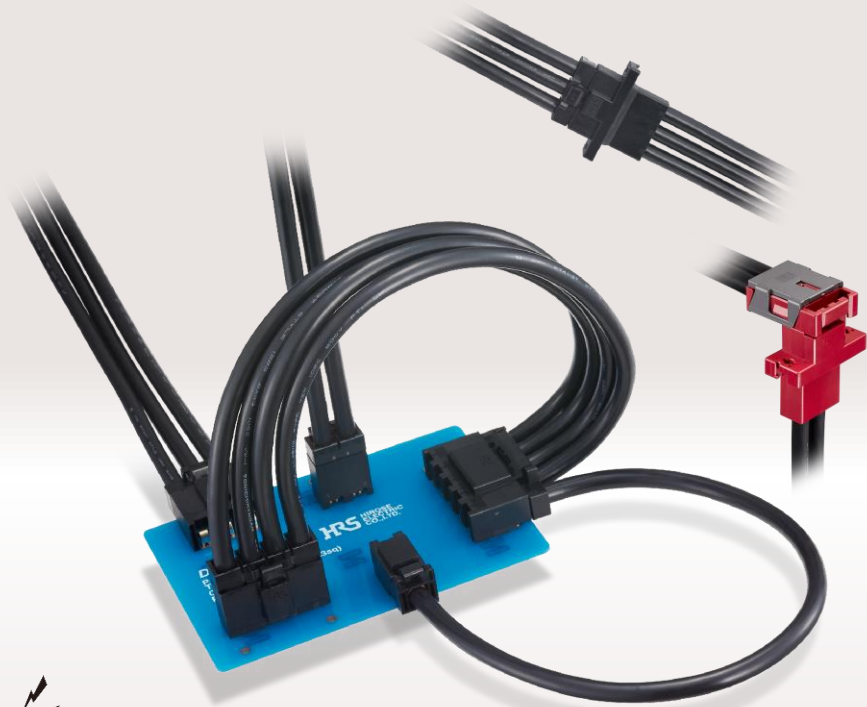


DF60 Series

Compact Wire-to-Board Connector



Features



Power Supply



Positive-Lock



Compact

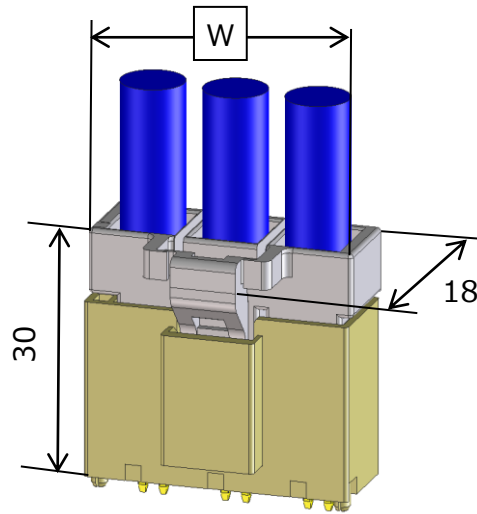
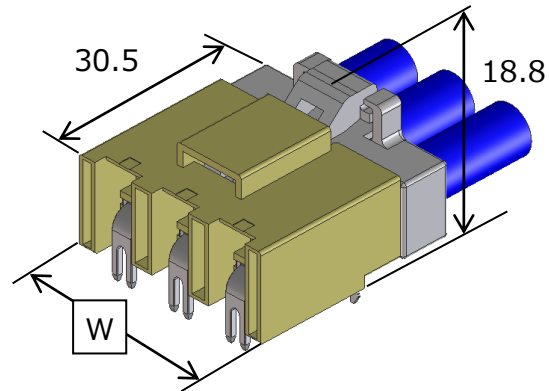
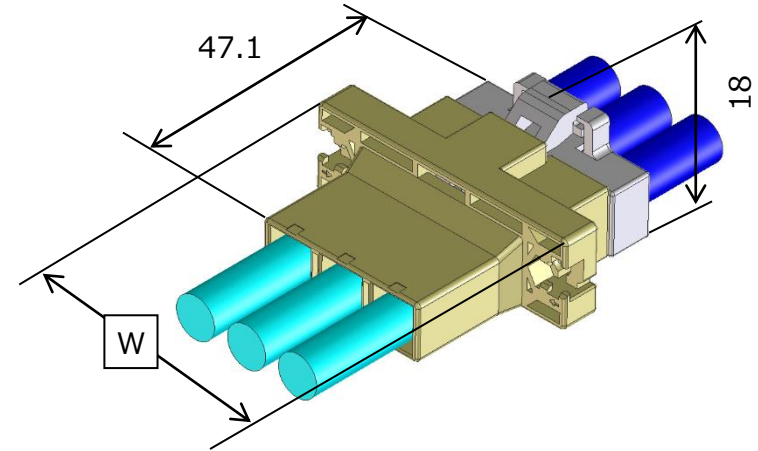
- 1 **Compact 65A*** high current capacity (with 8 AWG wire, 1 or 2pos.)
- 2 **Secure mating with clear tactile click**
- 3 **Highly reliable 5-point contact with independent contact springs**
- 4 **Mating varieties:**
Straight, Right Angle, In-Line, and Right Angle Crimp Socket
- 5 **Finger protection (DF60F/DF60FS) available**
- 6 **Accepts 8 to 12 AWG wires**
- 7 **Keying variations available**
- 8 **Compliant to UL, C-UL and TÜV specifications**

Patented

*Derating Curve, Ambient Temperature of 25°C

Standard

(mm)

Straight Pin HeaderRight Angle Pin HeaderIn-Line Plug with Flange

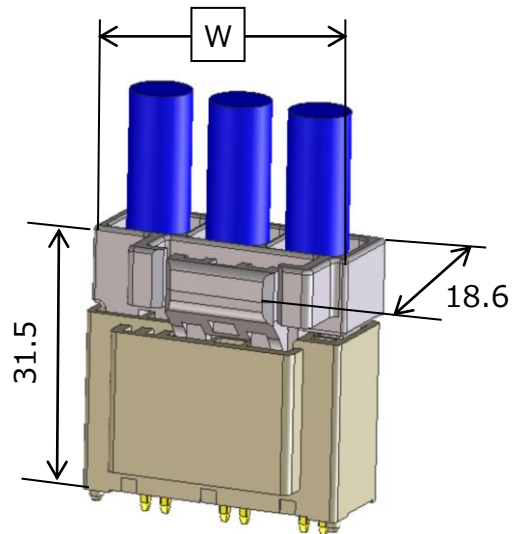
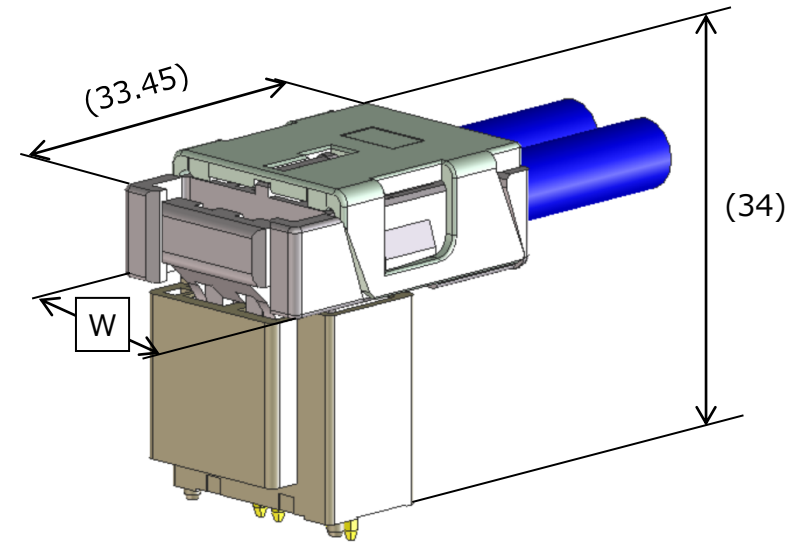
W: width		
No. of Pos.	Straight/Right Angle	In-Line
1	15.8	32.2
2	22.36	39.36
3	32.52	49.52
4	42.68	59.68
5	52.84	69.84
6	63.0	-

- Contact pitch: 10.16mm
- Effective mating length: 3.0mm

- Crimp contact (Reel)
 Female contact for socket: DF60-#SCFA
 Male contact for in-line: DF60-#PCFA
 (For DF60 and DF60F)
 DF60A-#PCFA

Finger Protect Type

(mm)

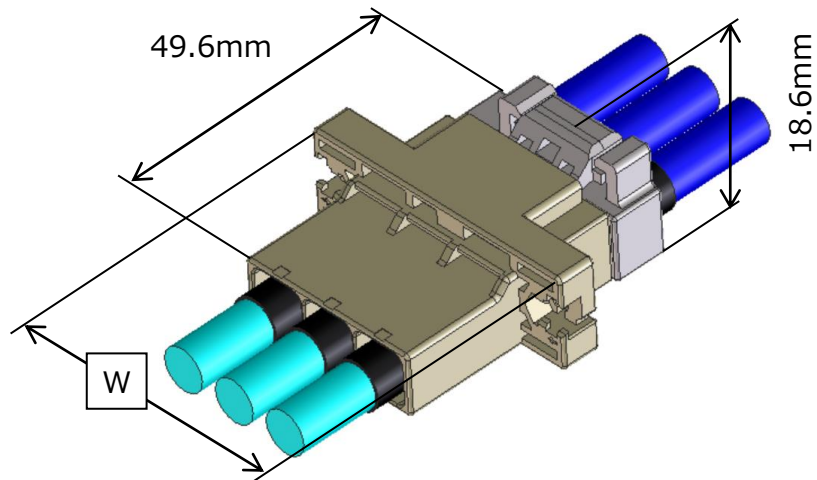
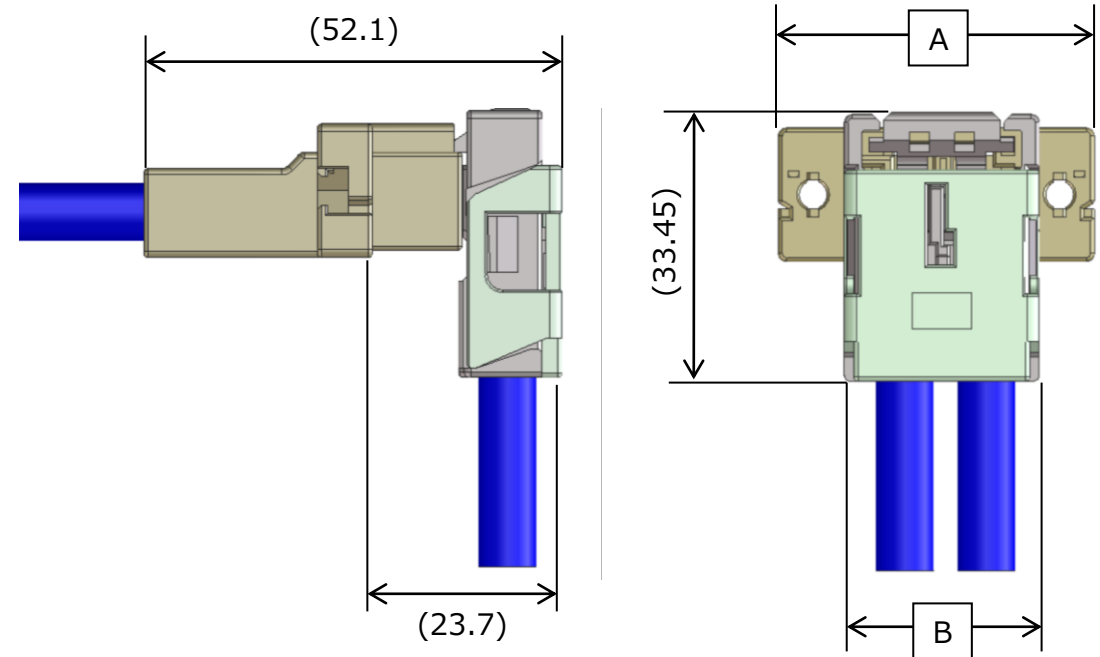
[Straight Pin Header][Right Angle Crimp Socket]

	W: width	
No. of Pos.	Straight	Right Angle
2	22.36	24.4
3	32.52	34.56

- Contact pitch: 10.16mm
- Effective mating length: 2.3mm

Finger Protect Type

(mm)

[In-Line][In-Line (Right Angle Crimp Socket)]

	W: width	A: width	B: width
No. of Pos.	In-Line	In-Line (Right Angle Crimp Socket)	
2	39.36	39.56	24.4
3	49.52	49.72	34.56

- Contact pitch: 10.16mm
- Effective mating length: 2.3mm

- Crimp contact (Reel)
Female contact for socket: DF60-#SCFA
Male contact for in-line: DF60-#PCFA
(For DF60 and DF60F)

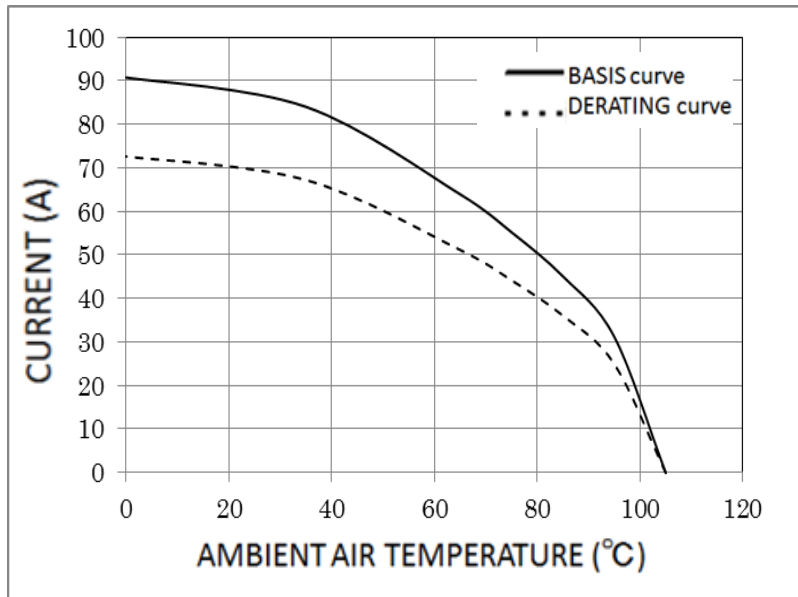
High Current Capacity

Rated Current (UL Standard)

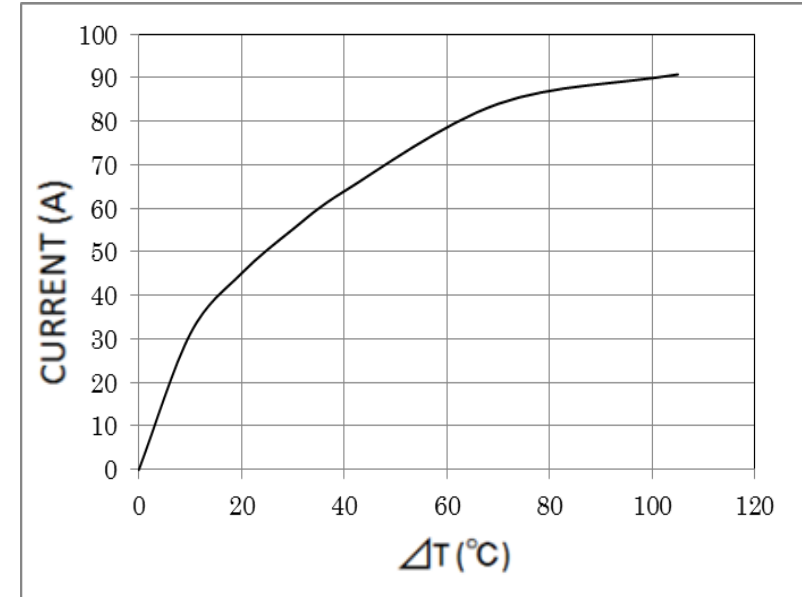
Number of pos.	1 & 2pos.	3 to 6pos.
8 AWG	65A	55A

【Reference Data】 2pos., 8 AWG

[Derating Curve(Typical)]



[Temperature Rising Curve](Typical)]

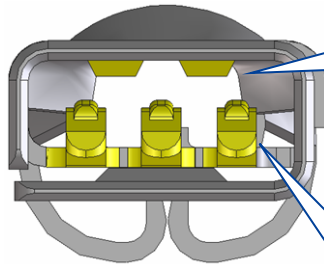


Small size and high current capacity

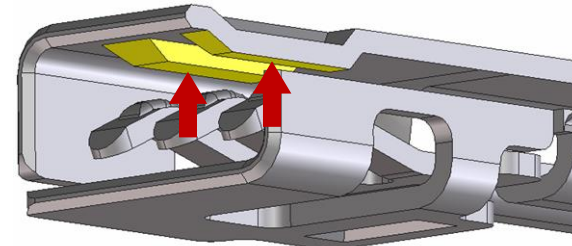
5-Point Contact

The three lower contacts have independent springs and individually deflect while being mated.

Crimp Contact

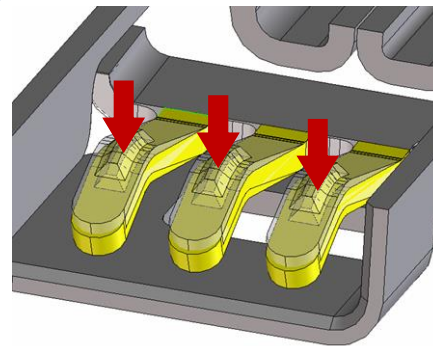


Upper Contact

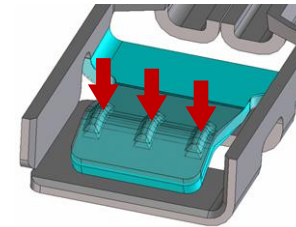


Independent Spring Contact

The separated three contacts individually follow the male contacts.



Lower Contact



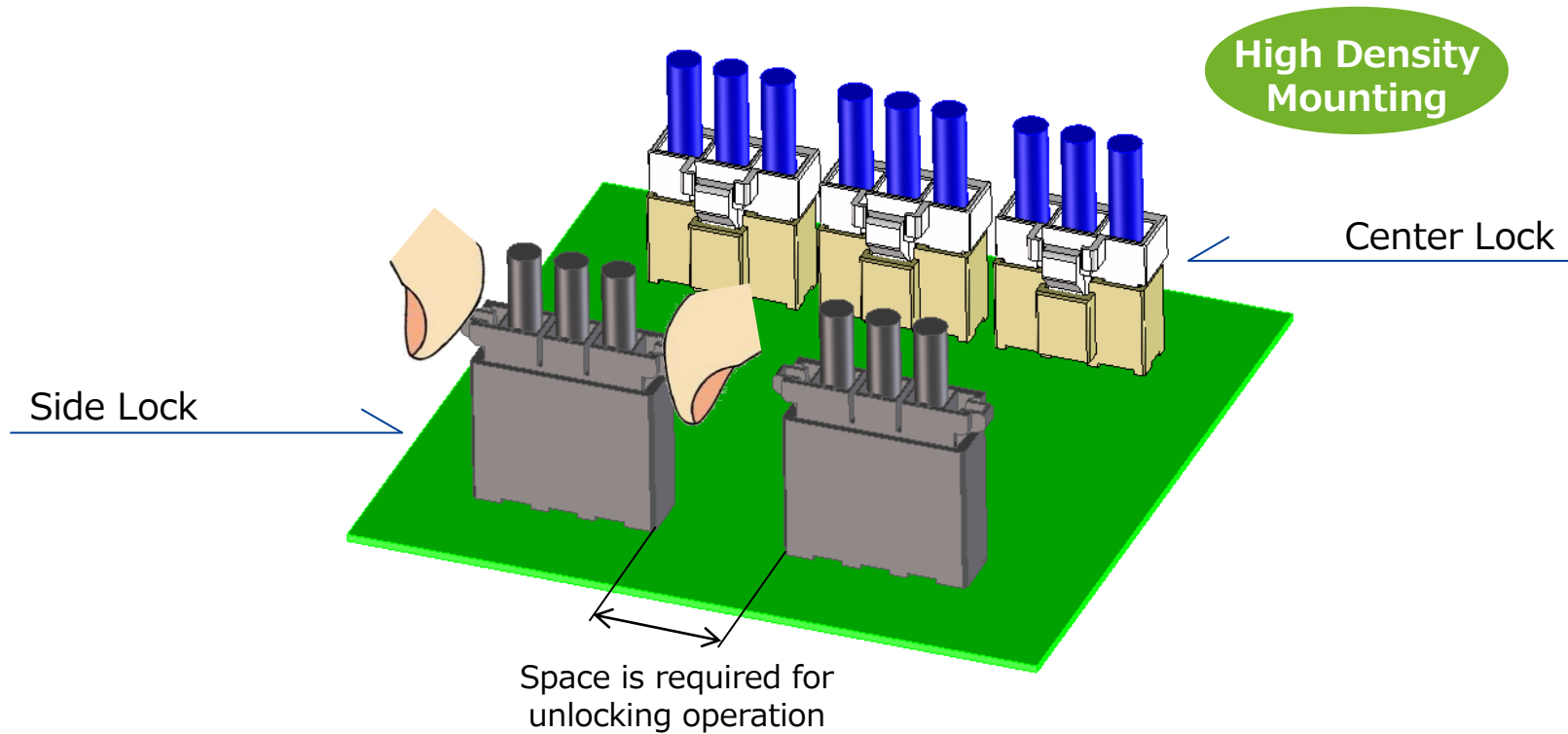
Conventional Type

Since the three contacts are on the same surface it is possible one of the contacts will not touch.

Secure Connection & Strong against Vibration

Center Lock Realizes High Density Mounting

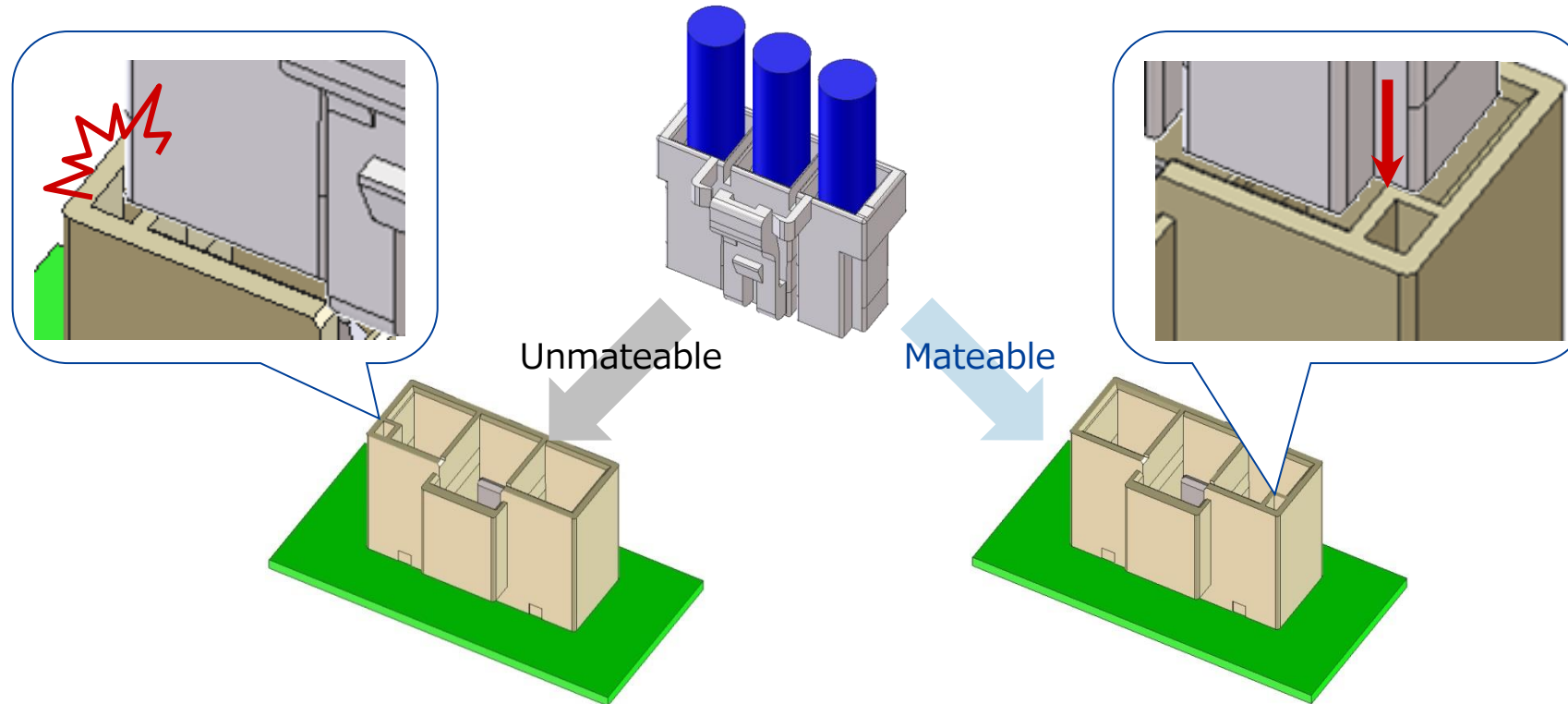
Center lock saves space for fingers to unlock the connector which is necessary for side lock, contributing to high density mounting.



Contributes to space-saving on the PCB.

Keying Variations Available

Wide key variations prevent incorrect mating.



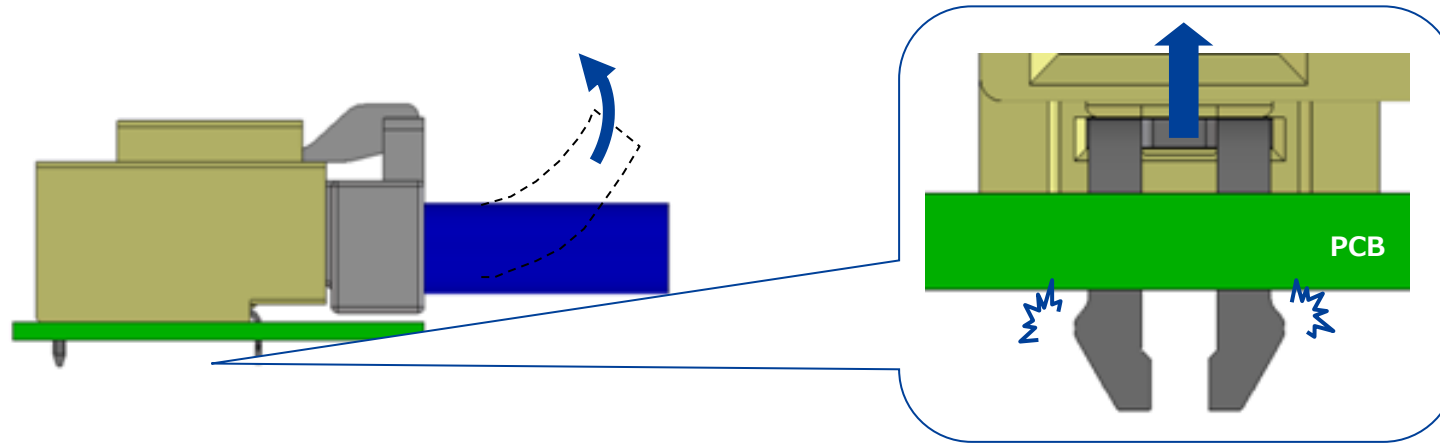
Contact a Hirose sales reps for housing color variations.

Prevents incorrect mating when using multiple connectors.

Features on Right Angle Header

Peel-Off Prevention

Hook on snap-in solder tab endures upward cable pulling force.

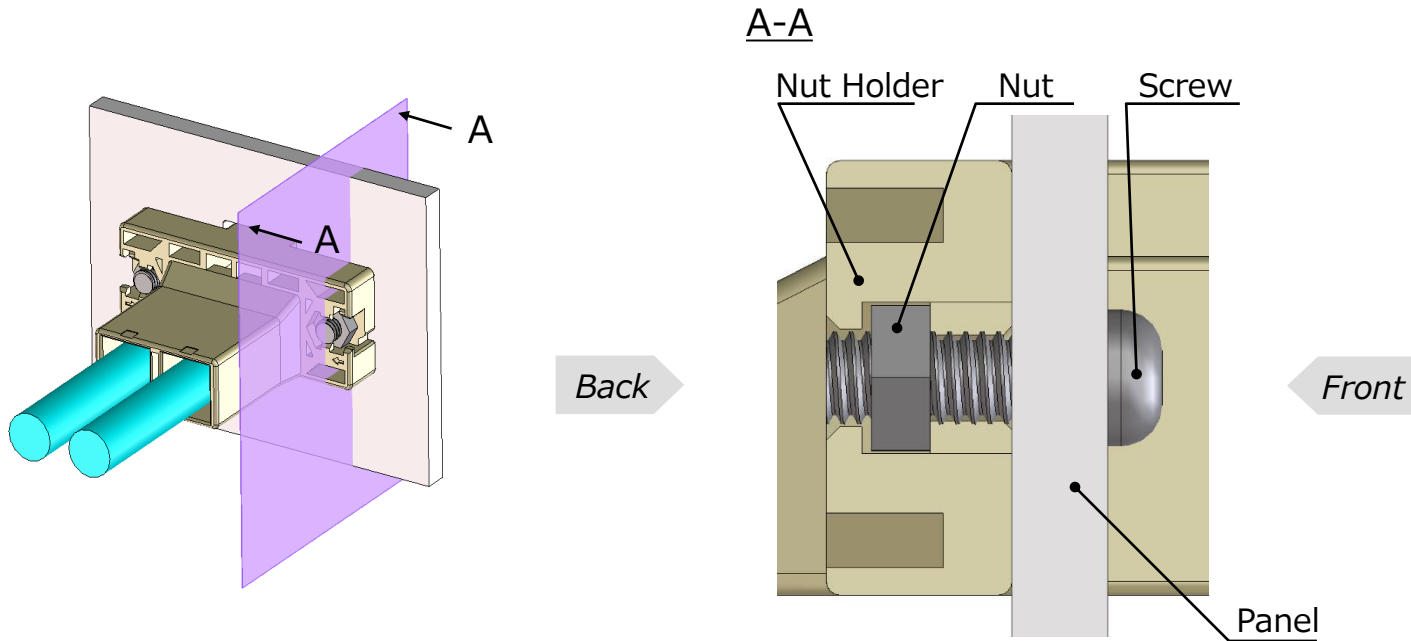


Robust design

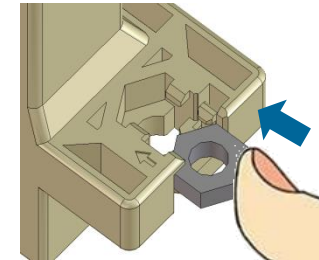
Nut Securing Design (In-Line Type)

Nut Securing

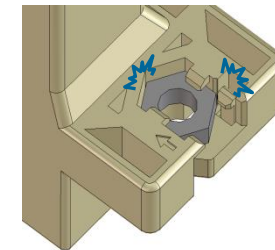
Nut can be pre-installed into the housing before mounting to the panel.



Nut Installation



Insert nut from side, following direction of arrow.

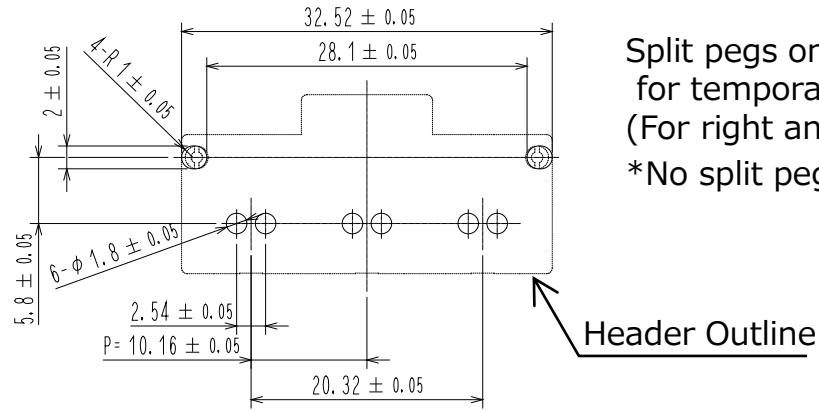


Press down until it clicks.

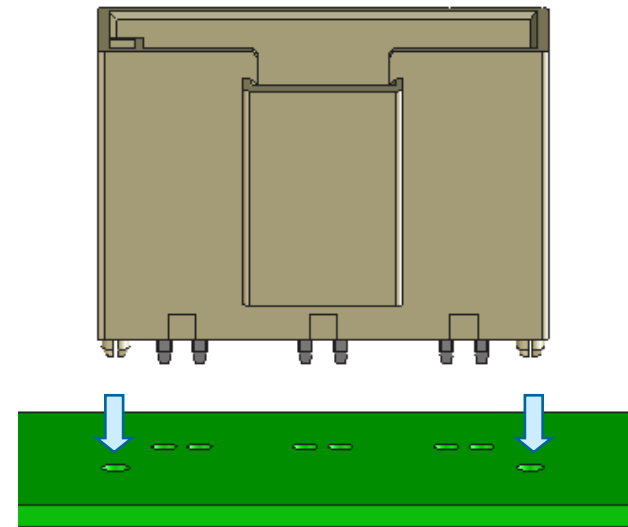
This original feature prevents the nut from falling off during panel mounting.

Recommended PCB Layout

Straight Header (Example: 3pos.)

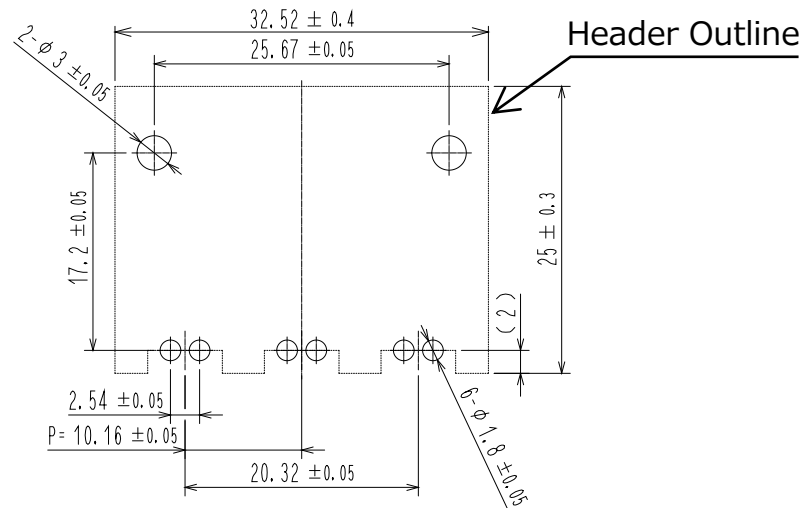


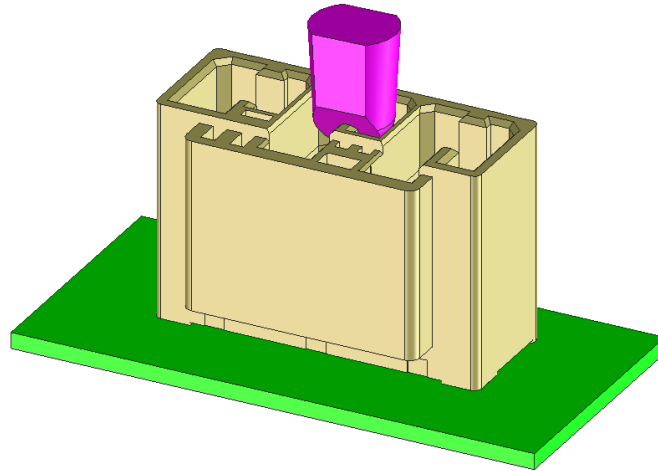
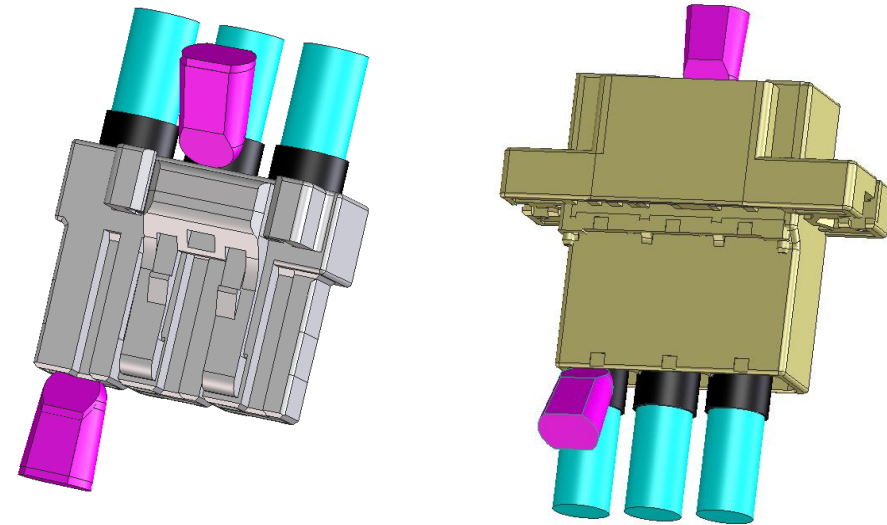
Split pegs on header are pushed into the through holes for temporary hold before soldering.
(For right angle type, split retention tabs work for temporary holding.)
*No split pegs with DF60F



(Recommended PCB Thickness: 1.6mm)

Right Angle Header (Example: 3pos.)

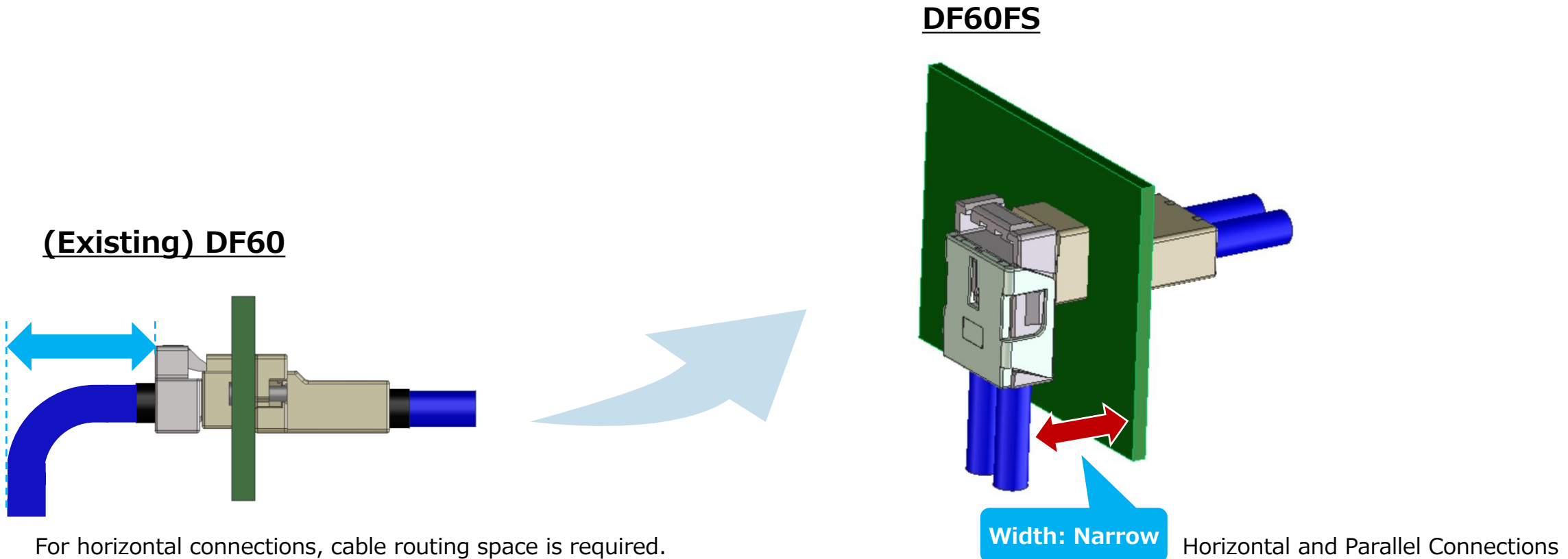


HeaderCrimp Socket/In-Line Crimp Plug

- Clears tests by IEC standard test finger due to **ribs inside the housing**.
- Finger protection for all cable size by **covering all the barrels with heat shrink tube**.
- The outer dimension is same as the standard type.

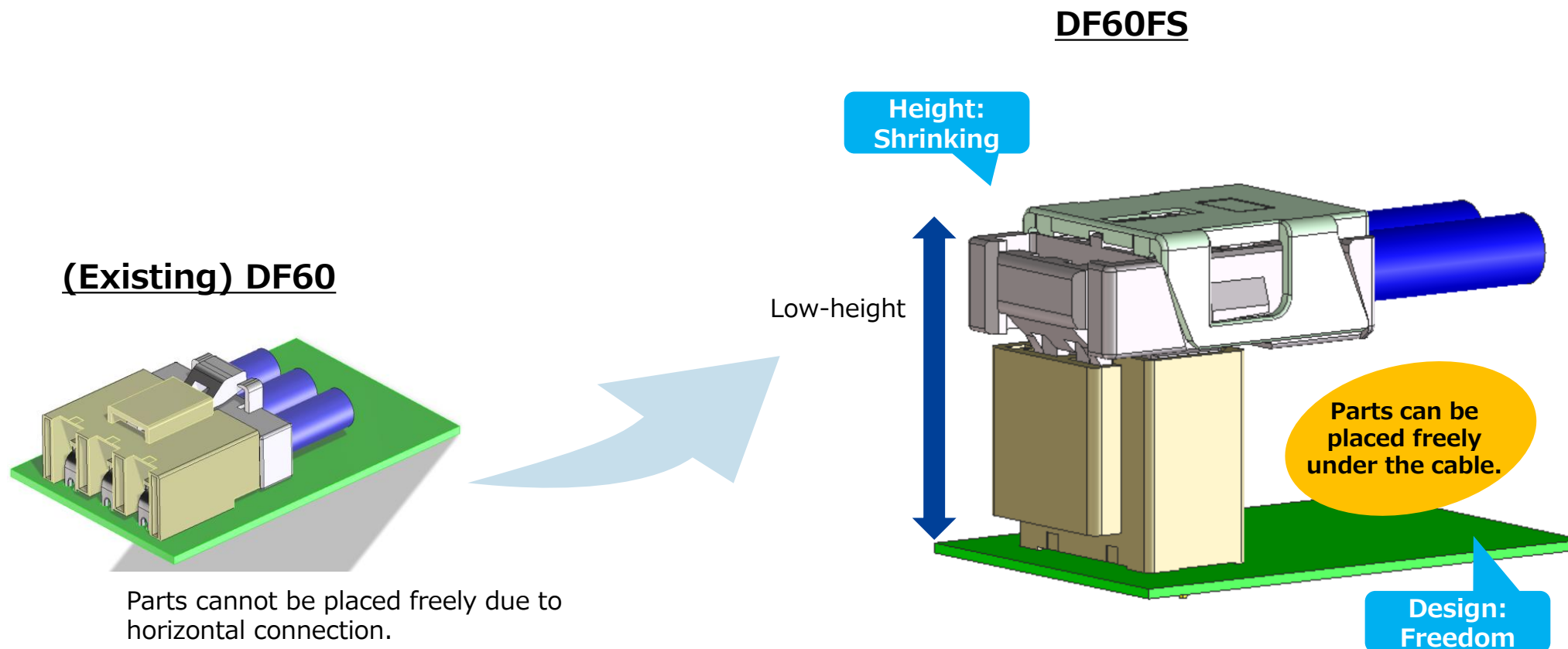
Checked by IEC61984/UL1977 (IP2X) test finger to certify the safety.

A variation of horizontal and parallel connections.



Increased Design Freedom or Space-Efficient Systems

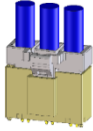
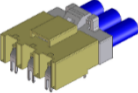
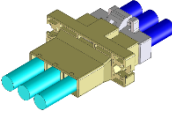
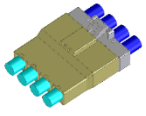
No Extra Space Needed for Cable Routing, Ensures Secure Part Mounting



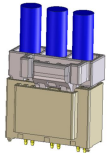
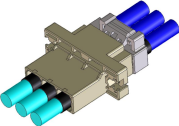
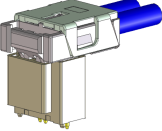
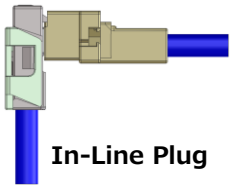
Increased Design Freedom or Space-Efficient Systems

Variations-1

Standard Type

				1	2	3	4	5	6
DF60	 Straight Pin Header	Standard Key (Black)	Header : DF60-#P-10.16DSA(27) Crimp Socket: DF60A-#S-10.16C	✓	✓	✓	✓	✓	✓
		Standard Key (Red)	Header : DF60-#P-10.16DSA(45) Crimp Socket: DF60A-#S-10.16C(15)		✓	✓			
		Key Variation (Gray)	Header : DF60R-#P-10.16DSA(27) Crimp Socket: DF60AR-#S-10.16C			✓			
	 Right Angle Pin Header	Standard Key (Black)	Header : DF60-#P-10.16DS(27) Crimp Socket: DF60A-#S-10.16C	✓	✓	✓	✓	✓	✓
		Standard Key (Red)	Header : DF60-#P-10.16DS(45) Crimp Socket: DF60A-#S-10.16C(15)		✓				
		Key Variation (Gray)	Header : DF60E-#P-10.16DS(27) Crimp Socket: DF60AR-#S-10.16C		✓	✓			
	 In-Line Plug	Standard Key (Black)	Header : DF60-#EP-10.16C Crimp Socket: DF60A-#S-10.16C	✓	✓	✓	✓	✓	
		Standard Key (Red)	Header : DF60-#EP-10.16C(15) Crimp Socket: DF60A-#S-10.16C(15)	✓	✓	✓			
		Key Variation (Gray)	Header : DF60R-#EP-10.16C Crimp Socket: DF60AR-#S-10.16C		✓	✓			
	 In-Line Plug (without flange)	Standard Key (Black)	Header : DF60A-#EP-10.16C Crimp Socket: DF60AR-#S-10.16C					✓	

Finger Protection

				1	2	3	4	5	6
DF60F	 Straight Pin Header	Standard Key (Black)	Header : DF60F-#P-10.16DSA(50) Crimp Socket: DF60F-#S-10.16C		✓	✓			
		Key Variation (Red)	Header : DF60FR-#P-10.16DSA(50) Crimp Socket: DF60FR-#S-10.16C		✓	✓			
	 In-Line Plug	Standard Key (Black)	Header : DF60F-#EP-10.16C Crimp Socket: DF60F-#S-10.16C		✓	✓			
		Key Variation (Red)	Header : DF60FR-#EP-10.16C Crimp Socket: DF60FR-#S-10.16C		✓	✓			
DF60FS	 Straight Pin Header	Standard Key (Black)	Header : DF60F-#P-10.16DSA(50) Crimp Socket: DF60FS-#S-10.16C Cover Case : DF60FS-#S-10.16C-CV		✓	✓			
		Key Variation (Red)	Header : DF60FR-#P-10.16DSA(50) Crimp Socket: DF60FSR-#S-10.16C Cover Case : DF60FS-#S-10.16C-CV		✓	✓			
	 In-Line Plug	Standard Key (Black)	Header : DF60F-#EP-10.16C Crimp Socket: DF60FS-#S-10.16C Cover Case : DF60FS-#S-10.16C-CV		✓	✓			
		Key Variation (Red)	Header : DF60FR-#EP-10.16C Crimp Socket: DF60FSR-#S-10.16C Cover Case : DF60FS-#S-10.16C-CV		✓	✓			

Specifications

Material and Finish

COMPONENT		MATERIAL	FINISH, REMARKS
Header	Insulator	PBT (Glass-reinforced)	UL94V-0/Black
	Contact	High Conductivity Copper Alloy	Gold Plating
	Retention Tab	Brass	Tin Plating
Crimp Socket		PBT (Glass-reinforced)	UL94V-0/Black
Cover Case		PBT (Glass-reinforced)	UL94V-0/Black
In-Line Plug		PBT (Glass-reinforced)	UL94V-0/Gray
Crimping Contact		High Conductivity Copper Alloy	Gold Plating

Performance Characteristics

	No. of pos.	8 AWG		10 AWG		12 AWG	
		C-UL/ TÜV standard	UL standard	C-UL/ TÜV standard	UL standard	C-UL/ TÜV standard	UL standard
Rated Current [C-UL/ TÜV standard]*1 Temperature rise below 30°C [UL standard] (Reference)*2 Ambient temperature of 25°C	1	50A	65A	40A	55A	31A	45A
	2	45A	65A	35A	55A	28A	40A
	3	42A	55A	34A	50A	28A	40A
	4	42A	55A	33A	45A	27A	35A
	5	42A	55A	33A	45A	27A	35A
	6	42A	55A	33A	45A	27A	35A
Rated Voltage	1,000V AC/DC (600V for UL approval)						
Operating Temperature	-55 to +105°C						
Contact Resistance	2mΩ Max. (6V DC), 1A						
Withstanding Voltage	3,000V AC for 1 min.						
Insulation Resistance	1,000MΩ Min. (1,000V DC)						
Mating Durability	30 times						
Applicable Cable	Wire conductor size: 8-12 AWG (equivalent 8-3.3sq.), Jacket dia.: 4-7.8mm						

*1 The rated current is the current with a temperature rise of 30°C or less. [Standard value]

*2 Indicates a current certified by UL at an ambient temperature of 25°C. [Reference value]

