



# AGV Connector Line Up

Hirose Electric, as a world leader in the connectivity industry, has been developed a broad innovative electronic connectors since 1937. Please visit our Web site for details of the listed products as well as other related product lines.

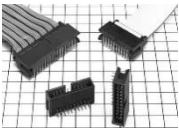


A

## Camera Module & Internal Connection

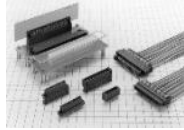
### Board to Board

#### HIF3F



Pitch: 2.54mm  
MIL standard

#### FX2



Pitch: 1.27mm  
Height:  
12 to 66mm

#### FX18



Pitch: 0.8mm  
Height:  
10 to 45mm  
High-speed transmission (10Gbps)

#### FX8C



Pitch: 0.6mm  
Height:  
3 to 16mm

#### FX10



Pitch: 0.5mm  
Height:  
4 to 13mm  
High-speed transmission (15Gbps)

#### FX20



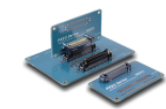
Pitch: 0.5mm  
Height:  
15 to 30mm  
Floating type

#### FX22



Pitch: 0.5mm  
Height: 4.2mm  
Floating type

#### FX23/FX23L



Pitch: 0.5mm  
Height:  
8 to 30mm  
Floating Type  
High-speed transmission (8Gbps)

#### DF12



Pitch: 0.5mm  
Height:  
3.0 to 5.0mm  
Depth: 4.6mm

#### DF17



Pitch: 0.5mm  
Height:  
4.0 to 8.0mm  
Depth: 5.7mm

#### DF40



Pitch: 0.4mm  
Height:  
1.5 to 4.0mm  
Depth: 3.38mm

#### DF40GL



Pitch : 0.4mm  
Height : 1.5mm  
Depth : 3.38mm  
Shielding and positive lock

#### DF37



Pitch: 0.4mm  
Height:  
0.98/1.5mm  
Depth: 2.98mm

#### KN13



Pitch: 0.4mm  
Height: 0.8mm  
Depth: 2.5mm

#### BM20



Pitch: 0.4mm  
Height: 0.6/0.8mm  
Depth: 2.3mm

### Board to FPC

#### FH63

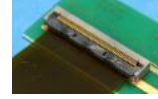
One action lock



Pitch: 0.5mm  
Height: 2.8mm  
Depth: 5.15mm

#### FH28

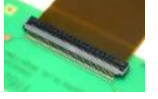
Front flip



Pitch: 0.5mm  
Height: 2.55mm  
Depth: 6.4mm

#### FH52

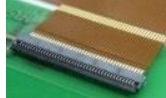
Front flip



Pitch: 0.5mm  
Height: 2.0mm  
Depth: 7.2mm

#### FH34SRJ

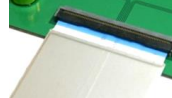
Back flip



Pitch: 0.5mm  
Height: 1.0mm  
Depth: 3.2mm

#### FH41

Back flip



Pitch: 0.5mm  
Height: 2.5mm  
Depth: 6.2mm

#### FH40

Vertical



Pitch: 0.5mm  
Height: 5.8mm  
Depth: 3.05mm

### Board to Wire

#### DF13

Wide variety,  
DIP/SMT



Pitch: 1.25mm  
Rated current:  
1A Max.

#### DF14

Low profile



Pitch: 1.25mm  
Height: 1.6mm  
Rated current:  
1A Max.

#### DF65

Small,  
Low profile



Pitch: 1.7mm  
Height: 1.8mm  
Rated current:  
4A Max.

#### DF57H

Swing lock,  
Low profile



Pitch: 1.2mm  
Height: 1.4mm  
Rated current:  
2.5A Max.

#### DF50

Positive lock



Pitch: 1.0mm  
Rated current:  
1A Max.

#### DF52

Small & Robust



Pitch: 0.8mm  
Rated current:  
2.5A Max.

#### DF58

ViSe lock,  
Low profile



Pitch: 1.2mm  
Height: 1.0mm  
Rated current:  
3A Max.

B

## Antenna/Microphone Module Connection

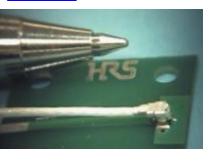
### Miniature RF

#### U.FL



Mated height :  
1.9mm (2.0mm Max.)  
Applicable Cable :  
ø0.81/1.31/1.32mm

#### W.FL



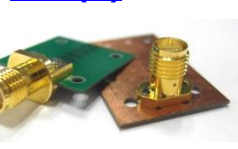
Mated height:  
1.4mm (1.55mm Max.)  
Applicable Cable:  
ø0.81/1.0mm

#### MMCX

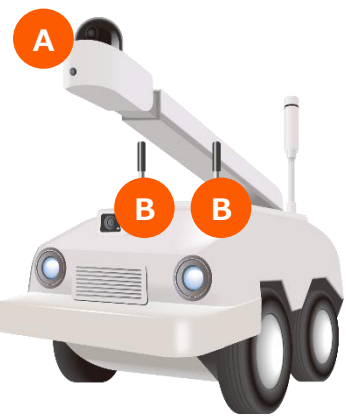


Small size  
coaxial connector  
Push on type  
Applicable Cable:  
ø1.13/1.32/1.37/1.48mm

#### HRM(G)



SMA coaxial connector  
Screw mount type  
up to 28Ghz



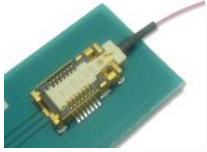
C

## In-line Connection

### Optical

#### BF4M

Optical active connector



Supporting up to 6Gbps

#### DF62

Slim In-line

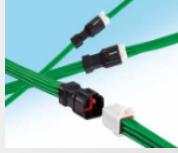


Rated Current:  
4A Max.

### In-line

#### DF62W

Water resistant  
(IP67)



Rated Current:  
3A Max.

#### DF63W

Water resistant  
(IP67)



Rated Current:  
14A Max.

#### LF

Water resistant (IP68)  
Shielded



Rated Current:  
10A Max.

#### HR30

Water resistant (IP68)  
Push-Pull Lock



Rated Current:  
5A Max.

#### HR10A

Push-Pull lock



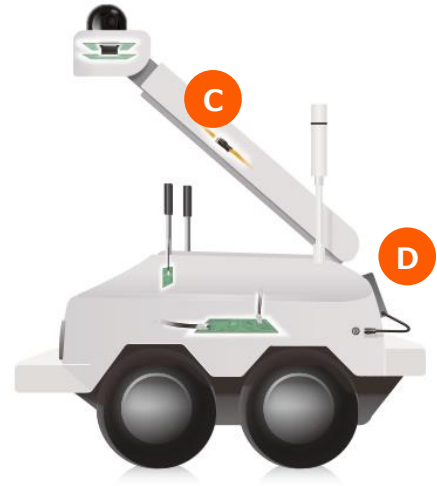
Rated Current:  
2A Max.

#### HR25A

Push-Pull lock



Rated Current:  
1A Max.



D

## Battery Application/Interface

### Board to Board

#### FX30B

Floating structure  
17A Max.



Pitch: 3.81mm

### Board to Wire

#### DF60

Power supply  
45A Max.



Pitch: 10.16mm

#### DF22

Power supply  
30A Max.



Pitch: 7.92mm

#### DF63

Power supply  
15A Max.



Pitch: 3.96mm

#### DF33C

Power supply  
5A Max.



Pitch: 3.3mm

### I/O

#### CX90B1

USB Type C



Transmission Speed :  
10Gbps  
On-board, Robust

#### IX

Next Generation  
Ethernet Connector



Transmission Speed:  
10Gbps  
Small, Robust

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