

<b>NO:</b> REL - 188	<b>PRODUCT:</b> G5SB – PCB Power Relay
<b>DATE:</b> March 2017	<b>TYPE:</b> DISCONTINUATION – Streamline Product Offering

## G5SB PCB Power Relay - DISCONTINUATION

In an effort to streamline our product offering and focus on popular models of Omron’s line of PCB Power Relays, OMRON will discontinue all G5SB models in February 2018. The suggested replacement will be our G5Q relay series which despite minor differences to the characteristics and operation ratings, can be considered to be functional equivalents. Please carefully read through this notification and note the differences. The following details will fully explain the discontinuation and replacement considerations; should you have any additional questions, however, please communicate with the Relay Product Specialist.

**LAST Order date (Last Time Buy Date)**

**February 28, 2018**

**All orders entered by the LTB date will be shipped by the factory by the end of:**

**June, 2018**



**Product Discontinuation**

PCB Power Relay  
**Model G5SB Series**



**Suggested Replacement**



PCB Power Relay  
**Model G5Q Series**

**G5Q - Differences from discontinued product:**

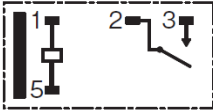
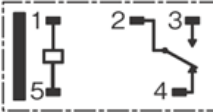
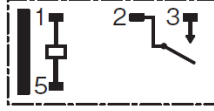
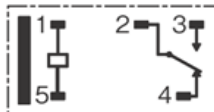
Suggested Replacement Model	Body Color	Dimen -sions	Wire connection	Mounting Dimensions	Charact -eristics	Operation ratings	Operation methods
G5Q-1A	**	**	**	**	*	*	**
G5Q-1A4	**	**	**	**	*	*	**
G5Q-1	**	**	**	**	*	**	**
G5Q-14	**	**	**	**	*	**	**

- \*\* : Compatible**
- \* : The change is a little/Almost compatible**
- : Not compatible**
- : No corresponding specification**

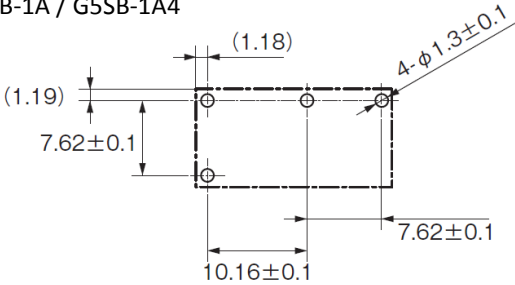
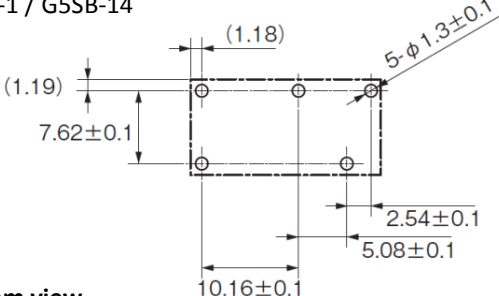
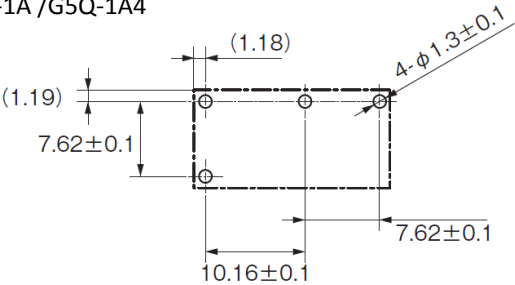
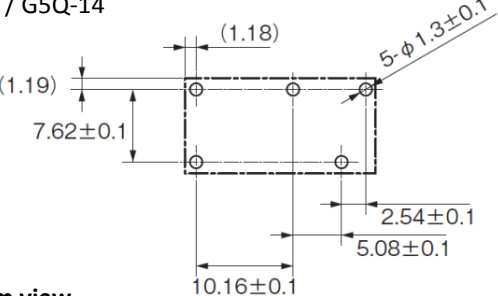
**Body Color:**

Discontinued Product Model G5SB Series	Suggested Replacement Model G5Q Series
Black 	Black 

**Wire Connection:**

Discontinued Product Model G5SB Series	Suggested Replacement Model G5Q Series
G5SB-1A / G5SB-1A4   G5SB-14   No coil polarity	G5Q-1A / G5Q-1A4   G5Q-14   No coil polarity

**Mounting Dimensions:**

Discontinued Product Model G5SB Series	Suggested Replacement Model G5Q Series
G5SB-1A / G5SB-1A4   G5SB-1 / G5SB-14   <b>Bottom view</b>	G5Q-1A / G5Q-1A4   G5Q-1 / G5Q-14   <b>Bottom view</b>

**Operation Ratings - Coil:**

Model		Rated voltage (VDC)	Rated current (mA)	Coil Resistance ( $\Omega$ )	Must operate voltage (%)	Must release voltage (%)	Max. voltage (%)	Power consumption (mW)
Discontinued Product	G5SB-14	5	80.0	63	75% max.	5% min.	150% (at 23°C)	Approx.400
		9	44.4	202				
		12	33.3	360				
		18	22.2	798				
		24	16.7	1,440				
		48	8.3	5,760				
Suggested Replacement	G5Q-1A G5Q-1A4	5	40.0	125	75% max.	5% min.	190% (at 23°C)	Approx.200
		9	22.2	405				
		12	16.7	720				
		24	8.3	2880				
		48	4.2	11520				
	G5Q-1 G5Q-14	5	80.0	63				Approx.400
		9	44.4	202				
		12	33.3	360				
		18	22.2	798				
		24	16.7	1,440				
		48	8.3	5,760				

**Operation Ratings - Contacts:**

Item	Discontinued Product Model G5SB Series		Suggested Replacement Model G5Q Series	
	G5SB-1A(4)	G5SB-1(4)	G5Q-1A(4)	G5Q-1(4)
Contact Type	Single			
Contact material	Ag-Alloy(Cd free)			
Rated load (resistive)	3 A (NO)/3 A (NC) at 125 VAC 5 A (NO)/3 A (NC) at 125 VAC 5 A (NO) at 250 VAC 3 A (NC) at 250 VAC 5 A (NO)/3 A (NC) at 30 VDC		N.O AC125V 10A AC250V 3A AC250V 5A AC125V 3A DC30V 5A	N.C AC250V 3A AC125V 3A DC30V 3A
Rated carry current	5A(N.O.)	5A(N.O.)/3A(N.C.)	10A(N.O.)	10A(N.O.)/3A(N.C.)

**Characteristics:**

Item		Discontinued Product Model G5SB Series		Suggested Replacement Model G5Q Series	
		G5SB-1A(4)	G5SB-1(4)	G5Q-1A(4)	G5Q-1(4)
Contact resistance *1		100mΩ			
Operate time		10ms max.			
Release time		5ms max.			
Insulation resistance*2		1,000 MΩmax.			
Dielectric strength		AC 4,000V 50/60Hz for 1 min (Between coil and contacts)			
		AC 1,000V 50/60Hz for 1 min (Between contacts of the same polarity)			
Impulse withstand voltage		8kV(1.2 x 50μs) (between coil and contacts)			
Vibration resistance	Destruction	10 to 55 to 10Hz 0.75mm single amplitude (1.5mm double amplitude)			
	Malfunction	10 to 55 to 10Hz 0.75mm single amplitude (1.5mm double amplitude)			
Shock resistance	Destruction	1,000m/s <sup>2</sup>			
	Malfunction	100m/s <sup>2</sup>			
Durability	Mechanical	5,000,000 operations (18,000 operations per hour)		10,000,000 operations (18,000 operations per hour)	
	Electrical	N.O (resistive load) 50,000 operations: 5 A at 250 VAC (operation: ON for 1 sec, OFF for 1 sec)  N.C (resistive load) 100,000 operations: 3 A at 250 VAC (operation: ON for 1 sec, OFF for 1 sec)  N.O/N.C(resistive load) 200,000 operations: 3A(N.O)/3A(N.C) at 125 VAC 50,000 operations: 5A(N.O)/3A(N.C) at 125 VAC 100,000 operations: 5A(N.O)/3A(N.C) at 30 VDC (operation: ON for 1 sec, OFF for 1 sec)		N.O (resistive load) 50,000 operations: 10 A at 125 VAC (operation: ON for 1 sec, OFF for 3 sec) 100,000 operations: 3 A at 250 VAC 200,000 operations: 3 A at 125 VAC 50,000 operations: 5 A at 250 VAC 100,000 operations: 5 A at 30 VDC (operation: ON for 1 sec, OFF for 1 sec)  N.C (resistive load) 100,000 operations: 3 A at 250 VAC 200,000 operations: 3 A at 125 VAC 100,000 operations: 3 A at 30 VDC (operation: ON for 1 sec, OFF for 1 sec)	
Failure rate (P level) (reference value)		DC5V 10mA (This value was measured at a switching frequency of 120 operations/min.)			
Ambient operating temperature		-40 °C to 70 °C (with no icing or condensation)		-40 °C to 105 °C (with no icing or condensation)	

Note. The data shown above are initial values.

\*1. The initial contact resistance is measured by applying 1A at 5VDC, using a fall-of-potential method.

\*2. Testing conditions: The insulation resistance was measured with a 500 VDC meg ohmmeter at the same locations as the dielectric strength was measured.

**Operating Method:**

Discontinued Product	Suggested Product
<b>No Change in Operating Method</b>	

**Details of Applicable Models:**

**NOTE1:** Nomenclature for G5SB relay may or may not include “BY OMI” or “BY OMI (N)” at the end of the part numbers, within the Omron computer system. This is a factory designation and has no bearing on the specifications.

**NOTE2:** Nomenclature for G5Q relay may or may not include “BY OMZ” at the end of the part numbers, within the Omron computer system. This is a factory designation and has no bearing on the specifications.

Discontinued Model	Suggested Replacement
G5SB-1A DC5 BY OMI	G5Q-1A DC5 BY OMZ
G5SB-1A DC5 BY OMI (N)	G5Q-1A DC5 BY OMZ
G5SB-1A DC9 BY OMI	G5Q-1A DC9 BY OMZ
G5SB-1A DC9 BY OMI (N)	G5Q-1A DC9 BY OMZ
G5SB-1A DC12 BY OMI	G5Q-1A DC12 BY OMZ
G5SB-1A DC12 BY OMI (N)	G5Q-1A DC12 BY OMZ
G5SB-1A DC24 BY OMI	G5Q-1A DC24 BY OMZ
G5SB-1A DC24 BY OMI (N)	G5Q-1A DC24 BY OMZ
G5SB-1A DC48 BY OMI	G5Q-1A DC48 BY OMZ
G5SB-1A DC48 BY OMI (N)	G5Q-1A DC48 BY OMZ
G5SB-1A4 DC5 BY OMI	G5Q-1A4 DC5 BY OMZ
G5SB-1A4 DC5 BY OMI (N)	G5Q-1A4 DC5 BY OMZ
G5SB-1A4 DC12 BY OMI	G5Q-1A4 DC12 BY OMZ
G5SB-1A4 DC12 BY OMI (N)	G5Q-1A4 DC12 BY OMZ
G5SB-1A4 DC24 BY OMI	G5Q-1A4 DC24 BY OMZ
G5SB-1A4 DC24 BY OMI (N)	G5Q-1A4 DC24 BY OMZ
G5SB-1A4 DC48 BY OMI	G5Q-1A4 DC48 BY OMZ
G5SB-1A4 DC48 BY OMI (N)	G5Q-1A4 DC48 BY OMZ
G5SB-1 DC5 BY OMI	G5Q-1 DC5 BY OMZ
G5SB-1 DC5 BY OMI (N)	G5Q-1 DC5 BY OMZ
G5SB-1 DC9 BY OMI	G5Q-1 DC9 BY OMZ
G5SB-1 DC9 BY OMI (N)	G5Q-1 DC9 BY OMZ
G5SB-1 DC12 BY OMI	G5Q-1 DC12 BY OMZ
G5SB-1 DC12 BY OMI (N)	G5Q-1 DC12 BY OMZ

Discontinued Model	Suggested Replacement
G5SB-1 DC24 BY OMI	G5Q-1 DC24 BY OMZ
G5SB-1 DC24 BY OMI (N)	G5Q-1 DC24 BY OMZ
G5SB-1 DC48 BY OMI	G5Q-1 DC48 BY OMZ
G5SB-1 DC48 BY OMI (N)	G5Q-1 DC48 BY OMZ
G5SB-14 DC5 BY OMI	G5Q-14 DC5 BY OMZ
G5SB-14 DC5 BY OMI (N)	G5Q-14 DC5 BY OMZ
G5SB-14 DC9 BY OMI	G5Q-14 DC9 BY OMZ
G5SB-14 DC9 BY OMI (N)	G5Q-14 DC9 BY OMZ
G5SB-14 DC12 BY OMI	G5Q-14 DC12 BY OMZ
G5SB-14 DC12 BY OMI (N)	G5Q-14 DC12 BY OMZ
G5SB-14 DC18 BY OMI	G5Q-14 DC18 BY OMZ
G5SB-14 DC18 BY OMI (N)	G5Q-14 DC18 BY OMZ
G5SB-14 DC24 BY OMI	G5Q-14 DC24 BY OMZ
G5SB-14 DC24 BY OMI (N)	G5Q-14 DC24 BY OMZ
G5SB-14 DC48 BY OMI	G5Q-14 DC48 BY OMZ
G5SB-14 DC48 BY OMI (N)	G5Q-14 DC48 BY OMZ
G5SB-14-ANI DC5 BY OMI	G5Q-14 DC5 BY OMZ
G5SB-14-ANI DC5 BY OMI (N)	G5Q-14 DC5 BY OMZ
G5SB-14-CB DC12 BY OMI	G5Q-14 DC12 BY OMZ
G5SB-14-CB DC12 BY OMI (N)	G5Q-14 DC12 BY OMZ
G5SB-14-CQC DC12 BY OMI	G5Q-14 DC12 BY OMZ
G5SB-14-CQC DC12 BY OMI (N)	G5Q-14 DC12 BY OMZ
G5SB-14-SS DC12 BY OMI	G5Q-14 DC12 BY OMZ
G5SB-14-SS DC12 BY OMI (N)	G5Q-14 DC12 BY OMZ

\* Sales teams should communicate this discontinuation with their OEM's and CEM's.  
For further technical support and any questions, please communicate with Product Marketing.

Specifications 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, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.

Last time buy dates are subject to change based on availability