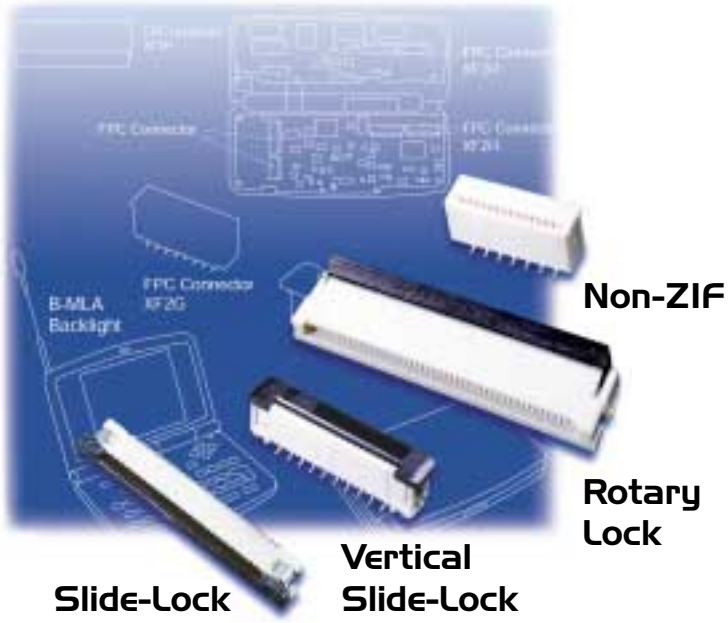
Low-Profile FPC Connectors

0.5 mm PITCH

OMRON®
the problem solvers™

FLEXIBLE PRINTED CIRCUIT CONNECTORS

From Design to Delivery, Omron Provides A Wide Variety of Reliable FPC Connectors

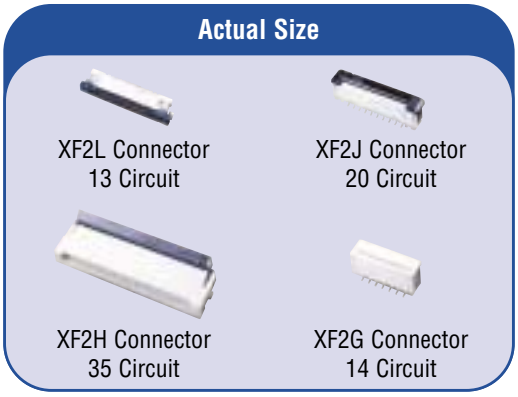


Leading companies throughout the world rely on Omron's vast offering of high quality components and systems. In addition to meeting global industry standards, our 100% quality tested products set new standards for innovation, performance and reliability.

As your control design partner, Omron presents customized solutions for every problem. Your knowledgeable local sales engineers will provide advice during the design phase to maximize manufacturing and operating factors.

In addition, our sales and customer services representatives will work directly with you to manage deliveries to your local or international printed circuit board (PCB) fabricators as your production requirements change. Your local sales contact is also your global interface with Omron's international network of 67 sales and support offices.

Omron manufactures 100% quality tested products in ISO 9000-certified factories where the best combination of production advantages gives you cost-effective components. Partnering with Omron reaps cost-savings benefits, too. When you increase the volume of parts you order, the consolidated value of each order qualifies you for more favorable pricing.



Omron's Ingenuity Proves How Far FPC Connectors Have Come

Until now, problems with Flexible Printed Circuit (FPC) connectors were just another part of a designer's imperfect world. Disconnection, lack of design freedom and lackluster productivity were common.

Enter Omron. Our focus on improving FPC connector design has resulted in a new line of highly reliable, low profile, FPC connectors for use in surface-mount applications. Our new ZIF and non-ZIF FPCs are ideal for mobile equipment, handheld devices, lighting controls, audio/visual devices, thermostats and other applications that require space-restricted PC board interconnectivity such as PCB to PCB or PCB to display.

Omron's unique XF2 FPC Connector Series features products that are inherently different than what you'll find elsewhere. The Series' construction solves all FPC mounting problems, and significantly enhances work efficiency and reliability. Among the XF2 Series' offerings, you'll find improvements that distinguish our FPC connectors from all others on the market:

Design Freedom

- The smallest on-board area in the industry achieves reduced equipment size, thickness and weight (XF2L).
- A low profile at the rear of the connector offers the highest board design efficiency in the industry (XF2L).

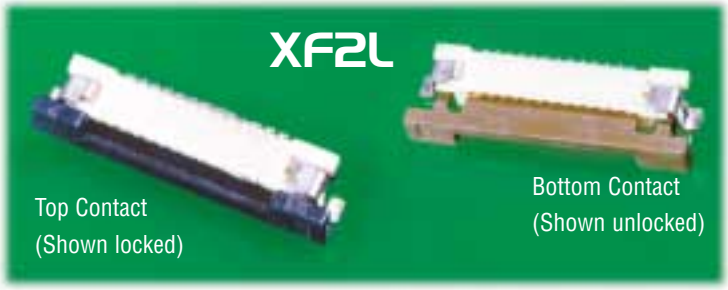
Secure Connections

- A unique slider guide restricts up and down movements, and a slider hold securely locks the slider guide (XF2L, XF2J).
- A rotary lock that's independent of the FPC socket means the lock will not disconnect if the FPC is lifted (XF2H).
- A four-shrouded FPC housing construction prevents FPC positional displacement (XF2H).

Enhanced Assembly Productivity

- Double-sided contacts mean you don't need to discriminate between the FPC top and bottom contacts when connecting top and bottom PCBs (XF2H).
- Assembly productivity increases during cable insertion since the rotary lock is in the open position when shipped (XF2H).

Slide-Lock ZIF FPC Connectors: Side Entry and Top Entry Models



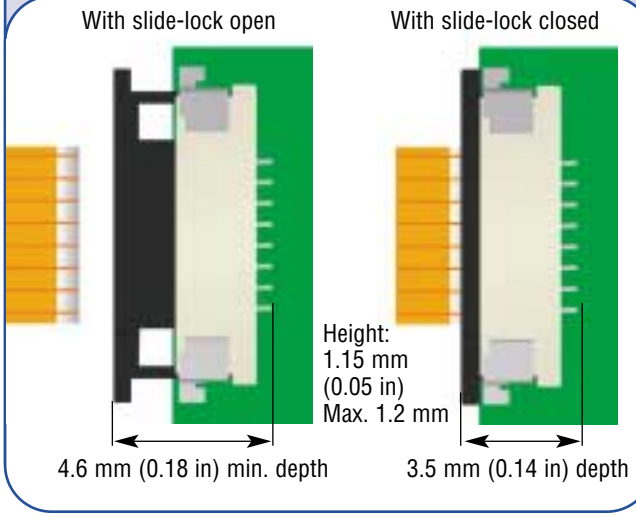
0.5 mm Pitch Slide-Lock FPC Connector – Occupies Smallest Footprint in the Industry

- Low-profile SMT ZIF connector, measuring just 1.2 mm max. above the board
- Slide mechanism locks securely; hold-down terminal improves connection stability during soldering
- Small footprint reduces space on PCBs
- Top and bottom contact styles have identical dimensions and use the same PCB layout for board design efficiency
- Connectors are supplied on tape reels for automatic insertion; color-coded slide identifies top and bottom contact versions
- Circuits 4, 5, 6, 7, 8, 10, 12, 13, 15, 18, 20, 21, 22, 26, 30

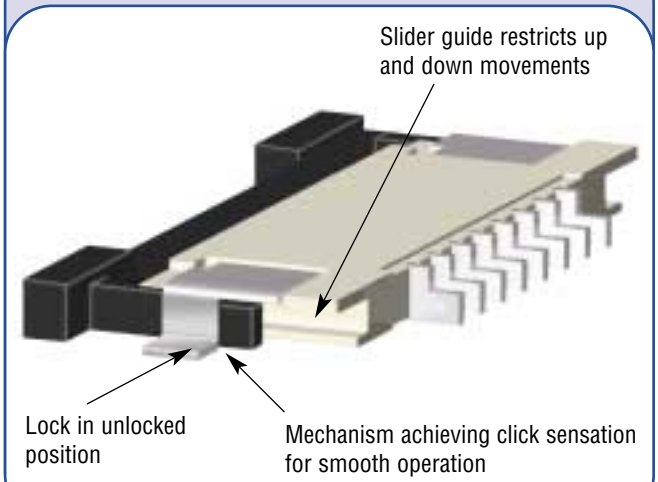
0.5 mm Pitch Vertical Slide-Lock FPC Connector

- SMT ZIF connector with low profile (4.15 mm above the circuit board) and top entry is ideal for automated assembly processes
- Enlarged surface area on slide bar makes automatic assembly easier
- Vertical slide mechanism locks flex circuit securely in place
- Hold-down terminal improves connection stability during soldering
- Connectors are supplied on tape reels for automatic insertion
- Circuits 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30

XF2L - Dimensions mm (in)



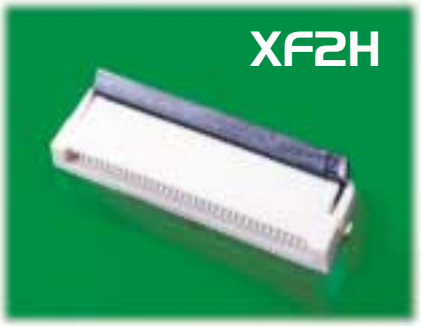
XF2L - Slide-Lock Construction



XF2L - Low profile

Enhances freedom of board design

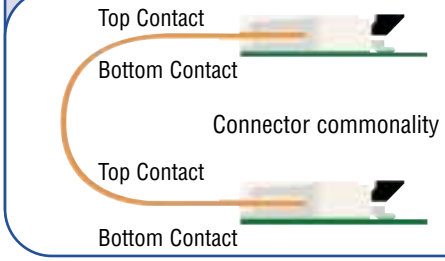
Rotary Lock ZIF FPC Connector (Rear Lock)

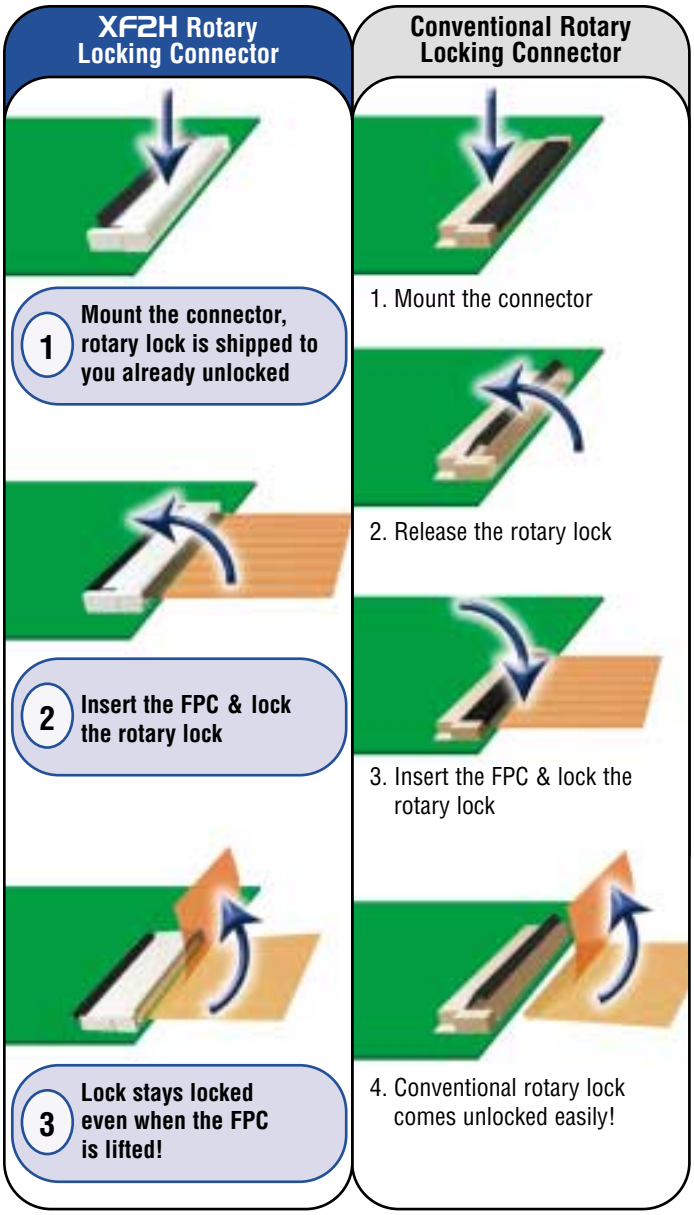


0.5 mm Pitch Rotary Lock FPC Connector – Lock is Independent of FPC Socket

- SMT ZIF connector with unique rotary lock improves assembly reliability and manufacturing efficiency
- Rear rotary lock location (vs. front) simplifies assembly and provides secure connection, even if cable flexes upward
- FPC housing design ensures reliable alignment of the circuits during assembly (unaffected by rotary lock)
- Double-sided contacts can be used wherever top or bottom connection is needed, reducing part numbers on the bill of materials
- Connectors are supplied with the rotary lock in the open position, eliminating one step during assembly
- Low profile, measuring only 2 mm max. above the board
- Connectors are supplied on tape reels for automatic insertion
- Circuits 10, 12, 13, 14, 18, 20, 21, 22, 24, 26, 30, 32, 33, 34, 35, 36, 38, 40, 45, 50

Double-Sided Contacts





Non-ZIF FPC Connector

0.5 mm Pitch Vertical FPC Connector

- SMT non-ZIF connector offers a low-cost, top entry alternative to locking types
- Enlarged top surface makes automatic assembly easier
- Low-profile, measuring just 4.15 mm above the board
- Connectors are supplied on tape reels for automatic insertion
- Circuits 6, 14, 16

"First Wave" Applications for Low-Profile FPC Connectors

"First wave" products are considerably smaller, lighter and more flexible than their predecessors. The future offers strong design opportunities, as interconnectivity and portability are chief ongoing priorities for these technologies. FPCs offer the flexibility to design smaller, lighter products and to facilitate the addition of multiple modular boards.

PDAs

Office equipment

Wireless communication

Media recorders & players

Electronic cameras

Laptops

"Second Wave" Applications for Low-Profile FPC Connectors

"Second wave" products and systems are ripe for greater connectivity and enhanced features, flexibility and ease of use. Our low-profile FPC connectors allow you to design aesthetically pleasing, feature-rich products for in-home applications. Add never-before-considered flexibility to your controls, without increasing product size.

Omron's FPC connectors can make your next generation of products even better. If you're having trouble putting your finger to the future, tell us about your next anticipated problem. We have the know-how to meet your customers' demands.

HVAC

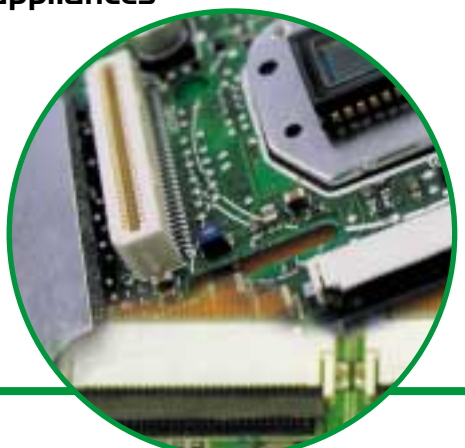
Home security

Test & measurement equipment

Automotive (in-dash LCDs, audio, GPS)

Mobile handheld devices

Home appliances



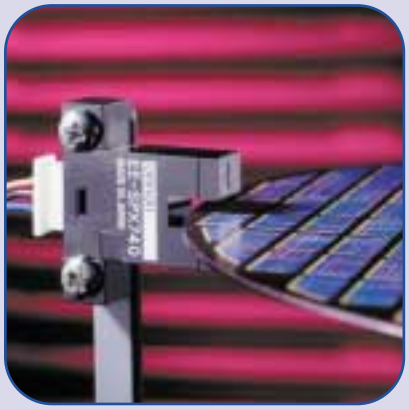
Advancing the Evolution of Technology for Compact Design

MMRelay

Etched from a silicon wafer, our Micro Machined Relays (MMRelays) are considerably smaller and faster than traditional electromechanical relays. Choose from a 6-pin plastic leaded chip carrier (PLCC) model, or a compact chip model. Electrical life expectancy is 1 billion operations. Compare for yourself: Traditional relays switch at about 6.0 ms; the MMRelay switches at 0.5 ms.

B-MLA Backlight

Thanks to a unique micro lens array technology, Omron's B-MLA Backlight is the brightest backlight available today. The efficient B-MLA features uniform brightness and low power consumption, offering consistent contrast. Variable brightness allows for a two-step backlight of low or high power. The B-MLA is a natural choice for your PDA, wireless phone, pager and mobile handheld device applications.



EE-SPX74/84 Optical Sensor

Featuring a snap-in connector for flexibility and easy maintenance, Omron's EE-SPX74/84 series of optical sensors provides exceptional shock and vibration resistance. The sensors' compact housing, recessed connector and detachable, bendable cable make them ideal for tight spaces and for semiconductor fabrication, automated assembly and material handling applications.

B3FS Tactile Switch (SMD)

These compact, cost-effective surface-mount tactile switches are ideal for high-density mounting applications in the appliance, CP/OA, consumer electronics and security industries. Measuring just 6 mm x 6 mm, these unsealed tactile switches are ideal for no-wash processed PCBs. A snap-action contact mechanism ensures sharp switching operation.

OMRON

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