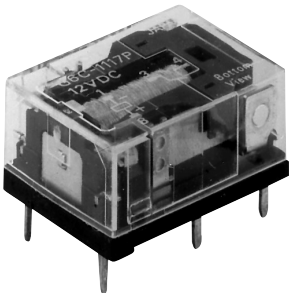
Power PCB Relay
G6C

- Subminiature 20.07 L x 14.99 W x 9.91 H mm (0.79 L x 0.59 W x 0.39 H in).
- Low power consumption (200 mW).
- Semi-sealed and sealed types available.
- Unique moving magnet armature (Moving Loop System) reduces relay size, magnetic interference, and contact bounce time.
- Single and double-winding latching types available.
- High sensitivity in a compact package.
- Long life assured by high contact pressure.



Ordering Information

To Order: Select the part number and add the desired coil voltage rating (e.g., G6C-1117P-US-*DC6*).

Type	Contact form	Construction	Model
Non-latching	SPST-NO	Sealed	**G6C-1114P-US**
	SPST-NO + SPST-NC		**G6C-2114P-US**
	SPST-NO	Semi-sealed	**G6C-1117P-US**
	SPST-NO + SPST-NC		**G6C-2117P-US**
Single-winding latching contact	SPST-NO	Sealed	**G6CU-1114P-US**
	SPST-NO + SPST-NC		**G6CU-2114P-US**
	SPST-NO	Semi-sealed	**G6CU-1117P-US**
	SPST-NO + SPST-NC		**G6CU-2117P-US**
Dual-winding latching contact	SPST-NO	Sealed	**G6CK-1114P-US**
	SPST-NO + SPST-NC		**G6CK-2114P-US**
	SPST-NO	Semi-sealed	**G6CK-1117P-US**
	SPST-NO + SPST-NC		**G6CK-2117P-US**

■ Accessories

Back Connecting Sockets

Relay	Model
G6C-1114P-US	**P6C-06P**
G6C-1117P-US	
G6C-2114P-US	
G6C-2117P-US	
G6CU-1114P-US	
G6CU-1117P-US	
G6CU-2114P-US	
G6CU-2117P-US	
G6CK-1114P-US	**P6C-08P**
G6CK-1117P-US	
G6CK-2114P-US	
G6CK-2117P-US	

Specifications

■ Contact Data

Non-latching

Load	SPST-NO		SPST-NO + SPST-NC	
	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)
Rated load	10 A at 250 VAC 10 A at 30 VDC	5 A at 250 VAC 5 A at 30 VDC	8 A at 250 VAC 8 A at 30 VDC	3.5 A at 250 VAC 3.5 A at 30 VDC
Contact material	Ag-Alloy			
Carry current	10 A		8 A	
Max. operating voltage	380 VAC, 125 VDC			
Max. operating current	10 A		8 A	
Max. switching capacity	2,500 VA, 300 W	1,250 VA, 220 W	2,000 VA, 240 W	875 VA, 170 W
Min. permissible load	10 mA, 5 VDC			

Latching

Load	SPST-NO		SPST-NO + SPST-NC	
	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)
Rated load	10 A at 250 VAC 10 A at 30 VDC	5 A at 250 VAC 5 A at 30 VDC	8 A at 250 VAC 8 A at 30 VDC	3.5 A at 250 VAC 3.5 A at 30 VDC
Contact material	Ag-Alloy			
Carry current	10 A		8 A	
Max. operating voltage	380 VAC, 125 VDC			
Max. operating current	10 A		8 A	3.5 A
Max. switching capacity	2,500 VA, 300 W	1,250 VA, 220 W	2,000 VA, 240 W	875 VA, 105 W
Min. permissible load	10 mA, 5 VDC			

■ Coil Data

Non-latching

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Coil inductance (ref. value) (H)		Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (mW)
			Armature OFF	Armature ON	% of rated voltage			
3	66.70	45	0.078	0.067	70% max.	10% min.	160% max. at 23°C (73°F) 130% max. at 70°C (158° F)	Approx. 200
5	40	125	0.22	0.18				
6	33.30	180	0.36	0.29				
12	16.70	720	1.32	1.13				
24	8.30	2,880	4.96	4.19				

Single-winding Latching Type

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Coil inductance (ref. value) (H)	Set pick-up voltage	Reset pick-up voltage	Maximum voltage	Power consumption (mW)
				% of rated voltage			
3	66.70	45	0.09	70% max.	70% min.	160% max. at 23°C (73°F)	Approx. 200
5	40	125	0.25				
6	33.30	180	0.36			130% max. at 70°C (158°F)	
12	16.70	720	1.75				
24	8.30	2,880	5.83				

Note: The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of ±10%.

■ Coil Data

Dual-winding Latching Type

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Coil inductance (ref. value) (H)		Set pick-up voltage	Reset pick-up voltage	Maximum voltage	Power consumption (mW)
			Set Coil	Reset Coil	% of rated voltage			
3	93.50	32.10	0.03	0.03	70% max.	70% max.	160% max. at 23°C (73°F)	Approx. 280
5	56	89.30	0.07	0.08				
6	46.70	129	0.10	0.12			110% max. at 70°C (158°F)	
12	23.30	514	0.37	0.47				
24	11.70	2,056	1.56	1.46				

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of ±10%.

2. Operating characteristics are measured at a coil temperature of 23°C (73°F).

3. The minimum pulse width of the set and reset voltage is 20 ms.

■ Characteristics

		Non-latching	Latching
Contact resistance		30 mΩ max.	
Operate (set) time		10 ms max. (mean value: approx. 5 ms)	
Release (reset) time		10 ms max. (mean value: approx. 2 ms)	
Bounce time	**Operate**	Approx. 3 ms	
	Release	Approx. 3 ms	
Operating frequency	**Mechanical**	18,000 operations/hour	
	Electrical	1,800 operations/hour (under rated load)	
Insulation resistance		1,000 MΩ min. (at 500 VDC)	
Dielectric strength		2,000 VAC, 50/60 Hz for 1 minute between coil and contacts, non-latching types	
		2,000 VAC, 50/60 Hz for 1 minute between contacts of different poles, non-latching	
		1,000 VAC, 50/60 Hz for 1 minute between contacts of same pole, non-latching	
		250 VAC, 50/60 Hz for 1 minute between set and reset coils, latching types	
Surge withstand voltage		4,500 V x 40 μs (between coil and contacts, non-latching)	
Vibration	**Mechanical durability**	10 to 55 Hz; 1.50 mm (0.06 in) double amplitude	
	Malfunction durability	10 to 55 Hz; 1.50 mm (0.06 in) double amplitude	
Shock	**Mechanical durability**	Approx. 100 G	
	Malfunction durability	Approx. 10 G	
Ambient temperature		-25 to 70°C (-13° to 158°F)	
Humidity		45 to 85% RH	
Service life	**Mechanical**	50 million operations min. (at operating frequency of 18,000 operations/hour)	
	Electrical	See “Characteristic Data”	
Weight		Approx. 5.6 g (0.20 oz)	

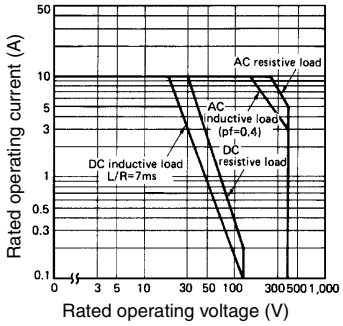
Note: Data shown are of initial value.

■ Characteristic Data

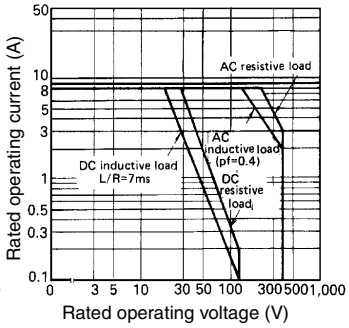
Non-latching Types

Maximum switching capacity

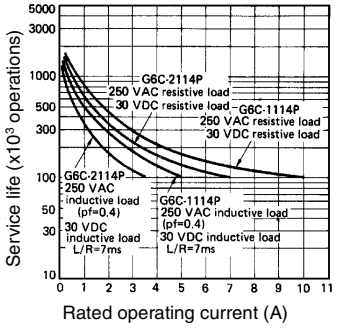
SPST-NO



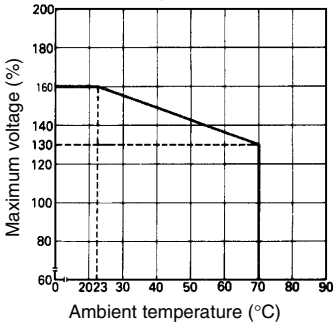
SPST-NO + SPST-NC



Electrical service life



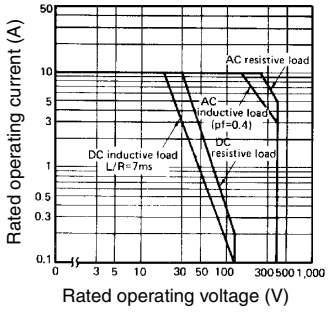
Ambient temperature maximum voltage (reference only)



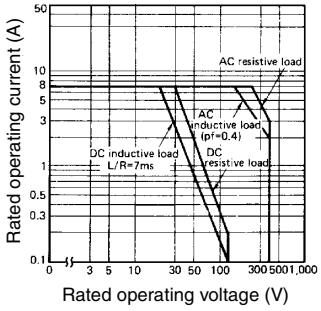
Latching Types

Maximum switching capacity

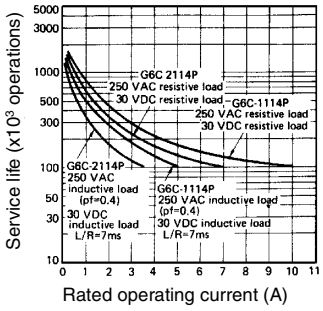
SPST-NO



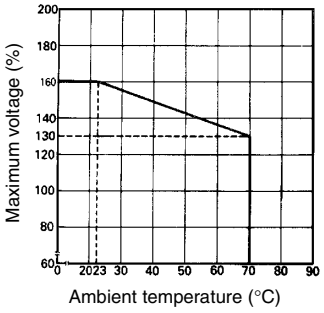
SPST-NO + SPST-NC



Electrical service life



Ambient temperature maximum voltage (reference only)

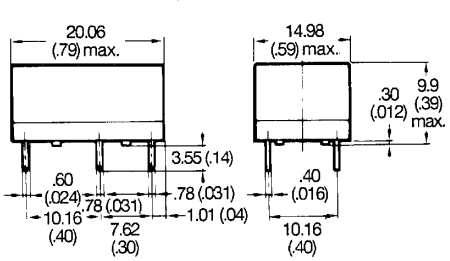


Dimensions

Unit: mm (inch)

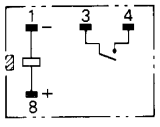
■ Non-latching Relays

G6C-□117P-US

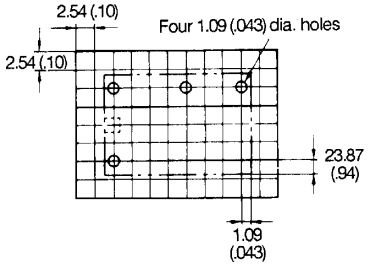


Terminal arrangement/ Internal connections
(Bottom view)

G6C-1117P-US, G6C-1114P-US

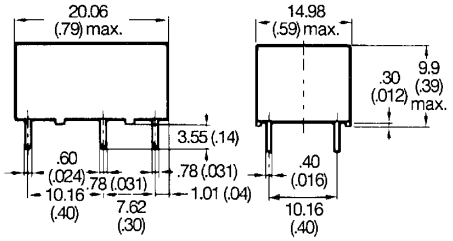


Mounting holes
[Bottom view, Tolerance ±2.54 (0.10)]



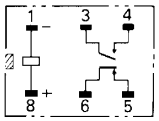
Note: ▨ and ⋯ indicate mounting orientation marks.

G6C-□114P-US

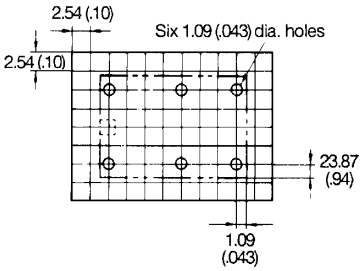


Terminal arrangement/ Internal connections
(Bottom view)

G6C-1117P-US, G6C-1114P-US

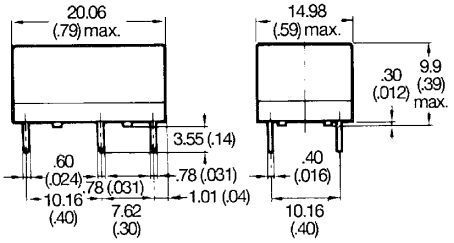


Mounting holes
[Bottom view, Tolerance ±2.54 (0.10)]

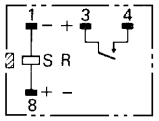


■ Latching Relays

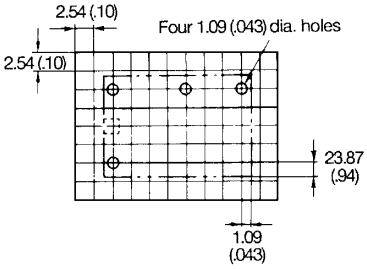
Single winding types, 1-pole
G6CU-1117P-US, G6CU-1114P-US



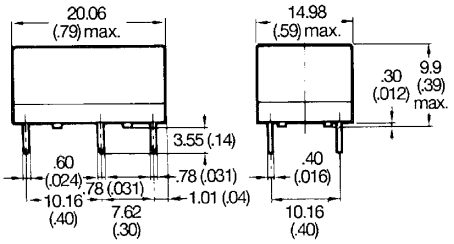
Terminal arrangement/ Internal connections
(Bottom view)



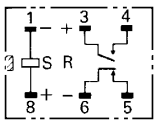
Mounting holes
(Bottom view)



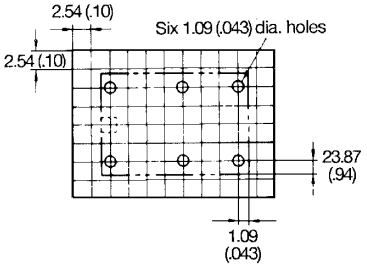
Single winding types, 2-pole
G6CU-2117P-US, G6CU-2114P-US



Terminal arrangement/ Internal connections
(Bottom view)



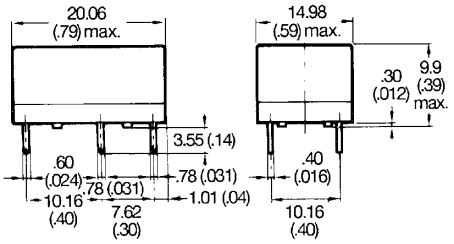
Mounting holes
(Bottom view)



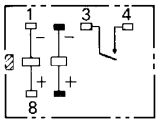
Note: ▨ and ⋯ indicate mounting orientation marks.

Unit: mm (inch)

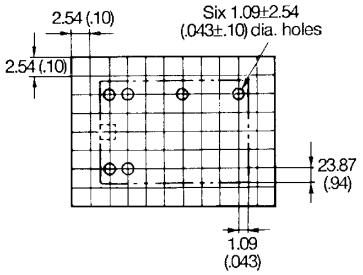
Double winding types, 1-pole
G6CK-1117P-US, G6CK-1114P-US



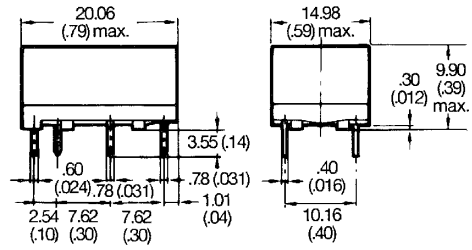
Terminal arrangement/
Internal connections
(Bottom view)



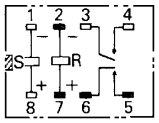
Mounting holes
(Bottom view)



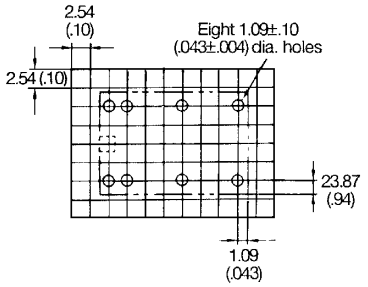
Double winding types, 2-pole
G6CK-2117P-US, G6CK-2114P-US



Terminal arrangement/
Internal connections
(Bottom view)

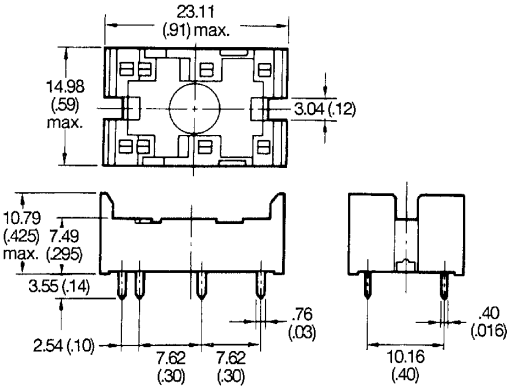


Mounting holes
(Bottom view)



■ Accessories

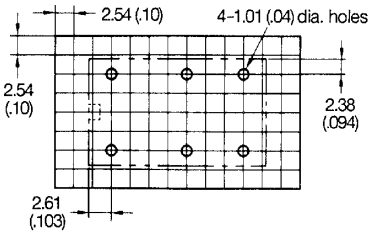
Connecting sockets – P6C-06P, P6C-08P



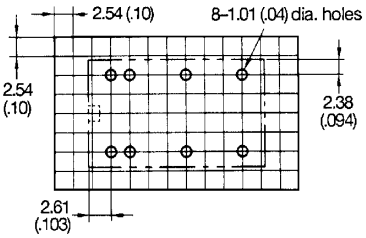
Mounting height of relay
width connecting socket

Mounting holes
(Bottom view)

P6C-06P



P6C-08P



Note: ▨ and ⬚ indicate mounting orientation marks.

■ Approvals

UL (File No. E41643)/CSA (File No. LR31928)

Type	Contact form	Coil rating	Contact ratings
G6C-1114P-US G6C-1117P-US	SPST-NO	3 to 60 VDC	10 A, 250 VAC (General purpose) 10 A, 30 VDC (Resistive) TV-5 1/4 HP, 125 VAC 1/4 HP, 250 VAC (Motor load) 1/3 HP, 250 VAC (Motor load) 600 WT, 120 VAC (Tungsten) 530 VA, 265 VAC, 2 A max. pilot duty 43.2 VA, 30 VDC, pilot duty 22 LRA, 3.6 FLA, 30 VDC B300 pilot duty
G6C-2114P-US G6C-2117P-US	SPST-NO + SPST-NC	3 to 60 VDC	8 A, 250 VAC (General purpose) 8 A, 30 VDC (Resistive) TV-5 1/4 HP, 125 VAC 1/4 HP, 250 VAC (Motor load) 600 WT, 120 VAC (Tungsten) 530 VA, 265 VAC, 2 A max. pilot duty 43.2 VA, 30 VDC, pilot duty 22 LRA, 3.6 FLA, 30 VDC B300/R300 pilot duty
G6C(U/K)-1114P-US G6C(U/K)-1117P-US	SPST-NO	3 to 60 VDC	10 A, 250 VAC (General purpose) 10 A, 30 VDC (Resistive) 1/6 HP, 125 VAC (Motor load) TV-5 1/4 HP, 125 VAC 1/4 HP, 250 VAC (Motor load) 1/3 HP, 250 VAC (Motor load) 600 WT, 120 VAC (Tungsten)
G6C(U/K)-2114P-US G6C(U/K)-2117P-US	SPST-NO + SPST-NC	3 to 60 VDC	8 A, 250 VAC (General purpose) 8 A, 30 VDC (Resistive) 1/6 HP, 125 VAC (Motor load) TV-5 1/4 HP, 125 VAC 1/4 HP, 250 VAC (Motor load) 1/3 HP, 250 VAC (Motor load) 600 WT, 120 VAC (Tungsten)

VDE (File No. 2314)

Type	Contact form	Coil rating	Contact ratings
G6C-1117P-VD G6C-1114P-VD	SPST-NO	DC3, 12, 24V	250 VAC 10 A (Resistive) 5 A (Inductive)
G6C-2117P-VD G6C-2114P-VD	SPST-NO + SPST-NC	DC3, 12, 24V	250 VAC 7 A (Resistive) 3.5 A (Inductive)

Note: 1. The rated values approved by each of the safety standards (e.g., UL and CSA) may be different from the performance characteristics individually defined in this catalog.

2. In the interest of product improvement, specifications are subject to change.

MEMO

Terms and Conditions of Sale

1. Offer; Acceptance. These terms and conditions (these "Terms") are deemed part of all quotations, acknowledgments, invoices, purchase orders and other documents, whether electronic or in writing, relating to the sale of products or services (collectively, the "Products") by Omron Electronic Components LLC ("Seller"). Seller hereby objects to any terms or conditions proposed in Buyer's purchase order or other documents which are inconsistent with, or in addition to, these Terms.
2. Prices; Payment. All prices stated are current, subject to change without notice by Seller. Buyer agrees to pay the price in effect at time of shipment. Payments for Products received are due net 30 days unless otherwise stated in the invoice.
3. Discounts. Cash discounts, if any, will apply only on the net amount of invoices sent to Buyer after deducting transportation charges, taxes and duties, and will be allowed only if (i) the invoice is paid according to Seller's payment terms and (ii) Buyer has no past due amounts owing to Seller.
4. Currencies. If the prices quoted herein are in a currency other than U.S. dollars, Buyer shall make remittance to Seller at the then current exchange rate most favorable to Seller and which is available on the due date; provided that if remittance is not made when due, Buyer will convert the amount to U.S. dollars at the then current exchange rate most favorable to Seller available during the period between the due date and the date remittance is actually made.
5. Governmental Approvals. Buyer shall be responsible for, and shall bear all costs involved in, obtaining any government approvals required for the importation or sale of the Products.
6. Taxes. All taxes, duties and other governmental charges (other than general real property and income taxes), including any interest or penalties thereon, imposed directly or indirectly on Seller or required to be collected directly or indirectly by Seller for the manufacture, production, sale, delivery, importation, consumption or use of the Products sold hereunder (including customs duties and sales, excise, use, turnover and license taxes) shall be charged to and remitted by Buyer to Seller.
7. Financial. If the financial position of Buyer at any time becomes unsatisfactory to Seller, Seller reserves the right to stop shipments or require satisfactory security or payment in advance. If Buyer fails to make payment or otherwise comply with these Terms or any related agreement, Seller may (without liability and in addition to other remedies) cancel any unshipped portion of Products sold hereunder and stop any Products in transit until Buyer pays all amounts, including amounts payable hereunder, whether or not then due, which are owing to it by Buyer. Buyer shall in any event remain liable for all unpaid accounts.
8. Cancellation; Etc. Orders are not subject to rescheduling or cancellation unless Buyer indemnifies Seller fully against all costs or expenses arising in connection therewith.
9. Force Majeure. Seller shall not be liable for any delay or failure in delivery resulting from causes beyond its control, including earthquakes, fires, floods, strikes or other labor disputes, shortage of labor or materials, accidents to machinery, acts of sabotage, riots, delay in or lack of transportation or the requirements of any government authority.
10. Shipping; Delivery. Unless otherwise expressly agreed in writing by Seller:
    1. Shipments shall be by a carrier selected by Seller;
    2. Such carrier shall act as the agent of Buyer and delivery to such carrier shall constitute delivery to Buyer;
    3. All sales and shipments of Products shall be FOB shipping point (unless otherwise stated in writing by Seller), at which point title to and all risk of loss of the Products shall pass from Seller to Buyer, provided that Seller shall retain a security interest in the Products until the full purchase price is paid by Buyer;
    4. Delivery and shipping dates are estimates only.
    5. Seller will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
11. Claims. Any claim by Buyer against Seller for shortage or damage to the Products occurring before delivery to the carrier must be presented in writing to Seller within 30 days of receipt of shipment and include the original transportation bill signed by the carrier noting that the carrier received the Products from Seller in the condition claimed.
12. Warranties. (a) Exclusive Warranty. Seller's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Seller (or such other period expressed in writing by Seller). Seller disclaims all other warranties, express or implied. (b) Limitations. SELLER MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. Seller further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) Buyer Remedy. Seller's sole obligation hereunder shall be to replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product or, at Seller's election, to repay or credit Buyer an amount equal to the purchase price of the Product; provided that in no event shall Seller be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Seller's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Seller before shipment. Seller shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies, or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing are not to be construed as an amendment or addition to the above warranty.
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16. Miscellaneous. (a) Waiver. No failure or delay by Seller in exercising any right and no course of dealing between Buyer and Seller shall operate as a waiver of rights by Seller. (b) Assignment. Buyer may not assign its rights hereunder without Seller's written consent. (c) Law. These Terms are governed by Illinois law (without regard to conflict of law principles). Federal and state courts in Illinois shall have exclusive jurisdiction for any dispute hereunder. (d) Amendment. These Terms constitute the entire agreement between Buyer and Seller relating to the Products, and no provision may be changed or waived unless in writing signed by the parties. (e) Severability. If any provision hereof is rendered ineffective or invalid, such provision shall not invalidate any other provision. (f) Setoff. Buyer shall have no right to set off any amounts against the amount owing in respect of this invoice.. (g) Definitions. As used herein, "including" means "including without limitation".

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OMRON ELECTRONIC COMPONENTS LLC
55 E. Commerce Drive, Suite B
Schaumburg, IL 60173
847-882-2288

OMRON CANADA, INC.
885 Milner Avenue
Toronto, Ontario M1B 5V8
416-286-6465

OMRON ON-LINE
Global - http://www.omron.com
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