 μs).

Standard Output Specifications (G9SP-N10S)

Output type	Sourcing outputs (PNP)
ON residual voltage	1.5 V max. (between each output terminal and V2)
Rated output current	100 mA max.

Item	Unit Version	
	Ver.1.[]	Ver.2.0
Single-beam Safety Sensor E3ZS, E3FS	max.1 unit	G9SP-N10D/N20S: max.6 units G9SP-N10S: max.4 units
Non-contact Door Switche D40A, D40Z	G9SP-N10D/N20S: max.30 units G9SP-N10S: max.15 units	
Safety Mat UM *1	max.12 units	
Safety Edge SGE *2	max.5 units	

*1. The UM Series was discontinued at the end of June 2019.

*2. Only a model with wire configuration of 2-wire cable on both sides (Configuration No. 0)

Specifications and prices in this product news are as of the issue date and are subject to change without notice. Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, product specifications, instructions, and manuals for precautions and necessary information when using products