

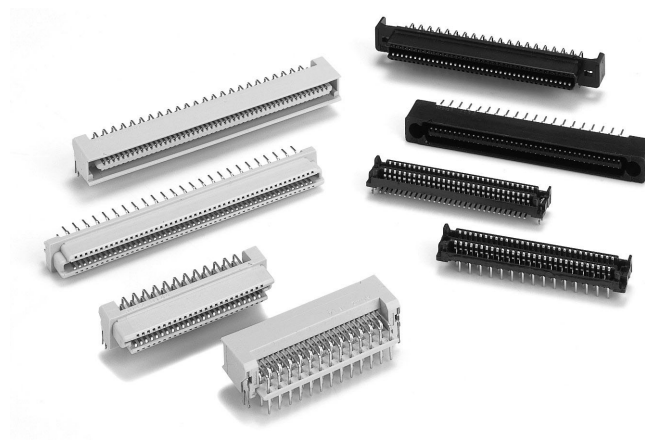
Half-Pitch Connectors

XH2

Allows high-density mounting for electronic devices.

A half-pitch connector with a pitch of 1.27 mm (0.05 in.) for compactness.

- A pitch of 1.27 mm (0.05 in.) for high-density mounting of double-row arrangements.
- A quadruple-row staggered arrangement (1.27 mm x 1.905 mm) (0.05 in. x 0.075 in.) for board connection.
- The bellows contact design, enables smooth mating and resistance to bending.
- Space saving mating length of 3.1 mm (0.12 in.).
- Positive contact locking assures long-term contact quality. The gold/palladium plating has been improved for better contact reliability.
- A special finish prevents flux rise. Also, it has fastening pins to standardize all the terminals.



Ordering Information

See ordering tables on the following pages.

Specifications

Rated current	0.5 A (at 20°C)
Contact resistance*	30 mΩ max. (at 20 mV, 100 mA max.)
Insulation resistance	10 ³ mΩ min (at 500 VDC)
Withstand voltage	650 VAC for 1 min. (leakage current 1 mA max.)
Connector insertion	80 gf (0.18 lb.f) max. per contact
Connector removal	10 gf (0.022 lb.f) max. per contact
Usage durability	400 times min.
Operating temperature	-55 to 105°C

*For XH2A-□□42 and XH2B-□□41

Materials and Finish

Item		Plug	Socket
Housing		PBT resin with glass (UL94V-0) (black)	
Locator		PBT resin with glass (UL94V-0) (black)	
Contact	Mating end	Phosphor bronze/nickel base, gold/palladium plating	Phosphor bronze/nickel base/gold/palladium plating
	Terminal	Phosphor bronze/nickel base, copper plating (2mm)	Phosphor bronze/nickel base copper plating (2mm)
Fastening pins		Phosphor bronze/copper plating	

Mating Diagram

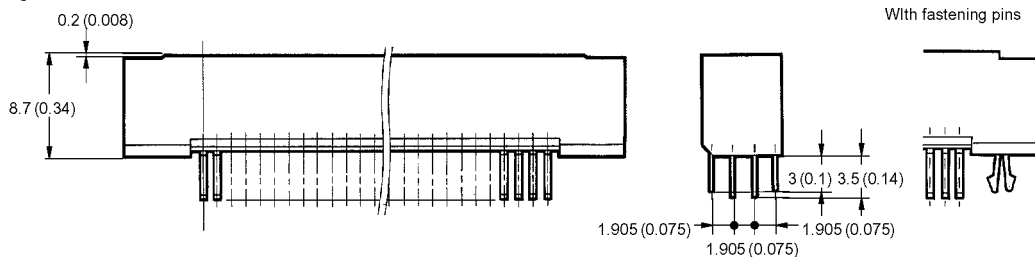
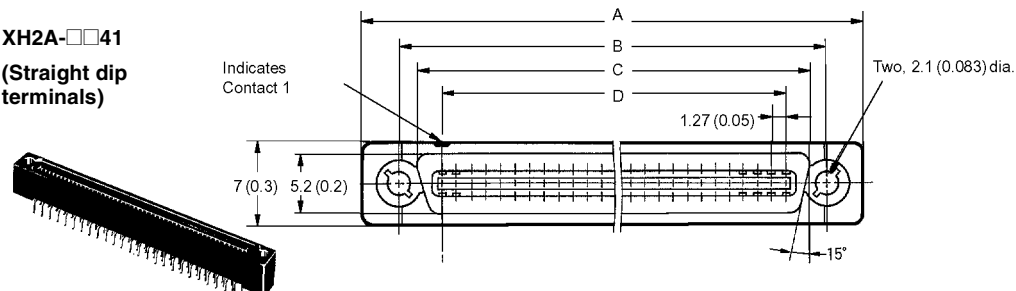
Vertical (standing)	Vertical (reverse)	Stacking	Horizontal

*The standard and reverse models function as the standard DIN connectors (XC5).

■ XH2A Plugs, Straight Dip Terminals

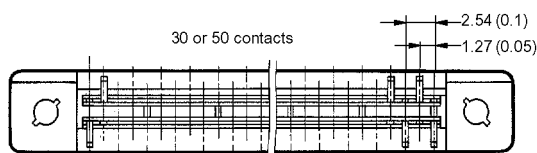
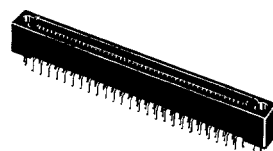
XH2A-□□41

(Straight dip terminals)

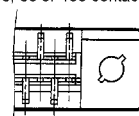


XH2A-□□41-A

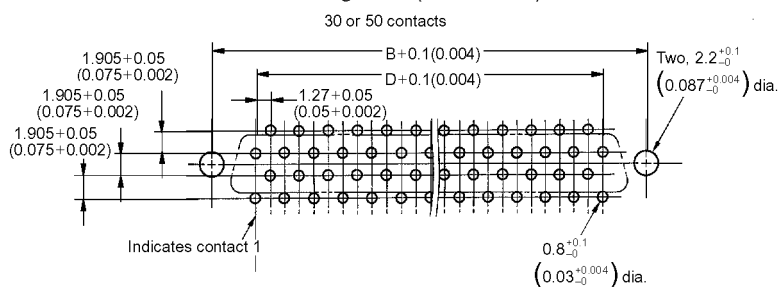
(Straight dip terminals, with fastening pins)



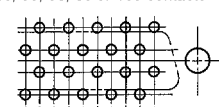
20, 40, 60, 68, 80 or 100 contacts



Mounting holes (bottom view)



20, 40, 60, 68, 80 or 100 contacts



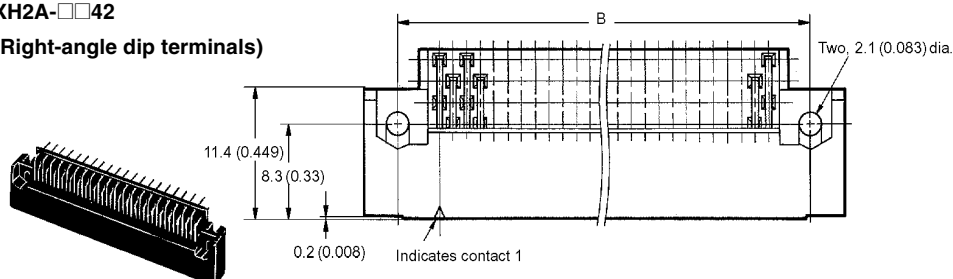
Ordering Information

No. of contacts	Dimensions [mm (in.)]				Model	
	A	B	C	D	Plug/straight dip terminals	Plug/straight dip terminals with fastening pins
20	25.4 (1)	19.05 (0.75)	15.8 (0.622)	11.43 (0.45)	XH2A-2041	XH2A-2041-A
30	31.8 (1.25)	25.40 (1)	22.2 (0.874)	17.78 (0.7)	XH2A-3041	XH2A-3041-A
40	38.1 (1.5)	31.75 (1.25)	28.5 (1.12)	24.13 (0.95)	XH2A-4041	XH2A-4041-A
50	44.5 (1.75)	38.10 (1.5)	34.9 (1.37)	30.48 (1.2)	XH2A-5041	XH2A-5041-A
60	50.8 (2)	45 (1.75)	41.2 (1.62)	36.83 (1.45)	XH2A-6041	XH2A-6041-A
68	55.9 (2.2)	49.53 (1.95)	46.3 (1.82)	41.91 (1.65)	XH2A-6841	XH2A-6841-A
80	63.5 (2.5)	57.15 (2.25)	53.9 (2.12)	49.53 (1.95)	XH2A-8041	XH2A-8041-A
100	76.2 (3)	69.85 (2.75)	66.6 (2.62)	62.23 (2.45)	XH2A-0141	XH2A-0141-A

■ XH2A Plugs, Right-angle Dip Terminals

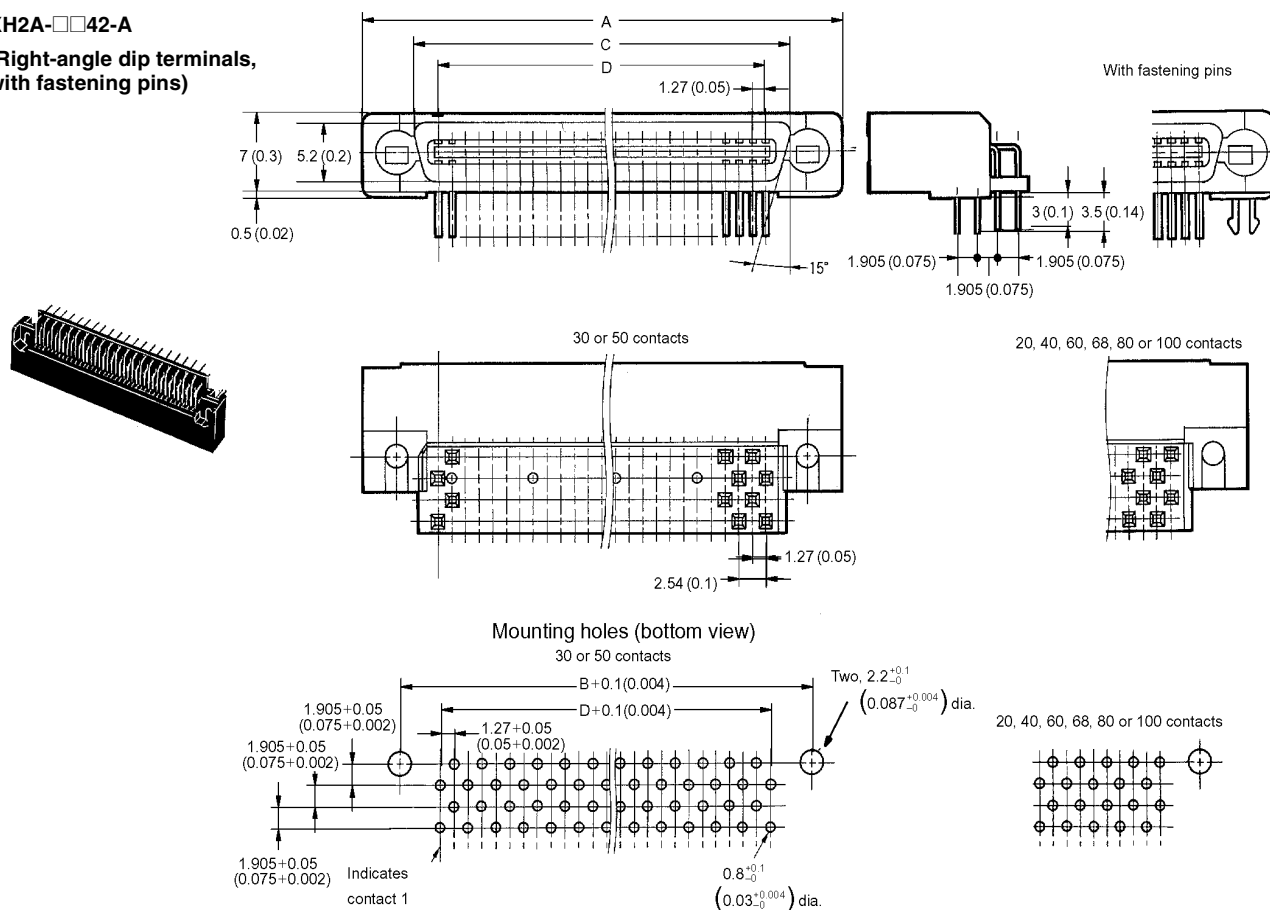
XH2A-□□42

(Right-angle dip terminals)



XH2A-□□42-A

(Right-angle dip terminals, with fastening pins)



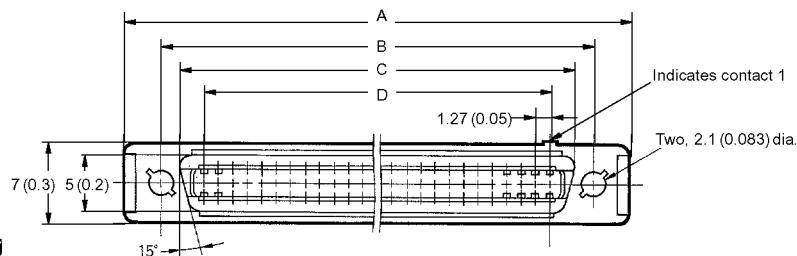
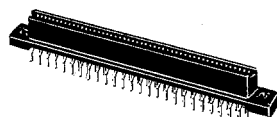
Ordering Information

No. of contacts	Dimensions [mm (in.)]				Model	
	A	B	C	D	Plug/straight dip terminals	Plug/straight dip terminals with fastening pins
20	25.4 (1)	19.05 (0.75)	15.8 (0.622)	11.43 (0.45)	XH2A-2042	XH2A-2042-A
30	31.8 (1.25)	25.40 (1)	22.2 (0.874)	17.78 (0.7)	XH2A-3042	XH2A-3042-A
40	38.1 (1.5)	31.75 (1.25)	28.5 (1.12)	24.13 (0.95)	XH2A-4042	XH2A-4042-A
50	44.5 (1.75)	38.10 (1.5)	34.9 (1.37)	30.48 (1.2)	XH2A-5042	XH2A-5042-A
60	50.8 (2)	44.45 (1.75)	41.2 (1.62)	36.83 (1.45)	XH2A-6042	XH2A-6042-A
68	55.9 (2.2)	49.53 (1.95)	46.3 (1.82)	41.91 (1.65)	XH2A-6842	XH2A-6842-A
80	63.5 (2.5)	57.15 (2.25)	53.9 (2.12)	49.53 (1.95)	XH2A-8042	XH2A-8042-A
100	76.2 (3)	69.85 (2.75)	66.6 (2.62)	62.23 (2.45)	XH2A-0142	XH2A-0142-A

XH2A Sockets, Straight Dip Terminals

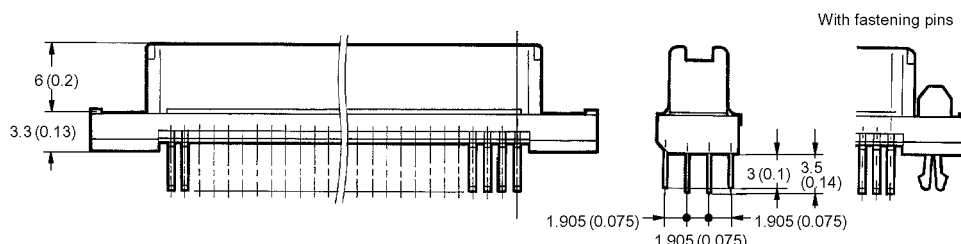
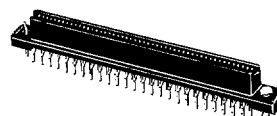
XH2B-□□41

(Straight dip terminal)

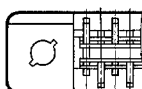


XH2B-□□41-A

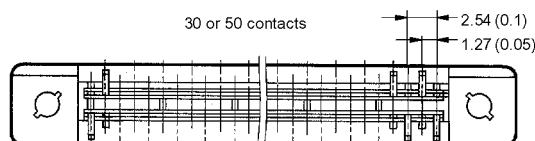
(Straight dip terminal, with fastening pins)



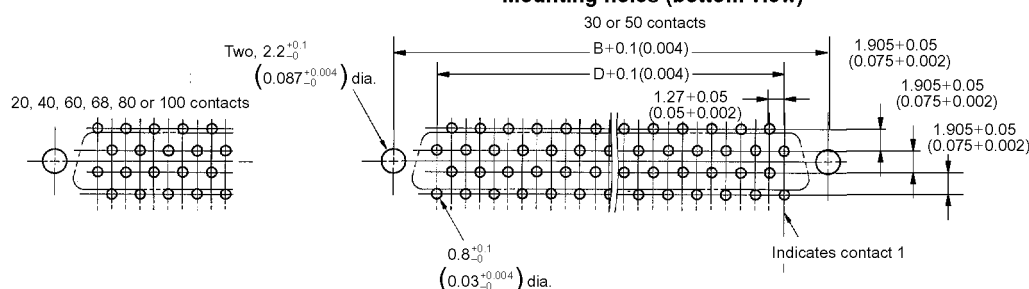
20, 40, 60, 68, 80 or 100 contacts



30 or 50 contacts



Mounting holes (bottom view)



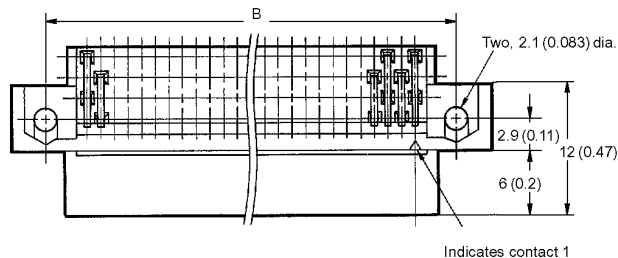
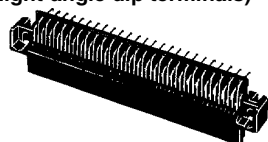
Ordering Information

No. of contacts	Dimensions [mm (in.)]				Model	
	A	B	C	D	Plug/straight dip terminals	Plug/straight dip terminals with fastening pins
20	25.4 (1)	19.05 (0.75)	15.7 (0.618)	11.43 (0.45)	XH2B-2041	XH2B-2041-A
30	31.8 (1.25)	25.40 (1)	22.1 (0.87)	17.78 (0.7)	XH2B-3041	XH2B-3041-A
40	38.1 (1.5)	31.75 (1.25)	28.4 (1.12)	24.13 (0.95)	XH2B-4041	XH2B-4041-A
50	44.5 (1.75)	38.10 (1.5)	34.8 (1.37)	30.48 (1.2)	XH2B-5041	XH2B-5041-A
60	50.8 (2)	44.45 (1.75)	41.1 (1.62)	36.83 (1.45)	XH2B-6041	XH2B-6041-A
68	55.9 (2.2)	49.53 (1.95)	46.2 (1.82)	41.91 (1.65)	XH2B-6841	XH2B-6841-A
80	63.5 (2.5)	57.15 (2.25)	53.8 (2.12)	49.53 (1.95)	XH2B-8041	XH2B-8041-A
100	76.2 (3)	69.85 (2.75)	66.5 (2.62)	62.23 (2.45)	XH2B-0141	XH2B-0141-A

■ XH2A Sockets, Right-angle Dip Terminals

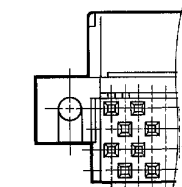
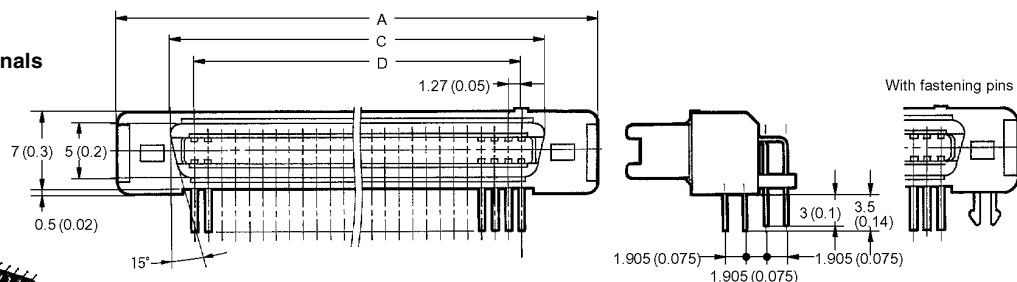
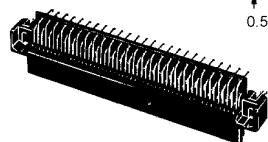
XH2B-□□42

(Right-angle dip terminals)

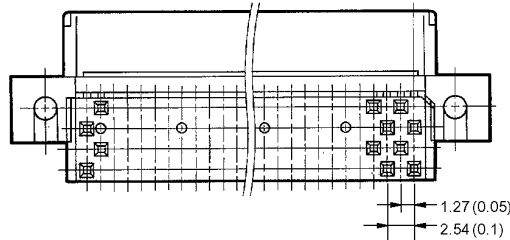


XH2B-□□42-A

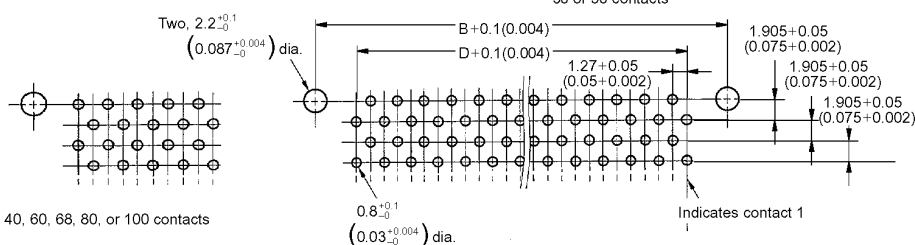
(Right-angle dip terminals with fastening pins)



20, 40, 60, 68, 80, or 100 contacts



Mounting holes (bottom view)



20, 40, 60, 68, 80, or 100 contacts

Ordering Information

No. of contacts	Dimensions [mm (in.)]				Model	
	A	B	C	D	Plug/straight dip terminals	Plug/straight dip terminals with fastening pins
20	25.4 (1)	19.05 (0.75)	15.7 (0.618)	11.43 (0.45)	XH2B-2042	XH2B-2042-A
30	31.8 (1.25)	25.40 (1)	22.1 (0.87)	17.78 (0.7)	XH2B-3042	XH2B-3042-A
40	38.1 (1.5)	31.75 (1.25)	28.4 (1.12)	24.13 (0.95)	XH2B-4042	XH2B-4042-A
50	44.5 (1.75)	38.10 (1.5)	34.8 (1.37)	30.48 (1.2)	XH2B-5042	XH2B-5042-A
60	50.8 (2)	44.45 (1.75)	41.1 (1.62)	36.83 (1.45)	XH2B-6042	XH2B-6042-A
68	55.9 (2.2)	49.53 (1.95)	46.2 (1.82)	41.91 (1.65)	XH2B-6842	XH2B-6842-A
80	63.5 (2.5)	57.15 (2.25)	53.8 (2.12)	49.53 (1.95)	XH2B-8042	XH2B-8042-A
100	76.2 (3)	69.85 (2.75)	66.5 (2.62)	62.23 (2.45)	XH2B-0142	XH2B-0142-A

General Information

■ Contact Numbers

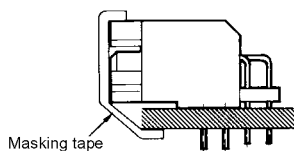
Terminal shape	Mated diagram	Mounting holes (bottom view)
Plug, straight terminals		
Plug, right-angle terminals		
Socket, straight terminals		
Socket, right-angle terminals		

- Contact numbers are not printed on the connectors. Use the triangular mark (indicates contact 1) as a guide when mounting to a board.
- On the mating side, the row terminals on the triangular mark side are called row a, and the other side is called row b. The numbers are in the order shown.
- The triangular marks on the plug and the socket should be aligned when mated. The contact numbers on both sides should match.

■ Precautions

Automated Soldering

Use tape to mask the right-angle connectors before automated-soldering.



MEMO

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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.
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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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14. Indemnities. Buyer shall indemnify and hold harmless Seller, its affiliates and its employees from and against all liabilities, losses, claims, costs and expenses (including attorney's fees and expenses) related to any claim, investigation, litigation or proceeding (whether or not Seller is a party) which arises or is alleged to arise from Buyer's acts or omissions under these Terms or in any way with respect to the Products. Without limiting the foregoing, Buyer (at its own expense) shall indemnify and hold harmless Seller and defend or settle any action brought against Seller to the extent that it is based on a claim that any Product made to Buyer specifications infringed intellectual property rights of another party.
15. Property; Confidentiality. The intellectual property embodied in the Products is the exclusive property of Seller and its affiliates and Buyer shall not attempt to duplicate it in any way without the written permission of Seller. Notwithstanding any charges to Buyer for engineering or tooling, all engineering and tooling shall remain the exclusive property of Seller. All information and materials supplied by Seller to Buyer relating to the Products are confidential and proprietary, and Buyer shall limit distribution thereof to its trusted employees and strictly prevent disclosure to any third party.
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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1. **Suitability for Use.** Seller shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in Buyer's application or use of the Product. At Buyer's request, Seller will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases but the following is a non-exhaustive list of applications for which particular attention must be given:
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 - (ii) Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
 - (iii) Use in consumer products or any use in significant quantities.
 - (iv) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this product.

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ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.



**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

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