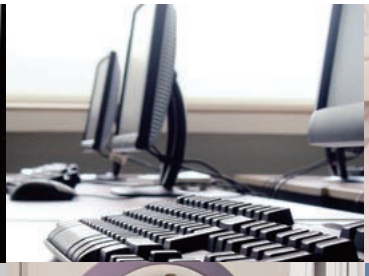
Connect To The Next

HONDA THE WORLD FAMOUS CONNECTORS

Connect To The Next





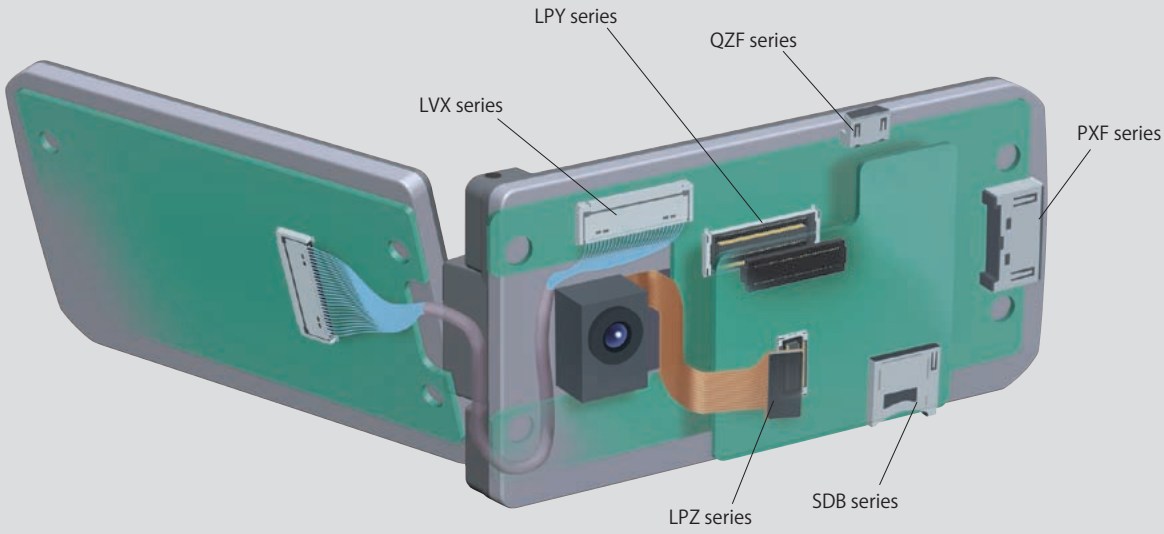


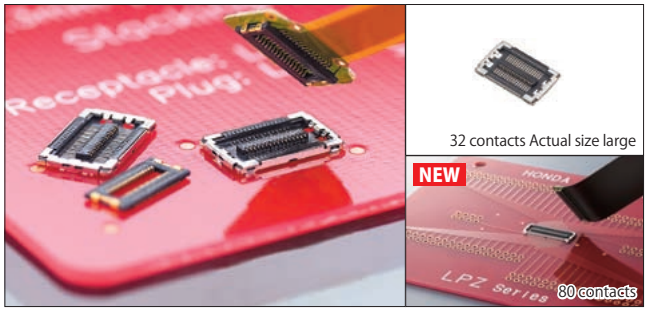

HONDA CONNECTOR'S

LINE UP

Classification	Series Names	For Interfaces	For PCBs	For Backplane Boards	For Relays	For Terminations	For Power Supplies	For Card Connectors
Connectors for Mobile Equipment	LPZ series		●					
	LPY series		●					
	LVX series		●					
	QZF series (Micro USB)	●						
	SDB series							microSD card
	PXF series	●						
	PXH series	●						
	BCL-C series	●					●	
High Speed Connectors	AKX series		●					
	AKX-A series (Sample Exhibited)		●					
	HIB series	●	●					
	HIBA series	●						
	HSA series	●	●				●	
	HSAS series	●	●					
	NCB series		●	●				
	NCBA series		●	●				
	LPJ series		●					
	NSP series		●	●				
0.8mm Pitch Connectors	HDR series	●	●		●			
	HDRA series	●	●					
1.27mm Pitch Connectors	PCR series	●	●		●	●		
	PCS series	●	●			●		
	RPS series		●					
2mm Pitch Connectors	LPC series		●					
2.54mm Pitch Connectors	HKP series		●		●			
	FFC series		●					
	DIC series		●					Shunt plug
	HCN series	●	●					
Other-Pitch Connectors than described above	QZAC series		●					
	QZAF series (HDMI Type C)	●						
	LVC series		●					
	MWB series		●					
Modular Connectors	MOD series	●	●					
Card Connectors	SD series							SD card
USB Connectors	QZF series	●						
Connectors for PCI-Express	EXP series							ExpressCard
	LPF series		●					
Coaxial Connectors	FLA series	●	●		●			
	FG-Y series	●	●		●			
	FLX series	●	●		●			●
	FLK series	●	●		●			
	FLP series	●	●		●			
	FLPM series	●	●		●			
	FLCX series	●	●		●			
	FN/FFA/FLA series (Conversion adaptor)	●						
	Coaxial Antenna	●						
	Cable assembly							
Connectors for Optical Fiber	LGC/LGA/LGP series	●	●	●	●	●		
Power Connectors	PCL series	●	●				●	
Rectangular type Connectors	MR series	●	●		●			
Round type Connctors	RZP/RZM series				●		●	
Connectors for Car Electronics	TAK series	●	●					
	QZAE series		●					

	For Coaxial Connectors	For Optical Connectors	For PCB mounted Connectors			For Cable mounted Connectors				Page	
			Through hole type	SMT type	Press-in type	IDC type	Soldering type	Crimping type	Wire wrap type		
				●						6	LPZ
				●						6	LPY
				●			●			7	LVX
				●			●			7	QZF
				●						7	SDB
	●			●			●			7	PXF
				●			●			8	PXH
			●	●			●			8	BCL-C
			●	●	●					8	AKX
			●	●						8	AKX-A
				●			●			9	HIB
							●			9	HIBA
			●	●						9	HSA
				●	●					9	HSAS
					●					10	NCB
					●					10	NCBA
				●						10	LPJ
					●					10	NSP
			●	●		●	●			11	HDR
			●	●		●				11	HDRA
			●	●		●	●			11	PCR
			●	●		●	●			12	PCS
			●		●	●				12	RPS
			●	●		●		●		12	LPC
			●	●				●	●	13	HKP
			●							13	FFC
			●	●						13	DIC
			●				Screw stop			13	HCN
				●						14	QZAC
				●			●			14	QZAF
				●			●			14	LVC
				●			●			14	MWB
			●	●		●		●		15	MOD
				●						16	SD
			●	●			●			16	QZF
				●						16	EXP
				●						16	LPF
	●		●	●			●	●		17	FLA
	●		●				●	●		17	FG-Y
	●		●	●			●	●		17	FLX
	●			●			●			17	FLK
	●			●			●			18	FLP
	●		●	●			●			18	FLPM
	●		●				●			18	FLCX
	●									18	FN/FFA/FLA
	●									19	Coaxial Antenna
	●						●	●		19	Cable assembly
		●								19 ～24	LGC/LGA/LGP
			●		●	●		●		24	PCL
			●				●	●	●	24	MR
							●	●		25	RZP/RZM
			●					●		26	TAK
				●				●		26	QZAE





Stacking Height 0.7mm, and 0.3mm Pitch Ultra-Low-Profile Stacking Connectors

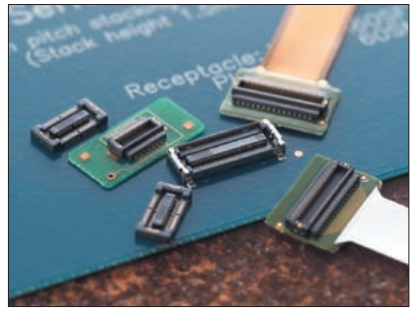
LPZ series

- Achieves 0.3mm pitch ultra-low profile and mating height of 0.7mm.
- Achieves a low profile and reduction of mounting surface on PCB.
- This metal shielded type connector can reduce RF radiation noise to one-fifth, when compared with a connector without a shield.
- The contact structure of the connector can maintain highly reliable connections because the contacts are a unique mechanism developed by HONDA.
- Since a metal shell covers the entire connector, the shell and hold downs contact at four places, and connect with the PCB ground, providing a complete EMI/ESD-filtered structure.
- Since pads are configured to provide zigzag rows on the PCB, the adjacent pad pitch becomes doubled, so that solder bridges are not created between adjacent terminals.
- A simple lock mechanism gives excellent operability and ensures connector mating because "you feel a click".

■SPECIFICATION

Number of contacts: 32, 40, 48, 60, 80 (Note 1)
Rated voltage: 50V AC (r.m.s.)
Rated current: 0.25A
Note 1: Please consult HONDA TSUSHIN for availability of number of contact.

Connectors for Mobile Equipment



Stacking Height 1.5mm, and 0.3mm Pitch Low-Profile Stacking Connectors

LPY series

- High-density low profile (1.5mm height) 0.3mm pitch type connectors.
- This connector can drastically reduce mounting surface on a PCB.
- Provides EMI/ESD-filter shielded structures.
- Since pads are configured to provide zigzag rows on the PCB, the adjacent pad pitch becomes doubled, so that solder bridges are not created between adjacent terminals.

■SPECIFICATION

Number of contacts: 28, 40, 60, 68, 80 (Note 1)
Rated voltage: 50V AC (r.m.s.)
Rated current: 0.25A
Note 1: Please consult HONDA TSUSHIN for availability of number of contact.

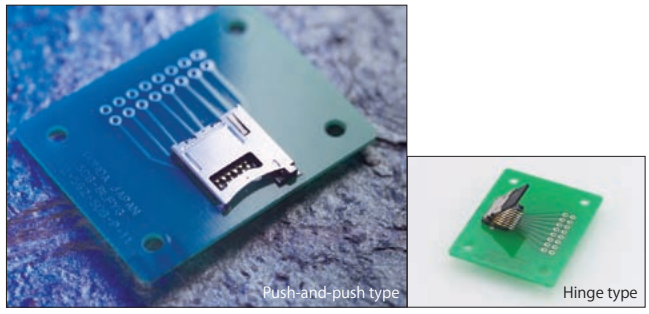
0.4mm pitch ultra-low profile type coaxial connector for ultra-fine wires

LVX series

- This connector achieves 0.4mm pitch and low profile 1.2mm mating height. Therefore the connector contributes to reduced equipment thickness.
- By adopting vertical mating of connectors, flexibility is increased for connector mounting position. Further, by attaching an insulator on the bottom surface of the connector, circuit pattems can be designed on the surface, and structure permits easy designing of PCB circuits.
- By narrowing the width of the cable plug to its utmost limit of 2.8mm, an assembled connector can be passed through the inside diameter of a hinge.
- Structure takes into account electrical noise prevention Ultra thin coaxial cable (AWG#42) can be used, and by covering the connector with a metal shell, electrical noise can be prevented.
- Setting up a suction surface on the receptacle allows for automatic mounting with PCB, and utilizes pulse-heat soldering technique, which minimizes cable damage during attachment.

■SPECIFICATION

Number of contacts: 30, 40
Rated voltage: 100V AC (r.m.s.)
Rated current: 0.2A



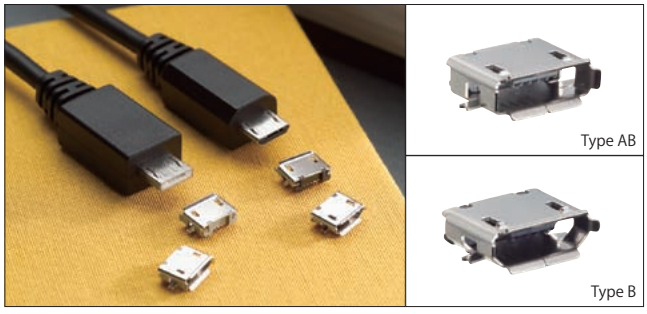
Slot Connectors for microSD cards

SDB series

- These products are slot connector for microSD cards have been developed, which are conforming to the SD Card Association (SDA) standard.
- Achieves a miniature and low-profile.
- Connector type: Push/Push onboard and hinge type are available.
- Provides card insertion detection mechanism for Push/Push onboard and hinge type connectors.
- Applicable cards: microSD

■SPECIFICATION

Number of contacts: 8
Rated voltage: 100V AC (r.m.s.)
Rated current: 0.5A
Operating temperature: -25 to +85℃
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 500V DC
Mating cycle: 10,000 (for Push-and-push type), 500 (for hinge type)



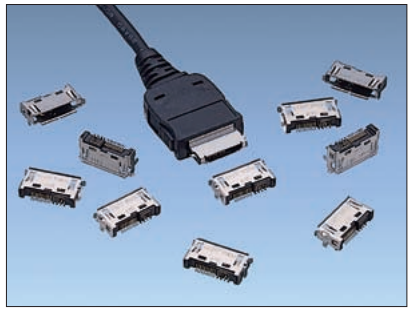
Micro USB connector of USB 2.0 conformity

QZF series

- Meets USB 2.0 standard.
- Micro USB connector has been added to the QZF series of standard and Mini connectors.
- AB and B type connectors are provided for PCB side connectors.
- MICRO USB A and MINI USB B series cable assemblies, and MINI USB B and MICRO USB A series cable assemblies are available (standard cable length: 1.5m).
- Applications: Cellular phones, Digital still cameras (DSC), MP3 players, etc.

■SPECIFICATION

Number of contacts: 5
Rated voltage: 30V AC (r.m.s.)
Rated current: 1A
Dielectric withstanding voltage: 100V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ



Connectors for the next generation cellular phones, Wideband Code Division Multiple Access (W-CDMA)

PXF series

- Conforms to standards of the Japan Electronics & Information Technology Industries Association EIAJ RC-5238 IMT-2000 for Connector A of cellular phones.
- Provides small-sized light-weight connectors.
- Allows live wire connections for signal contacts
- Uses bellows type contacts for high connection reliability of signal contacts.
- Provides connectors with a switch for coaxial cables.
- Number of signal contacts: 11 (includes one for coaxial cable)
- Supports high-speed data transmission, Universal Serial Bus (USB).

■SPECIFICATION

Rated voltage: 100V AC (r.m.s.) /DC
Rated current: 1.0A (for contacts numbered: 1, 4, 5, 6, 10)
0.5A (other contacts)
Dielectric withstanding voltage: 300V AC (signal contacts)
100V AC (coaxial contact)
Insulation resistance: More than 1,000MΩ at 250V DC (signal contacts)
More than 1,000MΩ at 100V DC (coaxial contact)

Connectors for Mobile Equipment

Narrow Pitch Connectors for interface

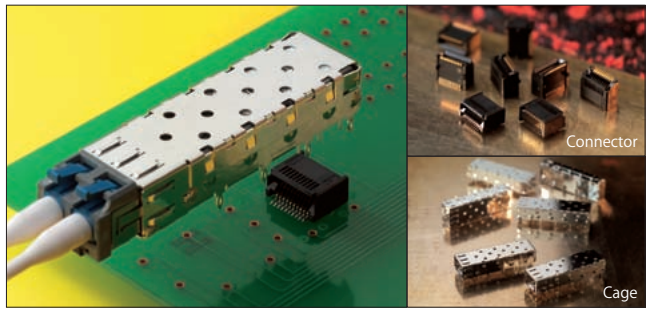
PXH series

- The PXH series of connectors are narrow pitch connectors for interfaces, which are used for mobile equipment such as smaller-sized and light-weight PDAs.
- Contact pitch is 0.5mm. However, this series utilizes highly reliable bellows type contacts.
- This robust and metallic shell provides a complete ESD-filtered structure.
- Since the housing is small and low-profile, size reduction of equipment can be achieved.

■SPECIFICATION

Number of contacts: 16
Rated voltage: 30V AC (r.m.s.)
Rated current: 0.5A
Dielectric withstanding voltage: 300V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 250V DC
Contact resistance: 50mΩ or less

High Speed Connectors



Connectors for Transceivers

AKX series

- AKX series connector consists of a connector and a cage, where the connector is a host connector for SFP transceivers. The connector and the cage conform to the Multi-Source Agreement (MSA).
- The host connector is a connector for high-speed transmission designed for differential transmission.

Connectors for Transceivers
AKX-20LFY (G1)

- 20contacts with 0.8mm pitch.
- Utilizing roll-surface contacts improves and maintains high reliability and high durability of the contact surface and the pad surface on transceiver mounted PCBs.

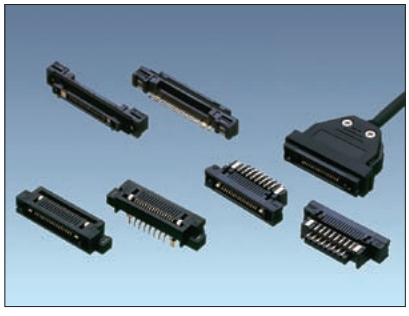
■SPECIFICATION

Rated voltage: 30V AC (r.m.s.)
Rated current: 0.5A
Dielectric withstanding voltage: 300V AC (r.m.s.)
Insulation resistance: More than 1000MΩ at 250V DC
Contact resistance: Less than 50mΩ

Connectors for Transceivers
AKX-CG/AKX-CGP

- The cage can be installed on a PCB by solder or press-in method.
- The cage consists of an upper cage and a lower cage. The press-in type cage is factory-shipped, after assembling and soldering the cage halves. The solder type cage can be factory-shipped after assembling and soldering, or they can be provided disassembled.
- Because the solder cage has a half-lock structure with the PCB, there is an assurance of workability.

Connectors for Mobile Equipment



Connectors for small-sized mobile terminals

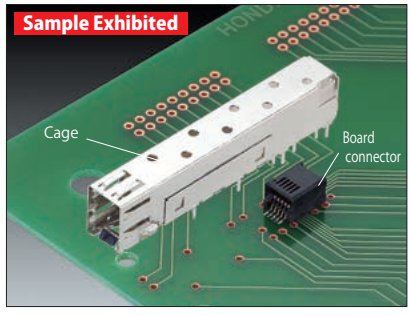
BCL-C series

- The BCL-C series of connectors for mobile equipment have been designed for small-sized mobile terminals. They are 1mm pitch space saving low-cost type connectors. The BCL-C series are of same type male connector used with a PDA body and cradle, and the same type female connector is used with a PDA cable. So, the cable side connector can be easily connected with a PDA body or PDA cradle.
- Male connectors are molded with rubber packing for waterproofing.
- Female connectors, which are used with the cradle and cable, ensure 10,000 insertion and extraction cycles because of the wiping effect on the contact surfaces due to the inseriton and extraction.
- Polarity key position can be changed.
- Since the cable side connector is solder type terminals, it can be easily connected with a USB cable, serial bus cable, etc.

■SPECIFICATION

Number of contacts: 18
Rated voltage: 21V AC (r.m.s.)
Rated current: 0.7A for signal contacts;2.8A for power supply contacts
Dielectric withstanding voltage: 300V AC (r.m.s.)
Insulation resistance: More than 500MΩ at 500V DC

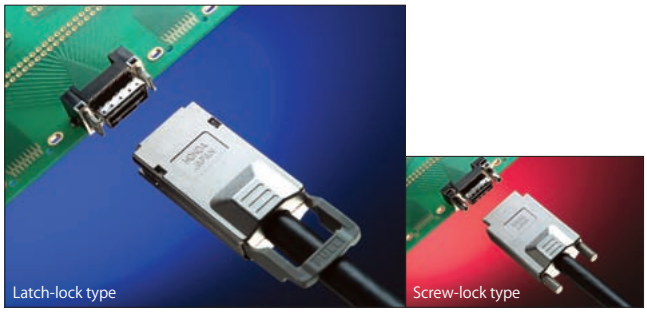
High Speed Connectors



Connectors for Compact SFP Transceivers

AKX-A series

- The AKX-A series connectors conform to the compact SFP MSA standard (1 channel type)
- Provides 0.8mm pitch, 10 contacts
- By utilizing roll-surface contacts, since the damage of the PCB contact surface is reduced, the AKX-A series connectors maintain high reliability of contact and high durability of insertion and extraction.
- Excellent high-speed transmission characteristics are assured. These are inherited from the existing AKX series of connectors for SFP.



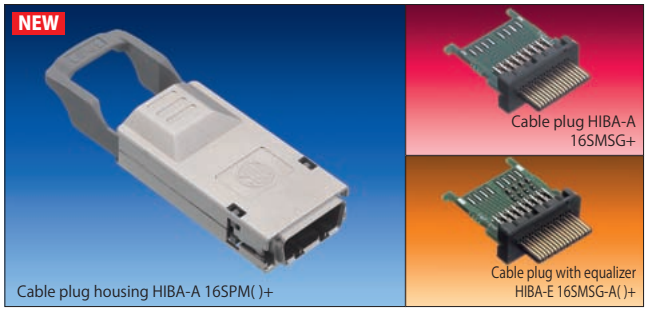
InfiniBand Standard I/O Connectors

HIB series

- Conforms to InfiniBand Trade Association (IBTA) standard for high-speed communications, for the next generation.
- When transmitting signals through I/O connectors, differential signals are utilized, and each pair of signals is shielded. By reducing noise between each signal and from the outside, high-speed transmission rates of 2.5 Gigabytes per second (1.25GHz) can be achieved.
- Achieves a low insertion loss and a low crosstalk by shielding each pair of differential signals.
- Assembling of connector and core cable is performed through a PCB, which is available for mounting components such as an equalizer.
- Using our own soldering method for cable drain wires, assembly can easily be performed, since the pitch for the soldering section becomes wider.
- The connectors can be used not only as InfiniBand 4X I/O connectors but also as I/O connectors (10GBASE-CX4, SAS, etc.) for high-speed differential signals.
- Provides a screw lock type connector conforming ANSI SFF-8470 standard.
- Signals can be transmitted distances of up to 10m (AWG#24 cable) because an equalizer is mounted on the PCB in the cable plug. Furthermore, you can replace the equalizer with one suited to the device used.

■SPECIFICATION

Rated voltage: 30V AC (r.m.s.)
Rated current: 0.5A/pin
Dielectric withstanding voltage: A type 200V AC (r.m.s.)
E type 50V AC (r.m.s.)
Insulation resistance: More than 100MΩ at 100V DC



Conforms to the InfiniBand 4X/10GBASE-CX4 Standard

HIBA series

- Conforms to the IEEE 802.3ak 10GBASE-CX4 standard, so that 3.125 Gigabits per second can be achieved.
- Conforms to the InfiniBand Trade Association (IBTA) Release 1.1 standard, so that 2.5 Gigabits per second can be achieved.
- Achieves low crosstalk by shielding each pair of differential signals and by increasing the lane distance between differential pairs.
- Achieves a low insertion loss.
- A PCB for assembling a connector and a core cable is also provided, which is capable of mounting components for an equalizer.
- By using our own soldering method for cable drain wires improves the assembly, since the pitch at the soldering section is wider.
- The screw lock type connectors conform to the ANSI SFF-8470 standard.

■SPECIFICATION

Rated voltage: 30V AC (r.m.s.)
Rated current: 0.5A/pin
Dielectric withstanding voltage: A type 200V AC (r.m.s.)
E type 50V AC (r.m.s.)
Insulation resistance: More than 100MΩ at 100V DC

Connectors conforming to Serial ATA standard

HSA series

- Serial ATA connectors are successors to the parallel type ATA. Currently, as memory capacity of hard disks has increased, higher-speed interfacing is required. To respond to that need, serial transmissions have been used.
- Serial ATA contributes to the improvement of thermal design and the implementation of small-sized systems, because cable wiring and mounting become simpler with the use of the small-sized connectors with few pins, and a thin flexible cable.
- These connectors conform to Serial ATA standards, which are available for plug connectors and receptacle connectors for various applications.
- Supports transmission speed of 1.5 Gbps (first generation) or 3.0 Gbps (second generation).
- By utilizing an electromagnetic field simulator, matching characteristic impedance. Further excellent transmission characteristics have been achieved by low crosstalk, low reflection attenuation, and low insertion loss.
- Receptacles are provided in either low or high profile types.

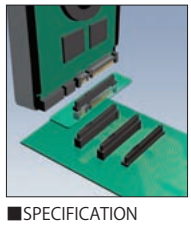
■SPECIFICATION

Rated voltage: 100V AC (r.m.s.)
Rated current: 1.5A
Characteristic impedance (differential): 100Ω ±15% , Tr: 70ps (20-80%)
Cross talk (differential): Max 5%

Connectors conforming to Serial Attached SCSI Standard

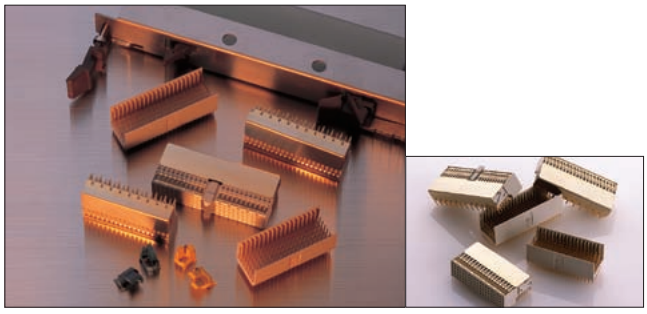
HSAS series

- Complying with Serial Attached SCSI standard.
- Achieves transmission rates of 3 Gbps.
- Excellent transmission characteristics are obtained by utilizing electromagnetic field simulator.
- The characteristic impedance is matched, Low crosstalk, Low insertion loss, Low reflection attenuation.



■SPECIFICATION

Rated voltage: 100V AC (r.m.s.)
Rated current: 1.5A/0.5A DC
Characteristic impedance (differential): 100Ω ±15% , Tr: 70ps (20-80%)
Cross talk (differential): Max 5%



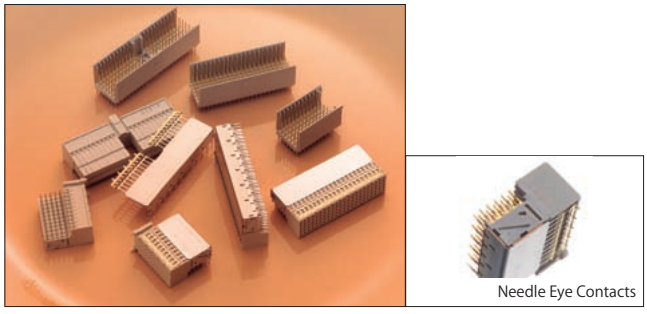
2mm pitch Hard-metric Connectors

NCB series

- NCB series of 2mm pitch hard-metric connectors have been developed to meet electrical and mechanical performance requirements, and to support systems required in the industries of telecommunications, data transmission, computers, etc.
- These connectors are built with 2mm pitch hard-metric contacts complying with IEC917 (DIN43355) and IEC61076-4-101 international standards.
- High-density systems can be achieved with a minimum waste of space.
- Because these connectors are attached to PCBs with a press-in method (solder-less connection), they are unaffected by heat stress or flux cleaning.
- The press-in shape adopts the well established C shape with minimum damage to through holes.
- Supports bus systems for industrial use (bus systems for compact PCI).

■SPECIFICATION

Number of contacts: 55, 95, 110, or 125
Rated voltage: 250V AC (r.m.s.)
Rated current: 1.5A
Dielectric withstanding voltage: 750V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 100V DC



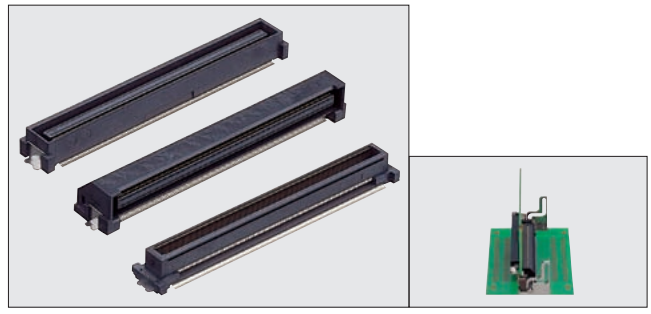
2mm Pitch Hard Metric Connectors

NCBA series

- Conforms to IEC standard.
- Developed by utilizing the technology of the NCB series and has excellent cost performance.
- To reduce costs, the press-fit part of each connector is made in the shape of Needle Eye.
- The shield plate (upper side) is mounted on the connector, facilitating the work of mounting the connector onto the board.

■SPECIFICATION

Number of contacts: 55, 110, 125
Rated voltage: 250V AC (r.m.s.)
Rated current: 1.5A
Dielectric withstanding voltage: 750V AC (r.m.s.) for up to one minute
Insulation resistance: More than 1,000MΩ at 100V DC

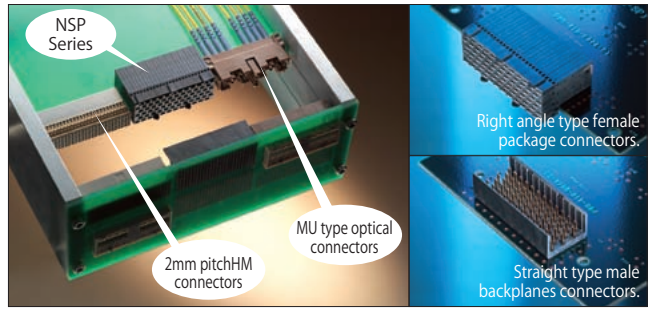


LPJ series

- Developed to be able to use one or more per PCB due to their highly pliant floating structure.
- Connectors are of two types: for horizontal, and for vertical connections between PCBs.
- These connectors can be used in either parallel or serial connections.
- A connector ejector is available for mounting on a PCB.
- Applications: Communications equipment, Computers, etc.

■SPECIFICATION

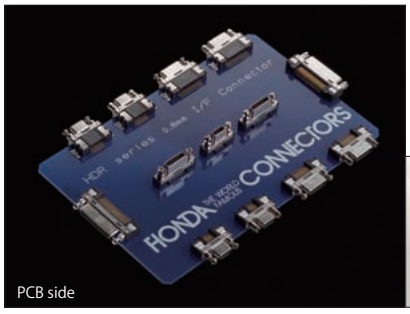
Number of contacts: 240
Rated voltage: 100V AC (r.m.s.)
Rated current: 0.35A
Dielectric withstanding voltage: 300V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ
Contact resistance: 80mΩ or less
Tolerable alignment error (in mating of one connector) Lateral direction (widthwise): Max. 0.5mm
Longitudinal direction (lengthwise): Max. 0.3mm
Torsion absorption levels: A combination of up to 0.5mm in the lateral direction (widthwise), and up to 0.3mm in the longitudinal direction (lengthwise)



High-speed Data Transmission Connectors for Backplanes

NSP series

- The NSP series is a suitable connector for a high-speed communications to devices of the communication apparatus, RAID, the server, and storage, etc.
- This connector has no ground contacts. However, a high-speed data transmission of 3.2Gbps (1.6GHz) is enabled by the stacked-pair theory.
- Because a skew is suppressed to zero in the defferential pair, PCB patterns can be easily designed.
- Due to our own unique terminal structure, a terminal-buckling strength has been improved than conventional connectors.
- The connector can be mounted on the same PCB with 2mm pitch Hand Metric (HM) connectors and MU type optical connectors for HM.



PCB side


Assembly

HDR series

- Developed as the sister of the PCX series connector and arranged at a pitch of 0.8mm to meet the market needs for smaller-sized high density connectors.
- EM/ESD-filtered and over-molded type metallic housing.
- To protect signal circuits, the shield shell touches the shell of connector before the contacts touche their mating contact. These connectors provide for layered structure allowing up to two stacked connections.
- One-touch-lock and detachable/re-attachable housing gives excellence operability and ensures connector mating because "you feel a click".
- Both PCB-side and cable-side connectors can be selected from a male or a female connector. Further, cable-side connections can be selected from the IDC or soldering methods.
- Very small surface mount (SMT) interface connectors provide, an EMI/ESD-filtered structure, a hold-down structure to reinforce strength, and a fastening screw structure.
- Low profile with overall height of 5mm from the PCB surface.
- Cycles of insertion and extraction: 5,000
- Provides a screw lock type housing (cable size: 5.9-6.2mm diameter) with shield, which is required for secure connection with equipment utilized for such as factory automation (FA), or provides soldering type connector capable of connecting with cable of AWG#28-AWG#32.

■SPECIFICATION

Number of contacts: 14, 26, or 50
Rated voltage: 125V AC (r.m.s.)
Rated current: 0.5A
Dielectric withstanding voltage: 350V AC (r.m.s.) for up to one minute
Insulation resistance: More than 1,000MΩ at 250V DC
Contact resistance: 70mΩ or less
Wire sizes: AWG#28 or AWG#30

New products: 26-contact housing etc.

Screw lock type housing for 14-contact

- The HDR series of Honda original 0.8mm pitch connectors for interfaces, are a highly usable and reliable connector. As for the screw lock type, the lineup does 14-26-50 contacts to the case for 14-26 contacts and relays.

This is an EMI-filtered vertical type plastic housing with screw lock.


This is an EMI-filtered right-angle type plastic housing with screw lock.

This is vertical type plastic housing with hardware to stand under a spring lock for heavy wire cables.


This is an EMI-filtered vertical type plastic housing with spring lock.

HDRA series

- VHDCI (Very High Density Cable Interconnect): The next-generation standard interface connectors conforms with ANSI (American National Standards Institute) /SFF8441 standards.
- Enables high density packaging by providing 68-contact connectors arranged at a narrow pitch of 0.8mm in 2 rows.
- The PCB mounted (single-stage type) connectors are low profile with an overall height of 6mm from the PCB surface.
- To protect signal circuits, the shield shell touches the shell of connector before the contacts touch their mating contact.
- The cable mounted connectors provide a sealed metallic-shell shielding structure. This metallic shell is an over-molded type, providing a complete EMI/ESD-filtered structure.
- Applications: External connection between the portable PC and its peripherals (SCSI-III, PCI bus, etc.), and smaller-sized electronic devices.

■SPECIFICATION

Number of contacts: 36, 68, 100
Rated voltage: 30V AC (r.m.s.)
Rated current: 0.3A
Dielectric withstanding voltage: 250V AC (r.m.s.)
Insulation resistance: More than 500MΩ at 100V DC
Contact resistance: Less than 70mΩ (Single-stage type)
Less than 100mΩ (Double-stage type)
Wire sizes: AWG#30 or AWG#34


Assembly

PCR series

- Bellows-contact type connectors, which are the sisters of PCS series connectors.

Board-to-board connector

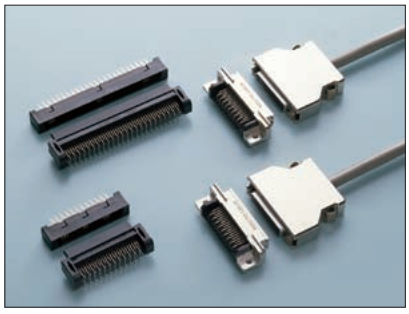
- For the circuit protection, provision is made for long and short pins allowing three different points in time to contact with the circuits.
- Even with many contacts, the connector can be easily inserted or extracted due to a low insertion force design.
- Best suited for parallel, horizontal, or vertical-stacked connection for board-to-board connection.

Board-to-cable connector

- EMI-filtered design to meet FCC and other standards.
- Quick locking with lock springs. The housing has a robust interface structure.
- For cable mounting, IDC type connection is standard, so that various cables can be used as in the PCS series connectors.
- Accessories such as housing and termination tool can be shared between the PCR ad PCS series.
- Connectors are also provided for Factory Automation (FA).

■SPECIFICATION

Number of contacts: 20, 34, 48, 68, 80, 96, 120, or 128, for board-to-board connections 20, 28, 36, 50, 68, 80, or 96 for board-to-cable connections 20, 28, 36, or 50 for board-to-cable connections in a factory environment
Rated voltage: 250V AC (r.m.s.)
Rated current: 1A
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ
Contact resistance: 35mΩ or less



PCS series

●Provides 1.27mm pitch designed for downsized electronic equipment.

Board-to-board connector

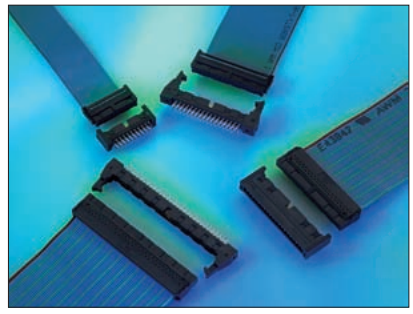
●Allows various circuit connections with a wide selection of the number of contacts.
●Even with many contacts, connectors can be easily inserted or extracted due to a low insertion force design.
●Cleaning solution does not remain in the housing during flux removal due to a drainage structure.

Board-to-cable connector

●For use cable, the IDC type connection is standard, resulting in substantial labor saving.
●Wire sizes available for use with the IDC connection are AWG#28 (7/0.127), AWG#30 (1/0.254), or AWG#30 (7/0.1).
●EMI-filtered design to meet FCC and other standards.
●Available in two types, a spring-locked type connector (SCSI-Ⅱ), and a screw-locked type connector (SCSI-Ⅲ). Cable housing and receptacle shell are made of robust die-cast material.

■SPECIFICATION

Number of contacts: 34, 48, 68, 96, 150, or 240 for board-to-board connections
20, 28, 36, 50, 68, 80, or 96 for board-to-cable connections
Rated voltage: 250V AC (r.m.s.)
Rated current: 1A
Dielectric withstanding voltage: 750V AC (r.m.s.)
Insulation resistance: More than 1,000 MΩ
Contact resistance: 35mΩ or less



RPS series

●1.27mm pitch high density connector designed to meet the needs for wiring between rack-mounted units, and for other high density contact connections as electronic equipment becomes downsized.
●The cable mounted connector is used with IDC type 1.27mm flat cable.
●The standard connector comes with "kink-formed" contacts for tentative assembly in mounting connectors on PCB.
●Even with many contacts, the connector can be easily inserted or extracted due to the low insertion force design.
●Center keyed and slot structures prevent mal insertion.
●Prevents erroneous mating of connectors of the same number of contacts, by use of an optional key (RPS-PK).
●Provides a mating guide structure to prevent pin bending.
●BOX type connectors (with no latch mechanism) provide effective use of mounting space.
●Provides IDC type 0.635mm pitch connectors. These connectors use U-shaped contacts, high reliability of connection is provided, and daisy chaining is also available.
●Transmission cable type connections (60/100 contacts) for high-speed signal transfer are also available.

■SPECIFICATION

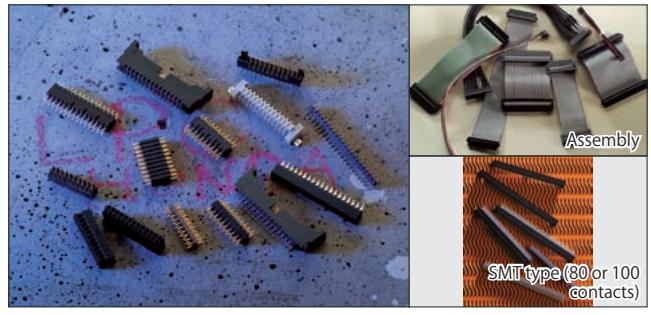
Number of contacts: 20, 26, 34, 40, 50, 52, 60, 68, 80, 100, or 120
[Box type]: 60 or 100
[RPS-D type]: 20, 26, 34, 40, 50, 52, 60, 68, 80, or 100
Rated voltage: 250V AC (r.m.s.)
Rated current: 1A
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ
Contact resistance: 30mΩ or less

PCS-XE series

●The PCS-XE series connectors for 50 or 68 contacts are approved by the American National Standards Institute (ANSI) as the standard interface for SCSI-Ⅱ/Ⅲ (Small Computer Systems Interface).
●1.27mm pitch board-to-cable connectors with 26 contacts for RS-232E interface or 100 contacts for HIPPI interface are standard, as well as SCSI-Ⅱ/Ⅲ.
●Cable connection is performed by IDC, resulting in substantial labor saving.
●Wire sizes available for use with the IDC connection are AWG#28 (7/0.127), AWG#30 (1/0.254), or AWG#30 (7/0.1).
●IDC and piggyback type connectors for 0.635mm pitch flat cable are available for daisy chain connection.
●Available in two types, a spring-locked type connector (SCSI-Ⅱ), and a screw-locked type connector (SCSI-Ⅲ). Their cable housing and receptacle shell are made of robust die-cast material.

■SPECIFICATION

Number of contacts: 26, 50, 68, or 100
Rated voltage: 250V AC (r.m.s.)
Rated current: 1A
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ
Contact resistance: 35mΩ or less

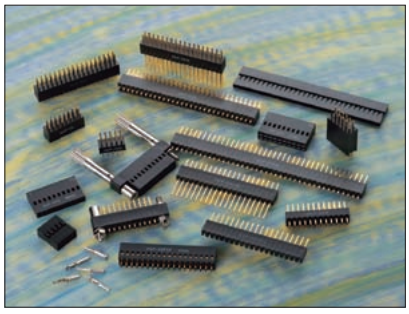


LPC/LPC-B series

●2mm pitch high density low profile connector for PCB developed to meet the needs of today's market.
●Designed on the basis of the reliable HKP series of tried-and-true 2.54mm pitch connectors for PCB's.
●Can be used for more densely packed equipment requiring weight reduction and downsizing.
●Ensures reliable-and-stable contacts by using HONDA TSUSHIN's unique two-point contact design.
●Cable mounted connection performed by crimping, and also by IDC method has been developed to expand the series.
●The insulating material is UL-approved having superior electrical and mechanical characteristics and chemical resistance.

■SPECIFICATION

Number of contacts: 1-30 (1 row), 2-60 (2 rows) [LPC series]
10-50 [LPC-B series]
Rated voltage: 125V AC (r.m.s.)
Rated current: 1A
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 500V DC
Contact resistance: 40mΩ or less

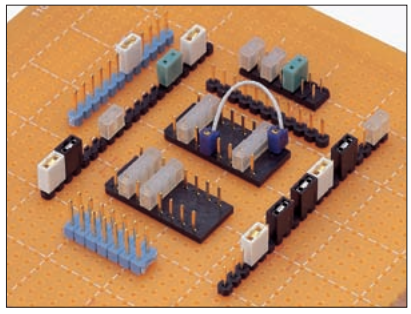


HKP series

- Printed circuit board (PCB) connector for use in equipment where size reduction and high density are required.
- The female crimped contact is of a box structure and provides high reliability and ensures secure contact. The male contact is standard 0.635mm square.
- Allows the economical connection of 3,000 terminals per hour by use of an automatic crimping machine. Also a hand-operated crimping tool can be used for small batches.
- The insulating material is UL-approved having superior electrical and mechanical characteristics, and good chemical resistance.

■SPECIFICATION

Number of contacts: 2 to 50 (1 row), 4 to 70 (2 rows)
Contact spacing: 2.54mm
Rated voltage: 300V AC (r.m.s.)
Rated current: 3A
Dielectric withstanding voltage: 1,000V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 500V DC
Contact resistance: 10mΩ or less



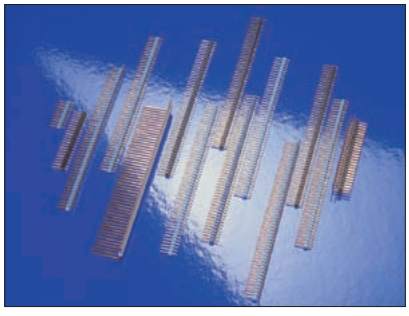
Switching between circuits on PCB's.

DIC series

- The DIC (Dual In-line Connector) series of connectors can be used for switching between circuits on PCB's.
- A smaller-sized connector for switching between circuits on PCB's, which can be arranged in any location on the PCB by selecting the required number of contacts.
- An ultra-thin connector combines easily with IC and semiconductor parts on a PCB.
- Can be used in combination with the FFC series and HKP series of connectors.
- Allows for easy cleaning of flux on a terminal board after flow soldering.
- Provides various types of connectors for switching from one circuit to another, or from multiple circuits to other multiple circuits simultaneously.

■SPECIFICATION

Rated voltage: 125V AC (r.m.s.)
Rated current: 1A
Dielectric withstanding voltage: 1,000V AC (r.m.s.)
500V AC (r.m.s.) only DIC-131
Insulation resistance: More than 1,000MΩ at 500V DC
Contact resistance: 20mΩ or less at 0.3A DC



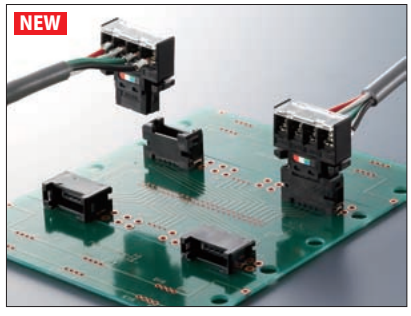
Pin header

FFC series

- PCB headers with 2.54mm pitch contacts with 0.635mm square pins or 0.64mm diameter pins.
- Can be used as a terminal plate for a board-to-cable or board-to-board application in combination with female connectors such as HKP series.
- Can be used as a terminal board for switching between circuits on a PCB in combination with DIC series of connectors.
- Uses 2.54mm pitch contacts in accordance with the reference grid dimension of PCB's, so that these connectors are suitable for high density mounting.
- Required number of contacts are selectable.
- Pins are available with different lengths, so that pin length is selectable in relationship to a mating female connector, or for a particular use.

■SPECIFICATION

Number of contacts: 1-52 (1 row), 2-144 (2 rows)
Rated current: 3A
Dielectric withstanding voltage: 1,000V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 500V DC



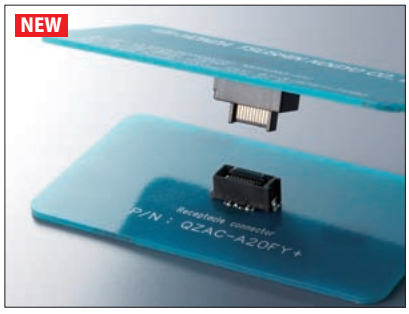
Connector for CompoNet

HCN series

- By using Common Industrial Protocol (CIP) for control, high-speed communications of data and messages can be performed to solve problems that could not previously be solved, creating an open network for sensors and actuators.
- Compatible with conventional products.
- Right-angle and straight type connectors are available.
- Moreover, 8mm goods in addition to a past 10mm at the engagement entrance have been commercialized, too.
- The cable side can draw out the cable in two directions of the terminal stand type for the hook on the inside.

■SPECIFICATION

Specifications
Rated current: Power contact: 4A Signal contact: 0.3A
Rated voltage: 30V
Dielectric withstanding voltage: 1,000V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 500V DC



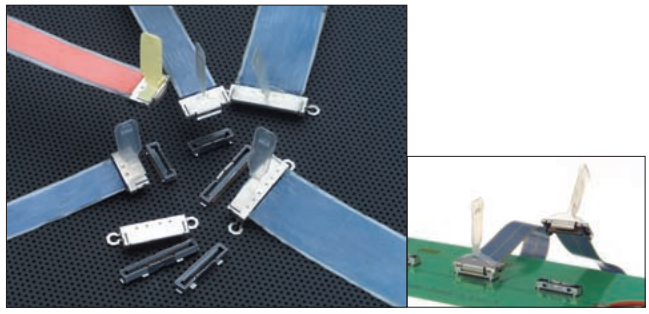
Floating Connectors

QZAC series

- Achieves up to ± 0.5mm floating width in the directions of X and Y in the 0.5mm narrow pitch.
- In the case or using a number of the stacking connectors, the floating connector accommodates variations in the mounting position of PCB-to-PCB stacking connectors.
- The floating connector accommodates not only variations in the mounting position, but also variations in the screw cramp between PCB to PCB.
- User can chose either a floating connector with boss or without boss, and chose a length of SMT portion.
- It is a lineup in new as for 0.8mm pitch and 20 contacts. Floating and 15mm in stack height of ±0.8mm.

■SPECIFICATION

Rated voltage: 50V AC (r.m.s.)
Rated current: 0.3A
Operating temperature: -40 to +85℃
Dielectric withstanding voltage: 200V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 100V DC
Contact resistance: 160mΩ or less



Connerctors for Super-Thin Coaxial Cables

LVC series

- LVC series of 0.5mm pitch connectors have been developed for interconnection between notebook-type personal computers (PCs) and Liquid Crystal Displays (LCDs) through super-thin coaxial cables.
- Supports high-speed data transmission.
- Achieves high-speed data transmission by reducing propagation skew as much as possible.
- Low profile type allows reduced mounting space.
- Utilizes pulse-heat soldering technique, which minimizes cable damage during attachment.
- Applications: LCD

■SPECIFICATION

Rated voltage: 50V AC (r.m.s.)
Rated current: 0.3A
Dielectric withstanding voltage: 150V AC (r.m.s.)
Insulation resistance: More than 100MΩ at 250V DC

C type connector

C type Connector Conforms to High Definition Multimedia Interface (HDMI) standard

QZAF series

- The C type connector conforms to the HDMI standard version 1.3a, which attracts a great deal of attention.
- TypeAtoC (1.5mm in the length of a standard cable) is prepared as Cable assembly.
- Uses C type connector for PCB side connectors.
- To arrange the soldering part of the substrate side shell forward of the connector, a chape is secured.
- applications: Digital video camera, digital camera, and PC. TV peripherals

■SPECIFICATION

Rated voltage: 40V AC (r.m.s.)
Rated current: 0.5A
Dielectric withstanding voltage: 300V AC (r.m.s.)
Insulation resistance: More than 10MΩ at 150V DC

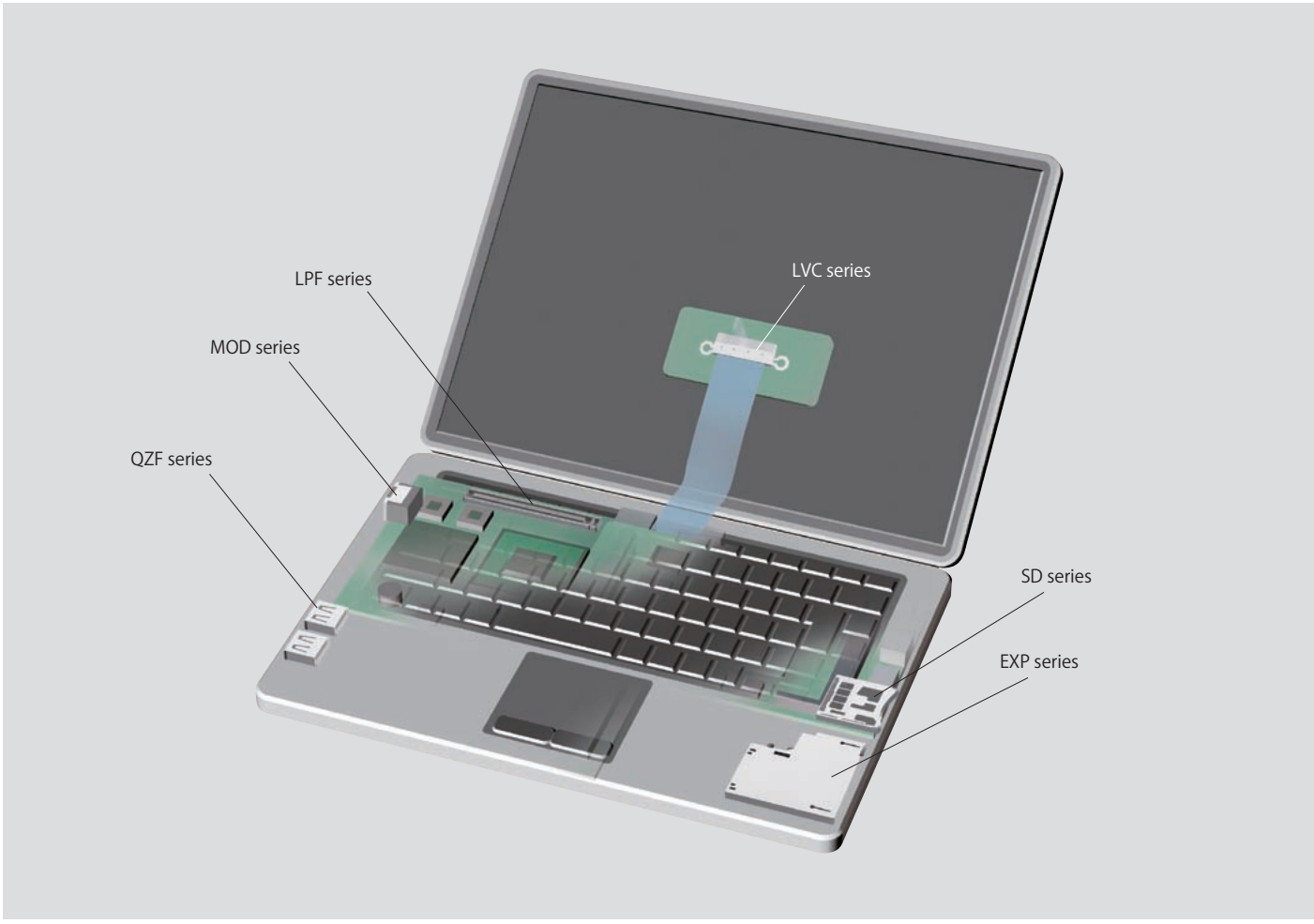
Hybrid Connector (Micro Coaxial and Discrete Cables)

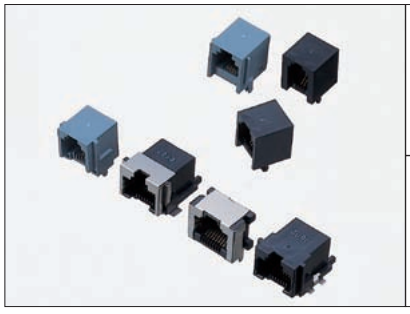
MWB series

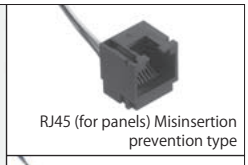
- Utilizes pulse-heat soldering technique, which minimizes cable damage during attachment. Thereby, different sized cables can using batch connection by soldering, so that man-hours needed for connection are saved due to the reduction of connection process steps.
- Since the MWB series provides complex connectors in which power-supply contacts and signal contacts are incorporated together, the connectors allow substantial cost-reductions for unit installation.
- By adopting the vertical mating of connectors, flexibility is increased at the connector mounting position. Furthermore, by adopting low-profile connectors the equipment thickness is reduced.
- By covering the connector with a metal shell, electrical noise can be prevented, and the MWB series connectors have a robust interface structure.
- With the "simplified" lock structure of the connecter, "you feel a click" at the time of insertion or extraction.
- By using a pull tab, the MWB series connectors improve operationality of insertion or extraction, preventing damage to connector, and constrain cable pulling.

■SPECIFICATION

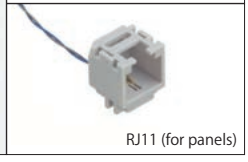
Contact pitch: Coaxial wire: 0.5mm (Signal: 30 lines)
Discrete wire: 1.0mm (Power: 13 lines)
Rated voltage: 100V AC (r.m.s.)
Rated current: 【AWG＃42】DC 0.3A ～【AWG＃28】DC 1.0A
Storge temperature: －20℃～＋85℃
Dielectric withstanding voltage: 250V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 250V DC







RJ45 (for panels) Misinsertion prevention type



RJ11 (for panels)

MOD series (Jacks line up)

- MOD series of connectors comply with FCC and NTT standards, allowing these connectors to be used for international products.
- They are suitable for high density equipment with limited space, because these are designed as smaller-sized and light-weight connectors.
- The contact plating is gold plate, ensuring the connectors provide high reliability and secure contact.
- Through hole type, crimpint, and SMT type jacks are available.

■SPECIFICATION

Rated voltage: 125V AC (r.m.s.)
Rated current: 0.5 to 1.5A (Jack)
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 100MΩ at 100V DC
Contact resistance: 50mΩ or less

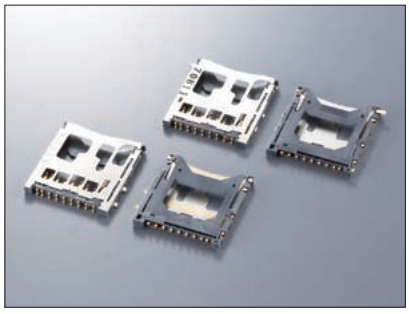
MOD series (screw-lock type)

- Developed to interface industrial cameras with Factory Automation (FA) equipment (GigE Vision interface).
- With use of screw locks, these connectors have achieved a high mating retention force and fixing strength.
- Maintains high reliability required for equipment that are secularly and continuously used, and/or used under constant vibration.
- With use of screw locks, shells of both plugs and jacks are electrically connected, so that these shells are maintained at ground potential.
- The jack-side connectors (equipment side) can be connected with the RJ-45 plug.
- The jack-side connectors are a straight DIP type or right-angle SMT type connector.
- The plug connectors are an over-molding straight type connector.
- The modular connectors are EMI-filtered pruducts. These connectors can be mated to the RJ-45 plug.

■SPECIFICATION

Contact pitch: 1.02mm
Number of contacts: 8
Rated current: 0.5A
Rated voltage: 125V AC (r.m.s.)
Contact resistance: Less than 40mΩ
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulatin resistance: More than 100MΩ at 100V DC
Mating cycle: 100

Card Connectors



Slot connectors for SD cards

SD series

- Complying with SD card Association (SDA)
- These are low profile SMT type connectors that have an installed height of 2.65mm from the PCB surface.
- With the "push-in-push-out" structure, you "feel a click" at the time of insertion or extraction.
- Static electricity prevention measures are completely assured with metal shell.
- Prevents the card from being misinserted, and also incorporates a mechanism that detects whether the SD card write-protect switch is in the locked or released condition, a mechanism that detects whether or not the card is inserted, and a simple card lock (half lock) mechanism, etc.
- Provides a hot-swap mechanism in that #3 and #4 terminals, in the 9 pole terminal set, contact with a card before other terminals contact with the card.
- Provides a boss hold-down structure for positioning onto the PCB.
- Conforming to the SD/IO standard.
- Capable of inserting and utilizing a multimedea card (MMC).

■SPECIFICATION

Number of contacts: 9
Rated voltage: 250V AC (r.m.s.)
Rated current: 0.5A
Storage temperature: -25 to +85℃
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 500V DC
Mating cycle: 10,000

Connectors for PCI-Express

Stacking height 4mm

Stacking height 5mm

Connectors for PCI-Express

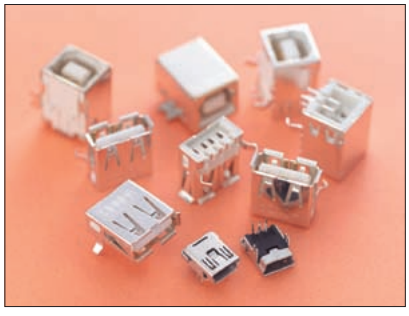
LPF series

- Developed as a connector for high-speed transmission such as PCI-Express, LVDS, TMDS.
- Can be used as a connector for interfacing differential signals, which is mainly adopted for PC at the moment.
- Achieves the perfomance of the connector conforming to PCI-Express specifications.
- Supports two stacking heights, 4 and 5mm.
- Adopts SMT mounting.
- Pitch at SMT lead portion: 0.5mm

■SPECIFICATION

Rated voltage: 200V AC (r.m.s.)
Rated current: 0.5A DC
Storage temperature: -40 to +85℃
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 100MΩ at 500V DC
Contact resistance: 60mΩ or less
Ground-contact resistance: 150mΩ or less

USB Connectors



USB Connectors

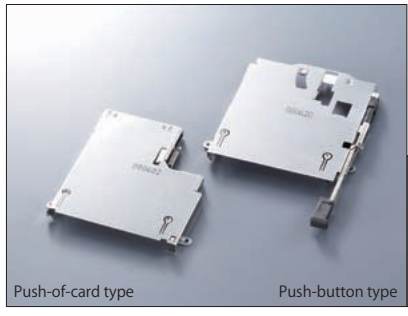
QZF series

- The QZF series of PC interface 4-contact connectors meet USB Ver. 2.0 (Specification Revision 2.0) standards, and are designed to transfer signals to and from keyboards, mouse or pointing devices, modems, printers, etc.
- The contacts are plated with gold to withstand many insertions and extractions, providing high reliability.

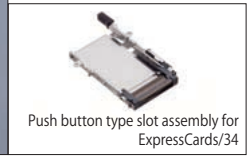
■SPECIFICATION

Number of contacts: 4 (5)
Rated voltage: 30V AC (r.m.s.)
Rated current: 1.0A
Dielectric withstanding voltage: 500 (100) V AC (r.m.s.)
Insulation resistance: More than 1,000 (100) MΩ

Connectors for PCI-Express



Push-of-card type　　Push-button type



Push button type slot assembly for ExpressCards/34

Universal Host Connectors for ExpressCards

EXP series

- Complying with ExpressCard™ standard.
- Supports both USB 2.0 (including low speed type) and PCI-Express interfaces.
- Supports both ExpressCard/34 and /54 for universal slots.
- Adopts an ejecting "push-and-push"structure (eject mechanism).
- HONDA TSUSIN's own unique structure of a guide mechanism (patent) assures outstanding resistance to mechanical stress such as twisting (twisting strength: 200N, for reference purpose).

■SPECIFICATION

Rated current: 0.75A DC
Operating temperature: 0 to +50℃
Storage temperature: -20 to +65℃
Ambient relative humidity: Max.95%
Dielectric withstanding voltage: 500V AC (r.m.s.)
Contact resistance: 40mΩ or less
Mating cycle: 5,000

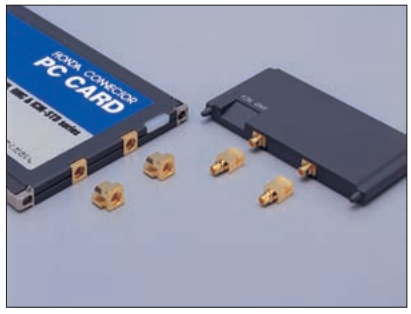
SMA type connectors

FLA series

- Smaller-sized coaxial connectors compatible with the SMA type connectors (MIL-C-39012, IEC-169-15) which are standard connectors for the microwave band.
- Since the discontinuous capacitance of connectors is compensated for by the unique technology, these connectors can be used for frequencies up to the microwave band.
- Some connectors can be used up to 26.5GHz.

■SPECIFICATION

Characteristic impedance: 50Ω
Dielectric withstanding voltage: 1,000V AC (r.m.s.)
Contact resistance: Less than 4mΩ (center and external contact)
Mating Cycle: 1,000
VSWR: 1.05 + 0.01 f (f = Frequency in GHz)



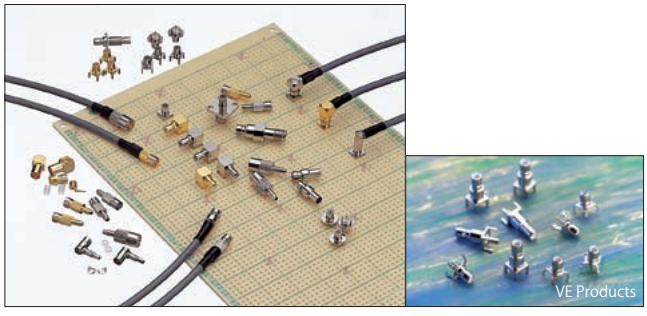
MMCX type connectors

FLX series

- Snap-on-type ultra miniature connectors compatible with "MMCX connectors" used in Europe and America.
- Available of plug connectors for cables and PCBs. These cable connectors are assembled with appropriate cables and supplied by HONDA TSUSHIN.
- Provides jack connectors only for mounting on PCBs, and available in three types, SMT, slide mount, and PCB through hole type. Also, this series provides male and female convertible adaptors with SMA male and female screws on the opposite end.
- Electrical characteristics, VSWR is 1.2 or less up to 6GHz.

■SPECIFICATION

Characteristic impedance: 50Ω
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 500MΩ
Contact resistance: 10mΩ or less
VSWR: 1.2 or less up to 6GHz

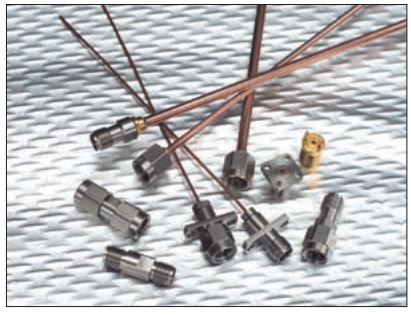


FG-Y series

- These are smaller-sized light-weight coaxial connectors we developed on the basis of SMB type connectors complying with MIL standards, and also the C05 type connectors complying with JIS standards. These connectors are designed to withstand mechanical vibrations.
- Structured so that the external electric conductor, with its slit projections, is firmly fastened by an annular spring an inward direction, and the conductor is supported at three points in the axial direction, thereby assuring stable contact.

■SPECIFICATION

Characteristic impedance: 50Ω
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 500MΩ
Contact resistance: 6mΩ or less
VSWR: 1.2 or less up to 2GHz



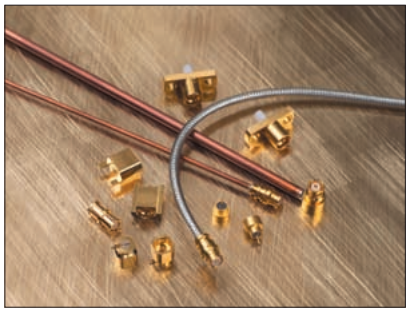
SMK type (2.92mm) connectors

FLK series

- Inside diameter of SMK type connector is designed to be 2.92mm for millimeterwaves up to 40GHz with excellent characteristics.
- Compliant with MIL-STD-348A
- Compatible with SMA type and 3.6mm coaxial connector.
- Excellent performance to high frequency

■SPECIFICATION

Characteristic Impedance: 50Ω
Operating frequency: DC to 40GHz
Contact resistance: Center contact 8mΩ Max.
Outer contact 8mΩ Max.
Insulation resistance: more than 5000MΩ at 500V DC
Dielectric withstanding voltage: 750V AC (r.m.s)
VSWR: 1.35 MAX. at DC to 40GHz
Insertion loss: 0.4dB MAX. at DC to 40GHz



SMP type Connectors

FLP series

- The SMP interface is a subminiature interface in the same size as MMCX type connector with a frequebcy range of DC to 40GHz.
  For airtight application, hermetic-seal type receptacle can be also provided.
- The SMP interface is a push-on mating style connector which was developed in response to high-density and higher frequency use.
- The SMP interface is a subminiature interface in the same size as MMCX type connector with a frequency range of DC to 40GHz.
- For airtight application, hermetic-seal type receptacle can be also provided.
- Applicable standard「MIL-STD-348A」(Compatible with GPO™ by Gilbert)

■SPECIFICATION

Characteristic Impedance: 50Ω
Frequency range: DC to 40GHz (straight type)
DC to 26.5GHz (right-angle type)
Rated Voltage: AC 335V AC (r.m.s.)
Contact resistance: Center contact 6 mΩ Max.
Outer contact 2mΩ Max.
Insulation resistance: More than 5000MΩ
Dielectric withstanding voltage: 500V AC (r.m.s.)
VSWR: 1.5 MAX. at 40GHz (straight type)

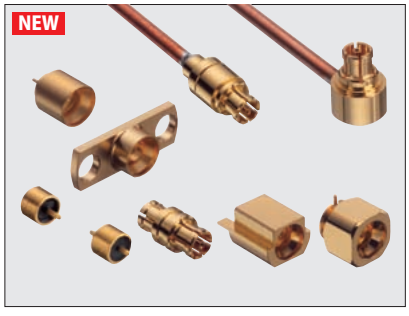
MCX type coaxial connector conforming to IEC61169-69 standard

FLCX series

- FLCX series of MCX coaxial connectors conform to the IEC61169-69 standard, and is a small-sized snap-on coaxial connector. The MCX coaxial connector is approximately the same size as the SMB connector, so that the MCX coaxial connector supports high density mounting.
- The 50Ω impedance connector conforms to the IEC61169-69 standard.
- "You feel a click" from the MCX coaxial connector and not from the SMB coaxial connector.
- Frequency-characteristic connector-and-cable assemblies are available.
- The 50Ω series of connectors conforming to the IEC61169-69 standard and 75Ω series matching impedance products are available.
- Applications: Information-communication systems, Car navigation systems, antennas for GPS, PHS cell stations, etc.

■SPECIFICATION

Characteristic impedance: 50Ω/75Ω
Insulation resistance: More than 1,000MΩ Min. at DC
Dielectric withstanding voltage: 500V AC (r.m.s.) for up to one minute
Contact resistance: 10mΩ Max.
Insulation resistance: 50Ω: Less than 1.30 at DC to 6.0 GHz 75Ω: Less than 1.20 at DC to 2.0 GHz
Mating cycle: 50Ω: 500 75Ω: 100



SMPM type connectors

FLPM series

- The SMPM interface is more subminiature than SMP interface with higher frequency range of DC to 60GHz.
  For airtight application, hermetic-seal type receptacele can be also provided.
- The SMPM interface is a push-on mating style connector which was developed in response to high-density and higher frequency use.
- The SMPM interface is more subminiature than SMP interface with higher frequency range of DC to 60GHz.
- For airtight application, hermetic-seal type receptacle can be also provided.
- Applicable standard「MIL-STD-348A」(Compatible with GPPO™ by Gilbert)

Conversion adapter

FN/FFA/FLA series

- Conversion adapter is used to evaluate an antenna and to measure signals from the antenna.

■SPECIFICATION (Reverse-type)

	N type	TNC type	SMA type
Adapter type	RN-(P)-N(J) N(P)-RN(J)	SMA(J)-RTNC(J) N(P)-RTNC(J)	SMA(P)-RSMA(P) SMA(P)-RSMA(J)
Frequency range	DC ～ 3GHz		DC ～ 12GHz
Characteristic impedance	50Ω		
VSWR	1.2or less		

Coaxial Antenna

Antenna

For Antenna

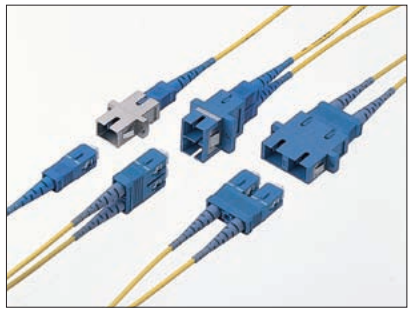
- 2.4 GHz bow-tie antenna: For wireless LAN access point (for fixed station). Colinear antenna
- Two 2.4 GHz elements or three 2.4 GHz elements (SMA connector): These antennas are installed in the panoptic location, and communications are performed by radio.

Flat antenna

- 2.4 GHz patch antenna: For wireless LAN access point (for fixed stations)
- 5.2 GHz or 2.4/5.2 GHz patch antenna: These antennas are installed in the location such as superiority of unidirectional or bidirectional communications and communications are performed by radio.

Inverted-F antenna

- 2.4 GHz antenna: This antenna is built into the chassis.(For movable stations)
- 2.4/5.2 GHz flexible antenna: This antenna is mainly built into note PCs and communications are performed by radio.



SC type Optical Connectors

LGC-300 series

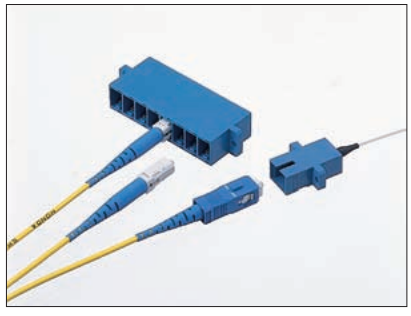
- Provides SC type plugs and adaptors of single-core-cable in vertical configuration, or double-core-cable in horizontal configuration.
- The housing is easily detachable or re-attachable due to its "Push-pull-lock" mechanism.
- The ferrule is made of zirconium.
- The housing is mainly made of plastic.

■SPECIFICATION

Items		Rated Values
Insertion Loss	50/125 GI PC Polishing	0.3dB or less
	10/125 SM PC and AdPC Polishing	0.5dB or less
Reflection attenuation	50/125 GI PC Polishing	22dB or more
	10/125 SM PC Polishing	22dB or more
	10/125 SM AdPC Polishing	40dB or more

Cable assembly

- In case of cable assembly of coaxial connector, we are providing them the cable for general, specific cable, also providing forming assembly of semi-rigid cable for customer requirement.
- If you have any question or inquiry, please feel free to contact us.
- Applications: Measurement, Communication equipment, Internal and external wiring for antennas



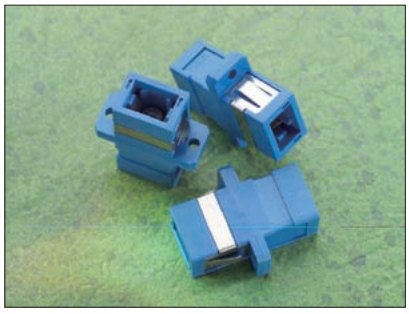
SC type Simplified Optical Connectors

LGC-SR300 series

- These connectors have simplified the configuration of the plug and adaptor of SC and SC2 types.
- Consists of simplified plugs and receptacles. The simple receptacles can be connected to plugs of SC or SC2 type.
- The SC type simplified receptacle accepts a single core cable, while the SC2 type receptacle handles eight core cables.
- The simplified plug accepts a single-core cable, and can be connected to an 8-core cable receptacle.
- The ferrule is made of zirconium.

■SPECIFICATION

Items		Rated Values
Insertion Loss	10/125 SM PC and AdPC Polishing	0.5dB or less
Reflection attenuation	10/125PC Polishing	22dB or more
	10/125 SM AdPC Polishing	40dB or more



Simplex SC-to-SC2 Conversion Adapters

LGC-AP30 ( )

- SC type simplex plug can be connected with SC2 type adapter.
- The dimension of the conversion adapter is the same as simplex SC type adapter, so the conversion adapter can be mounted on the board as usual mounting-hole dimensions.

■SPECIFICATION

Insertion loss: 0.3 dB or less (SM, GI)
Split sleeve material: Zirconia or phosphor bronze

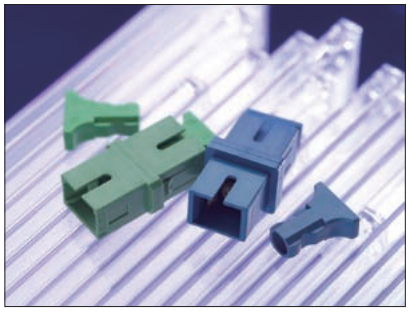
SC Type 4-Port Adapters

LGC-H4A313 ( )
LGC-SH4A313 ( ) [With shutter]

- SC type simplex plug can be connected with 4-port type adapter.
- Makes high-density mounting.
- Provides an adapter with shutter.
- Capable of connecting an SC type fixed optical attenuator.

■SPECIFICATION

Insertion loss: 0.3 dB or less (SM, GI)
Light-shielding amount (for adapter with shutter): 15 dB or more
(measured on light axis)
Split sleeve material: Zirconia or phosphor bronze
(The adapter with shutter is available only for zirconia split sleeve.)



SC Type Vertical Simplex Adapters with Latches for PCBs

LGC-AM30 ( )

- Component count has been reduced by combining the components of latches and adapter housing.
- The flange size of the SC type adapter has been reduced than predecessors, so that the adapter can be mounted on the PCB, saving in board space.
- Capable of connecting an SC type fixed optical attenuator.

■SPECIFICATION

Insertion loss: 0.3 dB or less (SM, GI)
Split sleeve material: Zirconia or phosphor bronze
Color of housing: Blue or green

Ringed removal prevention unit for SC-type plugs

LGC-PRT302 series

- The unit can also be attached to the existing SC-type plugs.
- Rotating the ring locks the cable in place, ensuring a constant connection with the plug.
- An RFID IC tag can be embedded within the unit, resulting in a system that offers better cable management.
- A variety of different units and rings are available.

■SPECIFICATION

External Dimensions・・・・・・・12.7×8.9×32.0 (mm)
Unit, ring colors・・・・・・・Blue, red, green etc
(please enquire about other colors) Assembly is optional
Size of IC tag that can be embedded・・・・・・・External diameter φ 4.0 mm or less, thickness of 0.45mm or less

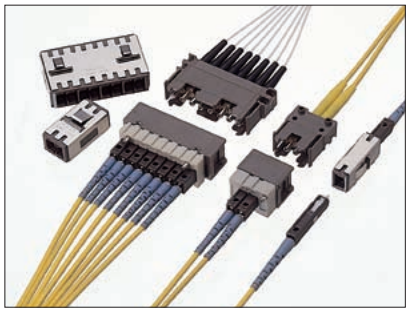
Ringed removal prevention unit for SC2-type plugs

LGC-PRT321 series

- Attachment of the unit renders the SC2-type plug inoperable, meaning essential cables cannot be removed accidentally.
- Different colors make identifying cables and providing warning labels easier.
- The unit can be attached and removed using the special attachment/removal tool for SC2-type plugs.

■SPECIFICATION

External Dimensions・・・・9.8×6.7×20.0 (mm)
Colors・・・・・・・Red (please enquire about other colors)



MU type Optical Connectors

LGC-600 series

- Provides optical connectors for high density mounting with the use of a thin zirconium ferrule (1.25mm diameter).
- Optical connector plug can be interfaced through a plug-in or adaptor type connector.
- The optical connector plug can be easily inserted or extracted due to its push-pull lock design.
- The plug-in-type housing has a self-lock structure whereby pressure is not applied onto the back panel when it is attached.

■SPECIFICATION

Items		Rated Values
Insertion Loss	50/125 GI PC Polishing	0.3dB or less
	10/125 SM AdPC Polishing	0.5dB or less
Reflection attenuation	50/125 GI PC Polishing	22dB or more
	10/125 SM AdPC Polishing	40dB or more

6.25mm Pitch MU type 2-Port Adapters

LGC-2A632 ( )
LGC-2SA632 ( ) [With shutter]

- The 6.5mm pitch of the adapter is the same as plug mounting pitch which is adapted for optical transceivers.
- Provides the adapter with shutter.
- Capable of connecting an MU type fixed optical attenuator.

■SPECIFICATION

Insertion loss: 0.3 dB or less (SM, GI)
Light-shielding amount (for adapter with shutter): 15 dB or more
(measured on light axis)
Split sleeve material Zirconia or phosphor bronze

Housing for Cost-effective MU type Plug

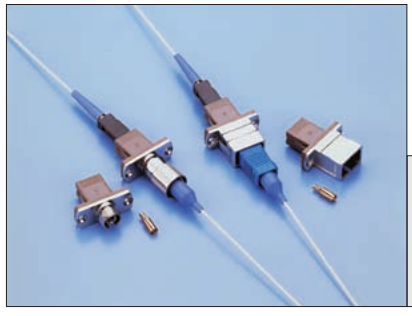
LGC-PH638 ( )

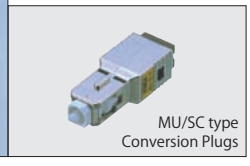
- Achieves lighter weight and lower-cost housing with a stopper made of resin material.
- A Kevlar optical cable and a plug housing are swaged together by using a tool.
- Because parts are preassembled, assembly can be easily performed by using an assembly tool.

■SPECIFICATION

Applicable outside diameter of optical cable	1.1 mm
Color of boot	Blue or lilac

Note: This series does not include a ferrule.





MU/SC type
Conversion Plugs

MU to SC type (FC type) Conversion Receptacles

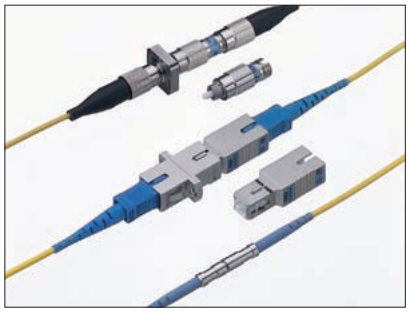
LGC-A600/A302 (A110) series

- This conversion receptacle is capable of interfacing between MU type plugs and SC (FC) type receptacles.
- The split sleeve for conversion is made of phosphor bronze.
- Stable optical characteristics are obtained.

MU to SC type Conversion Plugs

LGC-P302/A600 series

- This conversion plug is capable of interfacing between MU type plugs and SC type receptacles.
- The split sleeve for conversion is made of phosphor bronze.
- Stable optical characteristics are obtained.



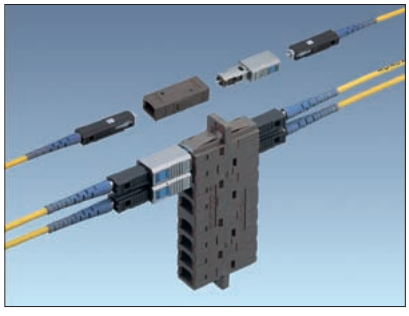
Fixed Optical Attenuators

LGA series

- Provides FC, SC, and inline type attenuators.
- The plug and adaptor of FC and SC type attenuators are an integral structure.
- The MU, FC, SC or push-in-type plugs can be mounted on both ends of the inline type attenuator.
- Available in two types of attenuators in terms of optical input durability, conventional products (up to 10 milliwatts), and high-power products (up to 100 milliwatts).
- Can be used for the adjustment of optical line level between transmission and reception, and experiments in optical communications.

■SPECIFICATION

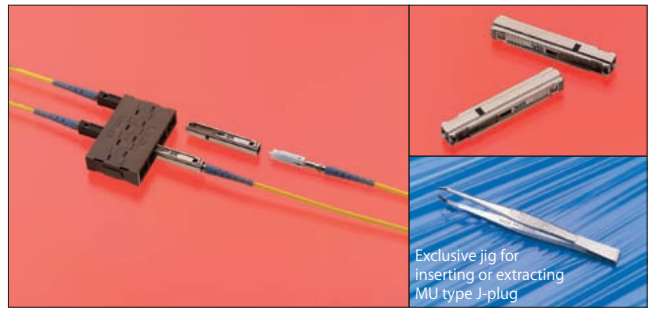
Items	Specifications		
	Insertion Loss	Return Loss	Optical input durability
50/125 GI FC/SC/Inline PC Polishing	3±1.0dB 5±1.5dB 10±1.5dB 15±1.5dB 20±1.5dB	22dB or more	～10mW
10/125 SM FC/SC/Inline PC Polishing			
10/125 SM FC/SC/Inline AdPC Polishing			
10/125 SM FC/SC ad PC Polishing (for high power)	5±1.0dB 10±1.5dB 15±1.5dB 20±1.5dB 25±1.5dB 30±2.5dB	40dB or more	～100mW
8/125 SM FC/SC Ad PC Polishing (for high power)			



MU type Fixed Optical Attenuators

LGA-S600 series

- Inserting a fixed optical attenuaor between MU type plug and receptacle can attenuate light.
- Bending characteristics are enhanced.
- MU type 6.25mm pitch 8 contact adapter is under development.



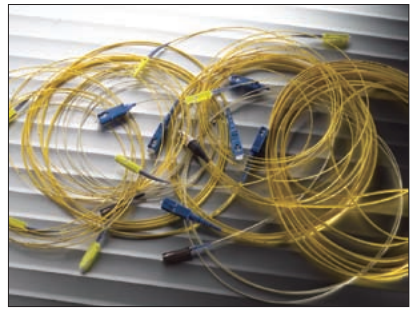
MU Type Fixed Attenuators

LGA-S6 ( ) LC

- These narrow pitch MU type fixed attenuators can be mated with a MU type adapter or simplified receptacle.
- Can be multiply connected to a 4.5mm MU adapter for multiple ports, or to a backboard housing for high-density mounting.
- A conventional MU type J-plug can be inserted into the attenuator. In addition, the J-plug can be easily extracted by a jig.
- The attenuators have a metal housing, thus ensuring high bending resistance.
- Can be used for the adjustment of optical power for transmission equipment, switching equipment, etc.

■SPECIFICATION

Item No.	Attenuation and Telerance(dB)	Item No.	Attenuation and Telerance(dB)
LGA-S601LC	1±0.5	LGA-S607LC	7±1.5
LGA-S602LC	2±0.5	LGA-S608LC	8±1.5
LGA-S603LC	3±1.0	LGA-S609LC	9±1.5
LGA-S604LC	4±1.0	LGA-S610LC	10±1.5
LGA-S605LC	5±1.5	LGA-S615LC	15±2.0
LGA-S606LC	6±1.5	LGA-S620LC	20±2.0



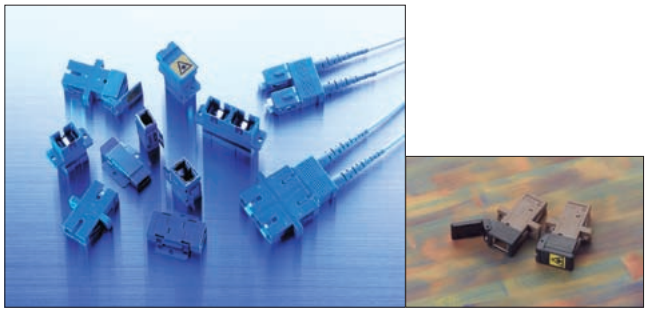
Optical Cable Assembly

■SPECIFICATION

Spec. / Ferrule polishing	Applicable connector series	Reflection attenuation		Insertion loss		Applicable cable diameter	Applicable cable length
		Single mode	Multiple mode	Single mode	Multiple mode		
AdPC	FC、SC、MU	40dB or more	35dB or more	0.5dB or less	0.3dB or less	φ0.9・φ1.1・φ1.5・φ2.0・φ2.8・Each SM, MM 2port code	From 10cm in increments of 5cm
PC	FC、SC、MU	22dB or more	22dB or more	0.5dB or less	0.3dB or less		
APC	FC、SC、MU	60dB or more	—	0.5dB or less	—		
Flat	FC、SC、MU	—	—	1.0dB or less	0.6dB or less		
8 degree of tapre	FC、SC、MU	60dB or more	—	—	—		

Please contact us for manufacturing master cords or assembling a holding cable for polarizen wave and a connector.

Connectors for Optical Fiber(with Shutters)



SC and MU Type Adapter with Shutter

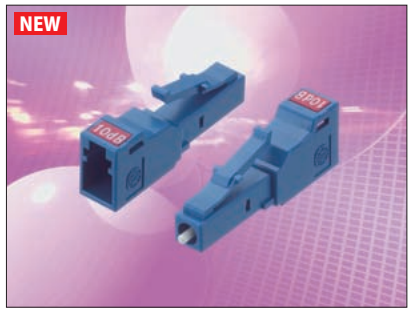
Connectors with Shutter series

- By ensuring compatibility with this connector, SC type connectors and MU type connectors, keeping the layout of conventional adapters, the adapter can be mounted. This connector can mate with conventional plugs or optical fixed attenuators.
- The external type shutter can subsequently be attached to a conventional adapter. Just fit the external shutter onto the conventional simplex adapter aleady mounted, and the adapter becomes an adapter with a shutter.
- When inserting or extracting a conventional plug using a tool or by hand, the built-in shutter automatically opens orcloses without contacting with a ferrule. In the case of external type shutters, open the lid that is placed in front of the adapter, and insert a conventional plug. When extracting the plug, the shutter is automatically closed.

■SPECIFICATION

Insertion loss: 0.3dB or less (typical value: 0.2dB or less)
Light shielding quantity: 15dB or more on optical axis (typical value 25dB or more)

Connectors for Optical Fiber(LC type)



LC type fixed optical attenuator

LGC-700 series

- The LC type attenuator is inserted between an adapter and a plug , so that optical power is attenuated. The optical attenuator can be used for adjusting input and output, optical transmissions, etc. with the optical module.
- Since the housing is integrally molded, housing stiffness is increased.

■SPECIFICATION

For use with fiber: SM
Attenuation and tolerance: 1 ～ 4±1.0dB 5 ～ 14±1.5dB 15 ～ 20±2.0dB
Return loss: 40dB or more

Connectors for Optical Fiber(with Shutters)

SC Plug with Shutter

Connectors with Shutter series

- Since the SC plug with shutter conforms to the SC type plug (JIS F04 type), the SC plug with shutter can be connected to equipment that equip conventional SC type adapters. Operability of the retaining plug is the same as for conventional SC type plugs.
- By mounting a spring for shutter switching in the plug, the shutter is automatically closed.
- Features mechanism for misinsertion prevention
- Because a number of components are shared between the SC type plugs with shutters and conventional SC type plugs, the conventional swaging tool and assembling method can be used.

■SPECIFICATION

Optical Characteristics
Insertion loss: 0.5dB or less (typical value: 0.2dB or less)
Return loss: 40dB or more (typical value: 51dB or more)
Light shielding quantity: 15dB or more on optical axis (typical value: 31dB or more)

Connectors for Optical Fiber(LC-MU conversion plug)

LC-MU conversion plug

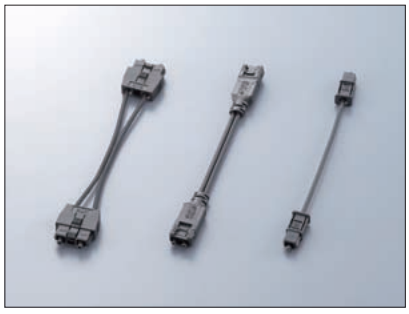
LGC-700 series

- The conversion Plug is inserted into an LC type adapter LC type receptacle, optical module, etc. so that the plug can be mated with an MU type plug. By converting the harness with an MU type plug that has been laid, to the LC type plug form, the LC type plug can be utilized.
- Provides plugs for SM and GI fiber cables. The conversion plug can be used in conformity to a fiber used.

■SPECIFICATION

For use with fiber: SM GI
Insertion loss: (SM) 1.0dB or less (GI) 0.6dB or less
Return loss: (SM) 40dB or more (GI) 22dB or more
Housing color: (SM) Blue (GI) Beige

Connectors for Optical Fiber(POF)



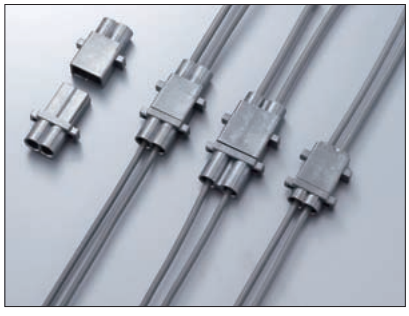
LGP series

SMI Optical Connectors LGP-Z0005PA (For use with optical fiber: SI-POF 980/1000 μm)
- Duplex optical connectors for all plastic multi-mode optical fibers (POF)
- Supports high-speed link. Conforms to the IEEE 1394b, S200, S400 standard.
- End face treatment: Hot plate method. Cable clamp: Crimping method

PN Type F07 Optical Connectors LGP-Z0007 series (For use with optical fiber: SI-POF 980/1000 μm)
- Duplex optical connectors for all plastic multi-mode optical fibers (POF)
- The ferrule and housing are integrally molded: The cable contact is crimped with a fiber clamp
- PN type optical connectors with a lever lock and fliction lock type
- End face treatment: Hot plate method
- Possible to install PULL TAB

F05 Optical Connectors LGP-Z0006PA (For use with optical fiber: SI-POF 980/1000 μm)
- Simplex optical connectors for all plastic multi-mode optiacl fibers (POF)
- The ferrule and housing are integrally molded. The cable contact is crimped with a fiber clamp.
- End face treatment Hot plate method.
- With simplified attachment, the F05 optical connectors can be used as a quasi F07 optical connector.

Power Connectors



Connectors for High Dielectric withstanding voltage (Connectors for Lamp-to-Ballast Connections)

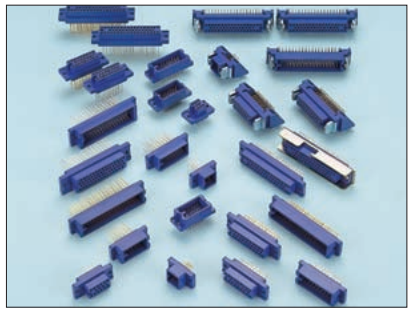
PCL series

- The PCL series connectors have been designed for connections between lamps and power supplies which are mainly used for projectors.
- Supports 5 ～ 15kV of dielectric withstanding voltages, The 15kV type connector can be selected from 3kinds of key forms, Other voltage type connectors are selected from 2 kinds of key forms.
- The housing utilizes LCP resins, which have an advantage over UV.
- The contacts are pressed. The connector utilizes crimping contacts.

■SPECIFICATION

Number of contacts: 2
Rated voltage: 250V AC
Rated current: 7A
Contact resistance: Less than 20mΩ
Storage temperature: -20 ～ 150℃
Dielectric withstanding voltage: 5 ～ 15kV AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 500V DC

Rectangular type Connectors



Rectangular type Connectors

MR series

- Smaller-sized, rectangular, connector series developed for machine tools, features multi-contact universal connectors providing high reliability and cost efficiency.
- The case are robust, smaller-sized, and light-weight, and employ a new mechanism with a spring-and-screw lock that especially excels in earthquake proofing applications.
- The flat terminals provide secure and stable connetions, and improve cost efficiency.
- These male and female connectors can be easily mated by virtue of the mating guide. Since the case are one-touch-locking with lock springs, the housings are easily detachable and re-attachable.

MRP series

- The MR series connectors provide crimping type high-perfomance multi-contact rectangular connectors.
- Because these connectors are compatible with the conventional MR series of connectors, MRP series can be used in combination with the MR series of soldering type and/or the wire wrapping type connectors.
- Because a crimping machine is used for connections, terminals can be connected with wires at a rate of 3,000 per hour, resulting in cost efficiency.

MRH series

- Developed for robotic insertion to extensively reduce the time of installing parts on PCB's, this connector series takes advantage of the high reliability of the MR series of connectors that have been favorably accepted by users.
- Compatible with the conventional MR or MRP series of connectors.
- Available in two types: straight and right-angled connectors.

MRF series

- Like the MRH series of connectors, MRF series are rectangular multiple-contact connectors that have been developed for robotic insertion.
- The board-to-board type connectors can be connected horizontally, vertically, or in parallel.
- Available in two types of straight and right-angle connectors.

■SPECIFICATION

Number of contacts: 8, 16, 20, 25, 34, 50, or 60 (MR series)
8, 16, 20, 25, 34, or 50 (MRP series)
20 or 50 (MRH series)
96 (MRF series)
Rated voltage: 300V AC (r.m.s.)
Rated current: 3A
Dielectric withstanding voltage: 1,000V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ at 500V DC
Contact resistance: 7 (30)★mΩ or less (MR series)
10mΩ or less (MRP series)
20 (30)★mΩ or less (MRH, MRF series)
( )★is right-angle type

Round Type Connectors

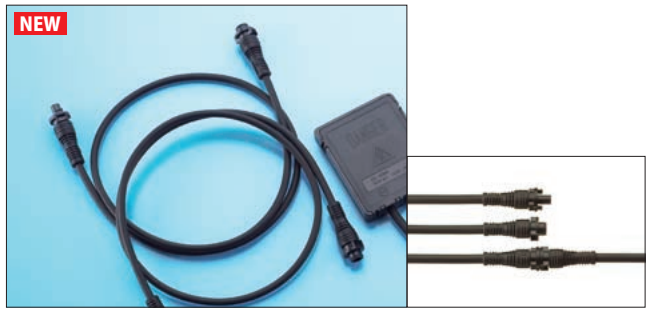
RZP series

- Since the main body of the connector is entirely made of plastic, the connector is reduced in size and weight.
- Because the connector has a simple locking mechanism, the connector is easily capable of mating for use with other connectors.
- Makes the connector waterproof (IPX5 or equivalent) during mating.
- The connector can be utilized as a relay connector.
- Number of contacts: 4 or 5 (We plan to develop otner connectors which have various numbers of contacts.)

■SPECIFICATION

Rated voltage: 250V AC
Rated current: 1A for 4contacts, 0.5A for 5contacts
Storage temperature: -20 to 60℃
Mating cycle: 100

Round Type Connectors



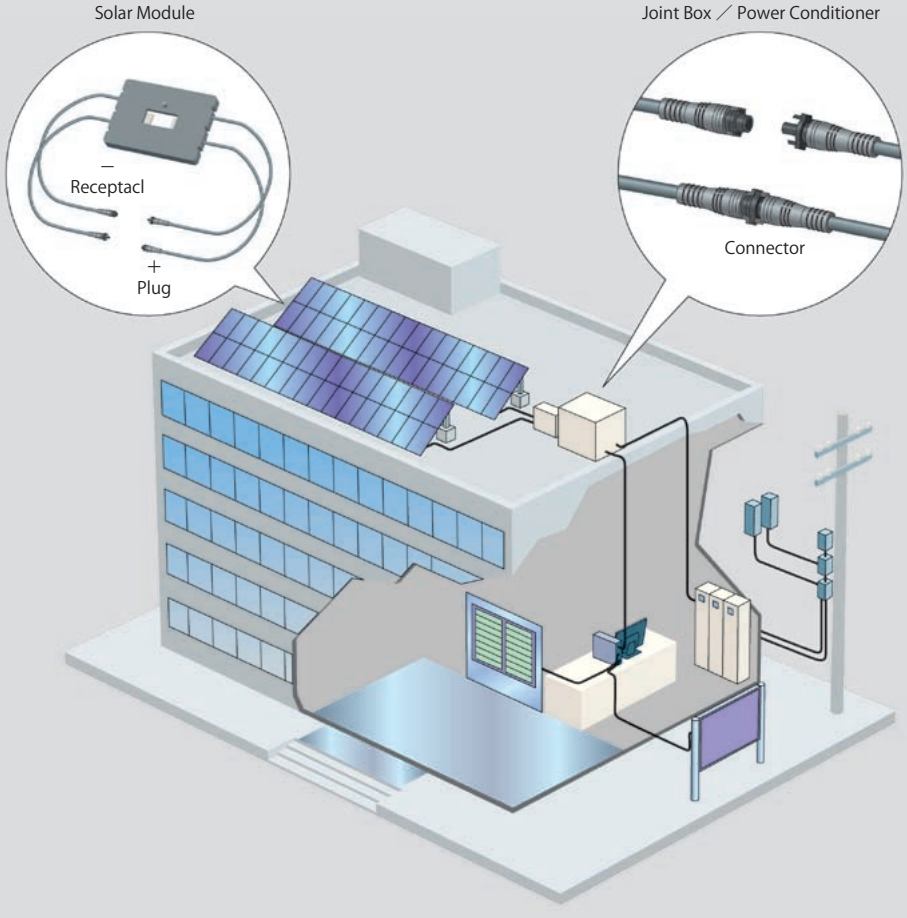
Connector for PV

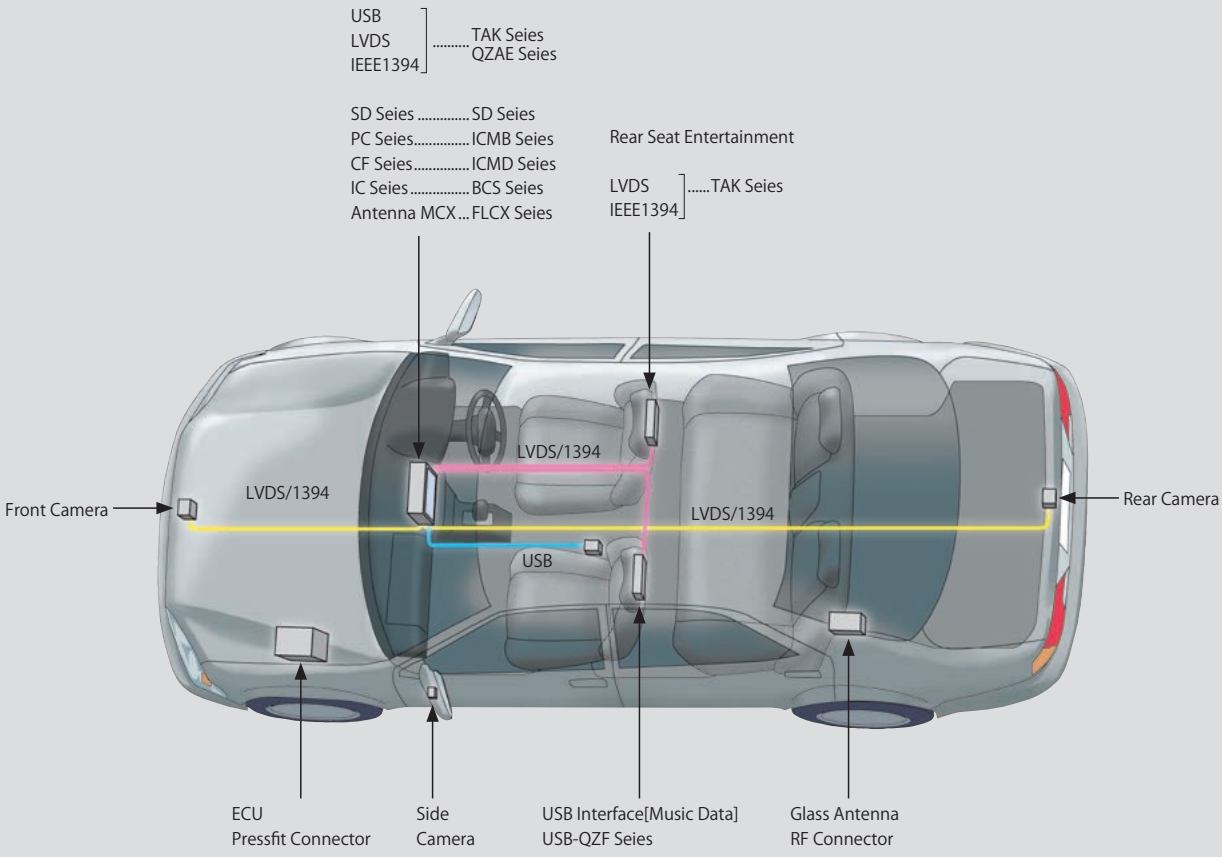
RZM series

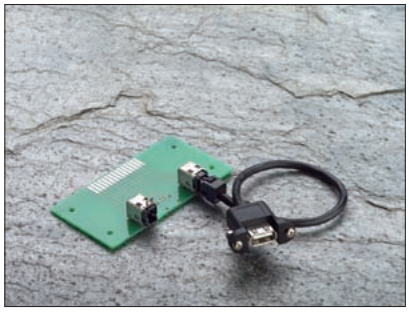
- Unique lock mechanism structure.
  Lock release without brake when cable is loaded strongly.
- Safety structure for turning on electricity.
  Mating sequence: water proof→connecting→Lock
- Easer cable assembly at filed due to simple structure.

■SPECIFICATION

Voltage and Current rating: 600V/1000V DC • 20A
IP class: IP67 (Un-mating: IP2X)
TUV certification (DIN VDE 0126-3) Certificate NO R 50110821
Connector with lock (Lock strength of forcible withdrawal: Min 89N.)







Connectors for Car Electronics

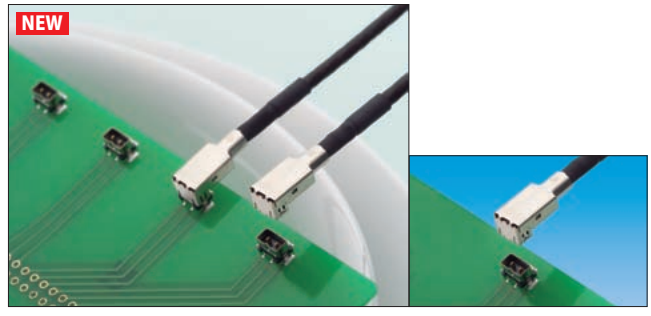
TAK series

- The TAK series are connectors for car-mounted navigation system connections and car-mounted information-and-communications terminals, etc.
- These connectors have been developed conforming to the USB2.0 standard, meeting the need of including locking mechanisms.
- Provided for connectors with screw-lock flange, which are selectable with or without the flange.
- Applications: Car-mounted navigation systems , car-mounted information-and-telecommunications equipment, drive recorders, car audio systems.

■SPECIFICATION

Number of contacts: 4, 6
Rated voltage: 30V AC (r.m.s.)
Rated current: 1A
Storage temperature: -40 to +105℃
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ
Mating cycle: 50

Connectors for Car Electronics



Connectors for Car Electronics

QZAE series

- The connector is an internal connector, which is capable of electronically transferring data without deterioration rates by using high-speed serial transmission with a single differential cable.
- Applications: Car-mounted navigation systems, Picture Transmission Equipment for CAR. Printer, Digital video camera.

■SPECIFICATION

Number of contacts: 2
Rated voltage: 125V AC
Rated current: 1A
Operating temperature: -30℃～+85℃
Storage temperature: -40℃～+85℃
Information transmission rate: 1.2Gbps
Differential impedance: 100Ω
Dielectric withstanding voltage: 500V AC (r.m.s.)
Insulation resistance: More than 1,000MΩ

HONDA TSUSHIN KOGYO CO., LTD.

Head Office 6-18-12, Megurohon-cho, Meguro-ku, Tokyo 152-8520 JAPAN
PHONE +81-3-3714-1161
FAX +81-3-5721-7090

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http://www.honda-connectors.co.jp/