

## Applications



Automotive Battery



Construction Equipment



Agriculture Equipment



High Temp



Low Profile



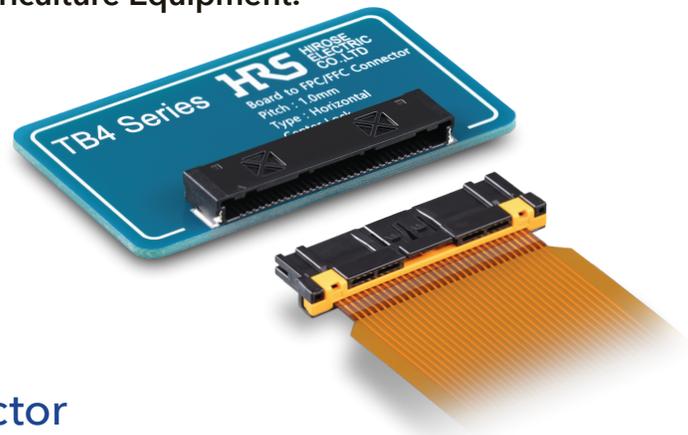
Finger Protect

## Discover Hirose's TB4 Series, a high-performance automotive FPC/FFC-to-Board connector with a 1.0mm pitch & center-lock design.

TB4 Series is built to meet automotive industry standards, it ensures vibration and heat resistance while delivering high contact reliability through a two-point contact design. Its FPC/FFC connection and compact design simplify assembly while ensuring safety with electric shock prevention and mis-insertion protection. Supporting two key code types (Black, Gray), the TB4 Series is ideal for Automotive Battery, Construction Equipment and Agriculture Equipment.

### KEY BENEFITS OF THE TB4 SERIES INCLUDE:

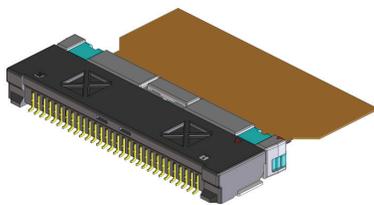
- A two-piece FPC/FFC connection simplifies assembly and minimizes size and weight.
- High reliability with vibration and heat resistance, compliant with USCAR-2 standards.
- Two-point contact design for enhanced contact reliability.
- A safe design prevents electric shock and mis-insertion, providing added protection during handling.
- Supports two key code types (Black, Gray) for secure and error-free connections.



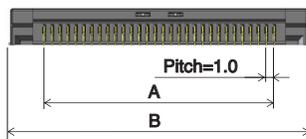
## Two-Piece, FPC/FFC-to-Board Connector

### 1mm Pitch, Single Row

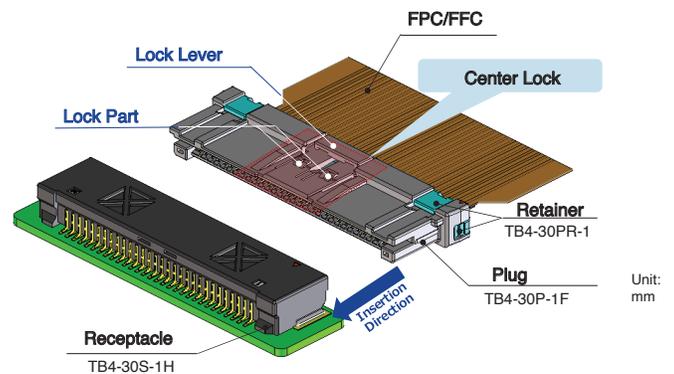
Example: 30 pos.



**Mating Height: 4.5mm, Low-profile, Slim Design Contributes to Space-saving**



### Mating Combination



Unit: mm

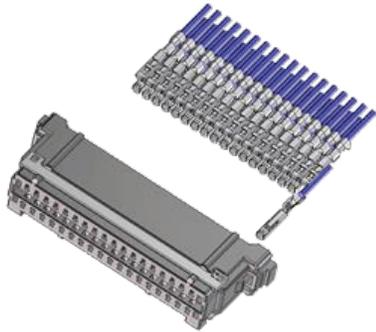
**CLICK HERE**  
FOR MORE INFORMATION

No. of Pos.	10	16	22	30
Dimension A	9.0	15.0	21.0	29
Dimension B	17.9	23.9	29.9	37.9

**CLICK HERE TO ORDER**  
SAMPLE NUMBER:  
US-TB4SAMPLE-24

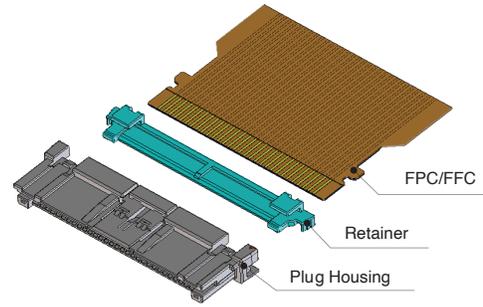
# Advantages of Two-piece FPC/FFC-to-Board Connection

## Discrete Wire Connection



- Traditional harness processes such as soldering and crimping are complex.
- Each pin requires its own contact and wire preparation.
- Insertion of contacts must be done pin by pin.
- Wire count directly contributes to an increase in overall weight.
- Additional space is needed for wire routing and bending radius.

## FPC/FFC Direct Connection Design



- A simple harness process involves inserting the FPC/FFC into the plug housing and then attaching the retainer.
- The plug side requires no additional contacts, only the FPC/FFC.
- Improves workability with FPC/FFC insertion at all once.
- Weight is reduced by switching from discrete wire to FPC/FFC.
- Enables space-saving FPC/FFC routing.

## Specifications

### Material/Finish

Component		Material	Finish, Remarks
Receptacle	Insulator	PA*1	Black, Gray / UL94V-0
	Contact	Copper Alloy	Contact: Gold Plating Lead: Gold Plating
	Retention Tab	Brass	Tin Plating
Plug	Housing	PA*1	Black, Gray / UL94V-0
	Retainer	PA*1	Orange / UL94V-0

\*1 This product satisfies halogen free requirements defined as 900ppm maximum chlorine, 900ppm maximum bromine, and 1500ppm maximum total of chlorine and bromine.

### Performance Characteristics

Rated Current	1.0A
Rated Voltage	100V AC/DC
Operating Temperature	-40 to +125°C*2
Contact Resistance	25mΩ Max.
Withstanding Voltage	500V AC for 1 min.
Insulation Resistance	100MΩ Min. (500V DC)
Mating Durability	10 times

\*2 Includes the temperature rise due to current flow.

If the heat resistance of the FPC/FFC is less than 125°C, the heat resistance of the FPC/FFC is applied.

\*3 If you have any questions about pin variation, please contact a Hirose representative.

- RoHS2 Compliant
- No. of Pos.\*3 : 10, 16, 30 pos. (Mass Production)  
22 pos. (Under Planning)



For additional information please go to  
[www.hirose.com/product/series/TB4](http://www.hirose.com/product/series/TB4)

Specifications herein are subject to change without notice.  
Contact Hirose for latest specifications, drawings, or availabilities.

STAY CONNECTED

