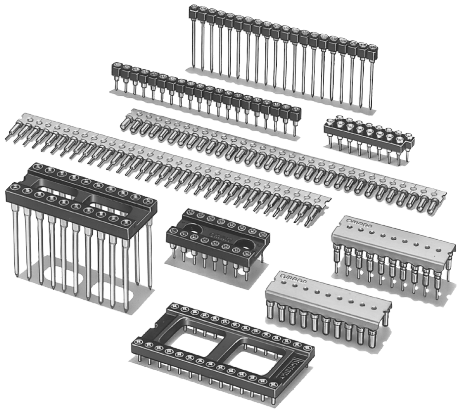
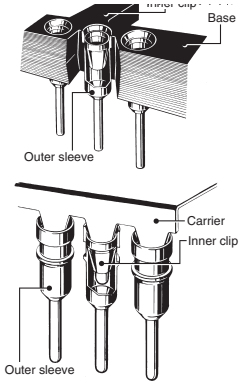
IC Sockets
XR2

OMRON's IC Connectors Have Excellent Reliability and Can Tolerate Momentary Interruptions in Power.

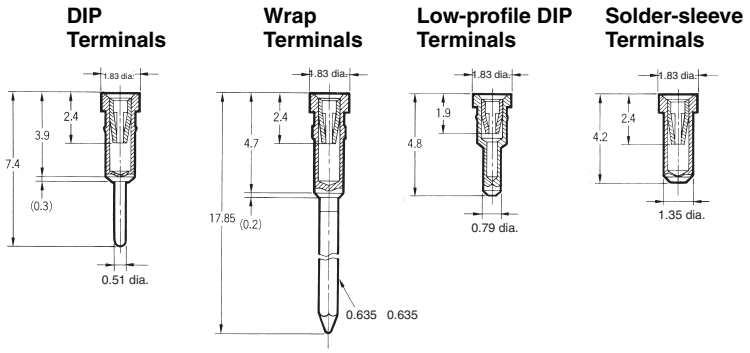
- Round pins and 4-point (4-finger) contact construction with contact entry holes that are large for easy insertion.
- IC lead contacts placed high for solid connections.
- A wide product range: open-frame, closed-frame, single-row, carrier-type DIP terminals, wrap terminals, solder-sleeve terminals, and low-profile DIP terminals.
- Conforms to UL standards (file no. E 103202) and CSA standards (file no. LR 62678).



■ Construction



■ Contact Dimensions



■ Ratings and Characteristics

Item	Gold plated	Gold flash plated
Rated current	1 A	
Rated voltage	300 VAC	
Contact resistance	20 mΩ max. (at 20 mV, 100 mA max.)	
Insulation resistance	1,000 MΩ min. (at 500 VDC)	
Dielectric strength	1,000 VAC for 1 min (leakage current: 1 mA max.)	
Contact insertion (See note.)	400 gf (3.92 N) max.	
Contact removal (See note.)	65 gf (0.64 N) min. with gold plating or with solder plating	
Insertion durability	100 times (0.75-μm gold plating), 50 times (0.25-μm gold plating)	20 times
Ambient temperature	Operating: –55 to 125°C (with no icing)	

Note: The contact insertion force and contact removal force are for a test gauge, t = 0.432 mm.

■ Materials and Finish

Base	Fiber-glass reinforced PBT resin (UL94V-0)/black
Carrier	Aluminum
Inner clip	Beryllium copper/nickel base, gold plated
Outer sleeve	Brass/nickel base, gold flash plating

Note: For non-standard plating, contact your OMRON representative.

■ Applicable Wrap Post Wire Sizes

AWG30, AWG28, AWG26, AWG24
(Solid wire: 0.25 to 0.51 mm dia.)

■ Wrap Post Length

3 wires

■ Applicable IC Lead Dimensions

DIP, Wrap, and Solder-sleeve Terminals

	Depth × width (mm)	
Flat lead	0.29 ±0.09 × 0.46 ±0.08 (See note.)	
Round lead	0.53 dia. max.	0.41 dia. min.

Note: Do not use wire where the diagonal is more than 0.56 mm.

Low-profile DIP Terminals

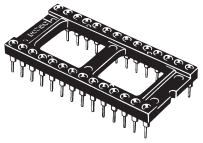
	Depth × width (mm)	
Flat lead	0.29 ±0.09 × 0.46 ±0.08 (See note.)	
Round lead	0.50 dia. max.	0.41 dia. min.

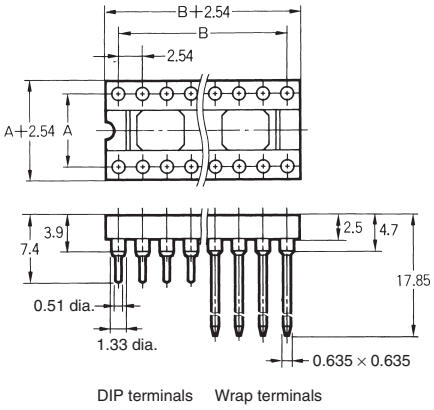
Note: Do not use wire where the diagonal is more than 0.52 mm.

XR2A Open-frame Sockets

■ Dimensions

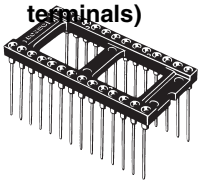
XR2A-□□11-N
XR2A-2463-N
XR2A-2473-N
XR2A-□□01-N
XR2A-2461-N
XR2A-2471-N
XR2A-□□21-N
XR2A-2467-N
XR2A-2477-N
(With DIP terminals)



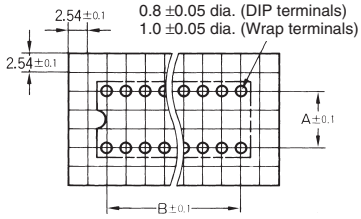


DIP terminals Wrap terminals

XR2A-□□02
(With wrap terminals)



Mounting holes (bottom view)

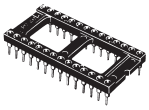
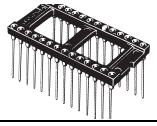


Dimensions

No. of contacts	Dimensions (mm)	
	A	B
8	7.62	7.62
14	7.62	15.24
16	7.62	17.78
18	7.62	20.32
20	7.62	22.86
22	10.16	25.40
24 (See note 1.)	15.24	27.94
24 (See note 2.)	10.16	27.94
24 (See note 3.)	7.62	27.94
28	15.24	33.02
32	15.24	38.10
40	15.24	48.26
42	15.24	50.80
48	15.24	58.42
50	22.86	60.96
64	22.86	78.74

Note: 1. XR2A-2401-N/XR2A-2402/ XR2A-2411N/XR2A-2421-N
2. XR2A-2461-N/XR2A-2463-N/ XR2A-2467-N
3. XR2A-2471-N/XR2A-2473-N/ XR2A-2477-N

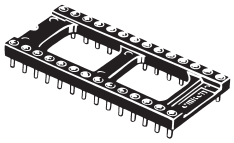
■ Ordering Information

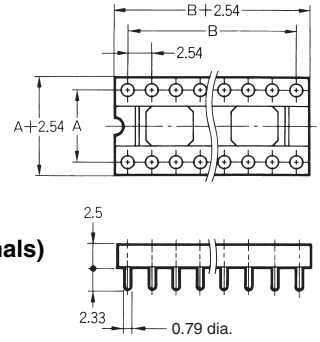
Appearance		Sockets with DIP terminals 			Sockets with wrap terminals 
No of contacts	Row pitch (A) (mm)	With 0.25-μm gold plating	With 0.75-μm gold plating	With gold flash plating	With 0.75-μm gold plating
8	7.62	XR2A-0811-N	XR2A-0801-N	XR2A-0821-N	XR2A-0802
14	7.62	XR2A-1411-N	XR2A-1401-N	XR2A-1421-N	XR2A-1402
16	7.62	XR2A-1611-N	XR2A-1601-N	XR2A-1621-N	XR2A-1602
18	7.62	XR2A-1811-N	XR2A-1801-N	XR2A-1821-N	XR2A-1802
20	7.62	XR2A-2011-N	XR2A-2001-N	XR2A-2021-N	XR2A-2002
22	10.16	XR2A-2211-N	XR2A-2201-N	XR2A-2221-N	XR2A-2202
24	15.24	XR2A-2411-N	XR2A-2401-N	XR2A-2421-N	XR2A-2402
24	10.16	XR2A-2463-N	XR2A-2461-N	XR2A-2467-N	—
24	7.62	XR2A-2473-N	XR2A-2471-N	XR2A-2477-N	XR2A-2472
28	15.24	XR2A-2811-N	XR2A-2801-N	XR2A-2821-N	XR2A-2802
32	15.24	XR2A-3211-N	XR2A-3201-N	XR2A-3221-N	XR2A-3202
40	15.24	XR2A-4011-N	XR2A-4001-N	XR2A-4021-N	XR2A-4002
42	15.24	XR2A-4211-N	XR2A-4201-N	XR2A-4221-N	XR2A-4202
48	15.24	XR2A-4811-N	XR2A-4801-N	—	XR2A-4802
50	22.86	XR2A-5011-N	XR2A-5001-N	—	—
64	22.86	XR2A-6411-N	XR2A-6401-N	—	XR2A-6402

XR2A Open-frame Sockets (with Low-profile DIP Terminals)

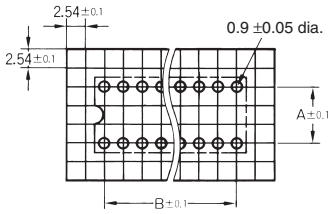
■ Dimensions

XR2A-□□15
XR2A-2466
XR2A-2476
XR2A-□□05
XR2A-2465
XR2A-2475
XR2A-□□25
XR2A-2468
XR2A-2478
(With low-profile DIP terminals)





Mounting holes (bottom view)

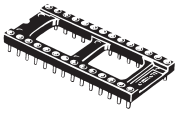


Dimensions

No. of contacts	Dimensions (mm)	
	A	B
8	7.62	7.62
14	7.62	15.24
16	7.62	17.78
18	7.62	20.32
20	7.62	22.86
22	10.16	25.40
24 (See note 1.)	15.24	27.94
24 (See note 2.)	10.16	27.94
24 (See note 3.)	7.62	27.94
28	15.24	33.02
32	15.24	38.10
40	15.24	48.26
42	15.24	50.80
48	15.24	58.42
64	22.86	78.74

Note: 1. XR2A-2415/XR2A-2405/ XR2A-2425
2. XR2A-2466/XR2A-2465/ XR2A-2468
3. XR2A-2476/XR2A-2475/ XR2A-2478

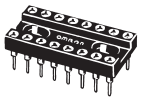
■ Ordering Information

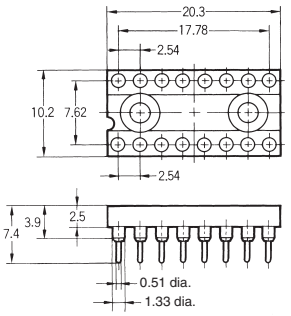
Appearance		Sockets with DIP terminals 		
No. of contacts	Row pitch (A) (mm)	With 0.25-μm gold plating	With 0.75-μm gold plating	With gold flash plating
8	7.62	XR2A-0815	XR2A-0805	XR2A-0825
14	7.62	XR2A-1415	XR2A-1405	XR2A-1425
16	7.62	XR2A-1615	XR2A-1605	XR2A-1625
18	7.62	XR2A-1815	XR2A-1805	XR2A-1825
20	7.62	XR2A-2015	XR2A-2005	XR2A-2025
22	10.16	XR2A-2215	XR2A-2205	XR2A-2225
24	15.24	XR2A-2415	XR2A-2405	XR2A-2425
24	10.16	XR2A-2466	XR2A-2465	XR2A-2468
24	7.62	XR2A-2476	XR2A-2475	XR2A-2478
28	15.24	XR2A-2815	XR2A-2805	XR2A-2825
32	15.24	XR2A-3215	XR2A-3205	XR2A-3225
40	15.24	XR2A-4015	XR2A-4005	XR2A-4025
42	15.24	XR2A-4215	XR2A-4205	—
48	15.24	XR2A-4815	XR2A-4805	—
64	22.86	XR2A-6415	XR2A-6405	—

XR2B Closed-frame Sockets

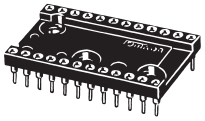
■ Dimensions

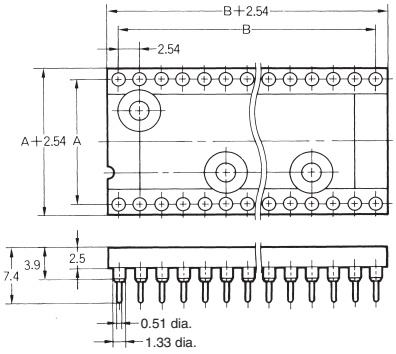
XR2B-1611-N
XR2B-1601-N

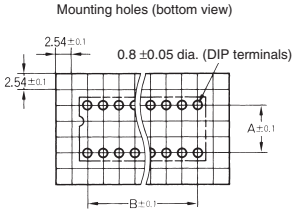




XR2B-□□11-N
XR2B-□□01-N



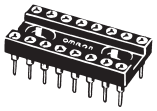




Dimensions

No. of contacts	Dimensions (mm)	
	A	B
16	7.62	17.78
24	15.24	27.94
28	15.24	33.02
32	15.24	38.10
40	15.24	48.26

■ Ordering Information

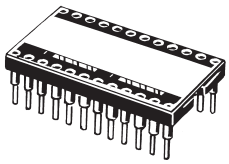
Appearance		Sockets with DIP terminals	
			
No. of contacts	**Row pitch (A) (mm)**	**With 0.25-μm gold plating**	**With 0.75-μm gold plating**
16	7.62	XR2B-1611-N	XR2B-1601-N
24	15.24	XR2B-2411-N	XR2B-2401-N
28	15.24	XR2B-2811-N	XR2B-2801-N
32	15.24	XR2B-3211-N	XR2B-3201-N
40	15.24	XR2B-4011-N	XR2B-4001-N

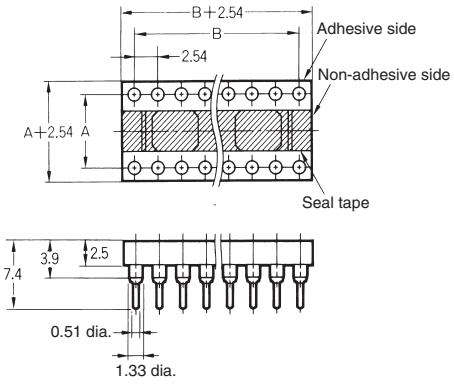
XR2T Open-frame Sockets with Seal Tape

- Equipped with seal tape to prevent flux cleaning liquids from entering the Socket.
- The same round-pin, 4-point contact structure as the RX2A is used for the contacts.
- The seal tape is made of transparent polyethyle (adhesive portion) and yellow polypropolyene (non-adhesive portion).

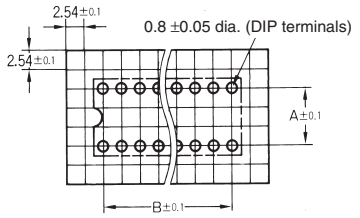
■ Dimensions

XR2T-□□11-N
XR2T-2463-N
XR2T-2473-N
XR2T-□□01-N
XR2T-2461-N
XR2T-2471-N
XR2T-□□21-N
XR2T-2467-N
XR2T-2477-N





Mounting holes (bottom view)



Dimensions

No. of contacts	Dimensions (mm)	
	A	B
8	7.62	7.62
14	7.62	15.24
16	7.62	17.78
18	7.62	20.32
20	7.62	22.86
22	10.16	25.40
24 (See note 1.)	15.24	27.94
24 (See note 2.)	10.16	27.94
24 (See note 3.)	7.62	27.94
28	15.24	33.02
32	15.24	38.10
40	15.24	48.26
48	15.24	58.42

Note: 1. XR2T-2411-N/XR2T-2401-N/ XR2A-2421-N
2. XR2T-2463-N/XR2T-2461-N/ XR2T-2467-N
3. XR2T-2473-N/XR2T-2471-N/ XR2T-2477-N

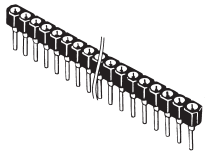
■ Ordering Information

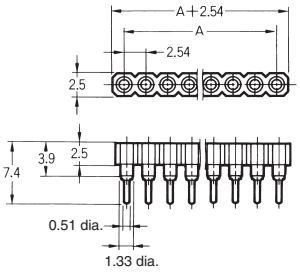
Appearance		Sockets with DIP terminals		
No. of contacts	Row pitch (A) (mm)	With 0.25-μm gold plating	With 0.75-μm gold plating	With gold flash plating
8	7.62	XR2T-0811-N	XR2T-0801-N	XR2T-0821-N
14	7.62	XR2T-1411-N	XR2T-1401-N	XR2T-1421-N
16	7.62	XR2T-1611-N	XR2T-1601-N	XR2T-1621-N
18	7.62	XR2T-1811-N	XR2T-1801-N	XR2T-1821-N
20	7.62	XR2T-2011-N	XR2T-2001-N	XR2T-2021-N
22	10.16	XR2T-2211-N	XR2T-2201-N	XR2T-2221-N
24	15.24	XR2T-2411-N	XR2T-2401-N	XR2T-2421-N
24	10.16	XR2T-2463-N	XR2T-2461-N	XR2T-2467-N
24	7.62	XR2T-2473-N	XR2T-2471-N	XR2T-2477-N
28	15.24	XR2T-2811-N	XR2T-2801-N	XR2T-2821-N
32	15.24	XR2T-3211-N	XR2T-3201-N	XR2T-3221-N
40	15.24	XR2T-4011-N	XR2T-4001-N	XR2T-4021-N
48	15.24	XR2T-4811-N	XR2T-4801-N	---

XR2C Single-row Sockets

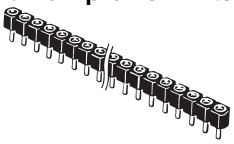
■ Dimensions

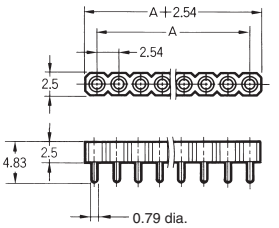
XR2C-□□11-N
XR2C-□□01-N
XR2C-□□21-N
(With DIP terminals)





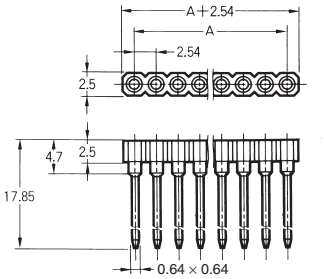
XR2C-□□15
XR2C-□□05
XR2C-□□25
(With low-profile DIP terminals)



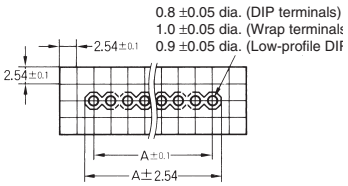


XR2C-□□02
(With wrap terminals)





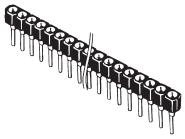
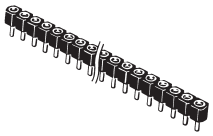
Mounting holes (bottom view)



Dimensions

No. of contacts	A (mm)
20	48.26
32	78.74

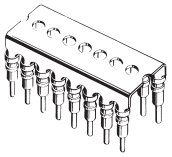
■ Ordering Information

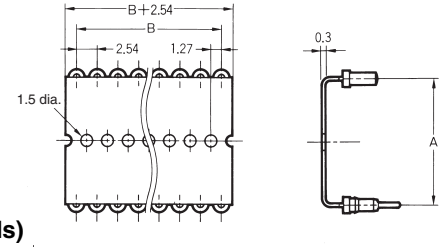
Appearance	No. of contacts	With 0.25-μm gold plating	With 0.75-μm gold plating	With gold flash plating
Sockets with DIP terminals 	10	XR2C-1011-N	—	—
	16	XR2C-1611-N	—	—
	20	XR2C-2011-N	XR2C-2001-N	XR2C-2021-N
	32	XR2C-3211-N	XR2C-3201-N	XR2C-3221-N
Sockets with low-profile DIP terminals 	20	XR2C-2015	XR2C-2005	XR2C-2025
	32	XR2C-3215	XR2C-3205	XR2C-3225
Sockets with wrap terminals 	20	—	XR2C-2002	—
	32	—	XR2C-3202	—

XR2D Double-row Carrier Sockets

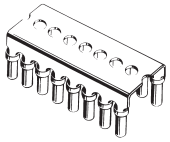
■ Dimensions

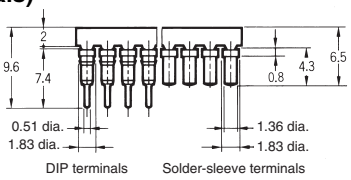
XR2D-□□01-N
(With DIP terminals)

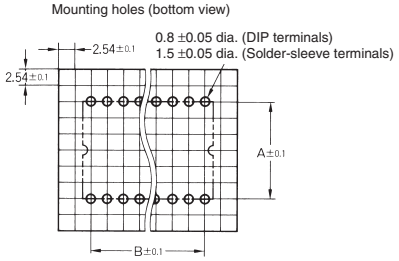




XR2D-□□04
(With solder-sleeve terminals)



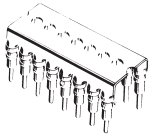
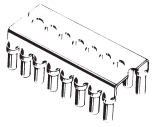




Dimensions

No. of contacts	Dimensions (mm)	
	A	B
8	7.62	7.62
14	7.62	15.24
16	7.62	17.78
18	7.62	20.32
20	7.62	22.86
24	15.24	27.94
28	15.24	33.02
32	15.24	38.10
40	15.24	48.26

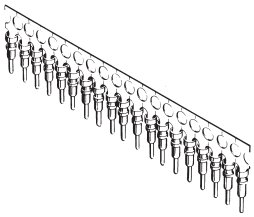
■ Ordering Information

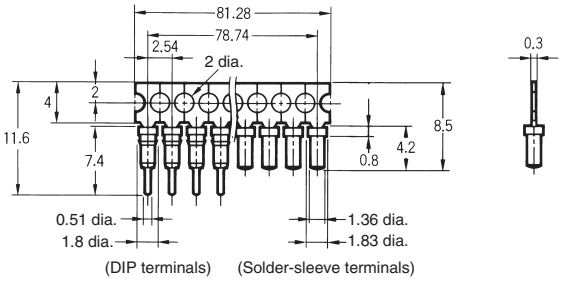
Appearance		Sockets with DIP terminals	Sockets with solder-sleeve terminals
			
No. of contacts	Row pitch (A) (mm)	With 0.75-μm gold plating	With 0.75-μm gold plating
8	7.62	XR2D-0801-N	XR2D-0804
14	7.62	XR2D-1401-N	XR2D-1404
16	7.62	XR2D-1601-N	XR2D-1604
18	7.62	XR2D-1801-N	XR2D-1804
20	7.62	XR2D-2001-N	XR2D-2004
24	15.24	XR2D-2401-N	XR2D-2404
28	15.24	XR2D-2801-N	XR2D-2804
32	15.24	XR2D-3201-N	XR2D-3204
40	15.24	XR2D-4001-N	XR2D-4004

XR2E Single-row Carrier Sockets

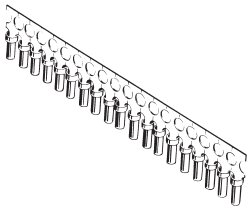
■ Dimensions

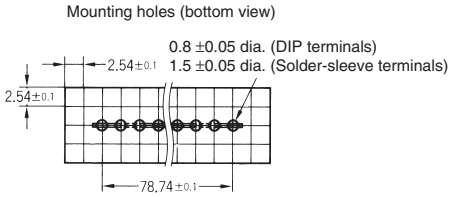
XR2E-3201-N
(With DIP terminals)



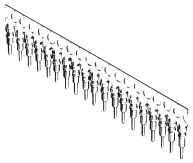
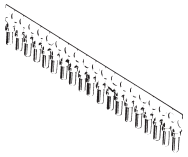


XR2E-3204
(With solder-sleeve terminals)





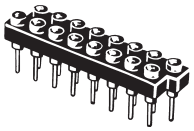
■ Ordering Information

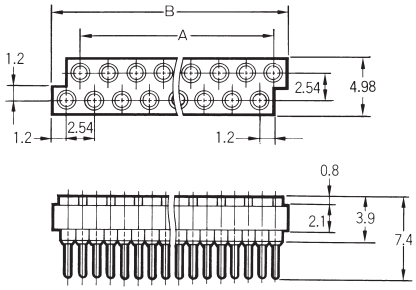
Appearance	Sockets with DIP Terminals	Sockets with Solder-sleeve Terminals
		
No. of contacts	With 0.75-μm gold plating	With 0.75-μm gold plating
32	XR2E-3201-N	XR2E-3204

XR2H ZIP (Zigzag) Sockets

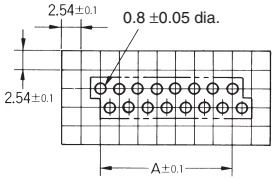
■ Dimensions

XR2H-□□11-N
(With DIP terminals)





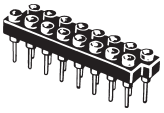
Mounting holes (bottom view)



Dimensions

No. of contacts	Dimensions (mm)	
	A	B
16	17.78	21.5
20	22.86	26.5
24	27.94	31.6
28	33.02	36.7

■ Ordering Information

Appearance	Sockets with DIP terminals 
No. of contacts	With 0.25-μm gold plating
16	XR2H-1611-N
20	XR2H-2011-N
24	XR2H-2411-N
28	XR2H-2811-N

XR2P Single-row Round Pin Plugs

Single-row Round Pins for Low-profile Stacking

- Single row with 2.54-mm pitch.
- Low-profile stacking possible in combination with Single-row IC Sockets (XR2C).
- Easily divided into the desired number of contacts.

■ Ratings and Characteristics

Rated current	1 A
Rated voltage	300 VAC
Contact resistance (See note.)	20 mΩ max. (at 20 mV, 10 mA max.)
Insulation resistance	1,000 MΩ min. (at 500 VDC)
Dielectric strength	1,000 VAC for 1 min (leakage current: 1 mA max.)
Ambient operating temperature	–55 to 125°C (with no icing at low temperature)

Note: The contact and vibration resistance are the values when the Plug is mated with an XR2C.

■ Materials and Finish

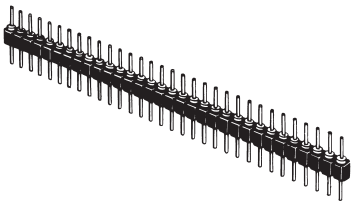
Base		Fiber-glass reinforced PBT resin (UL94V-0)/black
Contacts	**Mating end**	Brass/nickel base with 0.25-μm gold plating
	Terminal	

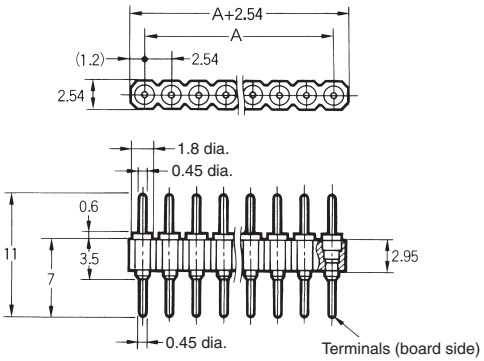
■ Applicable Sockets

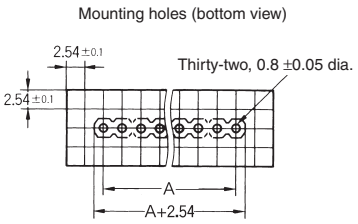
XR2C-□□11-N	IC Sockets (single row)
XR2C-3215	IC Socket (single row, low profile)

■ Dimensions

XR2P-□□41
(With DIP straight terminals)







Dimensions

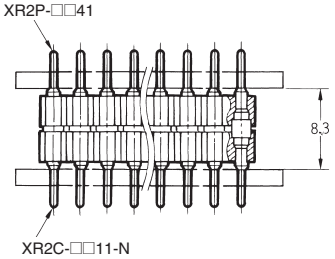
No. of contacts	A (mm)
10	22.86
16	38.1
20	48.26
32	78.74

■ Ordering Information

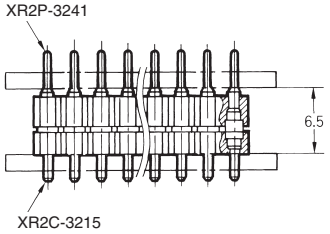
No. of contacts	Model
10	XR2P-1041
16	XR2P-1641
20	XR2P-2041
32	XR2P-3241

■ Mated Dimensions

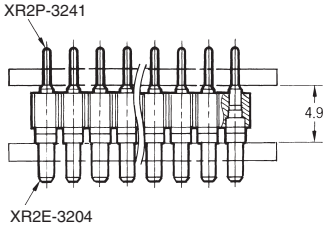
XR2P-□□41 with XR2C-□□11-N
Single-row IC Socket



XR2P-3241 with XR2C-3215
Single-row Low-profile IC Socket



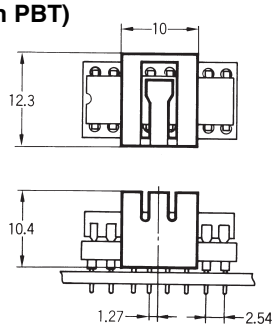
XR2P-3241 with XR2E-3204
Single-row Carrier Socket with Solder-sleeve Terminals



■ Tools and Accessories

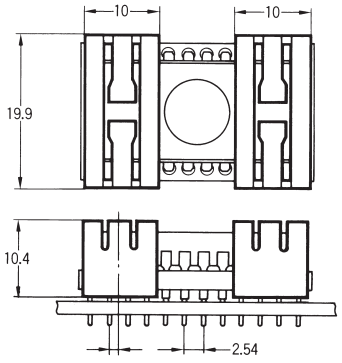
XR2Z-11
IC Holder (made from PBT)





XR2Z-13



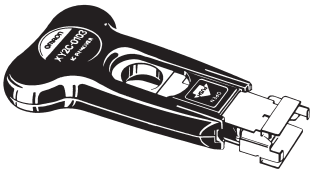


Note: Order the following models in multiples of the minimum order.

Model	No. of IC Socket contacts	IC socket width	Order in multiples of
XR2Z-11	14, 16, 18, 20, 24	7.62 m	100
XR2Z-13	24, 28, 32, 40, 42, 48	15.24 mm	500

Note: This Holder protects the IC from falling out due to shock. The IC will not fall out even with a 980 m/s^2 shock. Applicable IC height: 2.7 to 5.6 mm.

XY2C-0101
XY2C-0103
IC Removal Tool



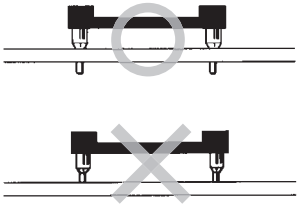
Model	No. of IC Socket contacts	IC socket width
XY2C-0101	14, 16, 18, 20	7.62 m
XY2C-0103	24, 28, 32, 40	15.24 mm

■ Precautions

Correct Use

Soldering

- When soldering, make sure that the outer sleeve of the IC Socket does not stick out of the circuit board through-holes.



- Make sure that no flux enters the IC Socket from the top.

Removing ICs

- Use the XY2C-0101 or XY2C-0103 IC Removal Tool to remove ICs.
- Do not use a screwdriver to remove the IC. It may damage the circuit board.
- Do not use a testing rod or check pin to check contacts or circuits. This may damage the inner clips or plating and may lead to improper contact.
- Four-point contact construction is used for plated products to make them more tolerant of momentary power interruptions. We recommend using gold-plated contacts in areas subject to vibration and shock.

Automated Soldering Conditions (Jet Flow)

1. Soldering temperature: 250±5°C
2. Continuous soldering time: Within 5 s

Applicable IC Lead Dimensions

1. Use leads that are within the range shown here. For details, refer to the first page of this datasheet. Use an IC with leads longer than 3 mm. If the leads are too long, the IC will not sit flush on the board.
2. Use an IC with tapered leads for easy insertion, a minimum amount of bending, and minimum damage to the leads.



MEMO

Omron Electronic Components, LLC

Terms and Conditions of Sales

I. GENERAL

1. Definitions: The words used herein are defined as follows.
   (a) Terms: These terms and conditions
   (b) Seller: Omron Electronic Components LLC and its subsidiaries
   (c) Buyer: The buyer of Products, including any end user in section III through VI
   (d) Products: Products and/or services of Seller
   (e) Including: Including without limitation
2. Offer: Acceptance: 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 by Seller. Seller hereby objects to any Terms proposed in Buyer's purchase order or other documents which are inconsistent with, or in addition to, these Terms.
3. Distributor: Any distributor shall inform its customer of the contents after and including section III of these Terms.

II. SALES

1. Prices; Payment: All prices stated are current, subject to change without notice by Seller. Buyer agrees to pay the price in effect at the time the purchase order is accepted by Seller. Payments for Products received are due net 30 days unless otherwise stated in the invoice. Buyer shall have no right to set off any amounts against the amount owing in respect of this invoice.
2. 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 (a) the invoice is paid according to Seller's payment terms and (b) Buyer has no past due amounts owing to Seller.
3. Interest: Seller, at its option, may charge Buyer 1.5% interest per month or the maximum legal rate, whichever is less, on any balance not paid within the stated terms.
4. Orders: Seller will accept no order less than 200 U.S. dollars net billing.
5. 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; 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.
6. Governmental Approvals: Buyer shall be responsible for all costs involved in obtaining any government approvals regarding the importation or sale of the Products.
7. 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.
8. 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.
9. Cancellation; Etc: Orders are not subject to rescheduling or cancellation unless Buyer indemnifies Seller fully against all costs or expenses arising in connection therewith.
10. 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.
11. Shipping; Delivery: Unless otherwise expressly agreed in writing by Seller:
    (a) 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;
    (b) Delivery and shipping dates are estimates only; and
    (c) Seller will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
12. Claims: Any claim by Buyer against Seller for shortage or damage to the Products occurring before delivery to the carrier or any claim related to pricing or other charges must be presented in detail in writing to Seller within 30 days of receipt of shipment.

III. PRECAUTIONS

1. Suitability: IT IS THE BUYER'S SOLE RESPOINSIBILITY TO ENSURE THAT ANY OMRON PRODUCT IS FIT AND SUFFICIENT FOR USE IN A MOTORIZED VEHICLE APPLICATION. BUYER SHALL BE SOLELY RESPONSIBLE FOR DETERMINING APPROPRIATENESS OF THE PARTICULAR PRODUCT WITH RESPECT TO THE BUYER'S APPLICATION INCLUDING (A) ELECTRICAL OR ELECTRONIC COMPONENTS, (B) CIRCUITS, (C) SYSTEM ASSEMBLIES, (D) END PRODUCT, (E) SYSTEM, (F) MATERIALS OR SUBSTANCES OR (G) OPERATING ENVIRONMENT. Buyer acknowledges that it alone has determined that the Products will meet their requirements of the intended use in all cases. Buyer must know and observe all prohibitions of use applicable to the Product/s.
2. Use with Attention: The followings are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible use of any Product, nor to imply that any use listed may be suitable for any Product:
   (a) Outdoor use, use involving potential chemical contamination or electrical interference.
   (b) Use in consumer Products or any use in significant quantities.
   (c) 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.
   (d) Systems, machines, and equipment that could present a risk to life or property.
3. Prohibited Use: NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
4. Motorized Vehicle Application: USE OF ANY PRODUCT/S FOR A MOTORIZED VEHICLE APPLICATION MUST BE EXPRESSLY STATED IN THE SPECIFICATION BY SELLER.
5. Programmable Products: Seller shall not be responsible for the Buyer's programming of a programmable Product.

IV. WARRANTY AND LIMITATION

1. 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 MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT ALL OTHER WARRANTIES, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS.
2. 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 there shall be no liability for Seller or its affiliates unless Seller's analysis confirms that the Products were correctly 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.
3. Limitation on Liability: SELLER AND ITS AFFILIATES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY. FURTHER, IN NO EVENT SHALL LIABILITY OF SELLER OR ITS AFFILITATES EXCEED THE INDIVIDUAL PRICE OF THE PRODUCT ON WHICH LIABILITY IS ASSERTED.
4. 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.

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1. Intellectual Property: 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. 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.
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3. Performance Data: Performance data is provided as a guide in determining suitability and does not constitute a warranty. It may represent the result of Seller's test conditions, and the users must correlate it to actual application requirements.
4. Change In Specifications: Product specifications and descriptions may be changed at any time based on improvements or other reasons. It is Seller's practice to change part numbers when published ratings or features are changed, or when significant engineering changes are made. However, some specifications of the Product may be changed without any notice.
5. Errors And Omissions: The information on Seller's website or in other documentation has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.
6. Export Controls: Buyer shall comply with all applicable laws, regulations and licenses regarding (a) export of the Products or information provided by Seller; (b) sale of Products to forbidden or other proscribed persons or organizations; (c) disclosure to non-citizens of regulated technology or information.

VI. MISCELLANEOUS

1. 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.
2. Assignment: Buyer may not assign its rights hereunder without Seller's written consent.
3. Law: These Terms are governed by Illinois law (without regard to conflict of laws). Federal and state courts in Cook County, Illinois have exclusive jurisdiction for any dispute hereunder.
4. 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.
5. Severability: If any provision hereof is rendered ineffective or invalid, such provision shall not invalidate any other provision.

Certain Precautions on Specifications and Use

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:
   (i) Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this document.
   (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.

   NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
2. Programmable Products. Seller shall not be responsible for the user's programming of a programmable product, or any consequence thereof.
3. Performance Data. Performance data given in this publication is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Seller's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to Seller's Warranty and Limitations of Liability.
4. Change in Specifications. Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Seller representative at any time to confirm actual specifications of purchased Product.
5. Errors and Omissions. The information in this publication has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors, or omissions.
6. RoHS Compliance. Where indicated, our products currently comply, to the best of our knowledge as of the date of this publication, with the requirements of the European Union's Directive on the Restriction of certain Hazardous Substances ("RoHS"), although the requirements of RoHS do not take effect until July 2006. These requirements may be subject to change. Please consult our website for current information.

Complete "Terms and Conditions of Sale" for product purchase and use are on Omron's website at http://www.components.omron.com – under the "About Us" tab, in the Legal Matters section.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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