Product Overview

TF70 Series

HIROSE ELECTRIC AMERICAS

Applications

Automotive

Battery Packs

Control Units

P= 0.5mm

Finger Protect

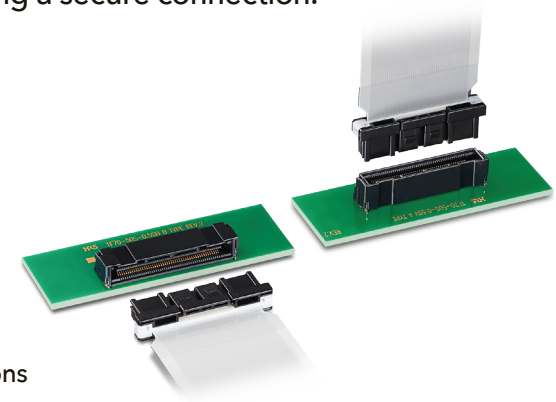
Automotive

Discover Hirose's TF70 Series, a high-performance FPC/FFC-to-Board connector engineered for automotive applications where performance and reliability are crucial.

Hirose Electric's new TF70 Series: A robust 0.5mm pitch FPC/FFC-to-Board connector with a two-piece design and center lock mechanism. Engineered with features that save space, reduce total weight, ease assembly, and simplify product serviceability. Its enclosed design prevents dust intrusion and minimizes shock risk making it perfect for battery packs, control units and other applications requiring a secure connection.

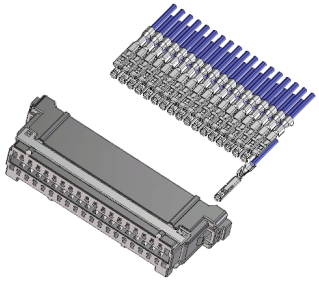
KEY FEATURES OF THE TF70 SERIES INCLUDE:

- 0.5mm pitch and direct FPC/FFC connection streamline assembly, reducing both size and weight for higher performance.
- Center lock design ensures secure, one-handed insertion and removal, featuring a robust locking strength of over 40N.
- Long effective mating length provides high contact reliability, minimizing the risk of discontinuity in demanding environments.
- Versatile connection options with both right-angle and straight configurations accommodate design needs.
- Built-in safety features help prevent electric shock, mis-insertion, and incorrect mounting, enhancing safety.
- Reliable operation from -40°C to 105°C, making it perfect for the harsh conditions of automotive applications.



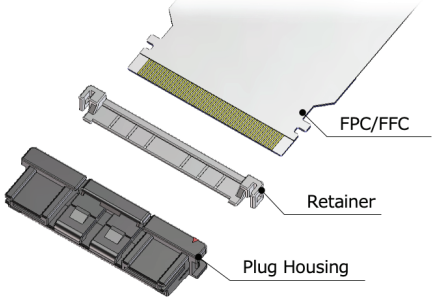
Advantages of Two-piece FPC/FFC-to-Board Connection

DISCRETE WIRE CONNECTION



- Traditional harness processes such as soldering & 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



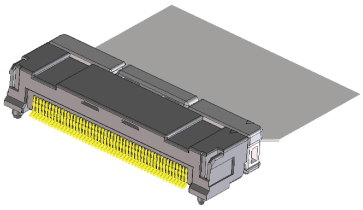
- A simple harness process that involves inserting the FPC/FFC into the plug housing and then attaching the retainer.
- The plug side requires no additional contacts, only the FPC/FFC.
- Improves workability with FPC/FFC insertion at all once.
- Weight is reduced by switching from discrete wire to FPC/FFC.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

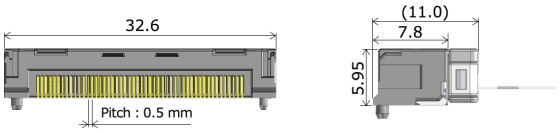
CLICK HERE
FOR MORE INFORMATION

CLICK HERE TO ORDER SAMPLE NUMBER: US-TF70SAMPLE-24

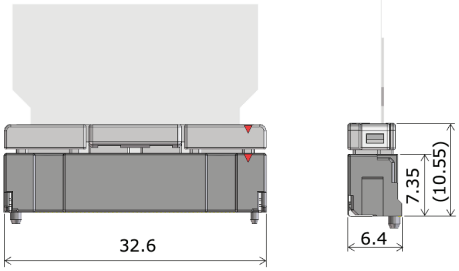
Dimensions: 50pos.

RIGHT ANGLE CONNECTION

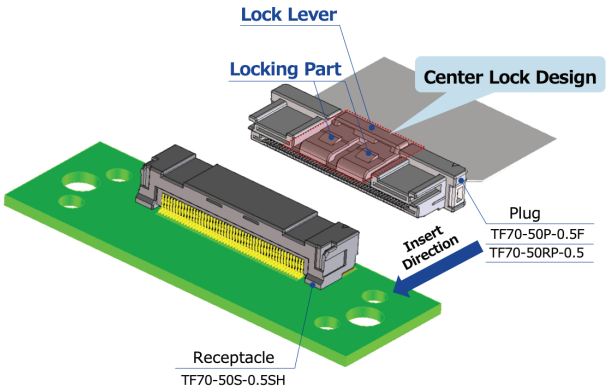


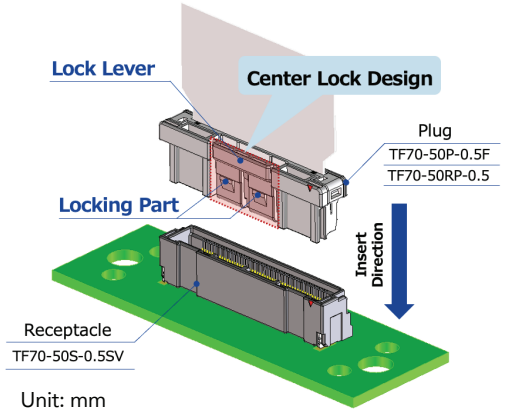


STRAIGHT CONNECTION



MATING COMBINATION





Unit: mm

Specifications

Material and Finish

COMPONENT		MATERIAL	FINISH, REMARKS
Receptacle	Insulation	LCP	Black
	Contact	Copper Alloy	Gold Plating (Nickle Underplating)
	Retention Tab	Brass	Tin Plating (Nickle Underplating)
Plug	Housing	PBT	Black
	Retainer	PBT	White

Performance Characteristics

Rated Current	0.5A
Rated Voltage	50V AC/DC
Operating Temperature	-40 to +105°C*
Contact Resistance	Initial : 50mΩ Max. After Testing : 70mΩ Max.
Withstanding Voltage	150V AC for 1 min.
Insulation Resistance	500MΩ Min. (100V DC)
Mating Durability	20 times

- RoHS2 Compliant
- No. of Pos.: 50pos.

* Includes the temperature rise due to current flow.
If the heat resistance of the FPC/FFC is less than 105°C, the heat resistance of the FPC/FFC is applied.

For additional information please go to
www.hirose.com/product/series/TF70

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

STAY CONNECTED