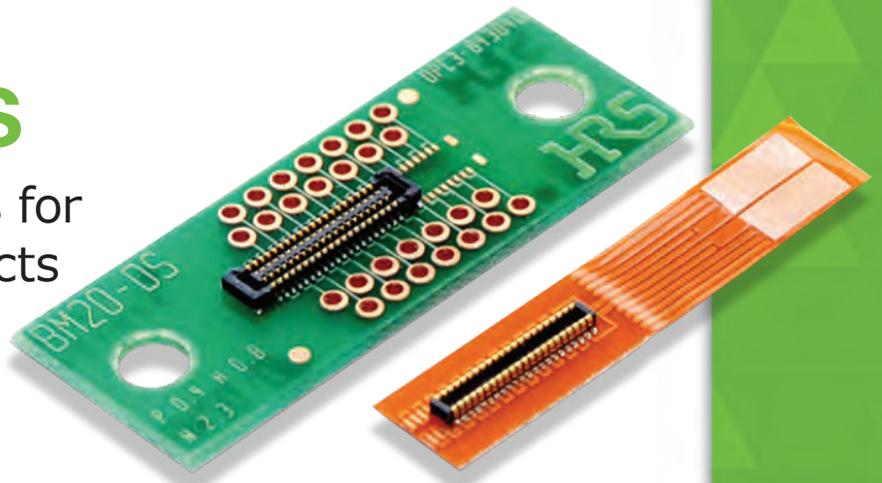




Medical Applications

For Interconnect Solutions for
Demanding Medical Products



HRS HIROSE
ELECTRIC
U.S.A.

CONNECTING THE FUTURE



A WORLD LEADER IN INTERCONNECT TECHNOLOGY

Hirose provides innovative, cutting-edge solutions for your interconnect requirements. We specialize in the design, development & manufacturing of high-performance interconnect solutions supporting the automotive, consumer, medical, and industrial markets. With over 80 years experience, Hirose has established itself as a growing technology leader.

Positioned on the forefront of interconnect technology, Hirose works closely with its customers to develop innovations in miniaturization, high-speed data transmission, signal integrity & robust mechanical design.



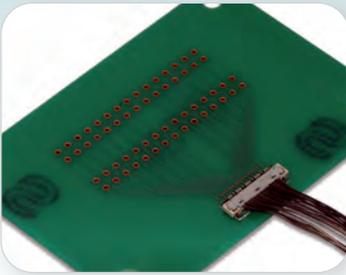
GLOBAL INNOVATIONS

Hirose is a growing \$1.2 billion company, with approximately 4,500 employees worldwide. Top-tier engineers design high-quality, precision connectors. Customer support is provided through all stages of development.



APPLICATIONS

Your products demand quality, and Hirose connectors provide the manufacturing precision, durability, and design intelligence that allows you to increase efficiency during installation, decrease costs, and improve your overall operations.



DF36 Series

- Oper. Temp. -35°C to +85°C
- 42-46 AWG
- 0.25A max rated current
- 30V AC/DC
- Contact positions: 15, 20, 25, 30, 40, 45, 50

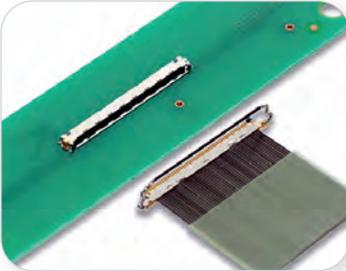
Enhanced shielding and ground connections, Top entry mating, Halogen-free (IEC61249-2-21) DF36A: Shielded type



LF Series

- 7, 10, 13 shell size
- 10A max rated current
- 125V AC/175V DC
- Contact positions: 3,4,6,11,12,20

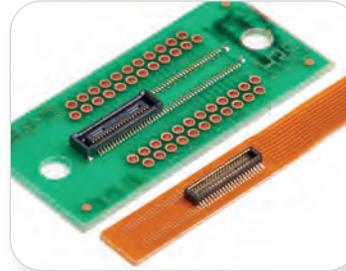
IP68 waterproof, EMI Shielded, Bayonet lock



DF81 Series

- Oper. Temp. -35C to 85C
- 34-46 AWG
- 0.3A max rated current
- 100V AC/DC
- Contact positions: 30, 40, 50

High Speed transmission 5.4 Gbps, Supports eDP™ Embedded DisplayPort™ Ver 1.3, MIPI (D-PHY), Halogen-free (IEC61249-2-21)



DF40 Series

- Oper. Temp. -35°C to +85°C
- 0.3A max rated current
- 30V AC
- 30 Durability (mating cycles)
- 1.5, 2.0, 2.5, 3.0, 3.5, 4.0 Height
- Contact positions: 10-100

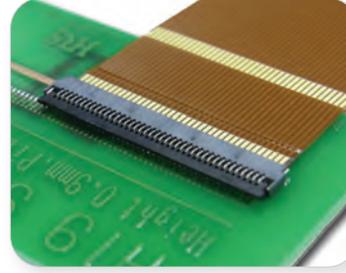
High contact reliability, Positive mated click, High Speed performance for USB2.0, USB3.0, MIPI, SATA, PCIe



DF62 Series

- Pitch: 2.2mm
- 22 - 30 AWG
- 4A max rated current
- 250V AC/DC
- Contact positions: 2, 3, 4, 5, 6, 7, 13, 24

With a slim & smooth profile, this in-line series can be used in tight spaces. Features include high reliability contacts, Connector Position Assurance & a protected latch variation.



FH34SRJ Series

- Pitch: 0.5mm
- 0.5A max rated current
- 50V AC/DC
- Contact positions: 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 22, 24, 26, 30, 34, 40, 50

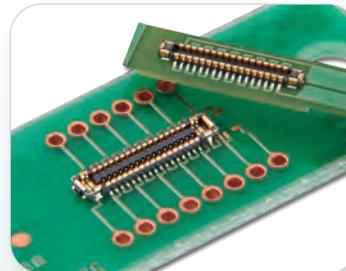
0.5mm Pitch, 1.0mm above the board Top and Top/Bottom Contact, Back-Flip Actuator Flexible Printed Circuit & Flexible Flat Cable ZIF Connectors



DF60 Series

- Pitch: 10.16mm
- 8-12 AWG
- 65A max (with AWG 8)
- 1000V AC/ DC
- Contact positions: 1, 2, 3, 4, 5, 6

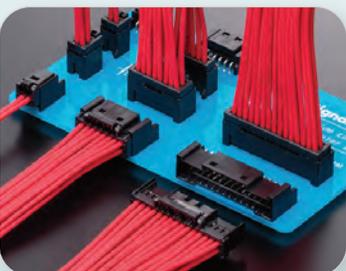
Positive center lock, Polarization key, 5-point contact, Extended operation temperature: -55°C to +105°C



BM28 Series

- Pitch: 0.35mm
- 0.6mm Height
- 5A max rated current for power, 0.3A max rated current for signal
- 30V AC/DC
- Contact positions: 6, 10, 16, 18, 20, 24, 30, 34, 36, 40, 44, 46, 50, 56, 58, 60

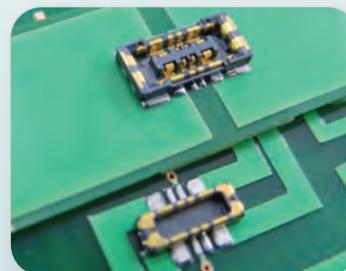
Hybrid connector (power/signal), Supports USB 3.1 gen. 2 (10 Gbps transmission), 2-point contact structure



DF51/DF51K Series

- Pitch: 2mm
- 22-30 AWG
- 2A max rated current
- 250V AC/DC
- Contact positions: 2-6 (single row) 4-30 (double row)

SignalBee: 2mm Pitch, Positive Lock, Wire-to-Board Connector (UL, C-UL recognized)



BM25 Series

- Pitch: 0.4mm
- 0.7mm Height
- 10A (power 4 pin), 0.3A (signal) max rated current
- 30V AC/DC

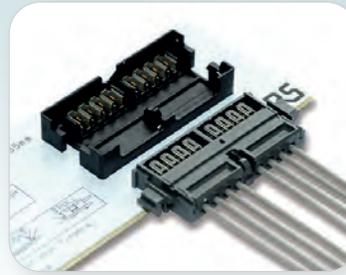
Hybrid connector (power/signal), Robust design



FH52 Series

- Oper. Temp. -40°C to +105°C
- 2.0mm Height
- 0.5A max rated current
- 50V AC/DC
- 20 Durability (mating cycles)
- Contact positions: 6,8,10,11, 12,15,18,20,22,24,25,26,28, 30,32,40,42,45,50,60

Long metal fittings type, Robust design, PCB patterning space underneath, Bottom contact, Halogen-free (IEC61249-2-21)



MRF18 Series

- Non-Magnetic coaxial connector
- Characteristic impedance 50Ω GHz
- Oper. Temp. -40°C to +125°C
- V.S.W.R. 1.3 Max. (DC to 1GHz)
- V.S.W.R. 1.4 Max. (1 to 2GHz)
- Contact positions: 8
- High lock strength & cable pull resistance

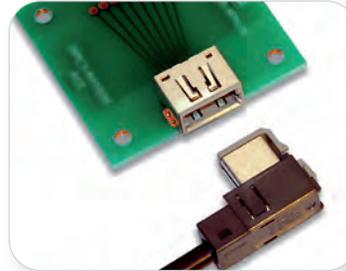
Small size, Light weight, Vertical Mating, Non-Magnetic 8-Channel Coaxial Connectors



ix Industrial Series

- 1.5A max rated current (fully loaded)
- 50V AC/60V DC
- Operation temperature: -40°C to + 85°C
- Contact positions: 10
- IEC PAS 61075-3-124

Reduces installation space by 75% compared to conventional RJ45 modular solutions, enables high design flexibility. Cat.6A high-speed Ethernet for 1/10Gbit/s data transmission



GT17 Series

- 24 - 28 AWG
- Contact positions: 4
- Up to 1 Gbps transmission
- Key variations available

Shielded connectors for USB, LVDS, GVIIF transmission. High Speed transmission, Ideal for Automotive.



HR30 Series

- 5A for 3 pos / 2A for others
- 100V AC/140V DC for 3, 6pos. 30V AC/42V DC for 10, 12pos.
- Shell size (6, 7, 8mm)
- Contact positions: 3, 6, 10, 12

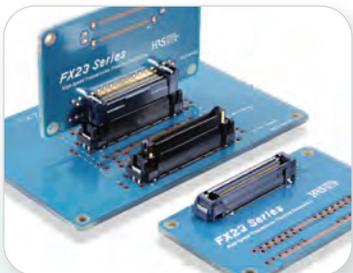
IP68 waterproof, small size, mating guide keys, push pull lock



FX11 Series

- 0.3A max rated current
- Pitch: 0.5mm
- 50V AC/DC
- 2.0, 2.5, 3.0 Height
- Contact positions: 68,72,80,92,100,116,140pos. 60, 80, 100, 120pos. (Shielded type)

10 Gbps+ High Speed, Shielded type is also available



FX23 Series

- Pitch: 0.5mm
- 0.5A (signal), 3A (power) max rated current
- 50V AC/DC (signal)/ 200V AC/DC (power)
- Contact positions: 20/40/60/80/100/120 for signal + 4 for power source
- Stacking height (mm) 15, 20, 25, 30

SMT, Floating structure stacking and vertical versions, 8+Gbps High Speed transmission



BF4M Series

- Pitch: 0.5mm
- Oper. Temp. -10°C to +60°C
- Optical transmissions achieved by simplified electrical connections
- Highly flexible optical fibers
- Low power consumption

Supports 0.05 to 6.25Gbps, can be used in medical, measuring equipment, FA systems, etc.



H.FL/S Series

- Non-magnetic coaxial
- Characteristic impedance 50Ω GHz
- V.S.W.R. 1.3 Max. (DC to 2GHz)
- Oper. Temp. -40°C to +90°C
- Contact Plating: Silver

DC to 3GHz 3.0mm Mated Height Micro Coaxial Connectors



ER8 Series

- Pitch: 0.8mm
- 0.5A max rated current
- 100V AC/DC
- Contact positions: 10, 20, 30, 40, 50, 60, 70, 80, 100, 120
- Stacking height (mm) 7, 9, 10, 12

Compatible with Samtec Edge Rate®, High Speed Transmission (10+Gbps)

HIROSE USA, MEDICAL CONNECTORS, QUICK REFERENCE SHEET

Series	Type	Contacts (Pins)	Pitch (mm)	Temp Range (°C)	Current (A/pin)	Voltage (V AC)	Speed (Gbps)	Termination	Features
BF4M	Optical to B	14	-	-10 to 60	-	-	6.25	SMT	Optical transmission achieved by simplified electrical connection, high speed over long distance with no EMI noise
BM25	B to FPC	4signal/2power	0.4	-40 to 85	10 (power) 0.3 (signal)	30	10	SMT	Hybrid with both signal and power contacts, high speed
BM28	B to B, B to FPC	6, 10, 16, 18, 20, 24, 30, 34, 36, 40, 44, 46, 50, 56, 58, 60	0.35	-40 to 85	5 (power) 0.3 (signal)	30	10	SMT	Hybrid with both signal and power contacts, high speed
DF36	Micro-Coaxial	15, 20, 25, 30, 40, 45, 50	0.4	-35 to 85	0.25	30	-	SMT	Enhanced shielding, reliable lock, top entry mating, halogen-free
DF40	B to B	10, 12, 20, 24, 30, 34, 40, 44, 48, 50, 60, 70, 80, 90, 100	0.4	-35 to 85	0.3	30	10	SMT	High density mounting, large self-alignment range, shielded high speed
DF51	W to B	2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30	2	-55 to 105	2	UL/CUL standard	-	crimp, THR	Secure side locking design, mis-insertion prevention, pottable up to 3mm
DF51K	W to B	2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30	2	-55 to 105	2	30	-	crimp, THR	Flexible center locking design, mis-insertion prevention, pottable up to 3mm
DF60	W to W, W to B	1, 2, 3, 4, 5, 6	10.16	-55 to 105	50	1,000	-	crimp, THR	High current capacity, 5-point contact structure, mis-insertion prevention
DF62	W to W, W to B	2, 3, 4, 5, 6, 7, 13, 24	2.2	-35 to 105	4	250	-	crimp, THR	Secure lock mechanism, robust contact structure, smooth and slim profile for tight spaces
DF81	B to Micro-Coaxial	30, 40, 50	0.4	-35 to 85	0.3	100	5.4	solder, SMT	Enhanced shielding, positive lock, halogen-free
ER8	B to B	10, 20, 30, 40, 50, 60, 70, 80, 100, 120	0.8	-55 to 85	0.5	100	10+	SMT	Large self alignment range, mis-insertion prevention, high speed
FH34SRJ	FPC	4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 22, 24, 26, 30, 34, 40, 50	0.5	-55 to 85	0.5	50	-	SMT	Low profile, back-flip actuator, increased FPC/FFC retention
FH52	FPC	6, 8, 10, 11, 12, 15, 18, 20, 22, 24, 25, 26, 28, 30, 32, 40, 42, 45, 50, 60	0.5, 1	-40 to 105	0.5	50	-	SMT	2 point contact, increased FPC/FFC retention
FX11	B to B	68, 72, 80, 92, 100, 116, 140pos. 60, 80, 100, 120pos. (Shielded type)	0.5	-55 to 85	0.3	50	-	SMT	High density mounting, shielded with optional ground plate
FX23	B to B	20, 40, 60, 80, 100, 120	0.5	-55 to 105	0.5, 3	50, 200	8+	SMT, THR	Floating, high speed, Hybrid with both signal and power contacts
GT17H	coaxial	4, 8	2	-40 to 105	1A (signal)	250	1	SMT, THR	Fully shielded, robust design
H.FL/S	Micro-coaxial	1	-	-40 to 90	-	-	-	SMT	Only H.FLS is non-magnetic
HR30	W to W	3, 6, 10, 12	-	-25 to 85	2, 5	30, 100	-	crimp, solder	IP68, light weight, easy mating, mis-insertion prevention
IX Ind	W to B	10	1.0	-40 to 85 or 90	1.5	50	10	solder, IDC	IEC Standard IEC 61076-3-124, compact size, robust, high speed, high EMC resistance
LF	W to W	3, 4, 6, 11, 12, 20	-	-25 to 85	10	125	-	solder, THR	IP68, shielded, bayonet lock
MRF18	Micro-coaxial	8	-	-40 to 125	-	-	-	THR	Non-magnetic, high lock strength

For additional information please go to <https://www.hirose.com/product/industry/Medical>
Specifications herein are subject to change without notice. Contact Hirose for latest specifications, drawings, or availabilities.

CONNECTING THE FUTURE

MEDICAL INNOVATION



**HRS HIROSE
ELECTRIC
U.S.A.**

HIROSE Electric U.S.A., Inc.,
U.S.A. Headquarters Chicago
2300 Warrenville Road, Suite 150,
Downers Grove, IL 60515, USA
P: 630.282.6700 • F: 630.963.0507



Sales & Engineering Center, Yokohama, Japan
6-3, Nakagawa Chuo 2-chome
Tsuzuki-Ku, Yokohama-shi 224-8540, Japan
P: 81-45-620-3526



San Jose Office
2841 Junction Ave, Suite 200,
San Jose, CA 95134, USA
P: 408.253.9640



Detroit Office
17197 Laurel Park Dr., Suite 253,
Livonia, MI 48152, USA
P: 734.542.9963



Boston Office
40 Shattuck Rd, Suite 215,
Andover, MA 01810, USA
P: 978.662.5255



Irvine Office
15440 Laguna Canyon Road, Suite 220,
Irvine, CA 92618, USA
P: 949.930.3750



Dallas Office
5550 Granite Parkway, Suite 255,
Plano, TX 75024, USA
P: 734.542.9963



RoHS - We are committed to the development and manufacture of world-class products without sacrificing the health of people & the environment. Hirose manufactures products that are compliant with RoHS directives.



Scan the QR code for a digital brochure and additional information on Medical Connectors

Visit us at...

