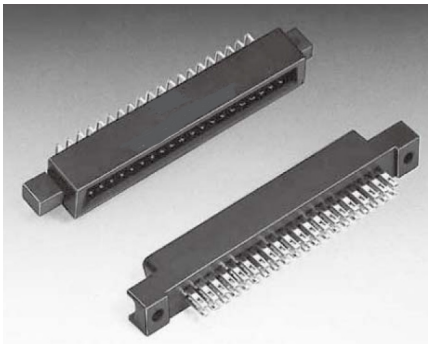
Connector

N360 Series

Rectangular Connector

Features



- Diversified applications
  Various connectors are available for connection by means of soldering, crimping, PC board mounting, and insulation displacement connection (IDC).
- Small size for high-density mounting
  The connectors are small with a contact and terminal pitch of 2.54 mm (0.100 in.) between pins and between rows and are thus well suited for high-density mounting.
- Sturdy shell guide
  Sturdy shell guides are used to prevent mismating and to protect the pins.

Specifications

Item		Specifications
Operating temperature range		–55°C to +85°C
Current Rating		DC 3 A (IDC type: 1 A)
Voltage Rating		250VAC
Contact resistance		15 mΩ max. (DC 6 V, 0.3 A)
Insulation resistance		1000 MΩ min. (DC 500 V)
Dielectric withstanding voltage		AC 500 V for 1 minute
Insertion force		24.5N max. (8 contacts), 196N max. (64 contacts)
Withdrawal force		2.94N min. (8 contacts), 22.54N min. (64 contacts)
Applicable Wire	Soldering	φ0.60 mm (0.024 in.) max, AWG #23 or less
	Crimping	φ0.51(0.020in.)～φ0.32(0.013in.) AWG24～28 φ1.2 mm (0.047 in.) max.
	Crimping (Thick Wires)	φ0.64(0.025in.)～φ0.32(0.013in.) AWG22～28 φ1.7mm(0.067in.) max
	IDC	Flat cable 1.27 mm (0.050 in.) pitch, AWG #28 (stranded wire), AWG #30 (solid wire)
Applicable PC board		1.6 mm (0.063 in.) standard thickness

Materials/ Finish

Item		Materials/ Finish
Housing		Polyester (N363J:PC) (N360C:PA)
Conductor (Contacts)		Copper alloy
Surface Treatment	Contacts	Gold plating
	Terminals	Flash Gold plating

otax

Product Designations

Plug、Receptacle

N	3	6	4	P	0	4	0	A	U

Series Name

Symbol	Terminals
1	Cable Soldering
3	Crimping (for Receptacle only)
4	Straight
5	Right Angle

Symbol	Shape
P	Plug
J	Receptacle

Symbol	Poles
008	8
016	16
024	24
032	32
040	40
048	48
056	56
064	64

Symbol	Plating
AU	Gold Plating

* For Terminals 3 (Crimping), Plating part is blank.

N	3	6	7	J	0	4	0	A	U	H

Series Name

Symbol	Terminals
7	Crimping (for Receptacle only)

Symbol	Shape
J	Receptacle

Symbol	Poles
008	8
016	16
024	24
032	32
040	40
048	48
056	56
064	64

Symbol	Plating
AU	Gold Plating

Symbol	Shape
H	Through-end Cover
F	Close-end Cover (excl. 40P)
FW	Close-end Cover (40P only)
MW *	Close-end Cover (40P only)

* N367J040AUMW is a Connector for Mitsubishi PLC (MELSEC-A/Q Series)

Cover、Metal Fittings

N	3	6	0	C	0	4	0	B

Series Name

Symbol	Terminals
0	Cover、Metal Fittings

Symbol	Shape
C	Cover

Symbol	Poles
008	8
016	16
024	24
032	32
040	40
048	48
056	56
064	64

Symbol	Cover Type
B	Standard Type
C	Cable to Cable Type
D	Wide Cable Exit Type
E	Long Lock Screw Type
J1	Angled Cable Exit Type
J2	Low-profile Angled Cable Exit Type

* Regarding corresponding poles, please refer to each page.

N	3	6	0	A	0	1	A

Series Name

Symbol	Shape
0	Cover、Metal Fittings

Symbol	Type
A	Metal Fittings

Symbol	Shape
**	*

*As for the types of metal fittings, please refer to P.19.

Symbol	Materilas
A	Aluminum

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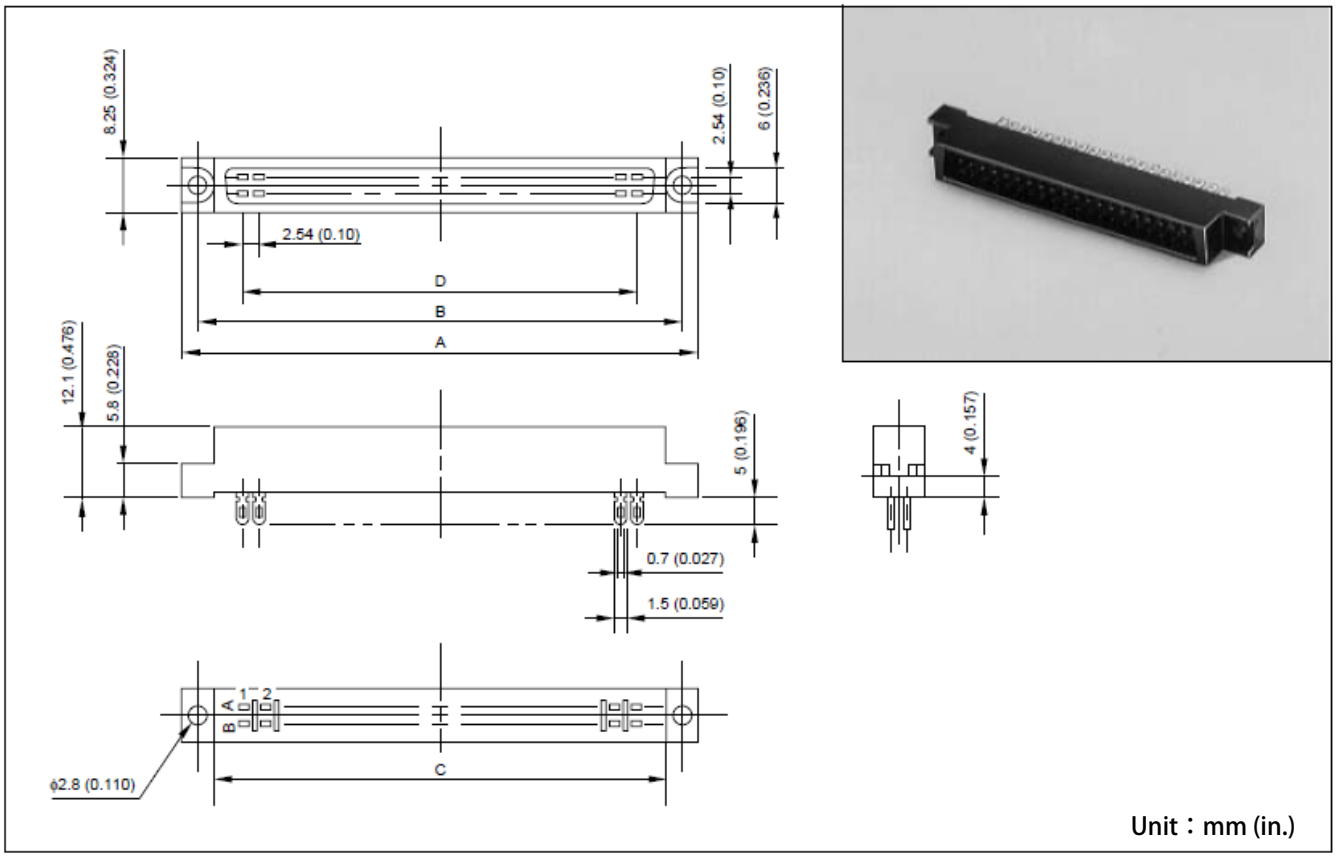
Soldering Type (Plug)

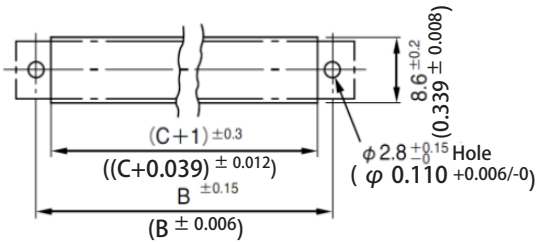
This is a plug connector for use with cables soldered to the terminals.

■ Dimensions



Unit：mm (in.)

■ Mounting Hole Layout［Panel］



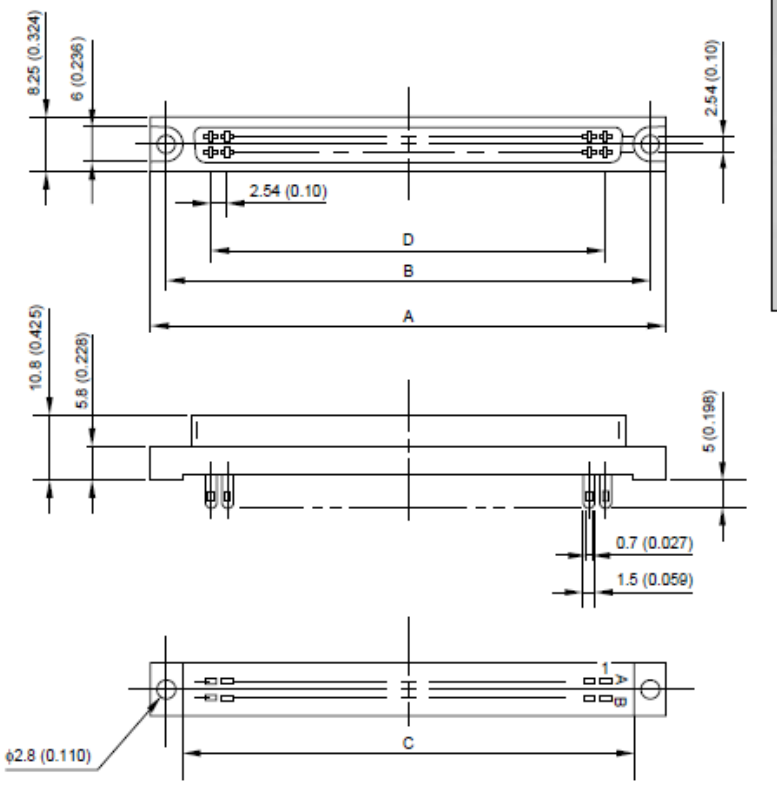
Unit：mm (In.)

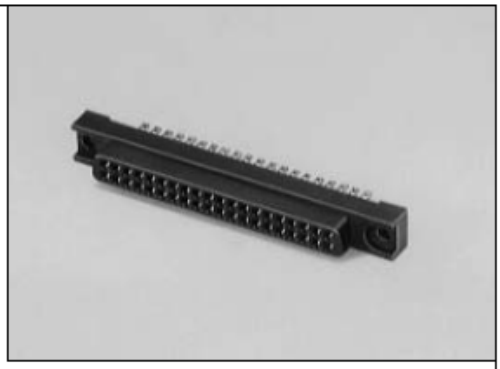
Poles	Part Number	Dimensions (mm)			
		A	B	C	D
8	N361P008AU	28.84	23.34	17.84	7.62
16	N361P016AU	39.00	33.50	28.00	17.78
24	N361P024AU	49.16	43.66	38.16	27.94
32	N361P032AU	59.32	53.82	48.32	38.10
40	N361P040AU	69.48	63.98	58.48	48.26
48	N361P048AU	79.64	74.14	68.64	58.42
56	N361P056AU	89.80	84.30	78.80	68.58
64	N361P064AU	99.96	94.46	88.96	78.74

Soldering Type (Receptacle)

This is a receptacle connector for use with cables soldered to the terminals.

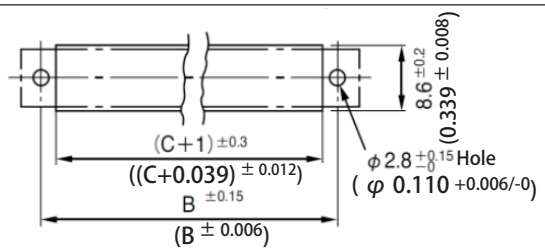
■ **Dimensions**





Unit：mm (in.)

■ **Mounting Hole Layout［Panel］**



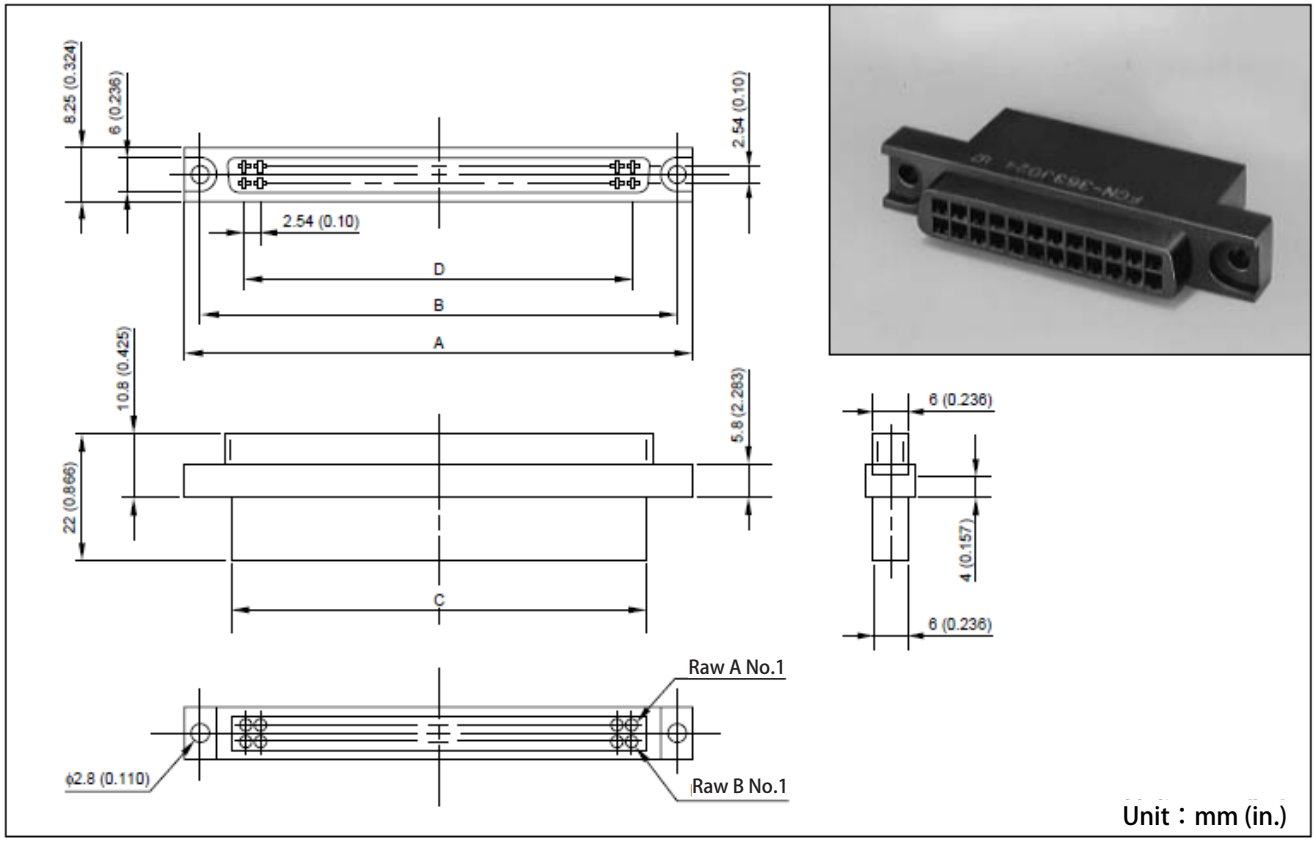
Unit：mm (In.)

Poles	Part Number	Dimensions (mm)			
		A	B	C	D
8	N361J008AU	28.84	23.34	17.84	7.62
16	N361J016AU	39.00	33.50	28.00	17.78
24	N361J024AU	49.16	43.66	38.16	27.94
32	N361J032AU	59.32	53.82	48.32	38.10
40	N361J040AU	69.48	63.98	58.48	48.26
48	N361J048AU	79.64	74.14	68.64	58.42
56	N361J056AU	89.80	84.30	78.80	68.58
64	N361J064AU	99.96	94.46	88.96	78.74

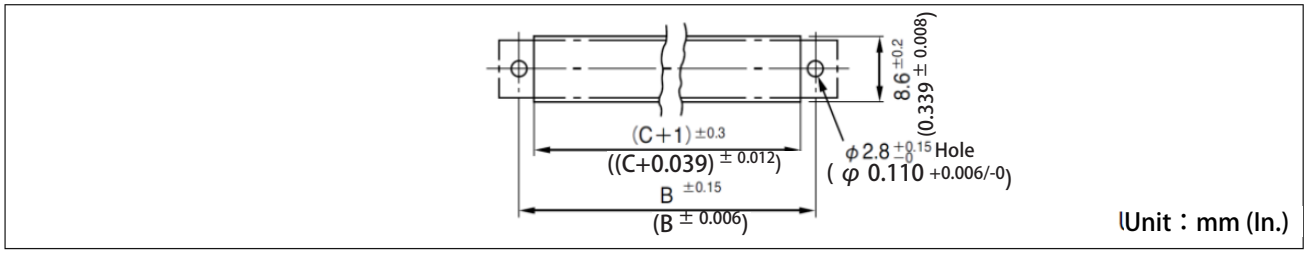
Crimp Type (Receptacle Housing)

This is a receptacle connector for use with crimp contacts inserted into the housing. Please select the appropriate crimp contacts listed on the next page.

■ **Dimensions**



■ **Mounting Hole Layout [Panel]**

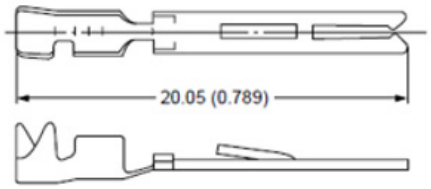


Poles	Part Number	Dimensions (mm)			
		A	B	C	D
8	N363J008	28.84	23.34	17.84	7.62
16	N363J016	39.00	33.50	28.00	17.78
24	N363J024	49.16	43.66	38.16	27.94
32	N363J032	59.32	53.82	48.32	38.10
40	N363J040	69.48	63.98	58.48	48.26
48	N363J048	79.64	74.14	68.64	58.42
56	N363J056	89.80	84.30	78.80	68.58
64	N363J064	99.96	94.46	88.96	78.74

Crimp Type (Contact/ Tool)

These are contacts for insertion into crimp jack housings, along with tools for crimping and contact extraction.
Please select the appropriate items according to the wire size.

■ Crimp Type Contact

Type	Plating	Applicable Wire (AWG # 22～ # 28)
Separate Piece Type	Gold Plating	N3631AUS
Reel Type	Gold Plating	N3631AUT
Dimensions (Unit：mm (in.))		

■ Manual Crimping Tool

The crimping tool is adjusted at the time of delivery for use with the wire sizes marked with an asterisk (*) below.

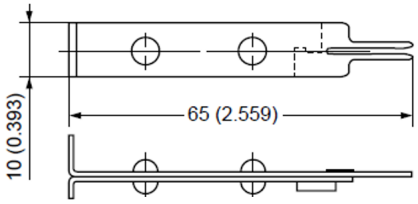
Part Number	Applicable Terminals	Applicable Wire	Cross-section Area of Wire (mm2)	Crimp Height (mm)	Diameter of Insulating Coating (mm)	Stripped Lenght of Wire (mm)
N363TT011H	N363JAUS (Single) N363JAUT (Reel)	AWG#22	0.30~0.40	0.85~0.95	Φ 1.0~1.6	3.0~4.0
		AWG#24	0.20~0.24	0.75~0.85		
		AWG#26	0.13~0.16	0.73~0.81		
		AWG#28 ※	0.088~0.096	0.66~0.74		

Appearance of Manual Crimping Tool

■ Contact Withdrawal Tool

Part Number	N360TT001H

Dimensionsi of Contact Withdrawal Tool



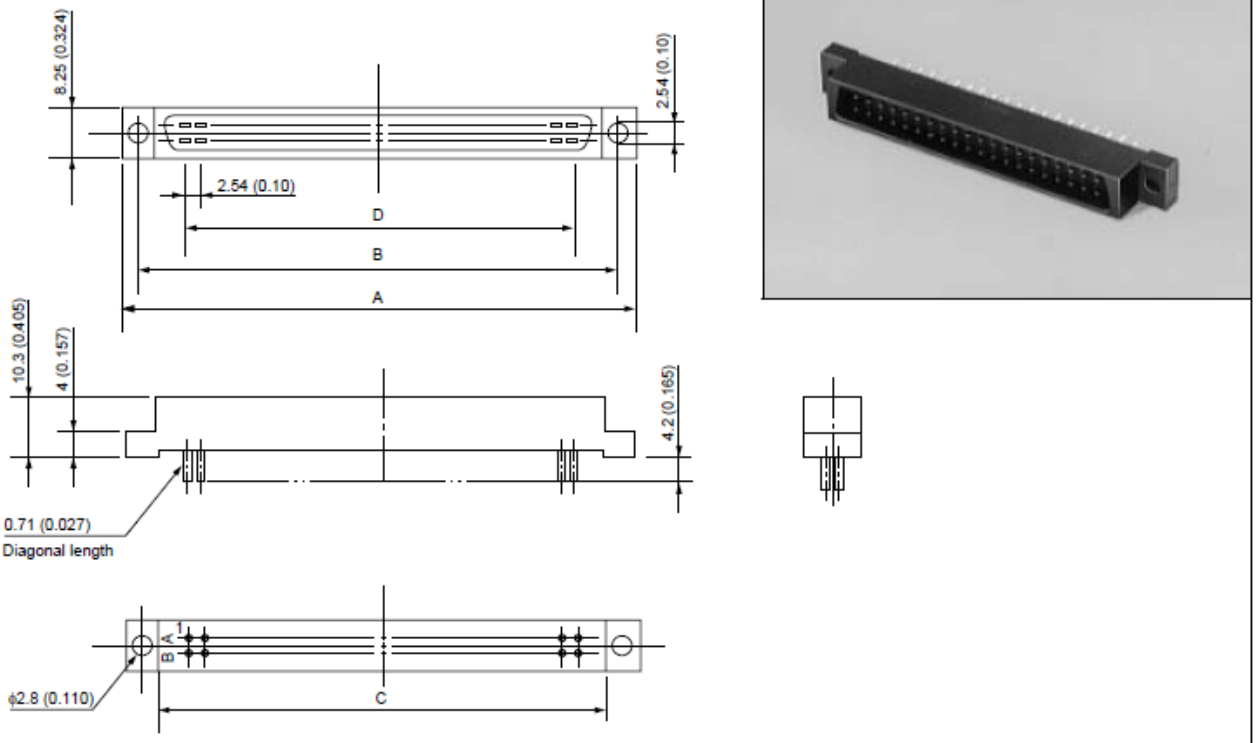
N360TT001H

Unit：mm (in.)

Straight Plug

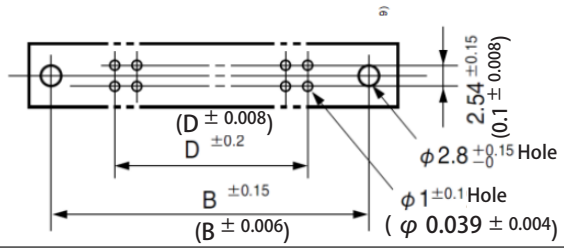
This is a plug connector designed for horizontal mating relative to the printed circuit board surface. The terminals are through-hole solder type. Metal fittings are required to secure the connection to the PCB.

■ **Dimensions**



Unit：mm (in.)

■ **Mounting Hole Layout［Printed Circuit Board］**



Recommended Board Thickness：
1.0 ± 0.1 mm, 1.6 ± 0.1mm
(0.03 ± 0.004, 0.063 ± 0.004)

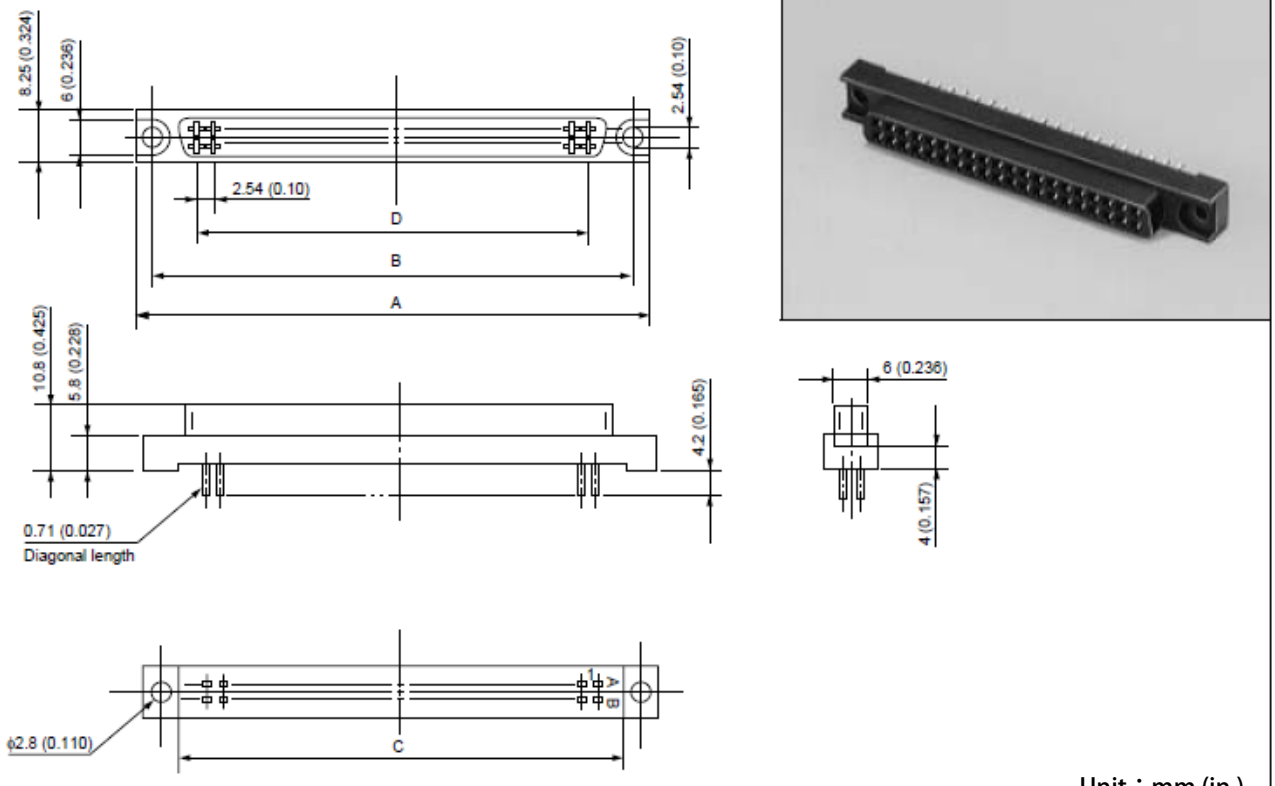
Unit：mm (in.)

Poles	Part Number	Dimensions (mm)			
		A	B	C	D
8	N364P008AU	28.84	23.34	17.84	7.62
16	N364P016AU	39.00	33.50	28.00	17.78
24	N364P024AU	49.16	43.66	38.16	27.94
32	N364P032AU	59.32	53.82	48.32	38.10
40	N364P040AU	69.48	63.98	58.48	48.26
48	N364P048AU	79.64	74.14	68.64	58.42
56	N364P056AU	89.80	84.30	78.80	68.58
64	N364P064AU	99.96	94.46	88.96	78.74

Straight Receptacle

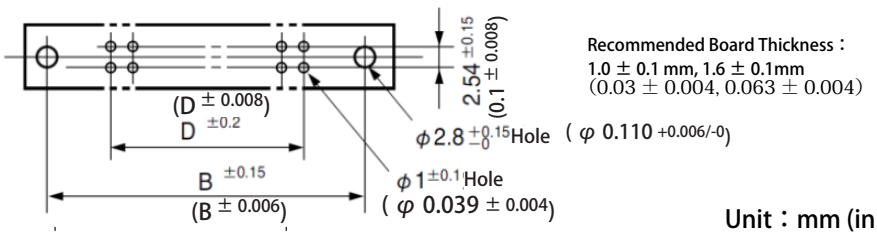
This is a plug connector designed for vertical mating relative to the printed circuit board surface. The terminals are through-hole solder type. Metal fittings are required to secure the connection to the PCB.

■ Dimensions



Unit：mm (in.)

■ Mounting Hole Layout［Printed Circuit Board］



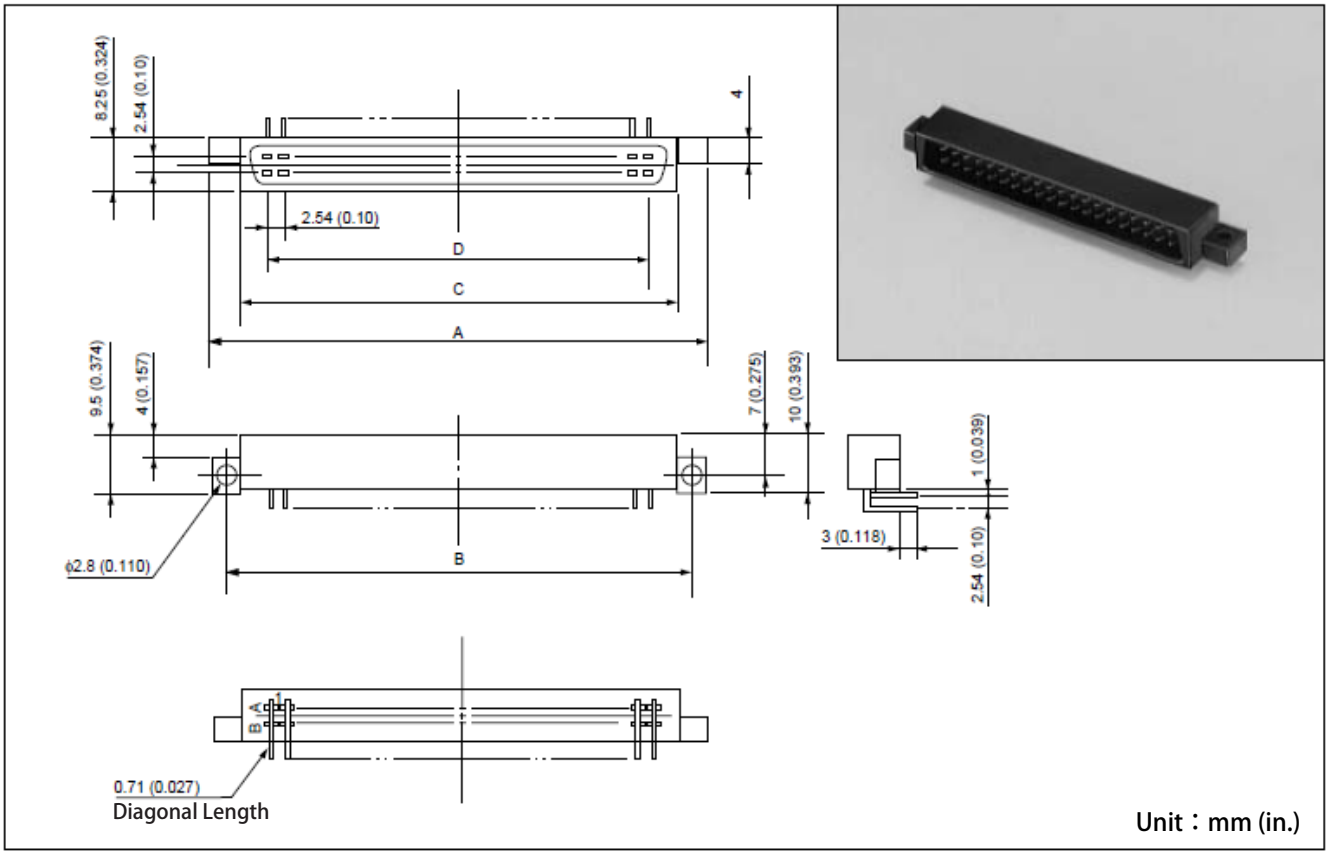
Unit：mm (in.)

Poles	Part Number	Dimensions (mm)			
		A	B	C	D
8	N364J008AU	28.84	23.34	17.84	7.62
16	N364J016AU	39.00	33.50	28.00	17.78
24	N364J024AU	49.16	43.66	38.16	27.94
32	N364J032AU	59.32	53.82	48.32	38.10
40	N364J040AU	69.48	63.98	58.48	48.26
48	N364J048AU	79.64	74.14	68.64	58.42
56	N364J056AU	89.80	84.30	78.80	68.58
64	N364J064AU	99.96	94.46	88.96	78.74

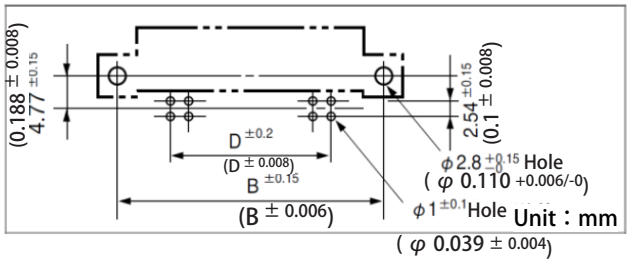
Right Angle Plug

This is a plug connector designed for vertical mating relative to the printed circuit board surface. The terminals are through-hole solder type. Metal fittings are required to secure the connection to the PCB.

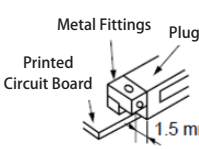
■ Dimensions



■ Mounting Hole Layout [Printed Circuit Board]



■ Cautions for Printed Circuit Board Mounting



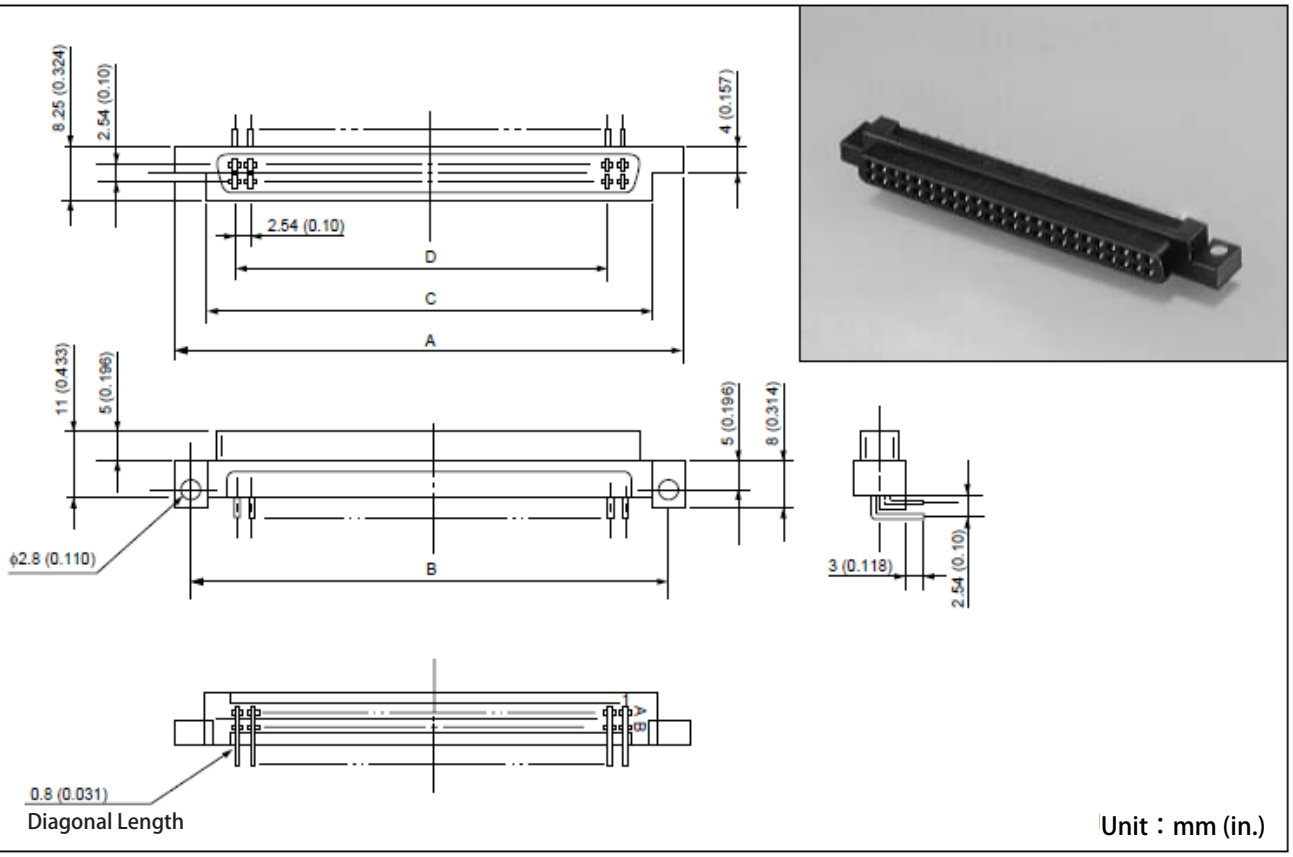
Mount the connector so that it extends at least 1.5 mm beyond the edge of the printed circuit board.

Poles	Part Number	Dimensions (mm)			
		A	B	C	D
8	N365P008AU	28.84	23.34	17.84	7.62
16	N365P016AU	39.00	33.50	28.00	17.78
24	N365P024AU	49.16	43.66	38.16	27.94
32	N365P032AU	59.32	53.82	48.32	38.10
40	N365P040AU	69.48	63.98	58.48	48.26
48	N365P048AU	79.64	74.14	68.64	58.42
56	N365P056AU	89.80	84.30	78.80	68.58
64	N365P064AU	99.96	94.46	88.96	78.74

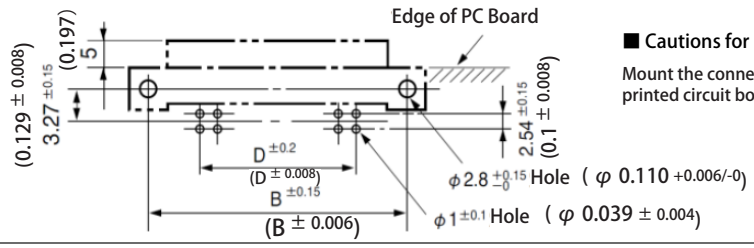
Right Angle Receptacle

This is a receptacle connector designed for vertical mating relative to the printed circuit board surface. The terminals are through-hole solder type. Metal fittings are required to secure the connection to the PCB.

■ **Dimensions**



■ **Mounting Hole Layout［Printed Circuit Board］**



■ Cautions for Printed Circuit Board Mounting

Mount the connector so that it extends at least 5 mm beyond the edge of the printed circuit board.

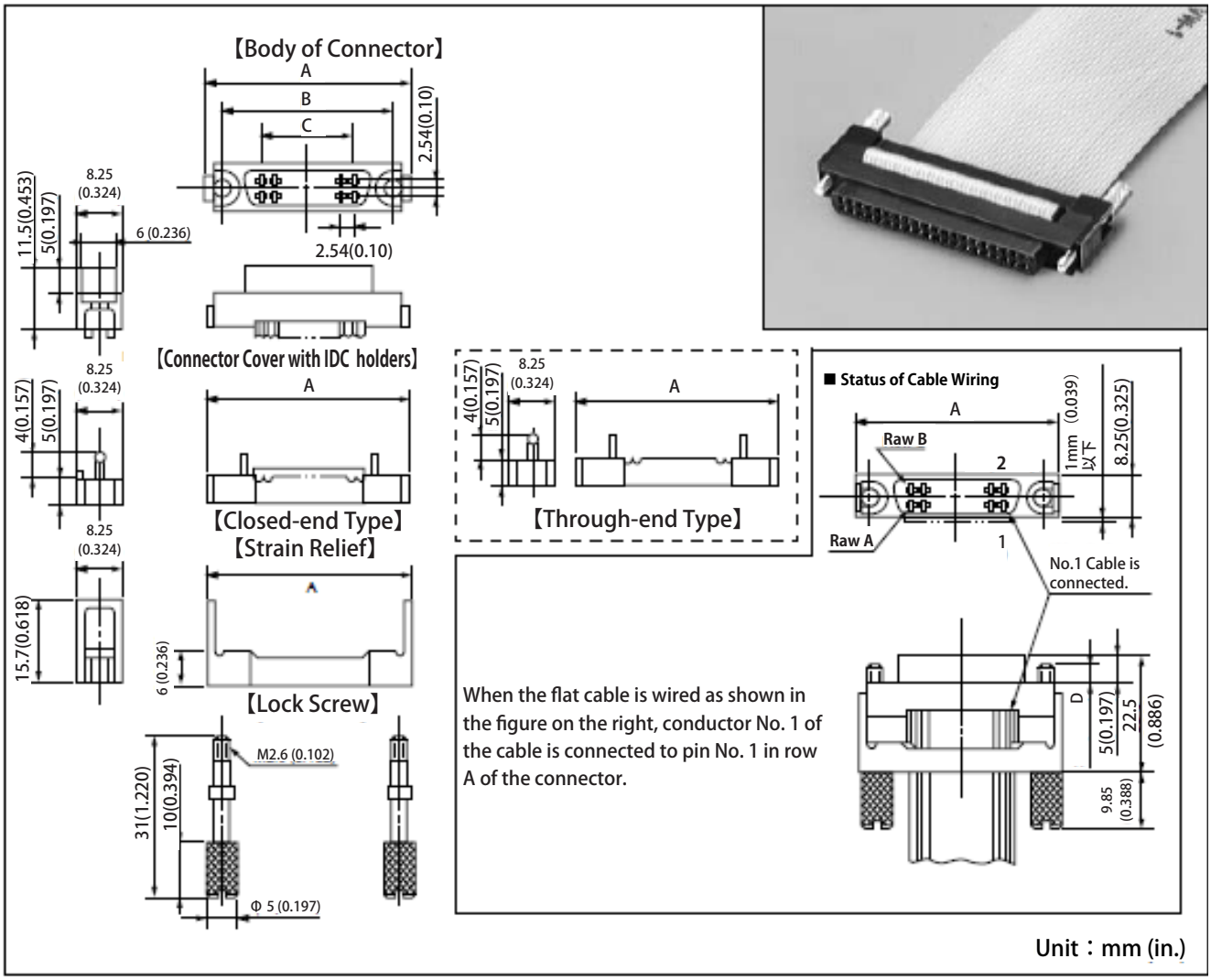
Unit：mm (in.)

Poles	Part Number	Dimensions (mm)			
		A	B	C	D
8	N365J008AU	28.84	23.34	17.84	7.62
16	N365J016AU	39.00	33.50	28.00	17.78
24	N365J024AU	49.16	43.66	38.16	27.94
32	N365J032AU	59.32	53.82	48.32	38.10
40	N365J040AU	69.48	63.98	58.48	48.26
48	N365J048AU	79.64	74.14	68.64	58.42
56	N365J056AU	89.80	84.30	78.80	68.58
64	N365J064AU	99.96	94.46	88.96	78.74

IDC Type Receptacle

This is a receptacle connector for IDC termination of flat cables. Depending on the cable connection method, either a closed-end cover or a through-end cover can be selected. Use the dedicated tool for IDC termination.

■ **Dimensions**

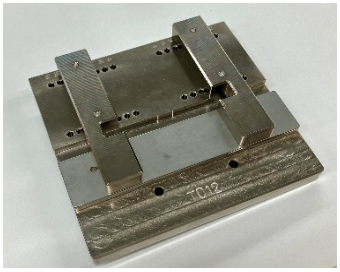


Poles	Part Number		Dimensions (mm)			
	Through-end Cover	Closed-end Cover	A	B	C	D
8	N367J008AUH	N367J008AUF	28.84	23.34	7.62	3.50
16	N367J016AUH	N367J016AUF	39.00	33.50	17.78	3.50
24	N367J024AUH	N367J024AUF	49.16	43.66	27.94	3.50
32	N367J032AUH	N367J032AUF	59.32	53.82	38.10	3.50
40	N367J040AUH	N367J040AUFW	69.48	63.98	48.26	3.50
		N367J040AUMW *				3.75
48	N367J048AUH	N367J048AUF	79.64	74.14	58.42	3.50
56	N367J056AUH	N367J056AUF	89.80	84.30	68.58	3.50
64	N365J064AUH	N367J064AUH	99.96	94.46	78.74	3.50

* N367J040AUMW is a Connector for Mitsubishi's Sequencer (MELSEC-A/Q Series).

IDC Locator Plate

This is a locator plate for IDC termination of N360 Series IDC connectors (N367J).
Mount the locator plate on the hand press for use.
The number of terminals can be easily changed simply by repositioning the connector guides in the specified pin holes.

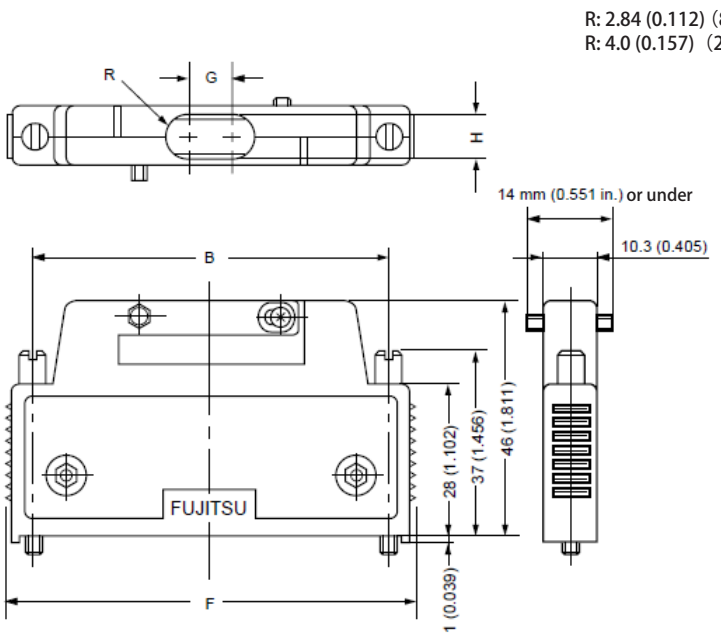


Part Name	Part Number
Locator Plate	N367TT012H

Cover（B Type Standard）

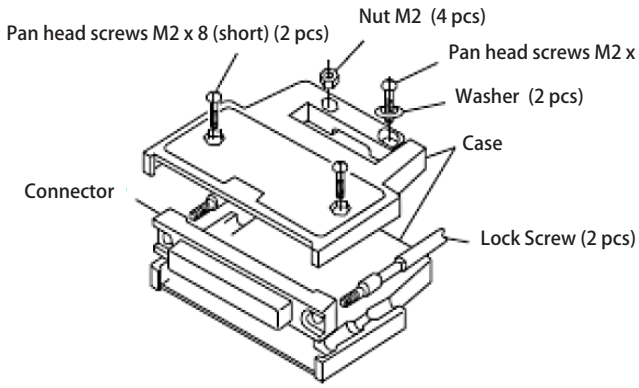
This is a cover for use with board-to-cable connectors (excluding IDC types). The mating section of the cover is male, allowing cable-to-cable connections by mating it with a Type C cover.

■ Dimensions



Unit：mm (in.)

■ Exploded View



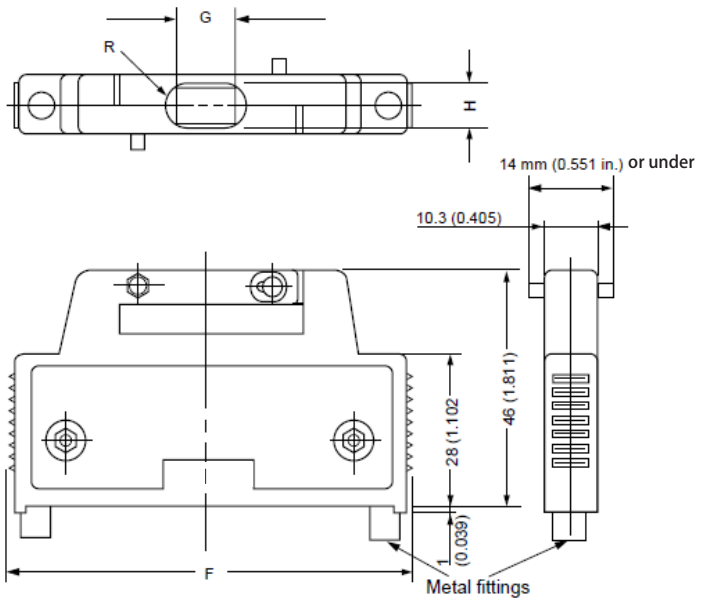
The cover is supplied with screws, nuts, washers, and lock screws.

Poles	Part Number	Dimensions (mm)			
		B	F	G	H
8	N360C008B	23.34	32.08	-	Φ5.7
16	N360C016B	33.50	42.24	-	Φ5.7
24	N360C024B	43.66	52.40	-	Φ8.0
32	N360C032B	53.82	62.56	2.00	8.00
40	N360C040B	63.98	72.72	6.00	8.00
48	N360C048B	74.14	82.88	10.00	8.00
56	N360C056B	84.30	93.04	14.00	8.00
64	N360C064B	94.46	103.20	18.00	8.00

Cover（C Type：Cable to Cable）

This is a cover for use with board-to-cable connectors (excluding IDC types).
The mating section of the cover is female, allowing cable-to-cable connections by mating it with Type B, D, E, J1, or J2 covers.

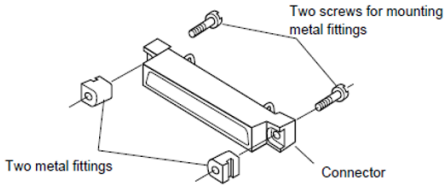
■ Dimensions

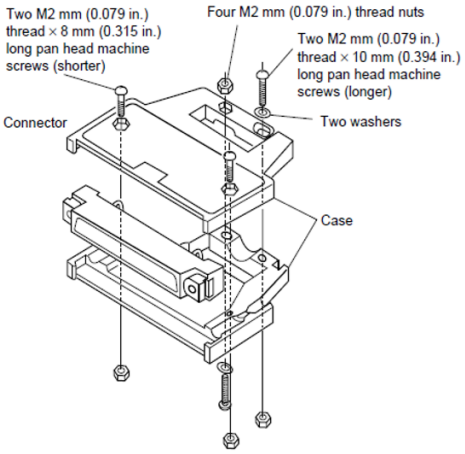


R: 2.84 (0.112)（8P、16P）
R: 4.0 (0.157)（24～64P）

Unit：mm (in.)

■ Exploded View





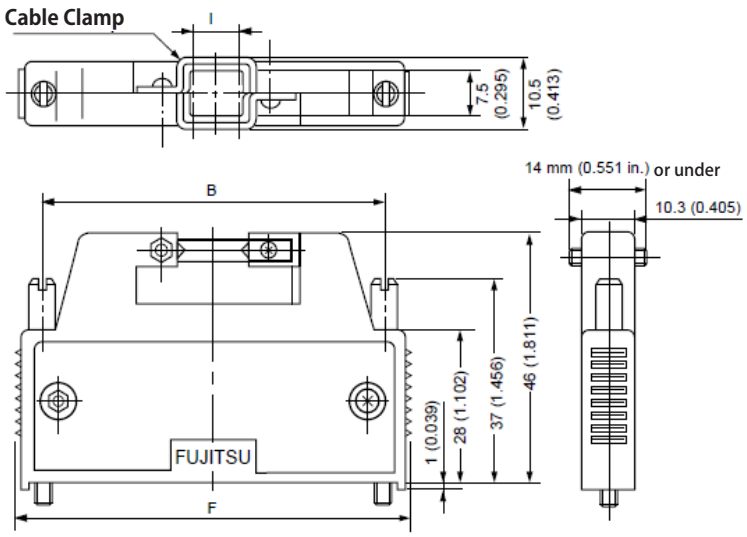
The cover is supplied with screws, nuts, washers, and metal fittings.

Poles	Part Number	Dimensions (mm)		
		F	G	H
8	N360C008C	32.08	—	Ø5.7
16	N360C016C	42.24	—	Ø5.7
24	N360C024C	52.40	—	Ø8.0
32	N360C032C	62.56	2.00	8.00
40	N360C040C	72.72	6.00	8.00
48	N360C048C	82.88	10.00	8.00
56	N360C056C	93.04	14.00	8.00
64	N360C064C	103.20	18.00	8.00

Cover（D Type：Wider Cable Exit Type）

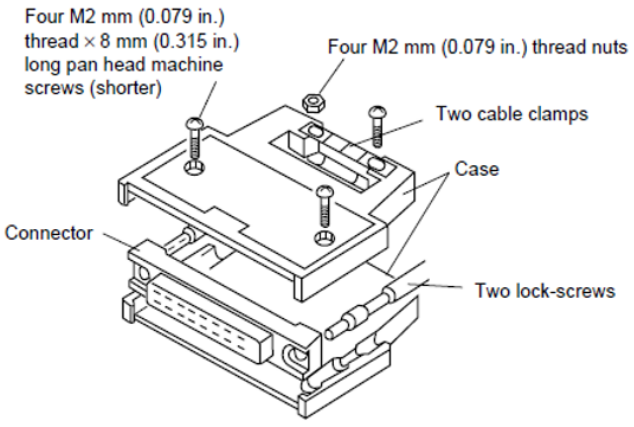
This is a cover for use with board-to-cable connectors (excluding IDC types).
The Cable Exit is wider than that of the Type B cover.
The mating section of the cover is male, allowing cable-to-cable connections by mating it with a Type C cover.

■ **Dimensions**



Unit：mm (in.)

■ **Exploded View**



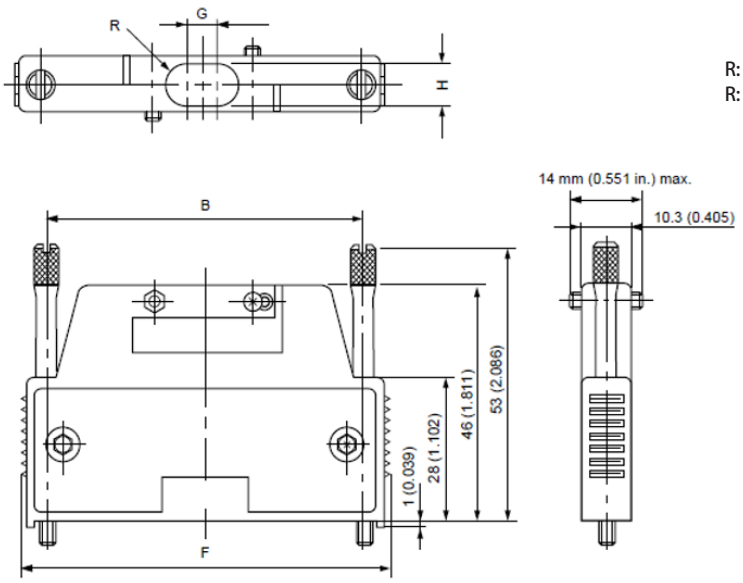
The cover is supplied with screws, nuts, cable clamps, and lock screws.

Poles	Part Number	Dimensions (mm)		
		B	F	I
40	N360C040D	63.98	72.72	8.00
48	N360C048D	74.14	82.88	12.00
56	N360C056D	84.30	93.04	16.00
64	N360C064D	94.46	103.20	20.00

Cover（E Type：Long Lock Screw Type）

This is a cover for use with board-to-cable connectors (excluding IDC types).
The lock screws on both sides are longer than those of the Type B cover.
The mating section of the cover is male, allowing cable-to-cable connections by mating it with a Type C cover.

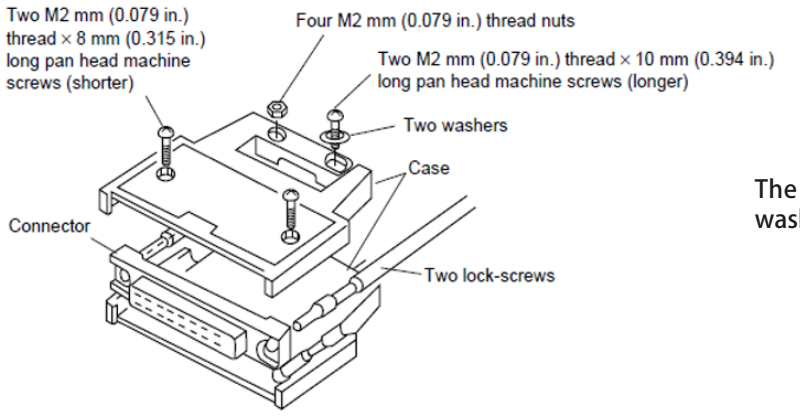
■ **Dimensions**



R: 2.84 (0.112)（8P、16P）
R: 4.0 (0.157)（24 ～ 64P）

Unit：mm (in.)

■ **Exploded View**



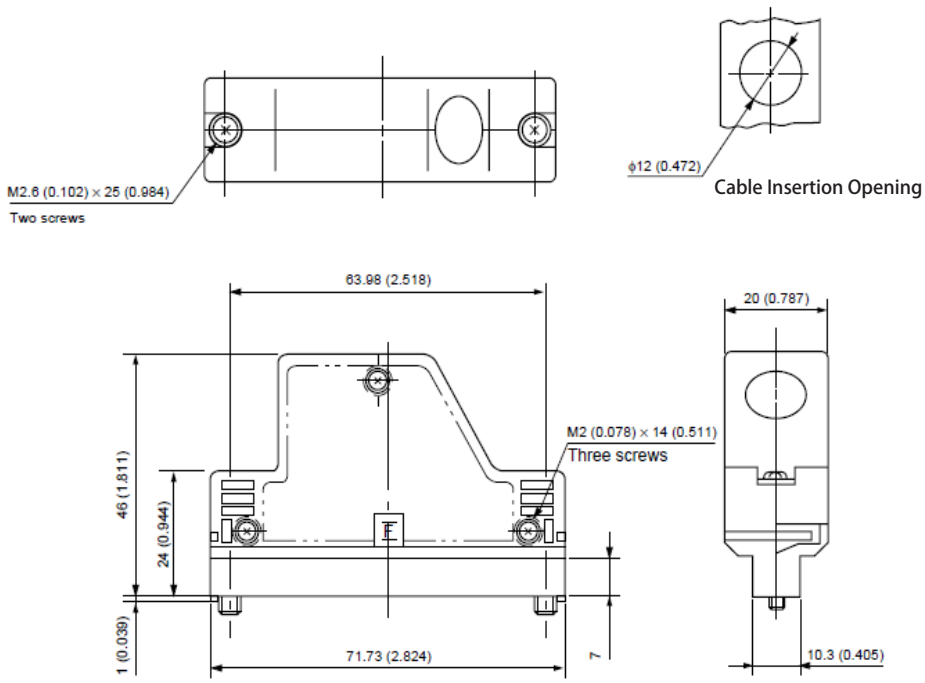
The cover is supplied with screws, nuts, washers, and lock screws.

Poles	Part Number	Dimensions（mm）			
		B	F	G	H
8	N360C008E	23.34	32.08	-	Φ5.7
16	N360C016E	33.50	42.24	-	Φ5.7
24	N360C024E	43.66	52.40	-	Φ8.0
32	N360C032E	53.82	62.56	2.00	8.00
40	N360C040E	63.98	72.72	6.00	8.00
48	N360C048E	74.14	82.88	10.00	8.00
56	N360C056E	84.30	93.04	14.00	8.00
64	N360C064E	94.46	103.20	18.00	8.00

Cover（J1 Type: Angled Cable Exit Type）

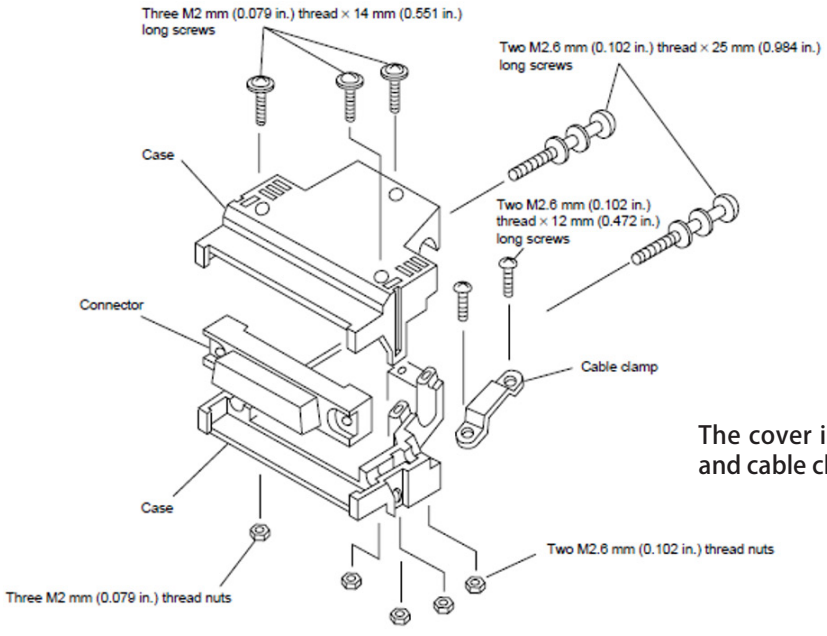
This is a cover for use with board-to-cable connectors (excluding IDC types).
The cable exits the cover at an angle.
The mating section of the cover is male, allowing cable-to-cable connections by mating it with a Type C cover.

■ **Dimensions**



Unit：mm (in.)

■ **Exploded View**



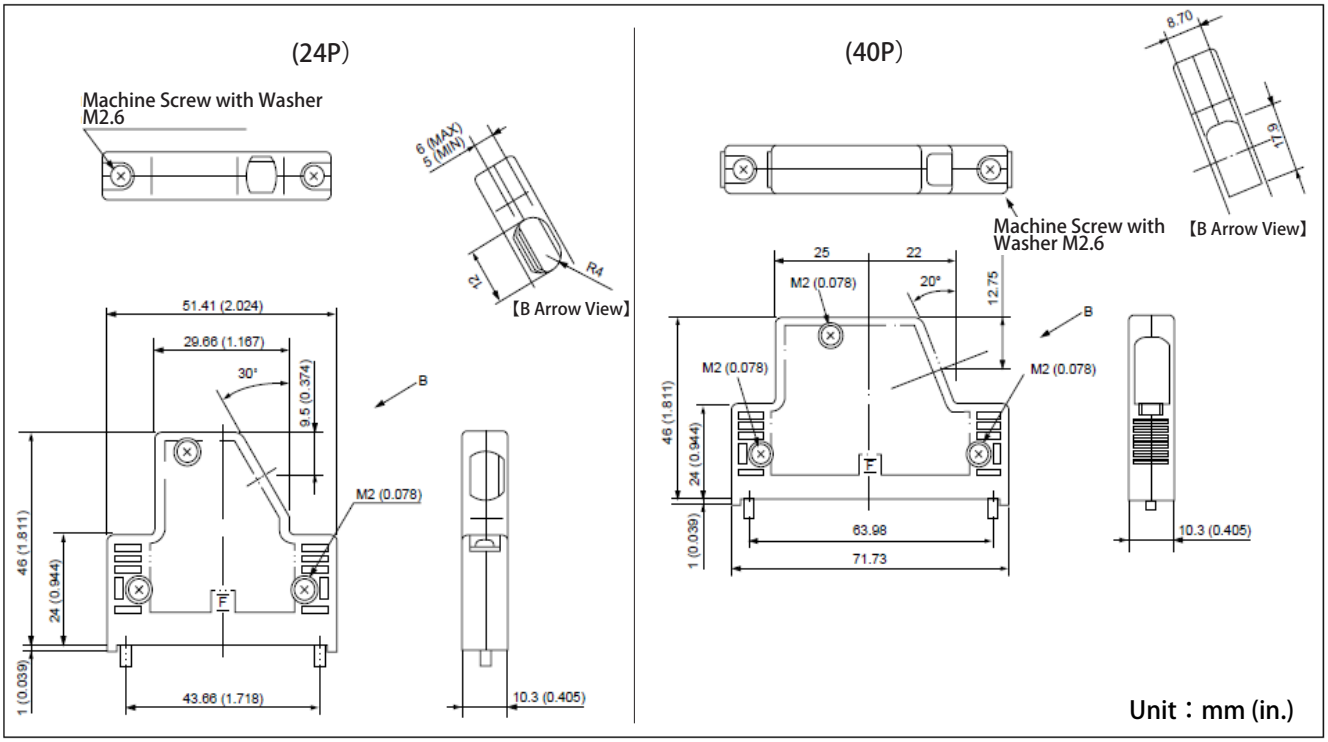
The cover is supplied with screws, nuts, and cable clamps.

Poles	Part Number
40	N360C040J1

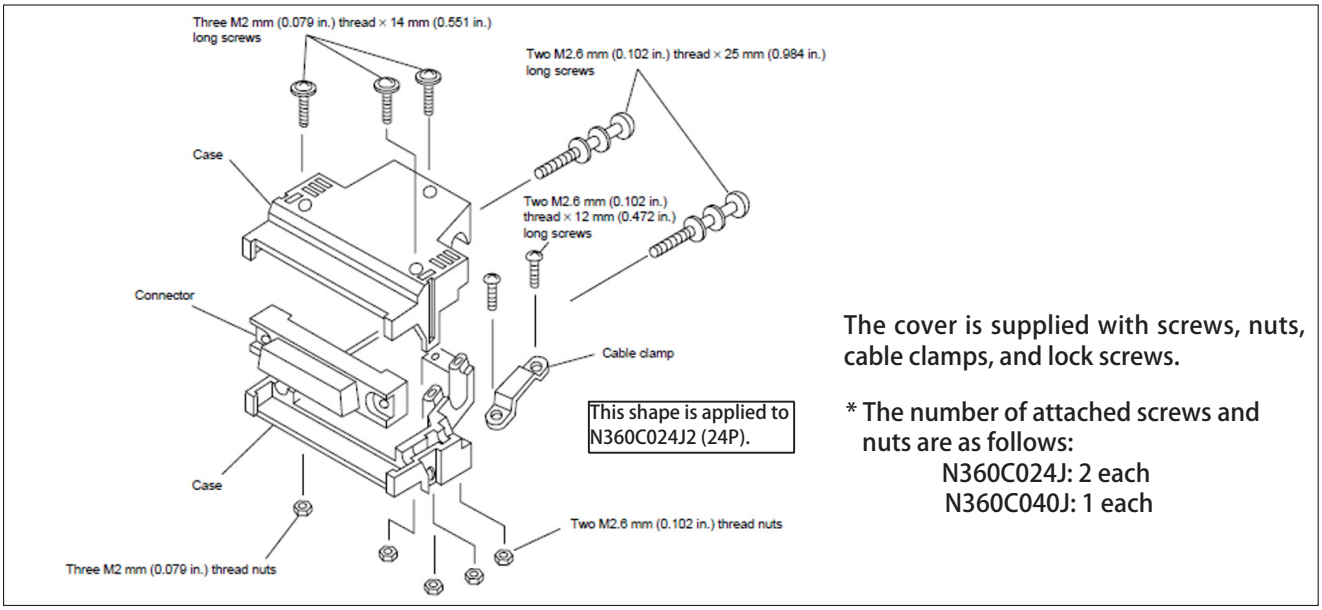
Cover（J2 Type：Low-profile Angled Cable Exit Type）

This is a cover for use with board-to-cable connectors (excluding IDC types).
The cable exits the cover at an angle.
The mating section of the cover is male, allowing cable-to-cable connections by mating it with a Type C cover.

■ **Dimensions**



■ **Exploded View**



The cover is supplied with screws, nuts, cable clamps, and lock screws.

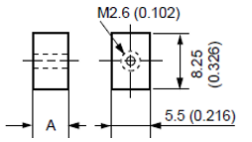
* The number of attached screws and nuts are as follows:
  N360C024J: 2 each
  N360C040J: 1 each

Poles	Part Number
24	N360C024J2
40	N360C040J2

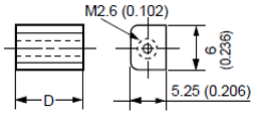
Metal Fittings

Metal fittings are required to secure the connection to the PCB.
The required fittings vary depending on the connector type and whether a cover is used. Please select the appropriate fittings from the combination table.

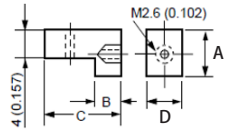
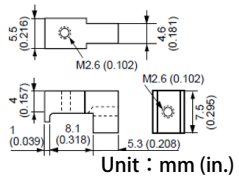
■ Straight Metal Fittings

Shape	Dimensions / Part Number	A	Notes
 Unit：mm (in.)	N360A01A	5.3	• Prepare one set (two pieces) of M2.6 × 8 screws to secure the connection to the printed circuit board. • A screw length of 8 mm is the standard length for a printed circuit board thickness of 1.6 mm. Use screws of an appropriate length according to your application.
	N360A06A	6.3	

■ Straight Round Metal Fittings

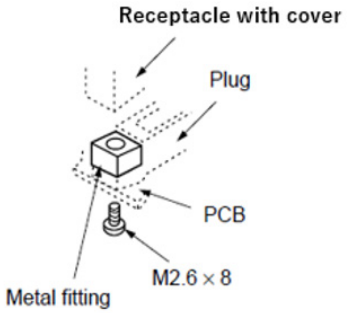
Shape	Dimensions / Part Number	D	Notes
 Unit：mm (in.)	N360A04A	7.1	• Prepare one set (two pieces) of M2.6 × 8 screws to secure the connection to the printed circuit board. • A screw length of 8 mm is the standard length for a printed circuit board thickness of 1.6 mm. Use screws of an appropriate length according to your application.
	N360A05A	9.9	
	N360A07A	8.1	

■ Right Angle Metal Fittings

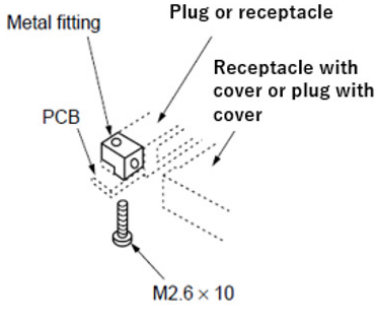
Shape	Dimensions / Part Number	A	B	C	D	Notes
 Unit：mm (in.)	N360A02A	7	3	9	5.5	• Prepare one set (two pieces) of M2.6 × 10 screws to secure the connection to the printed circuit board. • A screw length of 10 mm is the standard length for a printed circuit board thickness of 1.6 mm. Use screws of an appropriate length according to your application.
	N360A03A	7	4	10	5.5	
	N360A08A	7.5	5.3	13.3	5.4	
	N360A09A	7.5	6.3	14.3	5.4	
 Unit：mm (in.)	N360A10A	【Whole View】 				

■ Mounting Configuration

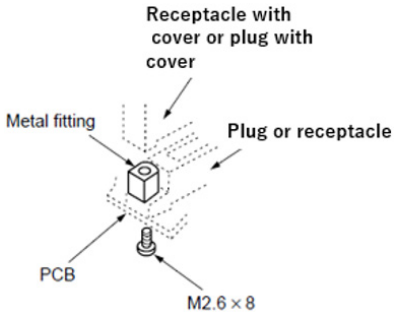
【Straight Metal Fittings】



【Right Angle Metal Fittings】



【Straight RoundMetal Fittings】



Combinations of Plug/ Receptacle with Metal Fittings

In case of Plug is placde on PCB side

Plug \ Receptacle		Mating Connector (Cover-Mounted Side)				
		N361J		N363J		N367J
		With Cover	No Cover	With Cover	No Cover	No Cover
PCB Side	N361P	N360A04A	N360A05A	N360A04A	N360A05A	N360A05A
	N364P	N360A01A	N360A06A	N360A01A	N360A06A	N360A06A
	N365P	N360A02A	N360A03A	N360A02A	N360A03A	N360A03A

* Covers cannot be attached to IDC-type connectors (N367J).

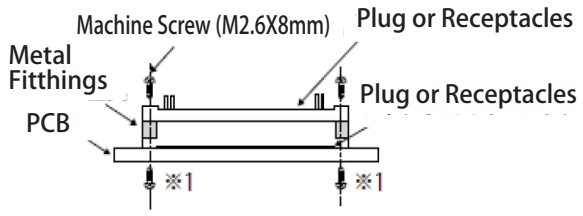
In case of Receptacle is placed on PCB side

Plug \ Receptacle		Mating Connector (Cover-Mounted Side	
		N361P	
		With Cover	Without Cover
PCB Side	N361J	N360A04A	N360A05A
	N363J	N360A04A	N360A05A
	N364J	N360A04A	N360A05A
	N365J	N360A10A N360A08A	N360A09A
	N367J	N360A04A	N360A05A

* Covers cannot be attached to plug connectors other than the solder type (N361P).

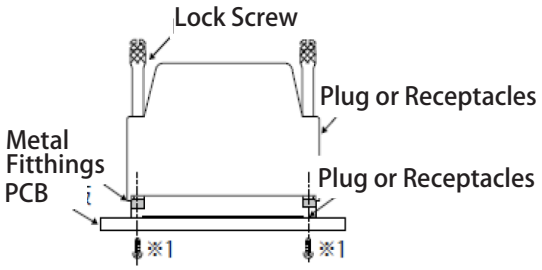
■ **Mounting Configuration**

【Fig.1 — Without Cover】



※ 1 The screws used on the printed circuit board side vary depending on the type of metal fitting.

【Fig. 2 — With Cover】



※ 1 The screws used on the printed circuit board side vary depending on the type of metal fitting.

【Remarks】

1. Prepare one set (two pieces) of M2.6 × 8 mm screws separately to secure the receptacle and plug together. (Fig. 1)
2. When using a receptacle or plug with a cover, separate screws are not required because lock screws are provided.
3. The screw lengths specified for securing the receptacle or plug to the printed circuit board via metal fittings are for reference only. The optimum screw length depends on the thickness of the printed circuit board. Determine the appropriate screw length after checking the required strength and other conditions on the actual equipment.

Cover Combination Chart

Connector / Cover	Plug	Receptacle			Number of Poles							
	Soldering	Soldering	Crimp	Crimp	8	16	24	32	40	48	56	64
	N361P	N361J	N363J	N367J								
N360C□□□B	●	●	●	–	●	●	●	●	●	●	●	●
N360C□□□C	●	●	●	–	●	●	●	●	●	●	●	●
N360C□□□D	●	●	●	–					●	●	●	●
N360C□□□E	●	●	●	–	●	●	●	●	●	●	●	●
N360C040J1	●	●	–	–					●			
N360C□□□J2	●	●	–	–			●		●			

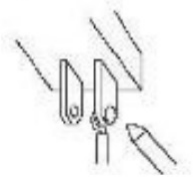
(Reference) Types of Terminal Configurations

Solder Terminal (Eyelet)
This type of terminal provides an electrical connection by stripping the insulation from the wire and soldering the conductor to the terminal.
Follow standard soldering practices, such as hooking the conductor through the terminal hole (eyelet), wrapping it around the terminal, and then soldering it securely.

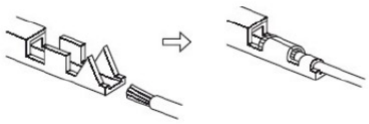
Crimp (Clipping) Terminal
This type of terminal provides an electrical connection by stripping the insulation from the wire, inserting the conductor into the terminal, and mechanically joining the terminal and conductor by deforming (crimping) the terminal.

IDC Terminal
This type of terminal provides an electrical connection without stripping the wire insulation. A U-shaped contact is pressed into the cable, piercing the insulation and making electrical contact with the conductor. The use of a flat cable allows multiple conductors to be terminated simultaneously.

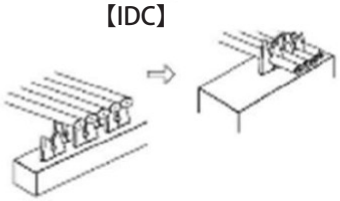
【Soldering】



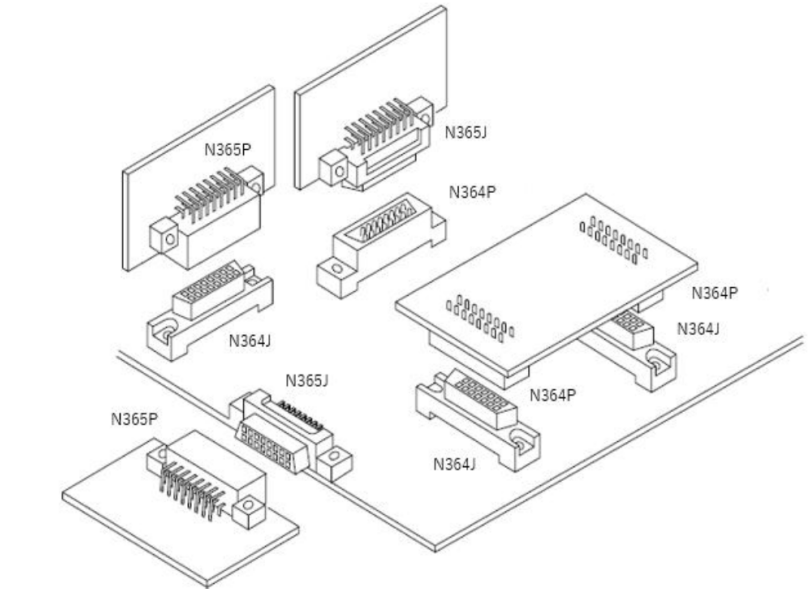
【Crimping】

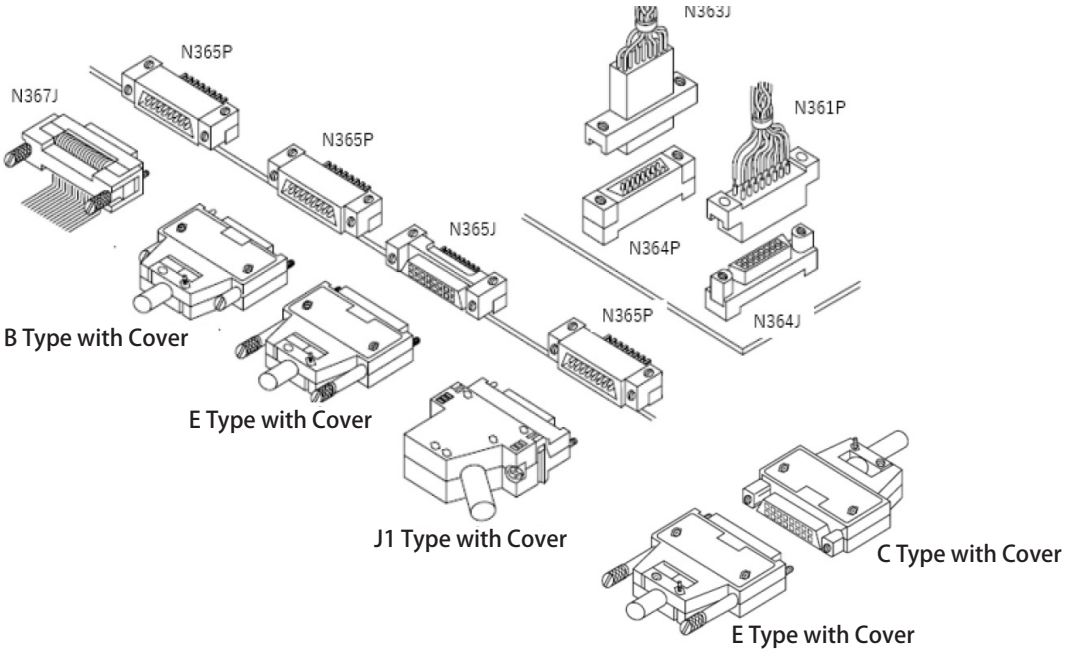


【IDC】



Application Examples





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