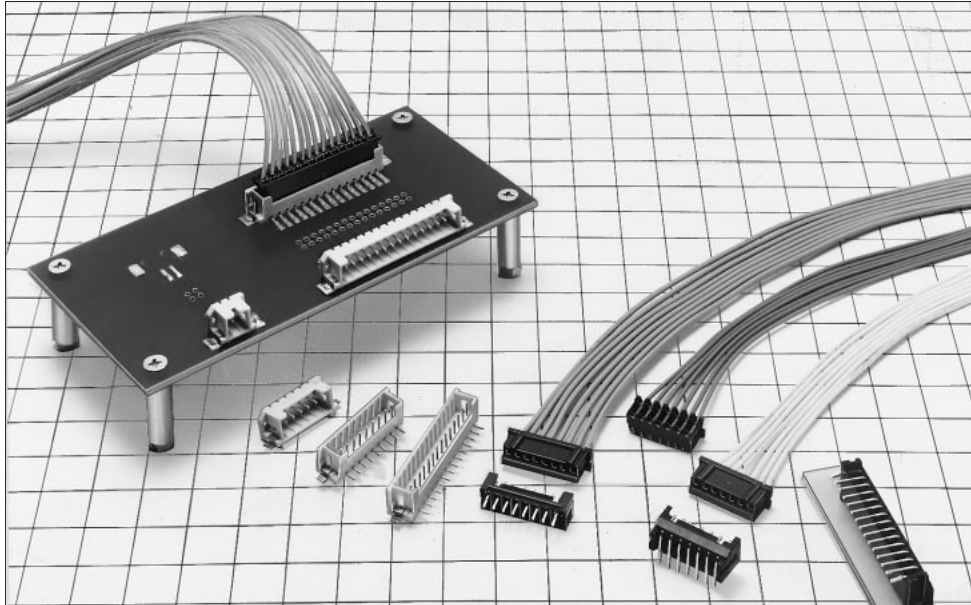


DF3 SERIES

2 mm Pitch Discrete Wire Connection Connector (Recognized Components in UL and CSA)



■ Features

Many variations ensure compatibility with various board designs.

- Insulation displacement termination socket
 - (1) Low profile design with a package height of 6.8 mm.
 - (2) Can be used for multi-harness by automatic insulation displacement terminator when combined with the DF11 series insulation displacement connector.
(The DF11 series is a connector with a 2 mm pitch, 2-row arrangement. See pages 80 through 91.)
- Crimp socket
 - (1) Low profile design with a package height of 7.5 mm. For details, see the Application drawing on page 63.
 - (2) Sufficient space for the connector crimping part, enabling stable crimping work.
- Receptacle
 - (1) Can connect to a board vertically or horizontally and combined with straight and right-angle headers.
 - (2) Horizontal board connection achieves a very low profile of 6.6 mm.
For details, see the Application drawing on page 63.
 - (3) Interchangeable with the extension plug: in board-to-cable connection, the board side terminal can be a receptacle with the cable side terminal being a plug.
- Pin header
 - (1) Post pins are kinked for temporarily fixing to a board.
 - (2) Box-type prevents the header from prying out.
 - (3) SMT-compatible headers using heat-resistant resin are available. Reinforcement for the headers of this type prevents separation of soldered parts.
- Extension plug
 - (1) Available in two types: space-saving type, and panel lock type, which can be fixed to the panel.
 - (2) Extension adapters are available that have plugs on both sides. Such adapters allow terminal No. 1 to No. 1 circuit connection.
- Plating

Tin-plating and gold-plating are standard.

■ Applications

General OA equipment such as copying machines and printers

Product standard

Rating	Rated current (Note 1)	Crimping	Wire size AWG 22~24 :3A			Operating temp.	-30~85°C (Note 2)
			Wire size AWG 26 :2A			Operating humidity	40~80%
			Wire size AWG 28 :1A			Storage temp.	-10~60°C (Note 3)
	Rated voltage	ID termination	Wire size	AWG 26, 28 :1A		Storage humidity	40~70% (Note 3)
		Crimping	AC250V	ID termination	AC100V		

Approved by UL-CSA Safety Standard			
Rating	Rated current	Wire size AWG 24~28:1A	
	Rated voltage	AC30V	

UL & CSA Safety Standards File No.

UL :E52653

CSA :LR95109

Items approved by UL & CSA

①DF3-*S-2C

②DF3/3A-*P-2DSA/DS

③DF3/DF3AA-*EP-2C

④DF3-*S-2R26/28

⑤DF3-*P-2H

Item	Standard	Conditions	
1. Insulation resistance	1000 MΩ or more	Measured at 500 VDC	
2. Withstand voltage	No flashover or dielectric breakdown allowed	AC650V 1 minute	
3. Contact resistance	30 mΩ or less	Measured at 100 mA	
4. Insertion and withdrawals force	MIN 0.3 N(30gf), MAX 4.4 N(450gf)	To be measured with a steel pin of $\square 0.5 \pm 0.002$ mm	
5. Vibration resistance	No electrical discontinuity of 1 μs or more allowed	Frequency: 10 - 55 Hz, single-side amplitude: 0.75 mm, 3 directions for 2 hours	
6. Moisture resistance	Contact resistance: 30 mΩ or less, insulation resistance: 500 MΩ or more	Temperature: 40±2°C, humidity: 90 - 95%, allow 96 hours before measurement	
7. Temperature cycle	Contact resistance: 30 mΩ or less, insulation resistance: 1000 MΩ or more	(-55°C for 30 min. → 5 - 35°C for 10 min. → 85°C for 30 min. → 5 - 35°C for 10 min.) 5 cycles	
8. Insertion/extraction life	Contact resistance: 30 mΩ or less	Soldered-plate:30 insertions/extractions	Gold-plate:50 insertions/extractions
9. Solder heat resistance	No melting of resin affecting the connector performance allowed	Dip type	Flow: 250°C for 10 min. Manual soldering: solder temperature: 300°C for 2 seconds
		SMT type	Reflow: At recommended temperature profile Manual soldering: solder temperature: 300°C for 3 seconds

Note 1: The rated current varies depending on the size of wire connected to the connector. The rating of the header itself is 3 A.

Note 2: Includes temperature rise when power is on.

Note 3: "Storage" refers to a long period of storage without use of the product before being mounted on a board.

The operating temperature and humidity ranges apply to the connectors mounted on a board when turned off, and connectors under temporary storage such as those being transported.

Note 4: The above standards are typical for the DF3 series. The formal standards are stated in the delivery specifications.

Material

Product	Part	Material	Processing	UL Rating
Crimp socket	Insulation	Polyamide resin	Black	UL94V-0
Crimp terminal for socket	Terminal	Phosphor bronze	Tin-plated or Gold-plated	
ID termination socket	Insulation	Polyamide resin	Black	UL94V-0
	Terminal	Phosphor bronze	Tin-plated or Gold-plated	
Receptacle	Insulation	Polyamide resin	Black	UL94V-0
	Terminal	Phosphor bronze	Tin-plated or Gold-plated	
Pin Header	Insulation	Polyamide resin	Black	UL94V-0
	Terminal	Brass	Tin-plated or Gold-plated	
S M T pin header	Insulation	Polyamide resin	Beige	UL94V-0
	Terminal	Brass	Tin-plated or Gold-plated	
	Fittings	Brass	Tin-plated	
Extension plug	Insulation	Polyamide resin	Black	UL94V-0
Crimp terminal for extension plug	Terminal	Phosphor bronze	Tin-plated or Gold-plated	
Extension adaptor	Insulation	Polyamide resin	Black	UL94V-0
	Terminal	Brass	Tin-plated	

Note: Our tin plating is protected from whiskers.

When ordering, select products using the product numbers listed in this catalog. 64 to 72 pages.

$$\begin{array}{cccccc} \text{DF3} & - & *S & - & 2C \\ \hline \textcircled{1} & & \textcircled{2} & & \textcircled{3} & \textcircled{4} & & \textcircled{5} & \textcircled{6} \end{array}$$

① Series Name:DF	⑥ Connection form/Type of termination
② Series No. :3, 3A, 3AA	C :Crimp case
③ Number of contacts:2~15	R26 :ID termination socket for AWG26
④ Types of connectors	R28 :ID termination socket for AWG28
S :Socket	DSA:Straight dip
P :Pin header	DS :Right angle dip
EP:Extension plug	V :Straight SMT
⑤ Contact pitch:2mm	H :Right angle SMT
	A :Adaptor

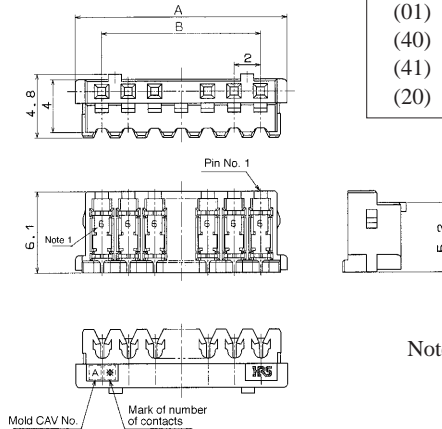
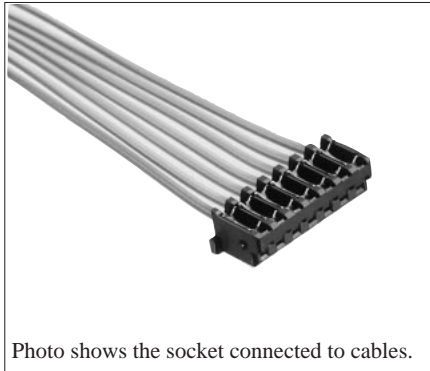
DF3 - EP2428PCFA

① Applicable form EP:Extension	③ Type of form/Type of packaging SCF:Socket contact · Reel SC :Socket contact · Loose piece PCF:Plug contact · Reel PC :Plug contact · Loose piece
② Applicable wire size 22 :AWG22 2428:AWG24~28	④ Type of plating Blank:Tin-plated A :Gold-plated C :Gold-plated

The image displays three rows of technical drawings for DF3 series components. Each row includes a side view of a component mounted on a base, a side view of the component alone, and a front view of the component mounted on a panel.

- Row 1:**
 - Side view (left): DF3-※S-2R (6.8), DF3A-※P-2DSA (7.7), DF3A-※P-2DS (5), DF3-※P-2H (5.6). Dimensions: 1.5, 7.5, 7.7.
 - Side view (middle): DF3-※S-2R (6.8), DF3A-※P-2DS (5), DF3-※P-2H (5.6). Dimensions: 1.5, 7.5.
 - Front view (right): DF3-※S-2R (8.4), DF3AA-※EP-2C (2.5). Dimensions: 8.4, 2.5. Label: Panel.
- Row 2:**
 - Side view (left): DF3-※S-2C (7.5), DF3A-※P-2DSA (8.4), DF3A-※P-2DS (5), DF3-※P-2H (5.6). Dimensions: 1.5, 8.2, 8.4.
 - Side view (middle): DF3-※S-2C (7.5), DF3A-※P-2DS (5), DF3-※P-2H (5.6). Dimensions: 1.5, 8.2.
 - Front view (right): DF3-※S-2C (9.1), DF3AA-※EP-2C (2.5). Dimensions: 9.1, 2.5. Label: Panel.
- Row 3:**
 - Side view (left): DF3-※S-2DSA (6.6), DF3A-※P-2DSA (7.5), DF3A-※P-2DS (5), DF3-※P-2H (5.6). Dimensions: 1.5, 7.3, 7.5.
 - Side view (middle): DF3-※S-2DSA (6.6), DF3A-※P-2DS (5), DF3-※P-2H (5.6). Dimensions: 1.5, 7.3.
 - Front view (right): DF3-※S-2C (9.1), DF3AA-※EP-2C (2.5). Dimensions: 9.1, 2.5. Label: Panel.

■ Insulation displacement termination socket



[Specification No.]: -**, (**)

Blank : Tin-plated, 100 pcs. per pack

(01) : Gold-plated, 100 pcs. per pack

(40) : Tin-plated, 500 pcs. per package

(41) : Tin-plated, 1000 pcs. per package

(20) : Tin-plated, magazine package

Note 1: Stamp to identify the sockets

6: R26, 8: R28

● For AWG26

Unit:mm

HRS No.	Product No.	No. of contacts	A	B	No. of products in a magazine
543-0078-7-**-	DF3- 2S-2R26 (**)	2	6	2	190
543-0079-0-**-	DF3- 3S-2R26 (**)	3	8	4	142
543-0080-9-**-	DF3- 4S-2R26 (**)	4	10	6	114
543-0081-1-**-	DF3- 5S-2R26 (**)	5	12	8	94
543-0082-4-**-	DF3- 6S-2R26 (**)	6	14	10	80
543-0083-7-**-	DF3- 7S-2R26 (**)	7	16	12	70
543-0084-0-**-	DF3- 8S-2R26 (**)	8	18	14	62
543-0085-2-**-	DF3- 9S-2R26 (**)	9	20	16	56
543-0086-5-**-	DF3-10S-2R26 (**)	10	22	18	52
543-0087-8-**-	DF3-11S-2R26 (**)	11	24	20	46
543-0088-0-**-	DF3-12S-2R26 (**)	12	26	22	44
543-0089-3-**-	DF3-13S-2R26 (**)	13	28	24	40
543-0090-2-**-	DF3-14S-2R26 (**)	14	30	26	38
543-0091-5-**-	DF3-15S-2R26 (**)	15	32	28	34

● For AWG28

Unit:mm

HRS No.	Product No.	No. of contacts	A	B	No. of products in a magazine
543-0092-8-**-	DF3- 2S-2R28 (**)	2	6	2	190
543-0093-0-**-	DF3- 3S-2R28 (**)	3	8	4	142
543-0094-3-**-	DF3- 4S-2R28 (**)	4	10	6	114
543-0095-6-**-	DF3- 5S-2R28 (**)	5	12	8	94
543-0096-9-**-	DF3- 6S-2R28 (**)	6	14	10	80
543-0097-1-**-	DF3- 7S-2R28 (**)	7	16	12	70
543-0098-4-**-	DF3- 8S-2R28 (**)	8	18	14	62
543-0099-7-**-	DF3- 9S-2R28 (**)	9	20	16	56
543-0100-4-**-	DF3-10S-2R28 (**)	10	22	18	52
543-0101-7-**-	DF3-11S-2R28 (**)	11	24	20	46
543-0102-0-**-	DF3-12S-2R28 (**)	12	26	22	44
543-0103-2-**-	DF3-13S-2R28 (**)	13	28	24	40
543-0104-5-**-	DF3-14S-2R28 (**)	14	30	26	38
543-0105-8-**-	DF3-15S-2R28 (**)	15	32	28	34

Note 2: Models without a number and (01) specified are available in packs (100 units per pack). Order them in packs.

Note 3: Models available in (40): 500 pieces per pack and (41): 1000 pieces per pack should be ordered in quantity of sockets. Order them in multiples of the ordering units, e.g., 500, 1000, 1500,-- .

Note 4: (20) Magazine packaging applies to the sockets to be connected by the DF11 single core fully-automatic insulation displacement terminator.

Note 5: Order magazine packaged sockets in integral multiples of the amount contained in a magazine.

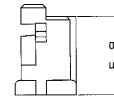
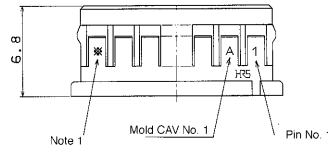
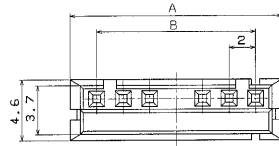
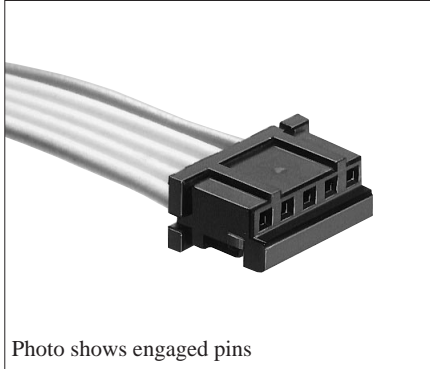
● Applicable cable

Product No.	Applicable cable	Coating O.D
DF3-*S-2R26	UL1061 AWG26 (7/0.16)	ø0.9~1mm
DF3-*S-2R28	UL1061 AWG28 (7/0.127)	ø0.9~1mm

● Applicable insulation displacement terminator

Type	Product No.	Connection	Remarks
DF11 single core fully automatic insulation displacement terminator	AM700/DF11	■ Applicable harness forms ① DF11-both ends, one end ② DF11-DF11 branch ③ DF11-DF3 branch ■ Applicable harness length 100~2000mm ■ Equipped with a conductivity inspection mechanism	(20) magazine packaging applies to the connectors.
DF3 & DF4 desk-top insulation displacement terminator	DF3(4)/ID-MO	DF3: Without restrictions DF4: Without restrictions	Desk-top machine for small lots

Crimp socket



[Specification No.]: -**,(**)

Blank : 100 pcs. per pack

(40) : 500 pcs. per package

(41) : 1000 pcs. per package

Unit:mm

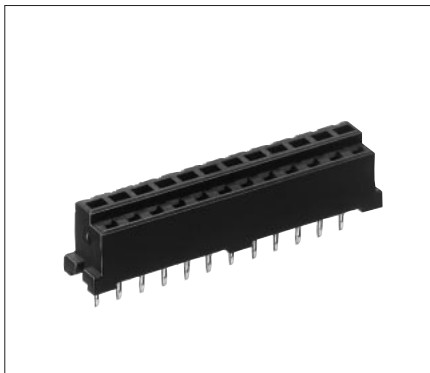
HRS No.	Product No.	No. of contacts	A	B	HRS No.	Product No.	No. of contacts	A	B
543-0003-8-**-**	DF3- 2S-2C (**)	2	6	2	543-0010-3-**-**	DF3- 9S-2C (**)	9	20	16
543-0004-0-**-**	DF3- 3S-2C (**)	3	8	4	543-0011-6-**-**	DF3-10S-2C (**)	10	22	18
543-0005-3-**-**	DF3- 4S-2C (**)	4	10	6	543-0012-9-**-**	DF3-11S-2C (**)	11	24	20
543-0006-6-**-**	DF3- 5S-2C (**)	5	12	8	543-0013-1-**-**	DF3-12S-2C (**)	12	26	22
543-0007-9-**-**	DF3- 6S-2C (**)	6	14	10	543-0014-4-**-**	DF3-13S-2C (**)	13	28	24
543-0008-1-**-**	DF3- 7S-2C (**)	7	16	12	543-0015-7-**-**	DF3-14S-2C (**)	14	30	26
543-0009-4-**-**	DF3- 8S-2C (**)	8	18	14	543-0016-0-**-**	DF3-15S-2C (**)	15	32	28

Note 1: Mark of number of contacts

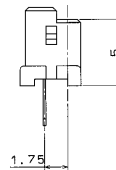
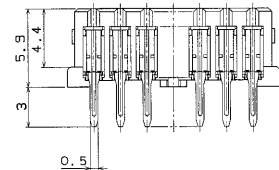
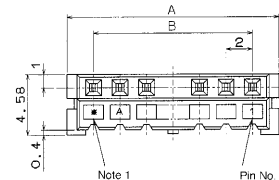
Note 2: Minimum order quantity of the models without a number specified is one pack containing 100 sockets.

Note 3: Models available in (40): 500 pieces per package and (41): 1000 pieces per pack should be ordered in quantity of sockets. Order in multiples of order units, e.g., 500, 1000, 1500,-- .

Receptacle



●Board through-hole diameter : $\varnothing 0.7 \pm 0.1$



[Specification No.]: -**,(**)

(20) : Tin-plated, magazine packaging

(50) : Gold-plated, magazine packaging

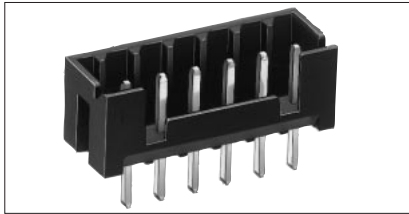
Note 1: Mark of number of contacts

Unit:mm

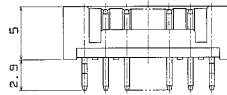
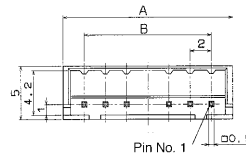
HRS No.	Product No.	No. of contacts	A	B	No. of packing in a magazine	HRS No.	Product No.	No. of contacts	A	B	No. of packing in a magazine
543-0048-6-**-**	DF3- 2S-2DSA (**)	2	6	2	80	543-0055-1-**-**	DF3- 9S-2DSA (**)	9	20	16	24
543-0049-9-**-**	DF3- 3S-2DSA (**)	3	8	4	60	543-0056-4-**-**	DF3-10S-2DSA (**)	10	22	18	21
543-0050-8-**-**	DF3- 4S-2DSA (**)	4	10	6	48	543-0057-7-**-**	DF3-11S-2DSA (**)	11	24	20	20
543-0051-0-**-**	DF3- 5S-2DSA (**)	5	12	8	40	543-0058-0-**-**	DF3-12S-2DSA (**)	12	26	22	18
543-0052-3-**-**	DF3- 6S-2DSA (**)	6	14	10	34	543-0059-2-**-**	DF3-13S-2DSA (**)	13	28	24	17
543-0053-6-**-**	DF3- 7S-2DSA (**)	7	16	12	30	543-0060-1-**-**	DF3-14S-2DSA (**)	14	30	26	16
543-0054-9-**-**	DF3- 8S-2DSA (**)	8	18	14	27	543-0061-4-**-**	DF3-15S-2DSA (**)	15	32	28	15

Note 2: Order magazine packaged sockets in integral multiples of the amount contained in a magazine.

Straight pin header



- Board through-hole diameter : $\varnothing 0.8 \pm 0.1$
- Temporarily kinked,
fixing effective diameter : $\varnothing 0.8 \pm 0.05$



[Specification No.]: -**,(**)

DF3A: Blank : Tin-plated

DF3 (01) : Gold-plated

Unit:mm

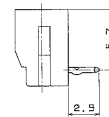
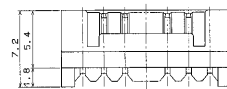
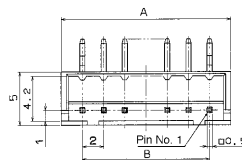
Soldered-plated		Gold-plated		No. of contacts	A	B
HRS No.	Product No.	HRS No.	Product No.			
543-0165-0	DF3A- 2P-2DSA	543-0017-2-01	DF3- 2P-2DSA (01)	2	6	2
543-0166-2	DF3A- 3P-2DSA	543-0018-5-01	DF3- 3P-2DSA (01)	3	8	4
543-0167-5	DF3A- 4P-2DSA	543-0019-8-01	DF3- 4P-2DSA (01)	4	10	6
543-0168-8	DF3A- 5P-2DSA	543-0020-7-01	DF3- 5P-2DSA (01)	5	12	8
543-0169-0	DF3A- 6P-2DSA	543-0021-0-01	DF3- 6P-2DSA (01)	6	14	10
543-0170-0	DF3A- 7P-2DSA	543-0022-2-01	DF3- 7P-2DSA (01)	7	16	12
543-0171-2	DF3A- 8P-2DSA	543-0023-5-01	DF3- 8P-2DSA (01)	8	18	14
543-0172-5	DF3A- 9P-2DSA	543-0024-8-01	DF3- 9P-2DSA (01)	9	20	16
543-0173-8	DF3A-10P-2DSA	543-0025-0-01	DF3-10P-2DSA (01)	10	22	18
543-0174-0	DF3A-11P-2DSA	543-0026-3-01	DF3-11P-2DSA (01)	11	24	20
543-0175-3	DF3A-12P-2DSA	543-0027-6-01	DF3-12P-2DSA (01)	12	26	22
543-0176-6	DF3A-13P-2DSA	543-0028-9-01	DF3-13P-2DSA (01)	13	28	24
543-0177-9	DF3A-14P-2DSA	543-0029-1-01	DF3-14P-2DSA (01)	14	30	26
543-0178-1	DF3A-15P-2DSA	543-0030-0-01	DF3-15P-2DSA (01)	15	32	28

Note: Minimum order quantity of the models is one pack containing 100 sockets.

Right angle pin header



- Board through-hole diameter : $\varnothing 0.8 \pm 0.1$
- Temporarily kinked,
fixing effective diameter : $\varnothing 0.8 \pm 0.05$



[Specification No.]: -**,(**)

DF3A: Blank : Tin-plated

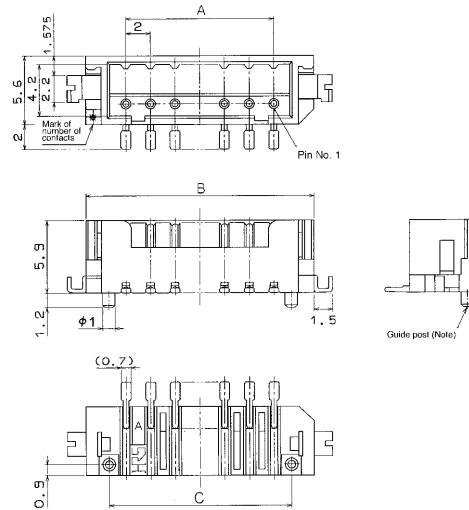
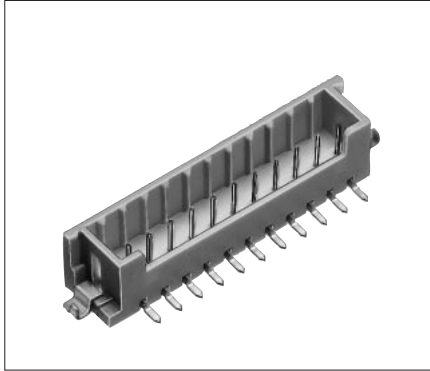
DF3 (01) : Gold-plated

Unit:mm

Tin-plated		Gold-plated		No. of contacts	A	B
HRS No.	Product No.	HRS No.	Product No.			
543-0179-4	DF3A- 2P-2DS	543-0031-3-01	DF3- 2P-2DS (01)	2	6	2
543-0180-3	DF3A- 3P-2DS	543-0032-6-01	DF3- 3P-2DS (01)	3	8	4
543-0181-6	DF3A- 4P-2DS	543-0033-9-01	DF3- 4P-2DS (01)	4	10	6
543-0182-9	DF3A- 5P-2DS	543-0034-1-01	DF3- 5P-2DS (01)	5	12	8
543-0183-1	DF3A- 6P-2DS	543-0035-4-01	DF3- 6P-2DS (01)	6	14	10
543-0184-4	DF3A- 7P-2DS	543-0036-7-01	DF3- 7P-2DS (01)	7	16	12
543-0185-7	DF3A- 8P-2DS	543-0037-0-01	DF3- 8P-2DS (01)	8	18	14
543-0186-0	DF3A- 9P-2DS	543-0038-2-01	DF3- 9P-2DS (01)	9	20	16
543-0187-2	DF3A-10P-2DS	543-0039-5-01	DF3-10P-2DS (01)	10	22	18
543-0188-5	DF3A-11P-2DS	543-0040-4-01	DF3-11P-2DS (01)	11	24	20
543-0189-8	DF3A-12P-2DS	543-0041-7-01	DF3-12P-2DS (01)	12	26	22
543-0190-7	DF3A-13P-2DS	543-0042-0-01	DF3-13P-2DS (01)	13	28	24
543-0191-0	DF3A-14P-2DS	543-0043-2-01	DF3-14P-2DS (01)	14	30	26
543-0192-2	DF3A-15P-2DS	543-0044-5-01	DF3-15P-2DS (01)	15	32	28

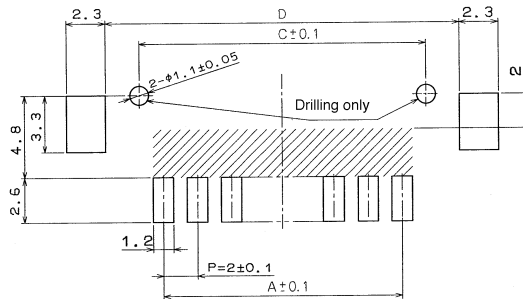
Note: Minimum order quantity of the models is one pack containing 100 sockets.

■ Straight pin header (SMT)



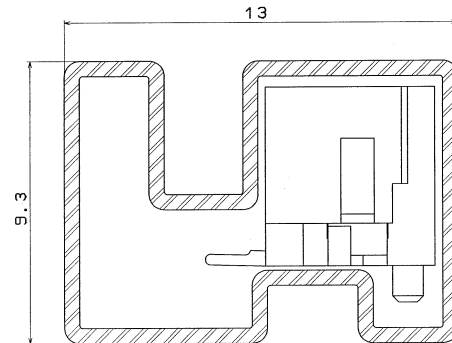
Note: The hole is not required for products without the guide.

❖ Recommended board pattern



Note: When a part marked with  has a pattern and no resist on it, take care to prevent the connector terminal from contacting it.

❖ Magazine dimensional drawing



[Specification No.]: -**,(**)

(20) : Tin-plated, magazine packaging

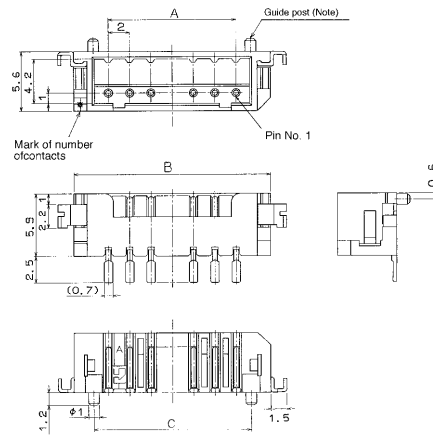
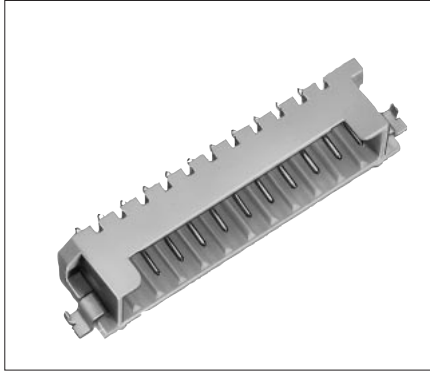
(50) : Gold-plated, magazine packaging

Unit:mm

Guide post (Provided)		Guide post (Not provided)		No. of contacts	A	B	C	D	No. of packing in a magazine
HRS No.	Product No.	HRS No.	Product No.						
543-0121-4-**-**	DF3- 2P-2V (**)	543-0207-8-**-**	DF3D- 2P-2V (**)	2	2	8.5	4.8	8.74	41
543-0122-7-**-**	DF3- 3P-2V (**)	543-0208-0-**-**	DF3D- 3P-2V (**)	3	4	10.5	6.8	10.74	34
543-0123-0-**-**	DF3- 4P-2V (**)	543-0209-3-**-**	DF3D- 4P-2V (**)	4	6	12.5	8.8	12.74	30
543-0124-2-**-**	DF3- 5P-2V (**)	543-0210-2-**-**	DF3D- 5P-2V (**)	5	8	14.5	10.8	14.74	26
543-0125-5-**-**	DF3- 6P-2V (**)	543-0211-5-**-**	DF3D- 6P-2V (**)	6	10	16.5	12.8	16.74	23
543-0126-8-**-**	DF3- 7P-2V (**)	543-0212-8-**-**	DF3D- 7P-2V (**)	7	12	18.5	14.8	18.74	21
543-0127-0-**-**	DF3- 8P-2V (**)	543-0213-0-**-**	DF3D- 8P-2V (**)	8	14	20.5	16.8	20.74	19
543-0128-3-**-**	DF3- 9P-2V (**)	543-0214-3-**-**	DF3D- 9P-2V (**)	9	16	22.5	18.8	22.74	18
543-0129-6-**-**	DF3-10P-2V (**)	543-0215-6-**-**	DF3D-10P-2V (**)	10	18	24.5	20.8	24.74	17
543-0130-5-**-**	DF3-11P-2V (**)	543-0216-9-**-**	DF3D-11P-2V (**)	11	20	26.5	22.8	26.74	15
543-0131-8-**-**	DF3-12P-2V (**)	543-0217-1-**-**	DF3D-12P-2V (**)	12	22	28.5	24.8	28.74	14
543-0132-0-**-**	DF3-13P-2V (**)	543-0218-4-**-**	DF3D-13P-2V (**)	13	24	30.5	26.8	30.74	14
543-0133-3-**-**	DF3-14P-2V (**)	543-0219-7-**-**	DF3D-14P-2V (**)	14	26	32.5	28.8	32.74	13
543-0134-6-**-**	DF3-15P-2V (**)	543-0220-6-**-**	DF3D-15P-2V (**)	15	28	34.5	30.8	34.74	12

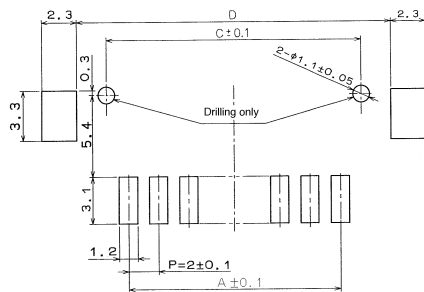
Note: Order magazine-packaged products in multiples of the amount contained in a magazine.

Right angle pin header (SMT)

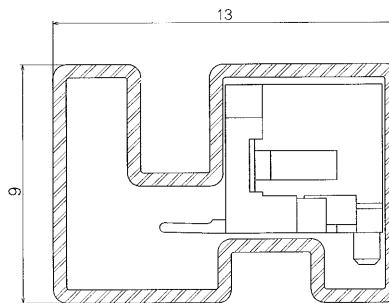


Note: The hole is not required for products without the guide.

Recommended board pattern



Magazine dimensional drawing



Number of contacts of embossed packaged products

	2	3	4	5	6	7	8	9	10	11	12	13	14	15
DF3 -*P-2H	○	○	○	—	○	—	—	—	—	—	—	—	—	—
DF3D-*P-2H	○	○	○	○	○	○	○	—	○	—	—	—	—	—

[Specification No.]: -*,(**)

(20) : Tin-plated, magazine packaging

(21) : Tin-plated, emboss packaging

(Check the number of product contacts)

(50) : Gold-plated, magazine packaging

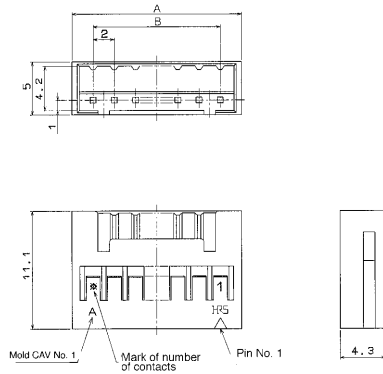
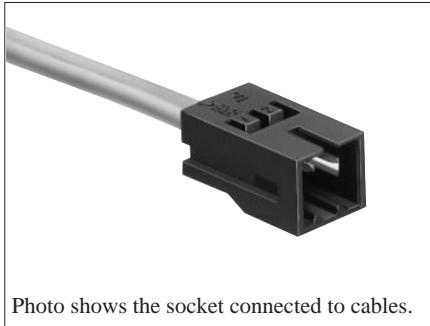
Unit:mm

Guide post (Provided)		Guide post (Not provided)		No. of contacts	A	B	C	D	No. of products in a magazine
HRS No.	Product No.	HRS No.	Product No.						
543-0107-3-*	DF3- 2P-2H (**)	543-0221-9-*	DF3D- 2P-2H (**)	2	2	8.5	4.8	8.74	41
543-0108-6-*	DF3- 3P-2H (**)	543-0222-1-*	DF3D- 3P-2H (**)	3	4	10.5	6.8	10.74	34
543-0109-9-*	DF3- 4P-2H (**)	543-0223-4-*	DF3D- 4P-2H (**)	4	6	12.5	8.8	12.74	30
543-0110-8-*	DF3- 5P-2H (**)	543-0224-7-*	DF3D- 5P-2H (**)	5	8	14.5	10.8	14.74	26
543-0111-0-*	DF3- 6P-2H (**)	543-0225-0-*	DF3D- 6P-2H (**)	6	10	16.5	12.8	16.74	23
543-0112-3-*	DF3- 7P-2H (**)	543-0226-2-*	DF3D- 7P-2H (**)	7	12	18.5	14.8	18.74	21
543-0113-6-*	DF3- 8P-2H (**)	543-0227-5-*	DF3D- 8P-2H (**)	8	14	20.5	16.8	20.74	19
543-0114-9-*	DF3- 9P-2H (**)	543-0228-8-*	DF3D- 9P-2H (**)	9	16	22.5	18.8	22.74	18
543-0115-1-*	DF3-10P-2H (**)	543-0229-0-*	DF3D-10P-2H (**)	10	18	24.5	20.8	24.74	17
543-0116-4-*	DF3-11P-2H (**)	543-0230-0-*	DF3D-11P-2H (**)	11	20	26.5	22.8	26.74	15
543-0117-7-*	DF3-12P-2H (**)	543-0231-2-*	DF3D-12P-2H (**)	12	22	28.5	24.8	28.74	14
543-0118-0-*	DF3-13P-2H (**)	543-0232-5-*	DF3D-13P-2H (**)	13	24	30.5	26.8	30.74	14
543-0119-2-*	DF3-14P-2H (**)	543-0233-8-*	DF3D-14P-2H (**)	14	26	32.5	28.8	32.74	13
543-0120-1-*	DF3-15P-2H (**)	543-0234-0-*	DF3D-15P-2H (**)	15	28	34.5	30.8	34.74	12

Note 1: Order magazine-packaged products in multiples of the amount contained in a magazine.

Note 2: Order embossed-packaged products in reels (1,000 pcs, per reel).

Extension plug



[Specification No.]: -**,(**)

Blank : 100 pcs. per pack

(40) : 500 pcs. per package

(41) : 1000 pcs. per package

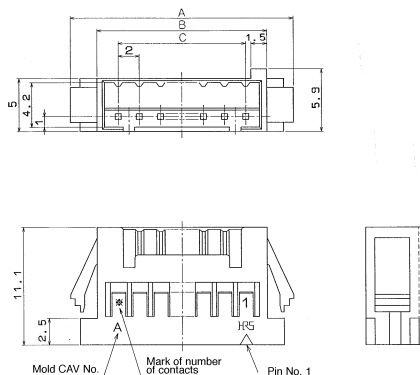
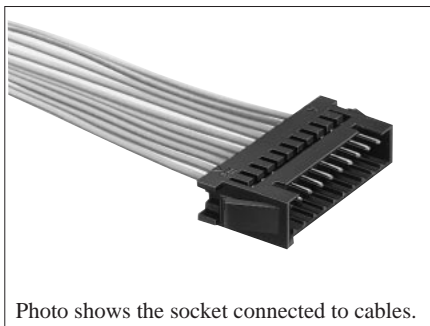
Unit:mm

HRS No.	Product No.	No. of contacts	A	B	HRS No.	Product No.	No. of contacts	A	B
543-0064-2-**-**	DF3- 2EP-2C (**)	2	6	2	543-0071-8-**-**	DF3- 9EP-2C (**)	9	20	16
543-0065-5-**-**	DF3- 3EP-2C (**)	3	8	4	543-0072-0-**-**	DF3-10EP-2C (**)	10	22	18
543-0066-8-**-**	DF3- 4EP-2C (**)	4	10	6	543-0073-3-**-**	DF3-11EP-2C (**)	11	24	20
543-0067-0-**-**	DF3- 5EP-2C (**)	5	12	8	543-0074-6-**-**	DF3-12EP-2C (**)	12	26	22
543-0068-3-**-**	DF3- 6EP-2C (**)	6	14	10	543-0075-9-**-**	DF3-13EP-2C (**)	13	28	24
543-0069-6-**-**	DF3- 7EP-2C (**)	7	16	12	543-0076-1-**-**	DF3-14EP-2C (**)	14	30	26
543-0070-5-**-**	DF3- 8EP-2C (**)	8	18	14	543-0077-4-**-**	DF3-15EP-2C (**)	15	32	28

Note 1: Minimum order quantity of the models without a number specified is one pack containing 100 sockets.

Note 2: Models available in (40): 500 pieces per package and (41): 1000 pieces per pack should be ordered in quantity of sockets. Order in multiples of order units, e.g., 500, 1000, 1500,-- ..

Extension plug with panel lock



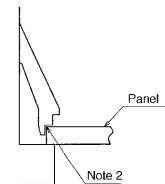
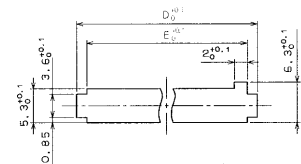
Unit:mm

HRS No.	Product No.	No. of contacts	A	B	C	D	E
543-0151-5-**-**	DF3AA- 2EP-2C (**)	2	11	6	2	9.4	6.3
543-0152-8-**-**	DF3AA- 3EP-2C (**)	3	13	8	4	11.4	8.3
543-0153-0-**-**	DF3AA- 4EP-2C (**)	4	15	10	6	13.4	10.3
543-0154-3-**-**	DF3AA- 5EP-2C (**)	5	17	12	8	15.4	12.3
543-0155-6-**-**	DF3AA- 6EP-2C (**)	6	19	14	10	17.4	14.3
543-0156-9-**-**	DF3AA- 7EP-2C (**)	7	21	16	12	19.4	16.3
543-0157-1-**-**	DF3AA- 8EP-2C (**)	8	23	18	14	21.4	18.3
543-0158-4-**-**	DF3AA- 9EP-2C (**)	9	25	20	16	23.4	20.3
543-0159-7-**-**	DF3AA-10EP-2C (**)	10	27	22	18	25.4	22.3
543-0160-6-**-**	DF3AA-11EP-2C (**)	11	29	24	20	27.4	24.3
543-0161-9-**-**	DF3AA-12EP-2C (**)	12	31	26	22	29.4	26.3
543-0162-1-**-**	DF3AA-13EP-2C (**)	13	33	28	24	31.4	28.3
543-0163-4-**-**	DF3AA-14EP-2C (**)	14	35	30	26	33.4	30.3
543-0164-7-**-**	DF3AA-15EP-2C (**)	15	37	32	28	35.4	32.3

Note 1: Minimum order quantity of the models without a number specified is one pack containing 100 sockets.

Note 2: Models available in (40): 500 pieces per package and (41): 1000 pieces per pack should be ordered in quantity of sockets. Order in multiples of order units, e.g., 500, 1000, 1500,-- ..

Panel cutout dimensions



Note 1: Applicable panel thickness: 1.6 - 1.0 mm (Note that some looseness is unavoidable when the plugs are mounted on a panel of other than 1.6 or 1.2 mm thickness.)

Note 2: Use the sharp edge for engagement with the panel.

Note 3: The terminal numbers represent 1, 4, 8, 12 and 15.

[Specification No.]: -**,(**)

Blank : 100 pcs. per pack

(40) : 500 pcs. per package

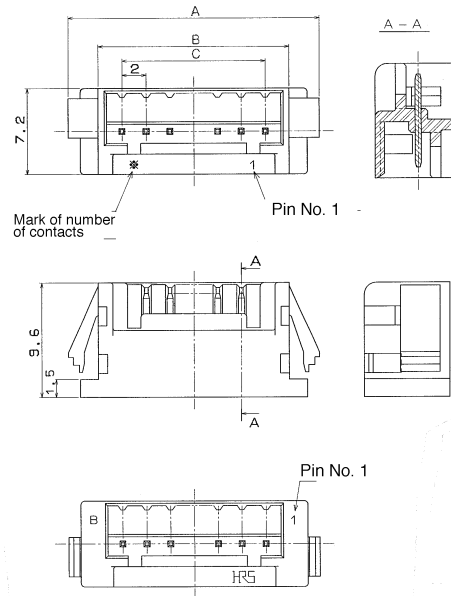
(41) : 1000 pcs. per package

■ Extension plug with panel lock

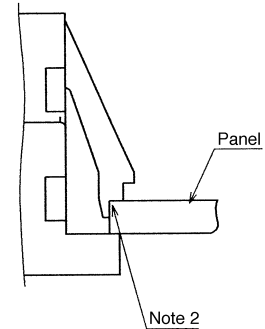
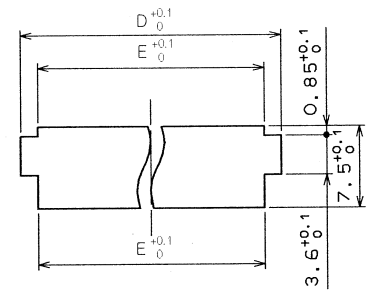


Extension adapter to accept two sockets on both sides

No. 1 to No. 1 circuit connection type



❖ Panel cutout dimensions



Note 1: Applicable panel thickness: 1.6 - 1.0 mm (Note that some looseness is unavoidable when the plugs are mounted on a panel of other than 1.6 or 1.2 mm thickness.)

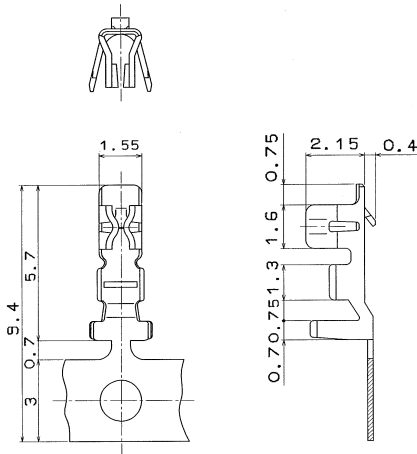
Note 2: Use the sharp edge for engagement with the panel.

HRS No.	Product No.	No. of contacts	A	B	C	D	E
543-0267-0-**-	DF3- 2EP-2A (**)	2	11	6	2	9.4	6.3
543-0268-2-**-	DF3- 3EP-2A (**)	3	13	8	4	11.4	8.3
543-0269-5-**-	DF3- 4EP-2A (**)	4	15	10	6	13.4	10.3
543-0270-4-**-	DF3- 5EP-2A (**)	5	17	12	8	15.4	12.3
543-0271-7-**-	DF3- 6EP-2A (**)	6	19	14	10	17.4	14.3
543-0272-0-**-	DF3- 7EP-2A (**)	7	21	16	12	19.4	16.3
543-0273-2-**-	DF3- 8EP-2A (**)	8	23	18	14	21.4	18.3
543-0274-5-**-	DF3- 9EP-2A (**)	9	25	20	16	23.4	20.3
543-0275-8-**-	DF3-10EP-2A (**)	10	27	22	18	25.4	22.3
543-0276-0-**-	DF3-11EP-2A (**)	11	29	24	20	27.4	24.3
543-0277-3-**-	DF3-12EP-2A (**)	12	31	26	22	29.4	26.3
543-0278-6-**-	DF3-13EP-2A (**)	13	33	28	24	31.4	28.3
543-0279-9-**-	DF3-14EP-2A (**)	14	35	30	26	33.4	30.3
543-0280-8-**-	DF3-15EP-2A (**)	15	37	32	28	35.4	32.3

[Specification No.]: -**,(**)
Blank : 100 pcs. per pack

Note 1: Minimum order quantity of the models without a number specified is one pack containing 100 sockets.

■ Socket crimp terminal



HRS No.	Product No.	Type	Quantity	Processing
543-0235-3	DF3-22SCF	Reel terminal	10,000 units per reel	Tin-plated
543-0236-6	DF3-22SC	Loose terminals	100 pcs. per pack	
543-0001-2	DF3-2428SCF	Reel terminal	10,000 units per reel	
543-0002-5	DF3-2428SC	Loose terminals	100 pcs. per pack	Gold-plate
543-0046-0	DF3-2428SCFC	Reel terminal	10,000 units per reel	
543-0047-3	DF3-248SCC	Loose terminals	100 pcs. per pack	

● Applicable wire (Tin-plated annealed copper wire)

Conductor size (core construction)	Coating diameter
AWG 22 (17core/0.16mm)	ø1.2~ø1.45mm
AWG 24 (11core/0.16mm)	ø0.75~ø1.45mm
AWG 26 (7core/0.16mm)	
AWG 28 (7core/0.127mm)	

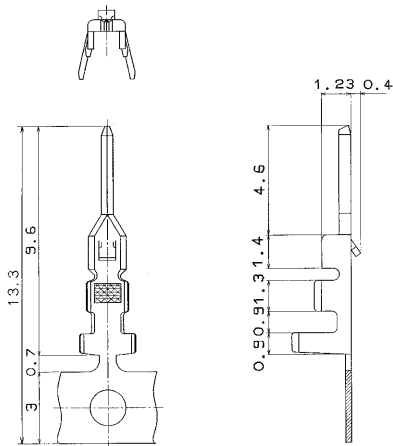
Note 1: Contact our sales department for unspecified wires.

Note 2: UL1061 applies to DF3-22SCF

● Recommended wire UL1061, UL1007 (Note 2)

● Strip length 1.8~2.3mm

■ Crimp terminal for extension plug



HRS No.	Product No.	Type	Quantity	Processing
543-0062-7	DF3-EP2428PCF	Reel terminal	10,000 units per reel	Tin-plated
543-0063-0	DF3-EP2428PC	Loose terminals	100 pcs. per pack	
543-0149-3	DF3-EP2428PCFA	Reel terminal	10,000 units per reel	Gold-plated
543-0150-2	DF3-EP2428PCA	Loose terminals	100 pcs. per pack	

● Applicable wire (Tin-plated annealed copper wire)

Conductor size (core construction)	Coating diameter
AWG 24 (11core/0.16mm)	ø0.75~ø1.45mm
AWG 26 (7 core/0.16mm)	
AWG 28 (7 core/0.127mm)	

Note: Contact our sales department for unspecified wires.

● Recommended wire UL1061, UL1007

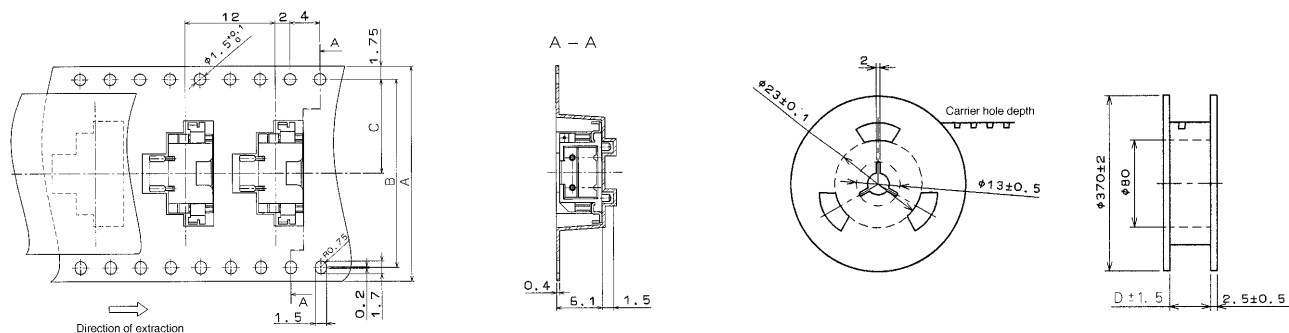
● Strip length 1.9~2.5mm

❖ Applicable clamping tool

Type	HRS No.	Product No.	Applicable contact
Applicator	901-4503-3	AP105-DF3-2428S	DF3-2428SCF/SCFC
	901-4549-4	AP105-DF3-22S	DF3-22SCF
	901-4508-7	AP105-DF3-EP2428P	DF3-EP2428PCF/PCFA
Press body	901-0005-4	CM-105	_____
Manual crimping tool	550-0164-5	DF3-TA2428HC	DF3-2428SC/SCC
	550-0184-2	DF3EP-TA2428HC	DF3-EP2428PC/PCA
	550-0257-4	DF3-TA22HC	DF3-22SC
Extraction tool	550-0170-8	DF-C-PO(A)	DF3-****SCF
			DF3-EP****PCF

Note : We will not honor the warranty if a problem is caused by using a tool not approved by Hirose.

❖ **Embossed tape carrier dimensional drawing (complies with JIS-C-0806)**



Unit:mm

Product type \ Dimension	No. of contact	A	B	C	D
DF3/3D-*P-2H	2~4	24	—————	11.5	26
	5~7	32	28.4	14.2	34
	8~12	44	40.4	20.2	46

◆ Notes on use

1. Recommended temperature profile (SMT)	<div><div><div>Temperature</div><div><div><div>IR reflow conditions</div><div><div>Preheating part</div><div>150°C</div><div>100 ~ 120 sec.</div></div><div><div>Soldering part</div><div>235 ± 5°C</div><div>less than 10 sec.</div></div><div><div>220°C or more</div><div>10 ~ 30 sec.</div></div></div></div></div><div><div><div><div>250℃</div><div>200℃</div><div>150℃</div><div>100℃</div><div>50℃</div><div>0℃</div></div><div><div>0Sec</div><div>50Sec</div><div>100Sec</div><div>150Sec</div><div>200Sec</div><div>Time</div></div></div><div><div><div>Maximum 240℃</div><div>220℃</div></div><div><div>Preheating part</div><div>Soldering part</div></div></div></div><div><div>Note 1: You can solder a product up to two times under the same conditions, provided that the product is allowed to cool back to room temperature before the second soldering.</div><div>Note 2: The above temperature refers to the board surface temperature of the connector lead.</div></div></div>
2. Recommended soldering conditions (SMT)	Soldering iron temperature: 290±10°C, soldering time: less than 3 seconds
3. Recommended screen thickness (SMT)	0.15mm~0.2mm
4. Warp in board (SMT)	0.03 mm or less at the center of the connector with the connector ends as the reference.
5. Recommended soldering condition (DIP)	<div><div>■ Reflow conditions by automatic soldering machine: Soldering temperature: 250±5°C, for 3 seconds or less.</div><div>■ Manual soldering conditions: Soldering iron temperature: 290±10°C, soldering time: 2 second or less.</div></div>
6. Cleaning conditions	See "GUIDE TO HIROSE NYLON CONNECTORS."
7. Connecting conditions	See "GUIDE TO HIROSE NYLON CONNECTORS."