NEW

2mm Hard Metric Coaxial Connector

PO21M, PO51M, PO82M Series (IEC 61076-4-101 Compliant)

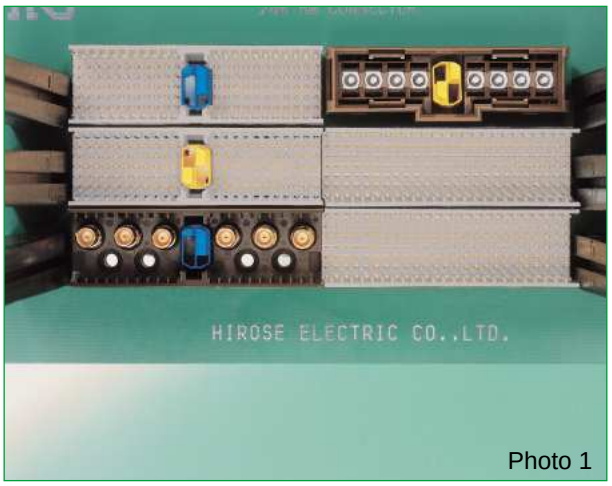


Photo 1

■Summary

P021M, PO51M, and P082M connector series are a plug-in type coaxial contact and an applicable housing case compliant with the 2mm hard metric standard (IEC 61076-4-101).

PO21M series: Housing

PO51M series: 50Ω coaxial contact

PO82M series: 75Ω coaxial contact

Mounted on the same board as the 2mm hard metric connector


Photo 2

■Features

1. Profile complies with 2mm hard metric

This connector can be mounted on the same board as the hard metric connector. (Refer to Photos 1 and 2.) It uses Compact-PCI designated key options to identify a 3.3V or 5V system.

(Hirose's MU optical fiber series can also be mounted on the same board as the 2mm electric system connector. Refer to Photo 1)

2. Flexible Design allows for various terminations

The housing (P021M series) allows for both cable mount as well as board mounted connectors. The back plane side allows both a 50Ω and a 75Ω straight jack as well as a right angle 50Ω jack. The daughter card side allows both a 50Ω and a 75Ω straight plug as well as a right angle 50Ω board mounted jack.

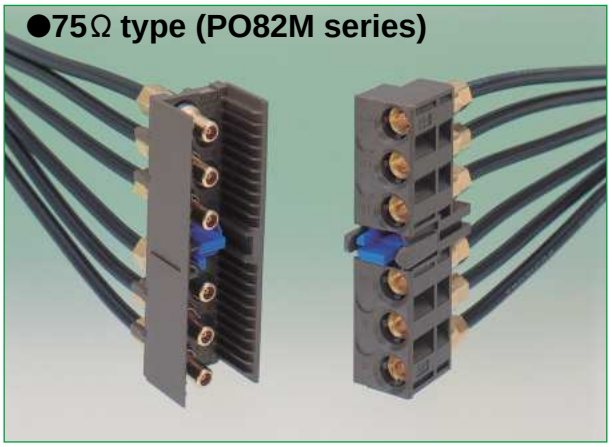
3. 50Ω type and 75Ω type

Hirose's unique technology assures that the high frequency characteristics of the 50Ω impedance type (P051M) and 75Ω impedance type (P082M) are consistent between the fully mated position and a mated position with a 1mm gap.

Note: The P082M connector opening is designed in the HRS original form in order to enhance high frequency characteristics.

●50Ω type (PO51M series)

●75Ω type (PO82M series)



■Applications

- Base Station
- Digital and Analog Switch Equipment
- Digital Broadcasting Equipment
- Test & Measurement Equipment
- Factory Control & Automation Equipment

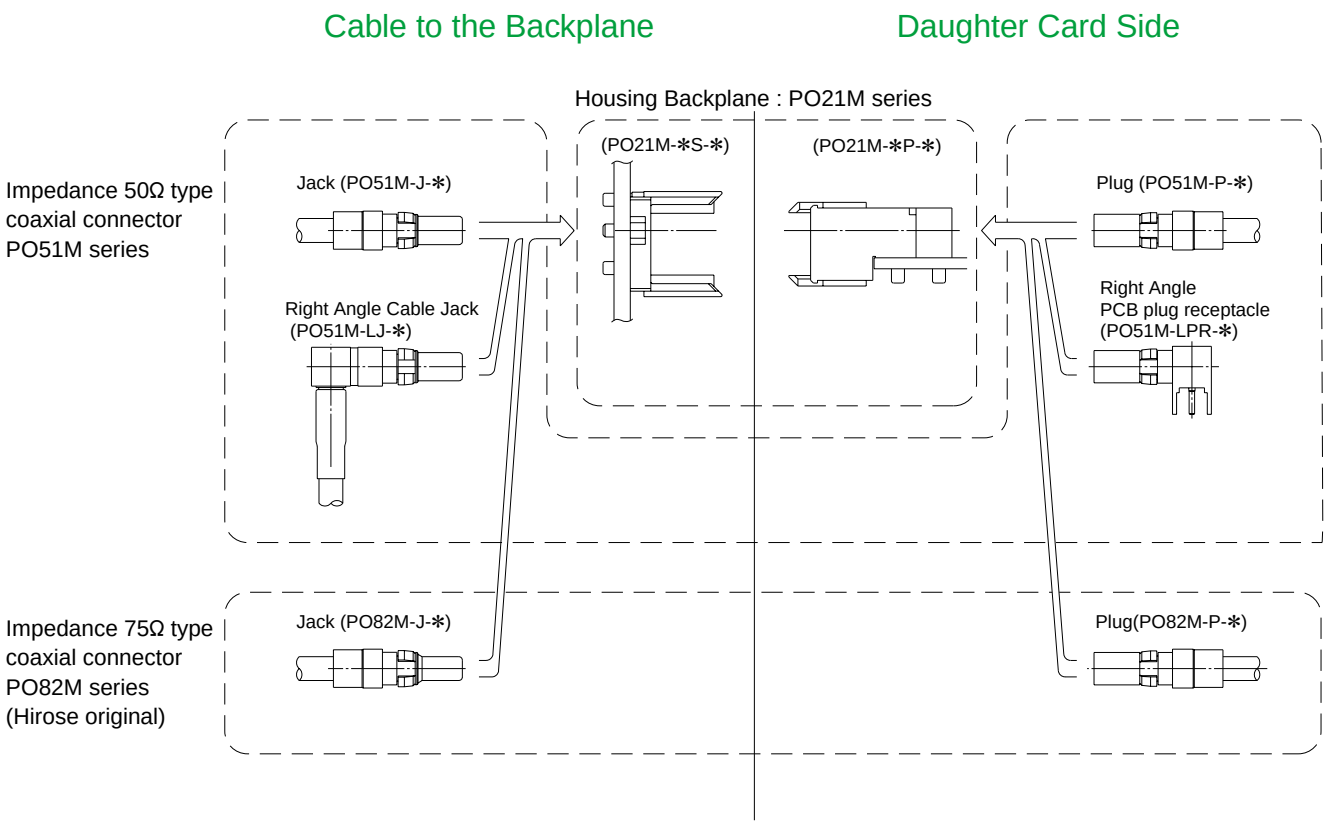
■Specification

Item	PO51M	PO82M
	Standard/Condition	Standard/Condition
Characteristic Impedance	50Ω	75Ω
Voltage Standing Wave Ratio	0～3GHz V.S.W.R.1.2 max.	0～2GHz V.S.W.R.1.2 max.
Insulation Resistance	1000MΩ/500V DC	1000MΩ/500V DC
Withstand Voltage	750V AC for one minute	750V AC for one minute
Contact Resistance	Inner : 6mΩ max. · Outer : 3mΩ max.	Inner : 11mΩ max. · Outer : 3mΩ max.

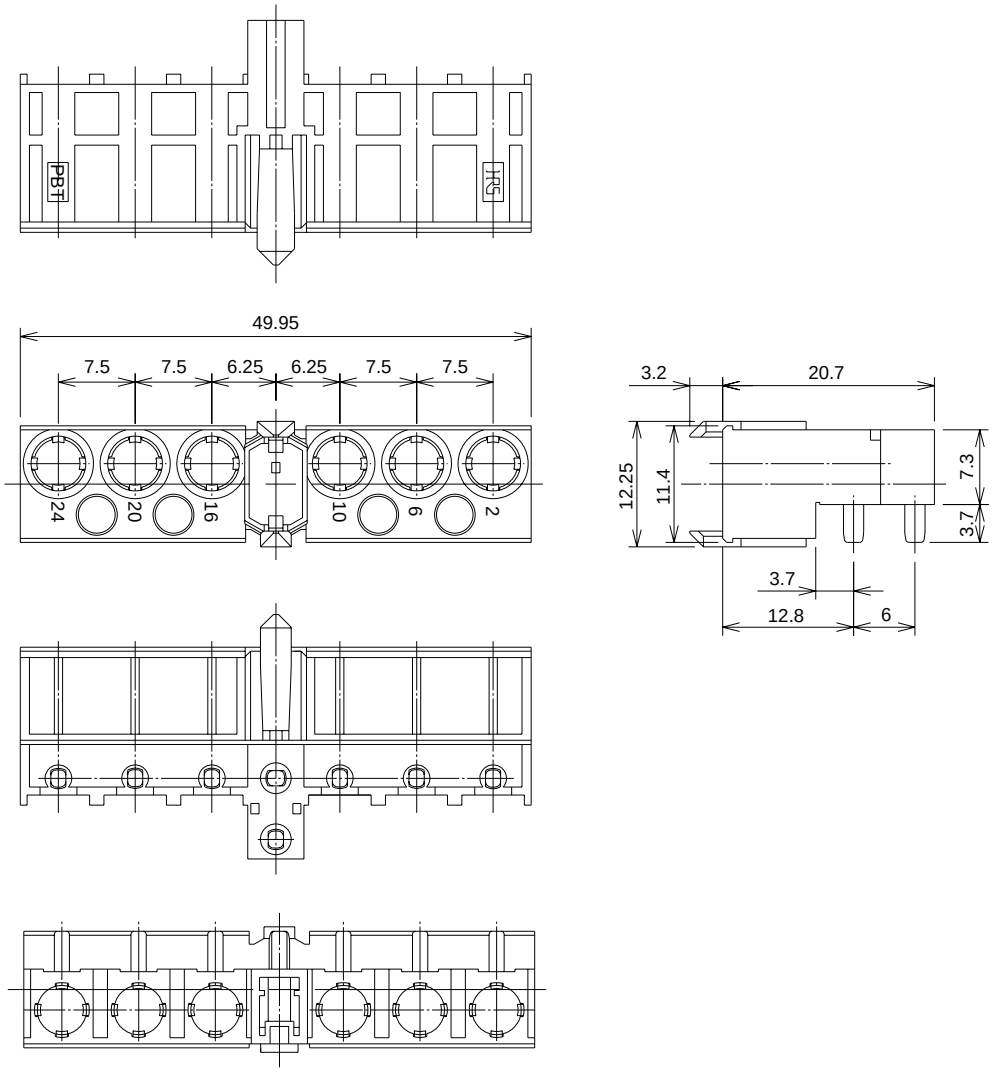
■Materials

Part	Material	Finish
Housing	PBT	——
Outer Conductor	Brass, phosphor bronze	Gold plating
Inner Conductor	Phosphor bronze, beryllium bronze	Gold plating
Insulator	PTFE	——

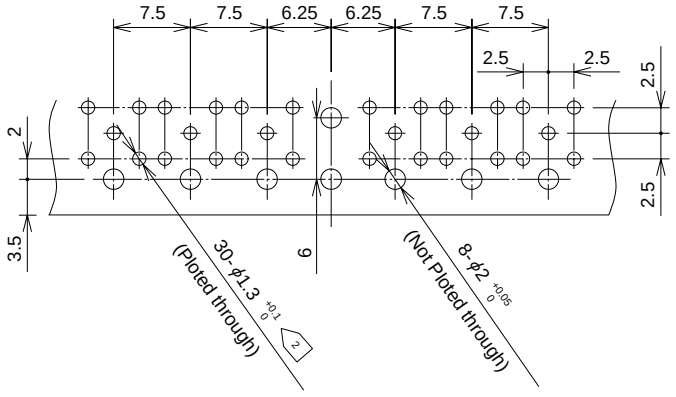
■Product Configuration



■Daughter Card Side: Coaxial 6-contact housing (IEC 61076-4-101 Compliant)



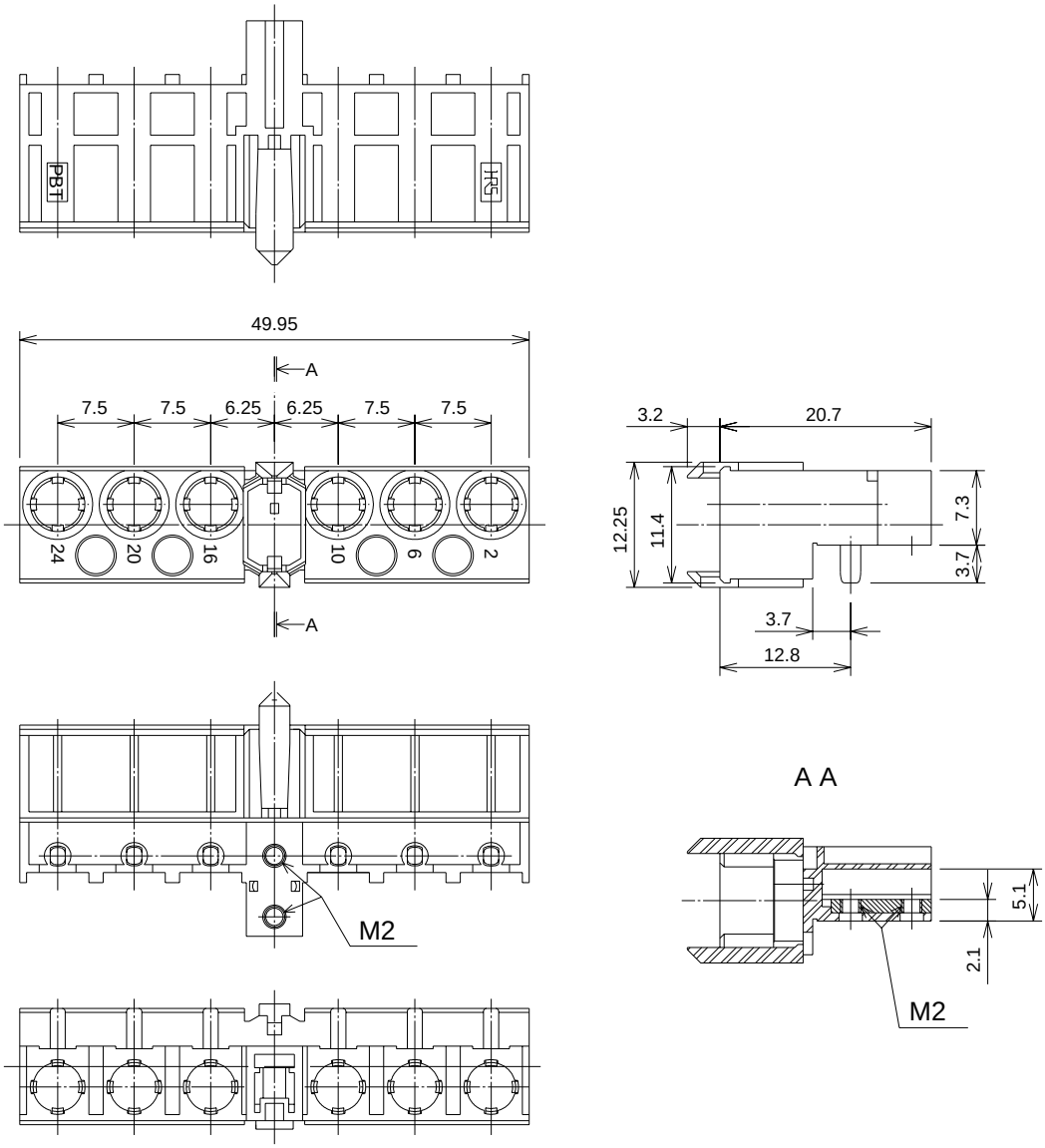
◆Recommended PCB Layout (Component Side)



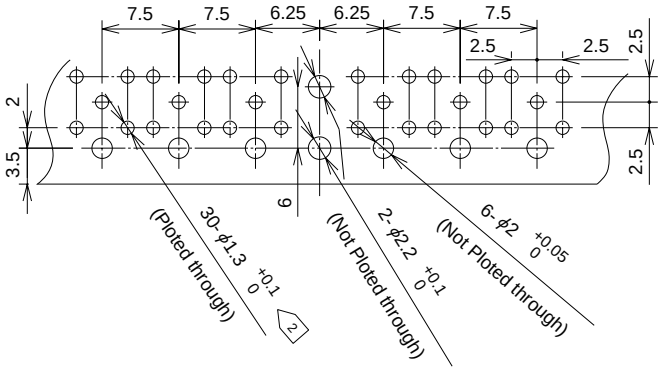
Note 1 The board hole pitch tolerance should be ±0.05mm.
2 The 30-φ1.3 hole is needed to combine and use coaxial connector PO51M-LPR-PC-1A.

Product No.	HRS No.	Remark
PO21M-6P-SA	CL330-0305-4	Compliant to IEC = Style L

■Daughter Card Side: Coaxial 6-contact housing (Nut Insert for Board Mounting)



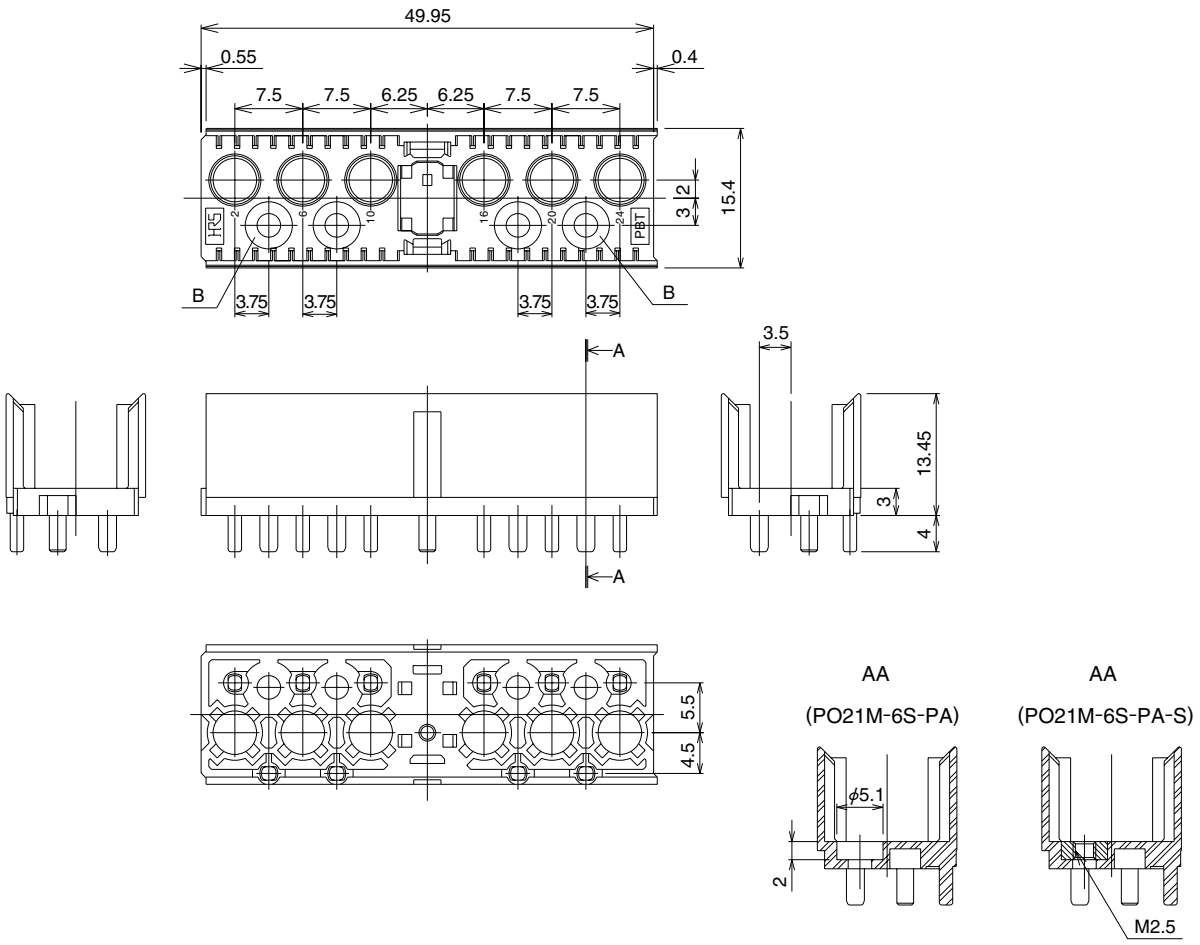
◆Recommended PCB Layout (Component Side)



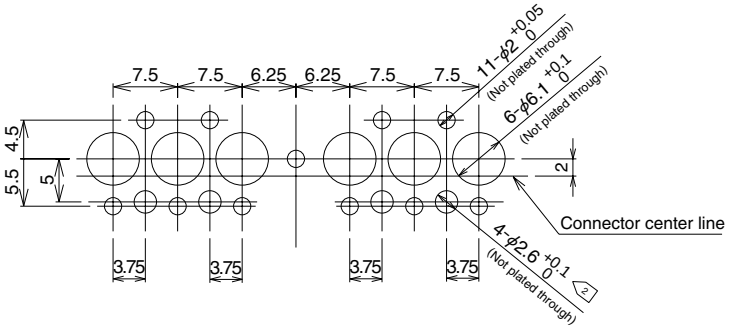
Note 1 The board hole pitch tolerance should be ±0.05mm.
2 The 30-φ1.3 hole is needed to combine and use coaxial connector PO51M-LPR-PC-1A.

Product No.	HRS No.	Remark
PO21M-6P-SA-S	CL330-0306-7	Nut insert product for mounting board

■Backplane Cable Side: Coaxial 6-contact housing



◆Recommended PCB Layout (Component Side)



Note 1 The board hole pitch tolerance should be ±0.05mm.
2 The 4-ϕ2.6 hole is needed to use and fix this product on the board by screws.

Product No.	HRS No.	Remark	
PO21M-6S-PA	CL330-0300-0	Compliant to IEC = Style L	
PO21M-6S-PA-S	CL330-0301-3	Nut insert product for mounting board	✻

✻ The above pattern shows a layout for PO21M-6S-PA.
PO21M-6-PA-S needs 2 screws (M2.5) to be inserted in area #2 as shown above.

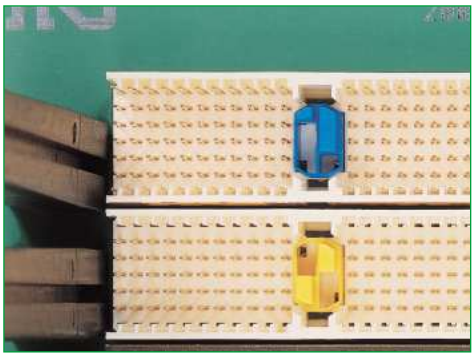
■Coding Key

These IEC 61076-4-101 compliant keys distinguish between daughter cards with 3.3V or 5V as specified by Compact-PCI. These keys are installed into the PO21M-6S and PO21M-6P type housings to prevent mis-mating.

● Product Corresponding to Compact PCI 3.3V (Yellow)

Product No.	HRS No.	Type	Applicable Connector
PCN-21-P-CK (A)	CL643-0039-3	3456	PO21M-6S type housing
PCN-21-S-CK (A)	CL643-0037-8	1278	PO21M-6P type housing

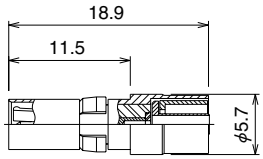
●Product Corresponding to Compact PCI 5V (Blue)



Product No.	HRS No.	Type	Applicable Connector
PCN-21-P-CK (B)	CL643-0040-2	1567	PO21M-6S type housing
PCN-21-S-CK (B)	CL643-0038-0	2348	PO21M-6P type housing

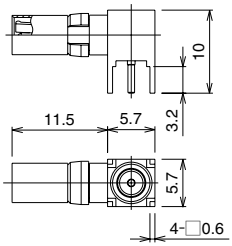
■Inline Cable Plug

Product No.	HRS No.	Applicable Cable
PO51M-P-1.5W	CL330-0320-8	1.5D-HQEW, Each kind of 1.5D-2W type cable
PO51M-P-1.5	CL330-0321-0	1.5D-HQEV, Each kind of 1.5D-2V type cable

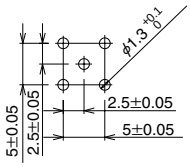


■Right Angle PCB Receptacle

Product No.	HRS No.
PO51M-LPR-PC-1A	CL330-0315-8

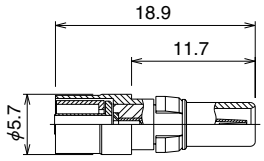


◆Recommended PCB Layout (Component Side)



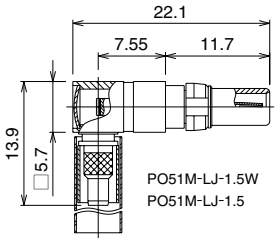
■Inline Cable Jack

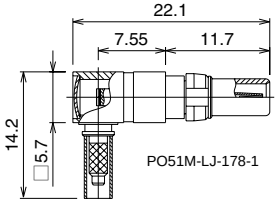
Product No.	HRS No.	Applicable Cable
PO51M-J-1.5W	CL330-0330-1	1.5D-HQEW, Each kind of 1.5D-2W type cable
PO51M-J-1.5	CL330-0331-4	1.5D-HQEV, Each kind of 1.5D-2V type cable



■Right Angle Cable Jack

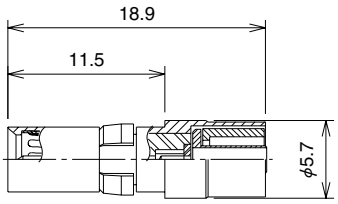
Product No.	HRS No.	Applicable Cable
PO51M-LJ-1.5W	CL330-0340-5	1.5D-HQEW, Each kind of 1.5D-2W type cable
PO51M-LJ-1.5	CL330-0341-8	1.5D-HQEV, Each kind of 1.5D-2V type cable
PO51M-LJ-178-1	CL330-0343-3	RG-178B/U





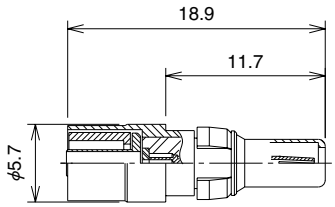
■Inline Cable Plug

Product No.	HRS No.	Applicable Cable
PO82M-P-1.5C	CL330-0350-9	1.5C-QEV, Each kind of 1.5C-2V type cable



■Inline Cable Jack

Product No.	HRS No.	Applicable Cable
PO82M-J-1.5C	CL330-0351-1	1.5C-QEV, Each kind of 1.5C-2V type cable



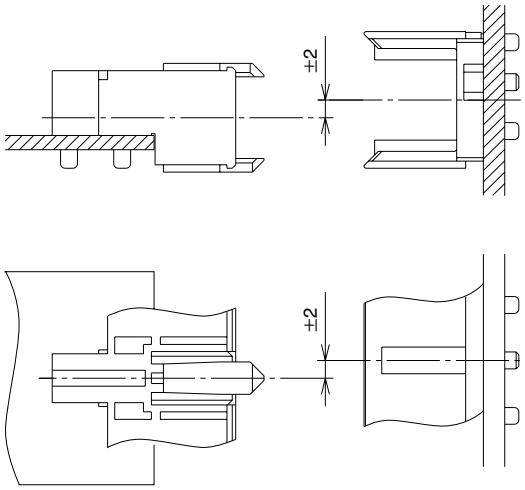
■ Extraction Jig

	Product No.	HRS No.
PO51M, PO82M Plug Jig	PO51MP-T-1	CL350-0137-6
PO51M, PJ82M Jack Jig (Common to PO51, PO72 Jack Jig)	PO51J-T-1	CL350-0038-4

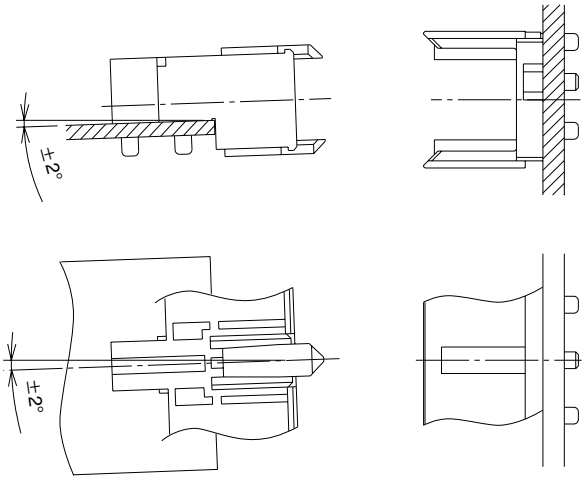
Mating Condition

The mating condition is shown as follows.

● Lateral and Longitudinal Mating

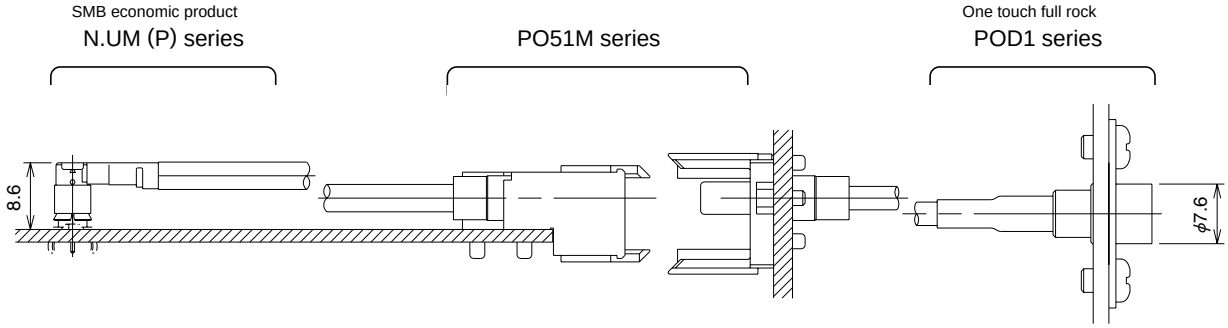


● Slant Mating

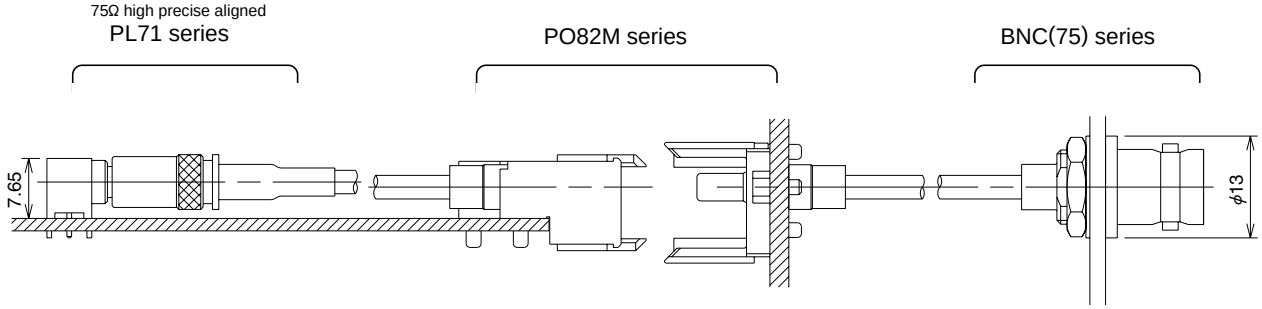


Usage

● Example of 50Ω Impedance Type (PO51M) in Combination



● Example of 75Ω Impedance Type (PO82M) in Combination



● Example of Custom Development (Mid plane Application)