INTRODUCING

0.5mm FRONT FLIP LOCKING FPC CONNECTORS

- **0.5mm pitch to support high-density PCB layouts**
- **Front flip-lock actuator to help enable controlled cable insertion and actuator closure**
- **Integrated locking cavity designed to help enhance cable retention**
- **Actuator design intended to support repeated mating operations**



TE Connectivity's (TE) 0.5mm front flip locking fine pitch connectors (FPC) expand the FPC portfolio with a retention-enhanced solution intended to support mechanical stability in compact electronic designs. By incorporating a locking cavity in combination with a standard actuator mechanism, the connector is designed to provide additional retention compared to friction-based interfaces alone, while supporting cable alignment and consistent mating performance.

The inclusion of a front flip actuator and Zero Insertion Force (ZIF) interface is intended to support assembly efficiency and reduce mechanical wear on contacts during mating cycles. This connector family is designed to support applications requiring compact form factors and may be suitable for designs where improved cable retention and streamlined assembly are important considerations.

APPLICATIONS

- **Consumer & Portable Electronics**
  Smartphones, tablets, laptops, wearables, cameras, gaming systems, printing equipment, and multifunction office devices that require compact, high-density internal interconnect solutions.
- **Display & Human Interface Systems**
  LCD and touch panels, flexible displays, Human-machine interface (HMI), keyboard, trackpad, and other electronic input interface modules
- **Imaging & Vision Systems**
  Compact camera modules, machine vision systems, security cameras, barcode scanners, biometric readers, and other embedded imaging devices
- **Industrial & Automation Systems**
  Industrial control boards, automation equipment, robotics, motion-control systems, unmanned electronic platforms, test and measurement equipment, sensor interfaces, and embedded control modules.
- **IoT & Embedded Systems**
  Smart home devices, connected sensor systems, humanoid robots, single-board computing and edge devices, drones, pre-configured PCB systems, and module-based systems.
- **Home Appliances**
  Home appliances and smart appliances with integrated electronic control systems, displays, and user interface modules.

KEY BENEFITS

- 0.5mm pitch to support high-density PCB layouts
- Front flip-lock actuator
- Integrated locking cavity designed to help enhance cable retention
- Actuator design intended to support repeated mating operations
- Right-angle, surface mount configuration
- Bottom contact orientation
- Available in multiple contact configurations (4 – 80 positions)
- Gold flash plating on contacts to support electrical interface stability
- Enhanced Mechanical Retention - The combination of actuator retention and locking cavity is intended to provide additional cable retention compared to standard FPC connectors which may be beneficial in applications subject to vibration or movement.
- Anti-fretting lubricant applied to contacts to help reduce corrosion
- Asymmetrical terminal design to help guide proper insertion orientation
- Keying and color options intended to help reduce risk of mis-mating
- Suitable for compact form factor designs requiring FPC interconnects
- Compatible with standard FPC cable designs within specified thickness ranges

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