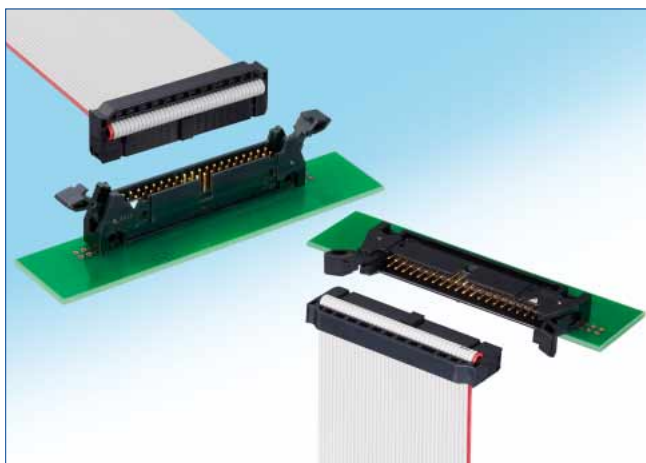


MIL Compliant Product

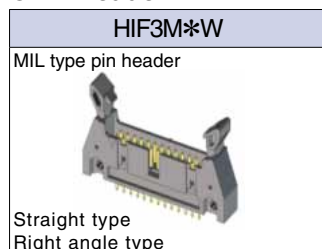
HIF3M*W Series

MIL-C-83503

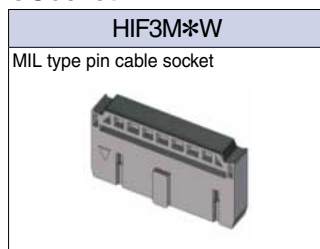


HIF3M*W Series Products

●Pin header



●Socket



■Features

1. MIL Compliant product

- MIL Compliant product (MIL-C-83503)
- Suited for wide range of applications (both internal and external connections)
- Mating compatible with HIF3 series

2. UL Certified

- UL certified connector

3. Mis-Insertion Prevention Mechanism

- Dual guide systems prevent mis-insertion
 1. MIL-compliant guide key (polarizing key) system
The guide system matches the convex shape on the pin header (polarizing key attached) with the concave shape on the socket (polarizing key cavity).
 2. Polarizing guide/slot system
The guide system matches the polarizing slot on the pin header with polarizing guide (mis-insertion prevention guide) on the socket.

4. Superior Usability

- A wide lock on the pin header and the long depth of the socket clamp makes push/pull action easier.
- The body and the protector of the socket can be detached, which makes cable assembly operation easier.

■Product specification

Ratings	Rated current 1A		Rated voltage AC200V	
	Operating temperature : -55°C to 85°C (Note 1)		Operating humidity range : Relative humidity 85% or less (No condensation)	
	Storage temperature : -10°C to 60°C (Note 2)		Storage humidity range : 5% to 85% (Note 2)	

Items	Specifications	Conditions
1. Insulation resistance	1,000MΩ or more	Measured at DC500V
2. Withstand voltage	No flashover, breakdown	650V AC/1 minute
3. Contact resistance	15mΩ or less	Measured at 0.1A
4. Vibration resistance	No electrical shut-off of 1μs or more	Frequency 10-55Hz, half amplitude 0.75mm, 2 hours in 3-axial directions
5. Moisture resistance	Insulation resistance : 1,000MΩ or more	Temperature 40±2°C, humidity left for 96 hours in 90 to 95%
6. Temperature cycle	No damage, cracks, or parts looseness.	Temperature -55 → 5 to 35 → 125 → 5 to 35°C Time tested for 30 → 5 → 30 → 5 minutes, 5 cycles
7. Push-pull life	Contact resistance : 15mΩ or less	500 times of push-pull actions
8. Soldering heat resistance	No deformation of components affecting performance.	Solder bath : 260°C for 10 seconds Hand soldering : Temperature of soldering iron 360°C,

Note 1 : Includes temperature rise caused by current flow.

Note 2 : The term "storage" refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers non conducting condition of installed connectors in storage, shipment or during transportation.

■Materials / Finish

●Pin header

Parts	Material	Color / Finish	Remarks
Lock	PBT	Black	UL94V-0
Insulator			
Contact	Brass	Contact part : gold plated 0.15μm MIN. Dip part : pure tin plated 2μm MIN.	— —

●Socket

Parts	Material	Color processing	Remarks
Insulator	PBT	Black	UL94V-0
Contact terminal	Copper alloy	Contact part : gold plated 0.15μm MIN. IDC part : nickel plated 2.5μm MIN.	— —

■Product Number Structure

Refer to the chart below when determining the product specifications from the product number.
Please select from the product numbers listed in this catalog when placing orders.

●Pin header (Right angle)

HIF	3	M*W	-	*	PA	-	2.54	DS
①	②	③		④	⑤		⑥	⑦

●Pin header (Straight)

HIF	3	M*W	-	*	PA	-	2.54	DSA
①	②	③		④	⑤		⑥	⑦

●Socket

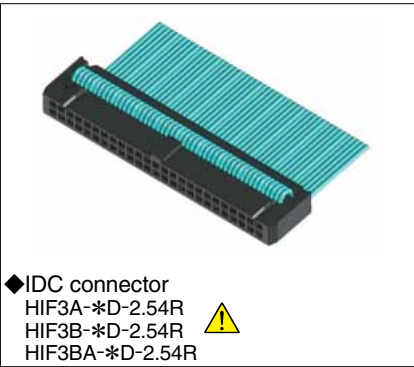
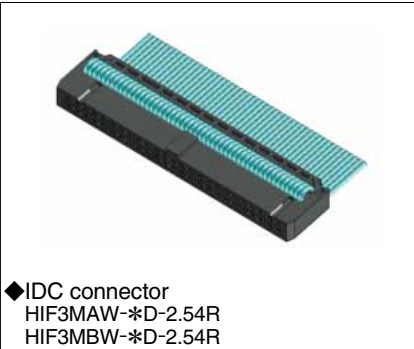
HIF	3	M*W	-	*	D	-	2.54	R
①	②	③		④	⑤		⑥	⑦

① Series name	HIF	⑤ Contact style	P : Pin header
② Series No.	3		A : Selective gold plated
③ Contact alignment	Pin header MAW : Total positions, MBW : 50,60, 64 positions only, MDW : 10 positions only	⑥ Contact pitch	D : Double
	Socket MAW : Total positions, MBW : 50, 60,64 positions only. Equipped with mis-insertion prevention guide	⑦ Product type	DS : Right angle type
			DSA : Straight type
④ Number of contacts	10,14,16,20,26,30,34,40,50,60,64		R : IDC

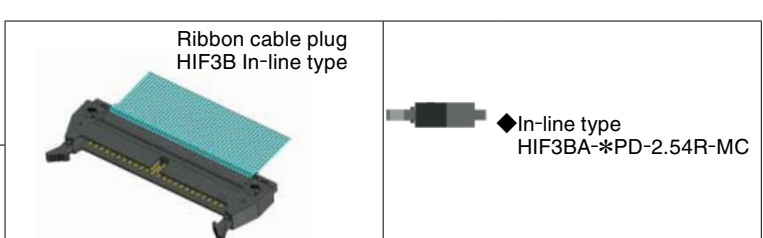
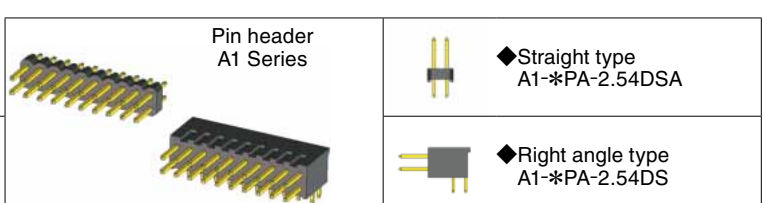
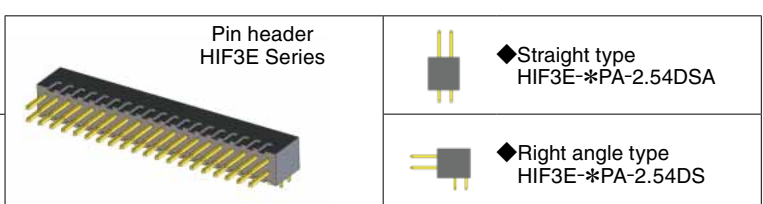
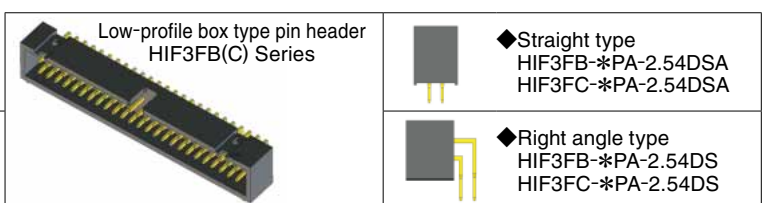
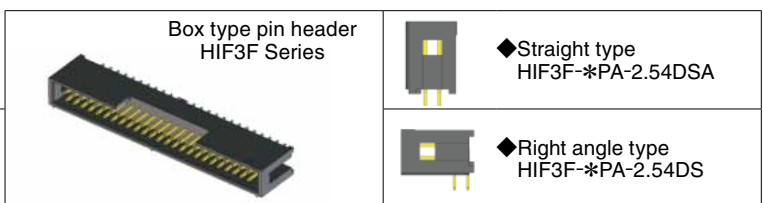
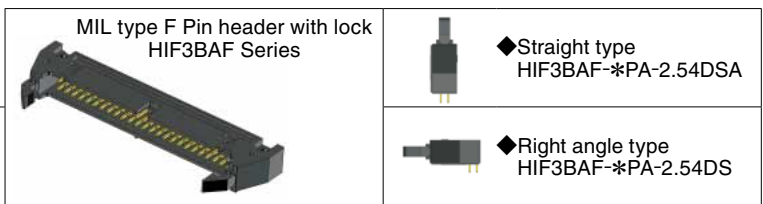
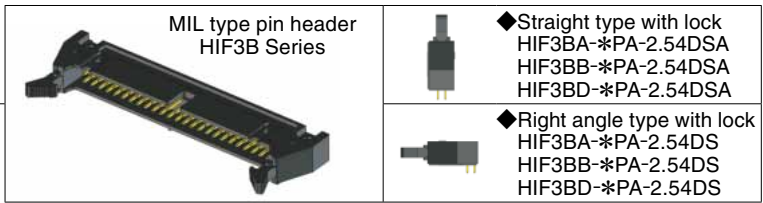
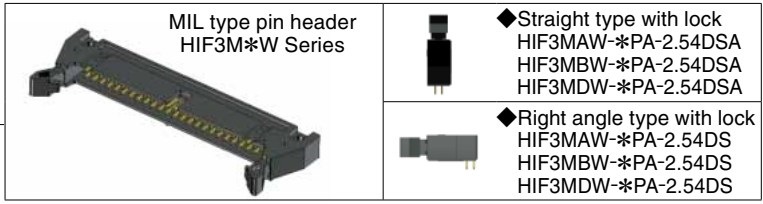
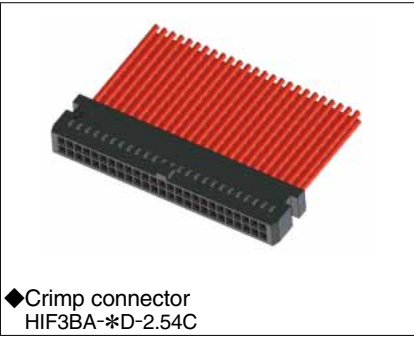
◆HIF3 Series Mating Compatibility Wire-to-Board type

Receptacle socket side

Header side



⚠ HIF3A-60D-2.54R and MIL type pin header can be mated only with HIF3BAE-60PA-2.54DS(A) Allows mating with other different number of positions and box type pin headers of HIF3A Series.



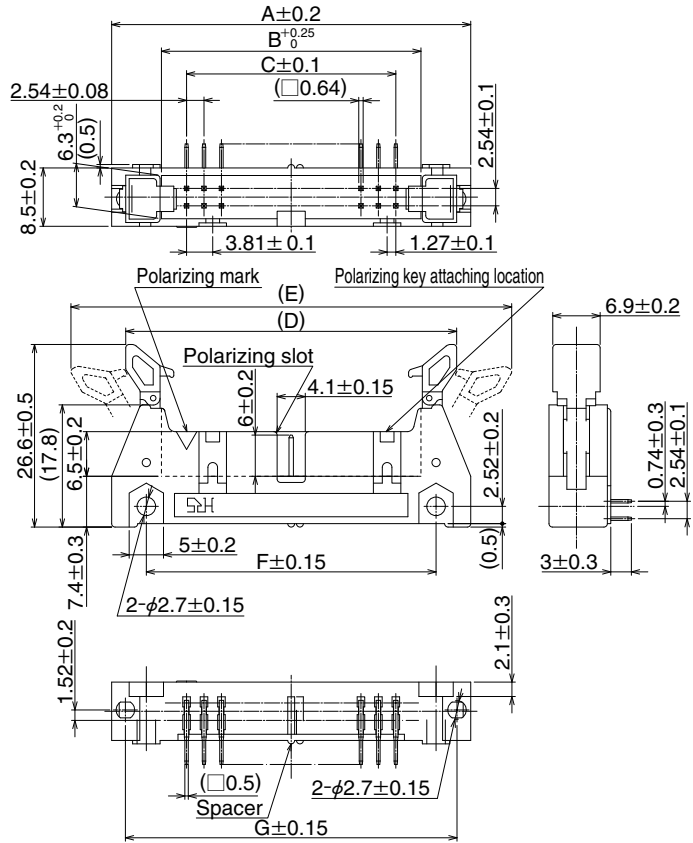
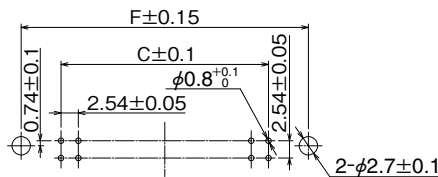
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■4-wall right angle through hole

・HIF3M*W-**PA-2.54DS



◆Recommended PCB Layout



*As the number of polarizing slots and polarizing keys differs for each part, please refer to the table below and the list of polarization properties in HIF3M*W Series on page 7.

*The spacer moves to the right according to the number of positions.

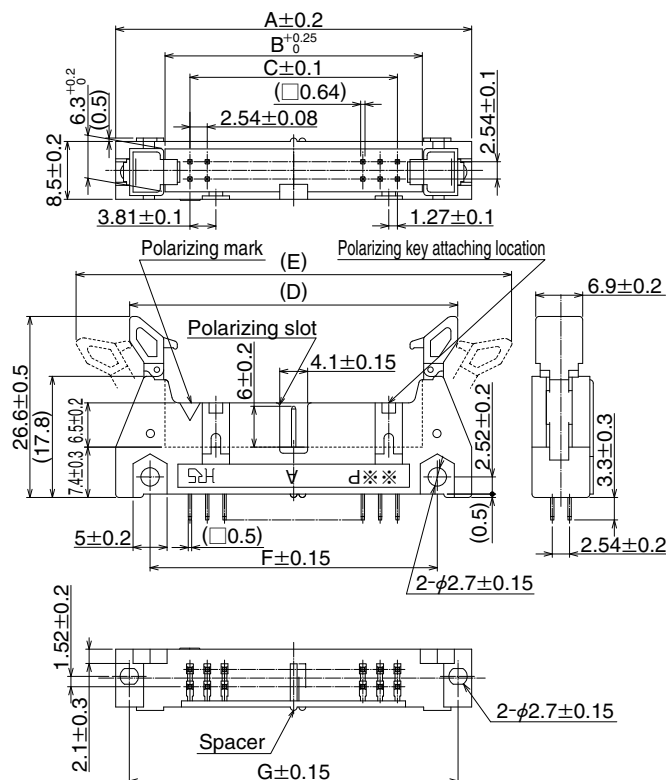
Unit : mm

	Part No.	HRS No.	No. of Contacts	A	B	C	D	E	F	G	Polarizing slot	Polarizing key	RoHS
★	HIF3MAW-10PA-2.54DS(63)	610-3500-6 63	10	32	17.5	10.16	28.14	51.1	21.8	27.9	0	1	YES
	HIF3MDW-10PA-2.54DS(63)	610-3501-9 63										0	
★	HIF3MAW-14PA-2.54DS(63)	610-3502-1 63	14	37.1	22.6	15.24	33.24	56.2	26.9	33		1	
★	HIF3MAW-16PA-2.54DS(63)	610-3503-4 63	16	39.6	25.1	17.78	35.74	58.7	29.5	35.5	1		
★	HIF3MAW-20PA-2.54DS(63)	610-3504-7 63	20	44.7	30.2	22.86	40.84	63.8	34.5	40.6			
★	HIF3MAW-26PA-2.54DS(63)	610-3505-0 63	26	52.3	37.8	30.48	48.44	71.4	42.2	48.3			
★	HIF3MAW-30PA-2.54DS(63)	610-3506-2 63	30	57.4	42.9	35.56	53.54	76.5	47.2	53.3			
★	HIF3MAW-34PA-2.54DS(63)	610-3507-5 63	34	62.5	48	40.64	58.64	81.6	52.3	58.4			
★	HIF3MAW-40PA-2.54DS(63)	610-3508-8 63	40	70.1	55.6	48.26	66.24	89.2	59.9	66			
★	HIF3MAW-50PA-2.54DS(63)	610-3509-0 63	50	82.8	68.3	60.96	78.94	101.9	72.6	78.7	2 ※		
★	HIF3MBW-50PA-2.54DS(63)	610-3510-0 63									1		
★	HIF3MAW-60PA-2.54DS(63)	610-3511-2 63	60	95.5	81	73.66	91.64	114.6	85.3	91.4	2 ※		
★	HIF3MBW-60PA-2.54DS(63)	610-3512-5 63									1		
★	HIF3MAW-64PA-2.54DS(63)	610-3513-8 63	64	100.6	86.1	78.74	96.74	119.7	90.4	96.5	2 ※		
★	HIF3MBW-64PA-2.54DS(63)	610-3514-0 63									1		

*Pitch of polarizing guide is 22.86mm.

★ indicates MIL compliant product.

·HIF3M*W-**PA-2.54DSA



Technical drawing of a mechanical part showing dimensions: 2.54 ± 0.05 , $C \pm 0.1$, 2.54 ± 0.05 , and a hole with diameter $\phi 0.8 \pm 0.1$.

*The spacer moves to the right according to the number of positions.

	Part No.	HRS No.	No. of Contacts	A	B	C	D	E	F	G	Polarizing slot	Polarizing key	RoHS	
★	HIF3MAW-10PA-2.54DSA(63)	610-3600-0 63	10	32	17.5	10.16	28.14	51.1	21.8	27.9	0	1	YES	
	HIF3MDW-10PA-2.54DSA(63)	610-3601-3 63									0			
★	HIF3MAW-14PA-2.54DSA(63)	610-3602-6 63	14	37.1	22.6	15.24	33.24	56.2	26.9	33	1	2		
★	HIF3MAW-16PA-2.54DSA(63)	610-3603-9 63	16	39.6	25.1	17.78	35.74	58.7	29.5	35.5	1			
★	HIF3MAW-20PA-2.54DSA(63)	610-3604-1 63	20	44.7	30.2	22.86	40.84	63.8	34.5	40.6				
★	HIF3MAW-26PA-2.54DSA(63)	610-3505-4 63	26	52.3	37.8	30.48	48.44	71.4	42.2	48.3				
★	HIF3MAW-30PA-2.54DSA(63)	610-3606-7 63	30	57.4	42.9	35.56	53.54	76.5	47.2	53.3				
★	HIF3MAW-34PA-2.54DSA(63)	610-3607-0 63	34	62.5	48	40.64	58.64	81.6	52.3	58.4				
★	HIF3MAW-40PA-2.54DSA(63)	610-3608-2 63	40	70.1	55.6	48.26	66.24	89.2	59.9	66				
★	HIF3MAW-50PA-2.54DSA(63)	610-3609-5 63	50	82.8	68.3	60.96	78.94	101.9	72.6	78.7				2 ※
★	HIF3MBW-50PA-2.54DSA(63)	610-3610-4 63												1
★	HIF3MAW-60PA-2.54DSA(63)	610-3611-7 63	60	95.5	81	73.66	91.64	114.6	85.3	91.4	2 ※			2
★	HIF3MBW-60PA-2.54DSA(63)	610-3612-0 63									1			
★	HIF3MAW-64PA-2.54DSA(63)	610-3613-2 63	64	100.6	86.1	78.74	96.74	119.7	90.4	96.5	2 ※			
★	HIF3MBW-64PA-2.54DSA(63)	610-3614-5 63									1			

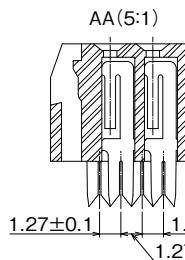
★ indicates MIL compliant product.

■Socket type (IDC, equipped with mis-insertion prevention guide)

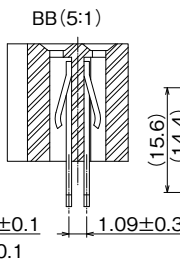
•HIF3M*W-*D-2.54R



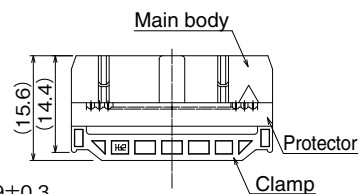
■A-A cross section



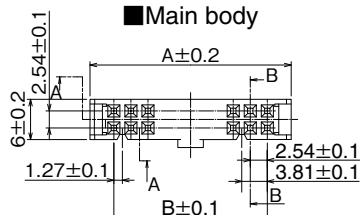
■B-B cross section



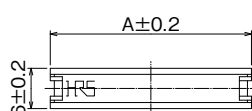
■Mated diagram



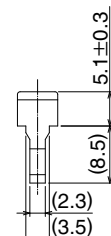
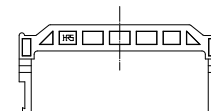
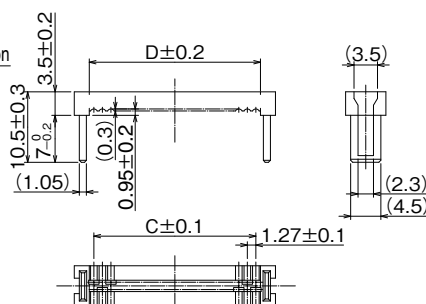
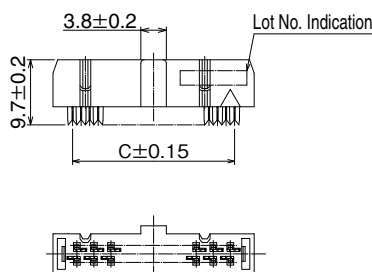
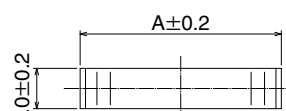
■Main body



■Protector



■Clamp



*As the number of polarizing guides and polarizing keyways differs for each part, please refer to the table below and the list of polarization properties in HIF3M*W Series on page 7.

Unit : mm

	Part No.	HRS No.	No. of Contacts	A	B	C	D	Polarizing guide	Polarizing keyway	RoHS
★	HIF3MAW-10D-2.54R(63)	610-3002-9 63	10	17.27	10.16	11.43	12.8	1	1	YES
★	HIF3MAW-14D-2.54R(63)	610-3003-1 63	14	22.35	15.24	16.51	17.88			
★	HIF3MAW-16D-2.54R(63)	610-3004-4 63	16	24.89	17.78	19.05	20.42		2	
★	HIF3MAW-20D-2.54R(63)	610-2097-0 63	20	29.97	22.86	24.13	25.5			
★	HIF3MAW-26D-2.54R(63)	610-3005-7 63	26	37.59	30.48	31.75	33.12			
★	HIF3MAW-30D-2.54R(63)	610-2098-2 63	30	42.67	35.56	36.83	38.2			
★	HIF3MAW-34D-2.54R(63)	610-2099-5 63	34	47.75	40.64	41.91	43.28			
★	HIF3MAW-40D-2.54R(63)	610-2100-2 63	40	55.37	48.26	49.53	50.9			
★	HIF3MAW-50D-2.54R(63)	610-2101-5 63	50	68.07	60.96	62.23	63.6	2 ※		
★	HIF3MBW-50D-2.54R(63)	610-2114-7 63						1		
★	HIF3MAW-60D-2.54R(63)	610-2102-8 63	60	80.77	73.66	74.93	76.3	2 ※		
★	HIF3MBW-60D-2.54R(63)	610-2115-0 63						1		
★	HIF3MAW-64D-2.54R(63)	610-3006-0 63	64	85.85	78.74	80.01	81.38	2 ※		
★	HIF3MBW-64D-2.54R(63)	610-0013-0 63						1		

*Pitch of polarizing guide is 22.86mm.

★ indicates MIL compliant product.

●Applicable cable

Conductor size (number of cores)	Jacket
28 AWG Flat Cable (7pcs./0.127mm) <UL2651>	0.9±0.1mm

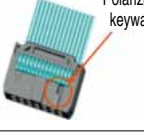
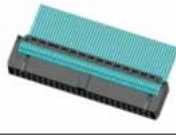
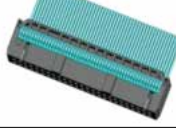
◆Applicable IDC tool

Type	Part No.	HRS No.
IDC Connection	HI-FLEX-HHP502	550-0082-2
Guide plate	HIF3-GPA2	550-0156-7
Pressure block	PRESS BLOCK A-01	550-0133-1

*Common to all No. of Contacts.

*Please refer to p.10 for the description on connection.

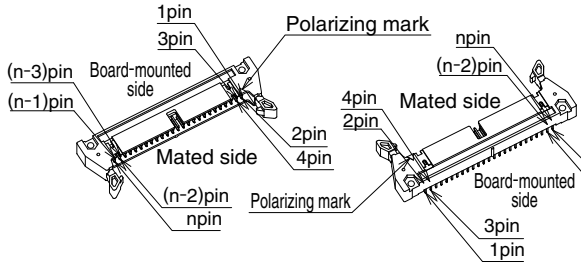
■HIF3M*W Series List of polarization

Socket type				Header type				
Socket side part number	Polarizing guide	Polarizing key	Socket appearance	No. of Contacts	Pin header appearance	Polarizing slot	Polarizing key	Pin header part number
				10		0	1	•HIF3MAW-10PA-2.54DS(A)
•HIF3MAW-10D-2.54R	1	1				1	0	•HIF3MDW-10PA-2.54DS(A)
•HIF3MAW-14D-2.54R	1	1		14		1	1	•HIF3MAW-14PA-2.54DS(A)
•HIF3MAW-16D-2.54R •HIF3MAW-20D-2.54R •HIF3MAW-26D-2.54R •HIF3MAW-30D-2.54R •HIF3MAW-34D-2.54R •HIF3MAW-40D-2.54R	1	2		16 to 40		1	2	•HIF3MAW-16PA-2.54DS(A) •HIF3MAW-20PA-2.54DS(A) •HIF3MAW-26PA-2.54DS(A) •HIF3MAW-30PA-2.54DS(A) •HIF3MAW-34PA-2.54DS(A) •HIF3MAW-40PA-2.54DS(A)
•HIF3MBW-50D-2.54R •HIF3MBW-60D-2.54R •HIF3MBW-64D-2.54R	1	2		50 to 64		1	2	•HIF3MBW-50PA-2.54DS(A) •HIF3MBW-60PA-2.54DS(A) •HIF3MBW-64PA-2.54DS(A)
•HIF3MAW-50D-2.54R •HIF3MAW-60D-2.54R •HIF3MAW-64D-2.54R	2	2				2	2	•HIF3MAW-50PA-2.54DS(A) •HIF3MAW-60PA-2.54DS(A) •HIF3MAW-64PA-2.54DS(A)

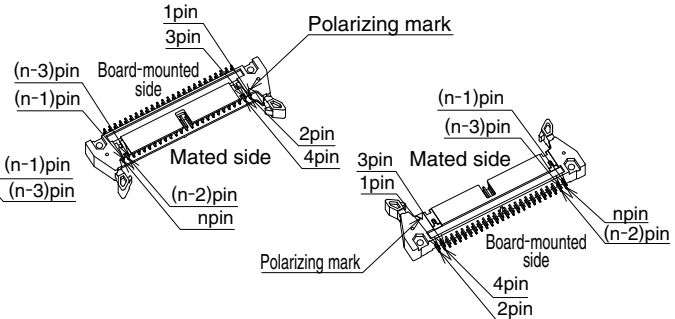
◆Pin configuration correlation diagram

When terminal Nos. are arranged as 1,2,3,4……n beginning from the side of the polarizing mark, contact positions are as shown in the diagram below.

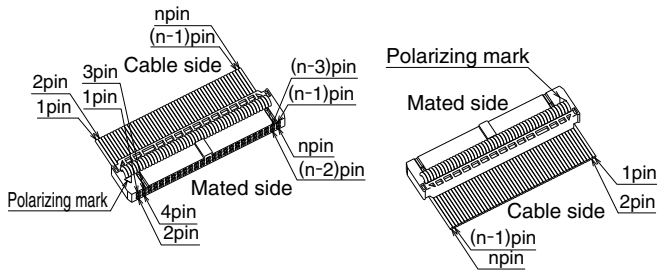
●Right angle dip solder



●Straight dip solder



●Socket type



Polarizing guide/slot : Mating combination

Compatible Mating Combinations

10 pos.

- ◆Socket
- HIF3MAW-10D-2.54R



- ◆Pin header
- HIF3MDW-10PA-2.54DS(A)
- Number of polarizing guides 1 = Number of polarizing slots 1

50 to 64 pos.

- ◆Socket
- HIF3MAW-**D-2.54R



- ◆Pin header
- HIF3MAW-**PA-2.54DS(A)
- Number of polarizing guides 2 = Number of polarizing slots 2

50 to 64 pos.

- ◆Socket
- HIF3MBW-**D-2.54R



- ◆Pin header
- HIF3MBW-**PA-2.54DS(A)
- Number of polarizing guides 1 = Number of polarizing slots 1

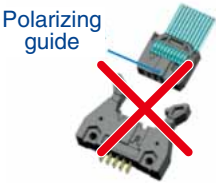
Incompatible Mating Combinations

10 pos.

- ◆Socket
- HIF3MAW-10D-2.54R



- ◆Pin header
- HIF3MAW-10PA-2.54DS(A)
- Number of polarizing guides 1 ≠ Number of polarizing slots 0

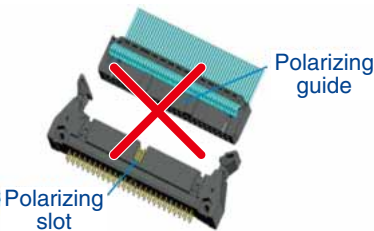


50 to 64 pos.

- ◆Socket
- HIF3MAW-*D-2.54R



- ◆Pin header
- HIF3MBW-*PA-2.54DS(A)
- Number of polarizing guides 2 ≠ Number of polarizing slots 1

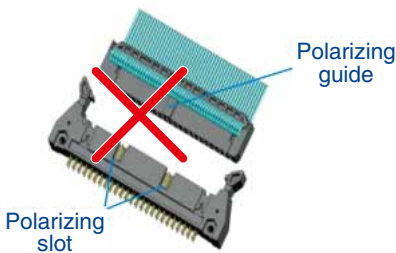


50 to 64 pos.

- ◆Socket
- HIF3MBW-*D-2.54R



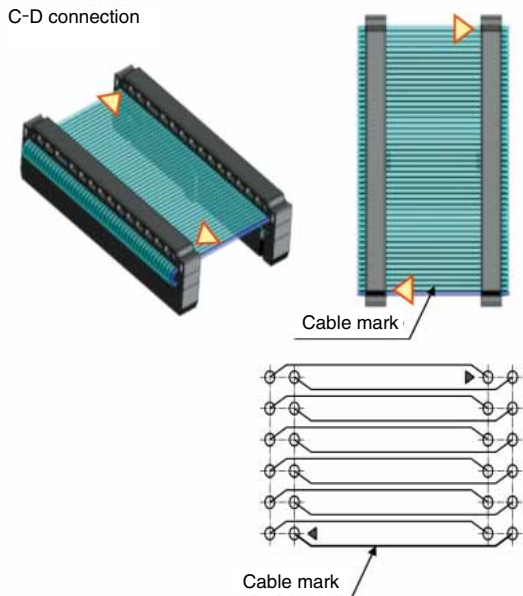
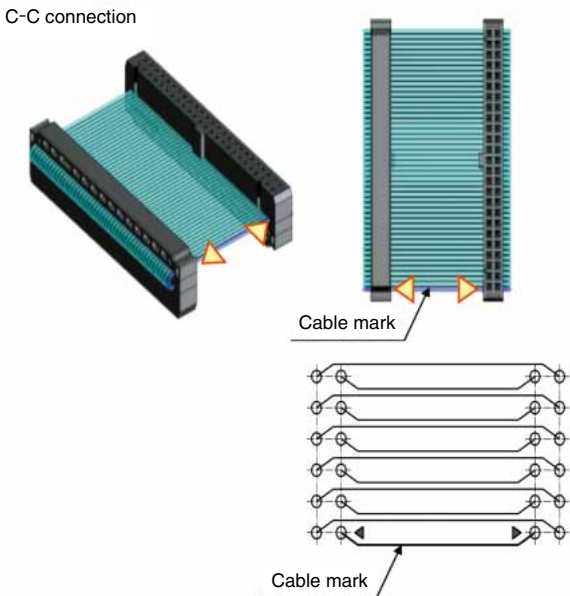
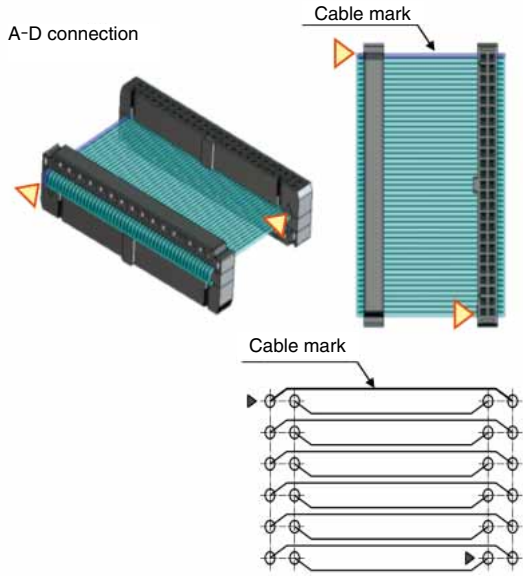
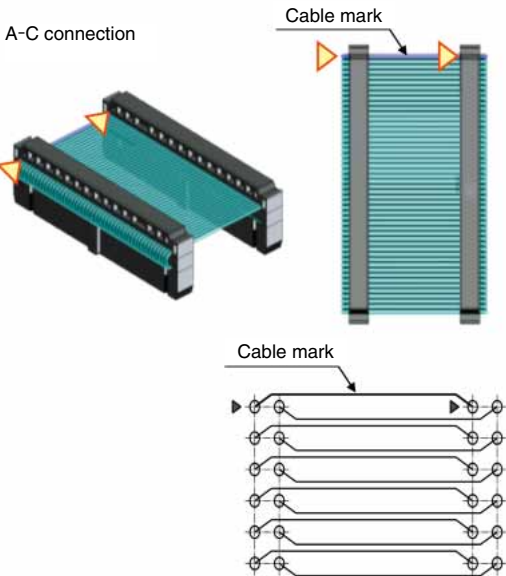
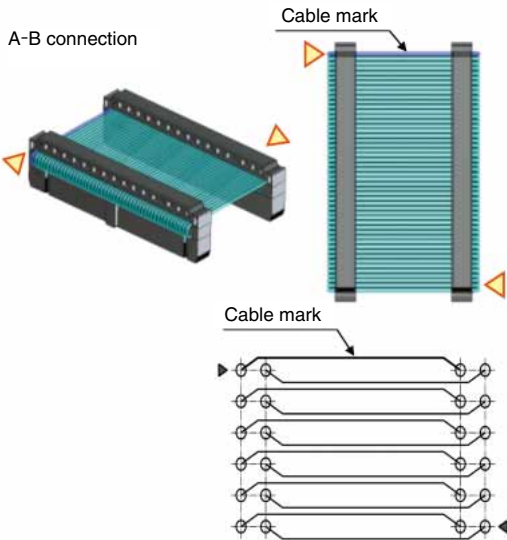
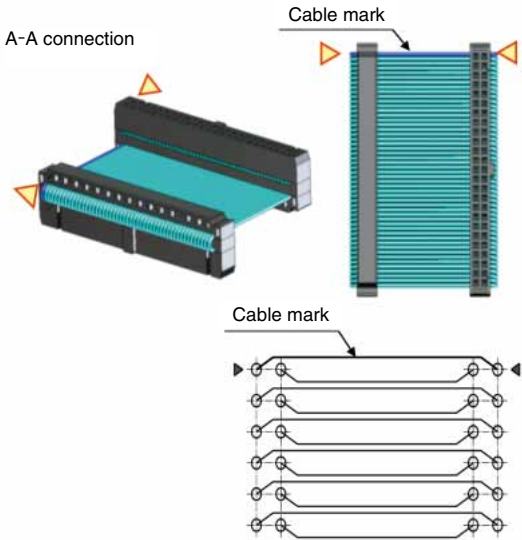
- ◆Pin header
- HIF3MAW-*PA-2.54DS(A)
- Number of polarizing guides 1 ≠ Number of polarizing slots 2



◆HIF3M*W-**D-2.54R Connection circuit diagram

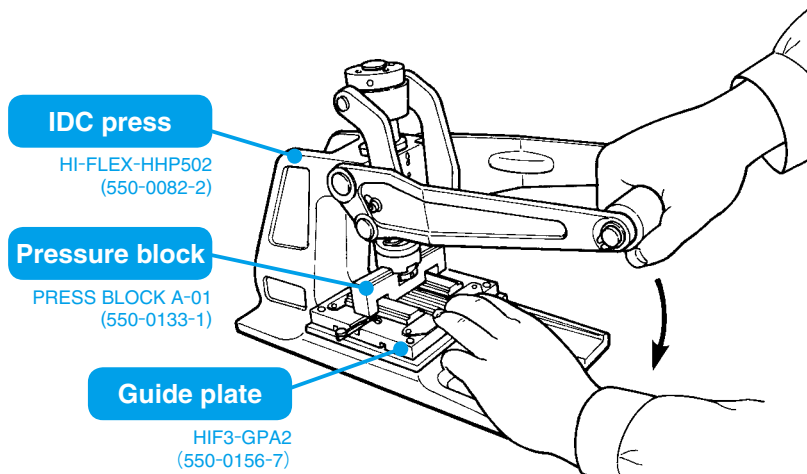
The following is the connection circuit diagram of cable-connected HIF3M*W-**D-2.54R.

▶ ...Polarizing mark position

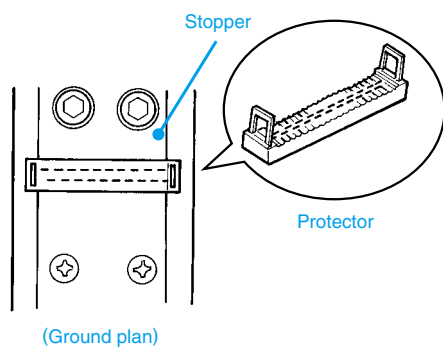


◆ How to assemble the socket side (IDC)

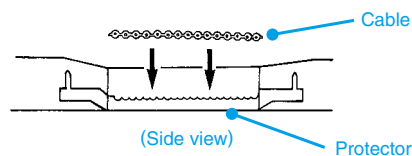
IDC press method : Dedicated tools as shown below are required for connection press of cables.



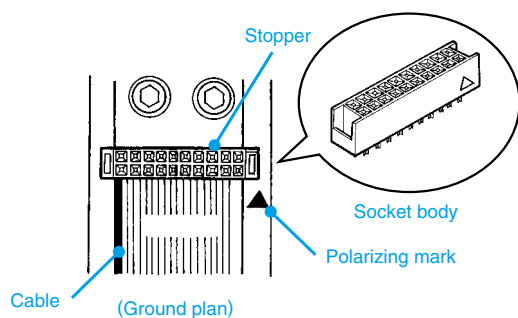
1. Place the protector on the guide plate.



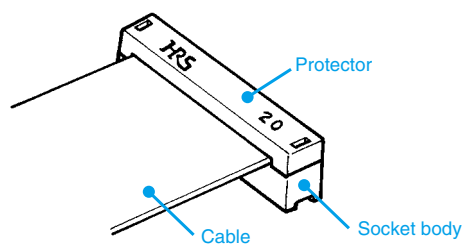
2. Place the cable on the top of the protector.



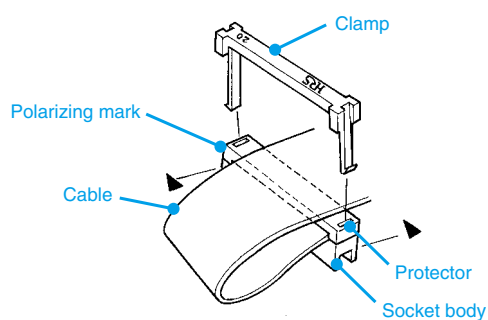
3. Place the socket body on the top of the cable.



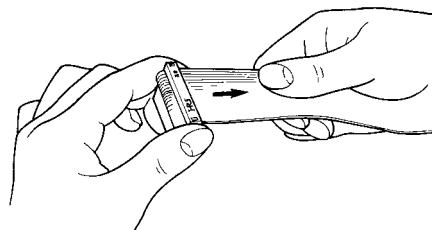
4. Depress the handle to terminate the socket body and the cable.



5. In order to enhance the connection reliability, fold back the cable and press down the clamp.



6. Pull the cable and eliminate deflection.



*For details on cable connection and applicable termination tools, see "HIF Series Ribbon Cable Connection Instruction Manual".
*HIF3M*W Series can be assembled by using the same tools with HIF Series.

MEMO :

Handwriting practice area consisting of 30 horizontal dashed lines.

MEMO :

Handwriting practice area with horizontal dashed lines.

HIROSE ELECTRIC CO.,LTD.
2-6-3,Nakagawa Chuoh,Tsuzuki-Ku,Yokohama-Shi 224-8540,JAPAN
<https://www.hirose.com/>