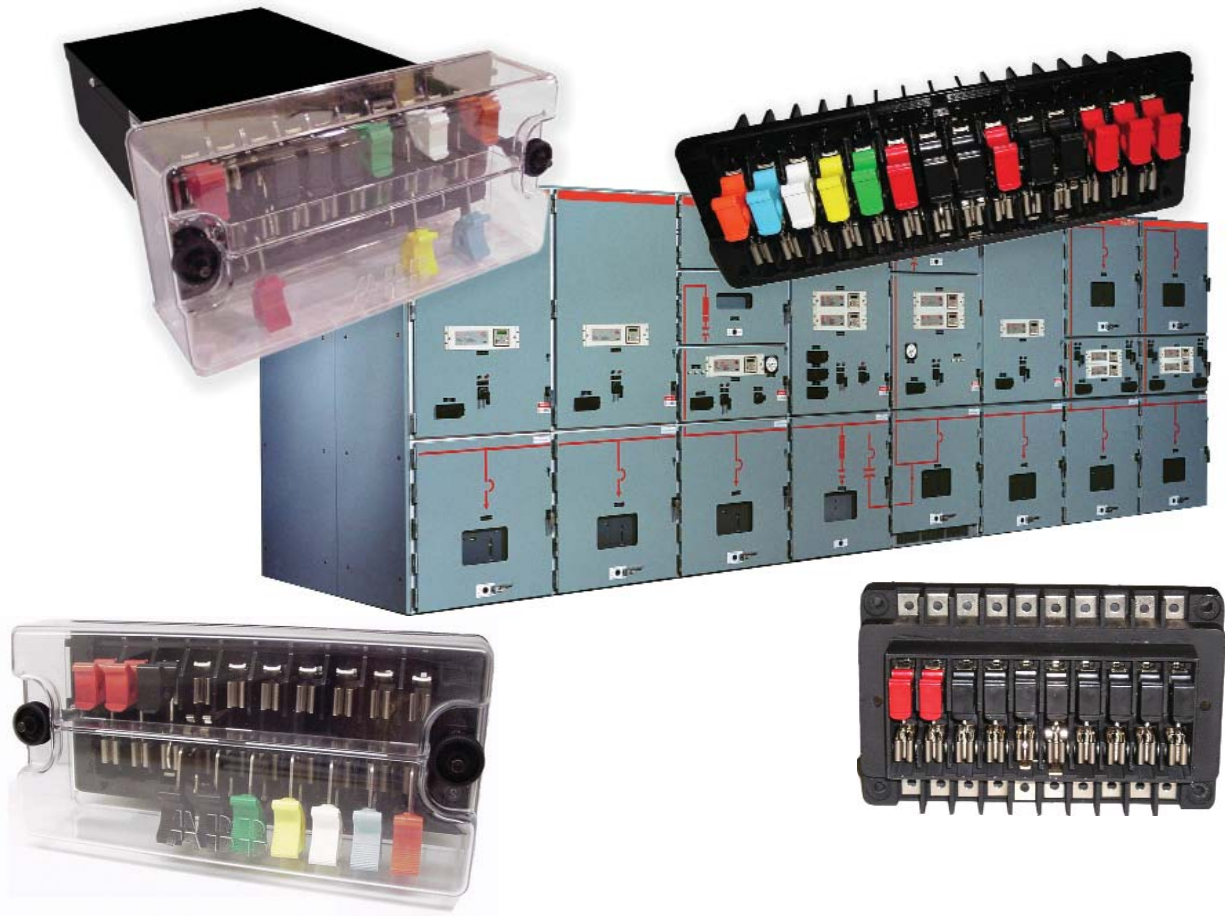
FT Flexitest Family

Switches, Covers and Test Plugs



FT Flexitest Switches

Description

The flexibility provided by the FT case design evolved into a separate family of molded base test switches for testing relays, meters and other electrical devices. FT test switches provide a cost-effective means to wire the outputs of relays, meters and other associated equipment to an external device for in-service testing and has been an industry standard for many years. Standard switches are available in many combinations of potential, current or current shorting poles and special combinations are available on request. Typical test switches come in either 10 or 14 pole and there is a new front connected version of the 10 pole switch.

Application

The ABB FT Flexitest switches provide a safe, simple, fast and reliable method to isolate and service installed equipment. With an almost unlimited amount of configurations and the ability to customize, the switches may be provided as individual units or mounted in a 19" panel. Rated for 600 volts and 30 amperes, the Flexitest switches provide unparalleled safety and convenience for switchgear, breaker, relay, metering or industrial applications where in-service testing, isolation, calibration or monitoring is required without de-powering panels.

Features

The Flexitest switches have all the features necessary for applications involving the measurement of individual currents and voltages to facilitate testing of substation instrumentation and protection devices. Multiple combinations of current or voltage switches create flexibility. The make before break current short circuit feature also allows test personnel to quickly and safely isolate equipment from current transformer circuits. The extended test switches bring the rear terminal connections to the same depth as most panel mounted protective relays and equipment. Extended unit terminals are the same depth as other 19" rack equipment, making it easier to wire. Optional colored handles are available.

- Longevity - over 50 years of proven field experience
- Technical support - 24 hours a day, 7 days a week
- Complete line of switches, switch assemblies and test plugs for separate source and in-service testing
- Standards
  > UL recognized
  > 1E qualified switches
  > ISO9001 certified facility
  > Independent third party verification of quality programs
- Safety - The positive make before break short circuit feature safely isolates equipment from current transformer circuits.
- Security - Meter seal capability through either of the cover studs prevents unauthorized access to the switch with the cover on.
- Convenience - immediate access to relay or other device circuits without disconnecting any wiring
- Flexibility - Switches are available with up to 14 current or potential circuits in various combinations to meet customer's application needs.
- Quality - unsurpassed quality with over 50 years of field proven application and vigorous quality testing programs
- Short lead times - stock to two weeks maximum, emergencies shipped within 24 hours - sometimes same day
- ABB Substation Automation and Protection relays and products are backed by YEAR warranty.

Test Switches

FT-1 & FT-14

- **FT-1** - 10 pole switch
- **FT-14** - 14 pole switch

FT-1

FT-19R

- **FT-19R** - option to mount the FT-1 into a 19" panel rack
- Provides up to 30 terminals using combinations of one to three FT-1 switches
- Pre-drilled 19" panels
- Clear or black covers
- Standard test plug compatible
- Available as one long cover or individual covers over each switch
- Large nameplates available
- Select any combination of FT-1 switches
- Panel color or finish, as well as panel height, can be customized
- Room available for any special customer label requirements

FT-14

FT-19R

FT-1X

FT-14X

Extended

- Extended unit terminals are the same depth as other 19" rack equipment, making it easier to wire.

FT-19R Extended

Test Switches

FT-19RS Special Assemblies

- **FT-19RS** - put FT switch into a panel, allowing for meter and lockout switches on panel
- Any customer derived configuration

Two FT-1 Switches Centered on 19" Plate

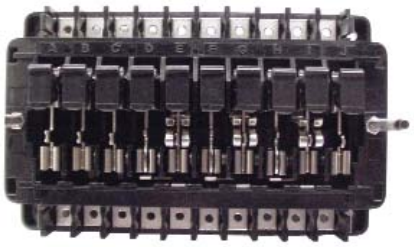
Two FT-1 Switches with On/Off Switch on 19" Plate

Two FT-1 Switches with Lockout Switch on 19" Plate

Two FT-1 Switches with Synchrotact on 19" Plate

Front Connected FT

- Flexibility – multiple combinations of current or voltage switches (1-10 switches)
- Surface mounting
- Optional colored handles



Front Connected

Accessories

Covers

- Covers fit on all FT switches

- Two types:
  > clear
    - Flexible – switches open or close with cover mounted
    - Security – full visibility blade position
    - Safety – energized blades not exposed
    - Prevents covers from being lost or damaged
    - Clear covers can be tinted
  > standard black
    - Security – cover mounts only with switch closed

Standard Black Cover

Clear Cover

Test Plugs

- Used in conjunction with all FT switches

- Three types:
  > individual - single pole for in-service measurement
  > in service - configured for specific FT switch so isolation testing can be performed according to configuration
  > separate source - isolates all devices that are wired into the test switch - universal will go into any configuration

Individual Test Plug

Separate Source Test Plug

- Enhanced connection capability

- Standard banana plugs

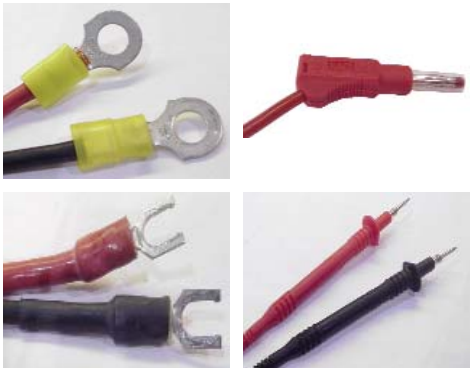
- Spade lugs

- Ring lugs

- Meter test probes or wire connections

- Custom or standard cables and harnesses

In-Service Test Plug



Leads

Produced in Coral Spring, Florida since 1977, the FT Flexitest switch is a well-established design, starting as an integral part of the electromechanical protective relay product group dating back to the late 1950's. The standalone FT-1 Flexitest switch was introduced using the same switch mechanism design that has proven to be safe and reliable for more than 50 years.

The many design changes, since the beginning of production, range from a special alloy developed for the application, to profile changes to the switch blade to optimize reliability, quality, and performance. No other test switch matches the number of operations the ABB Flexitest switch performs, without any visible deterioration of the blade plating and between the switch jaws. The plating requirements for all components, including full coverage between the switch jaws, assure that even in harsh environments, corrosion is prevented, eliminating elevated operating temperatures through reduced contact area. The Flexitest switch is qualified for Nuclear application.

The switch has a unique design that provides the maximum surface contact area, over any other switch on the market, in both the normal operation, as well as in the testing mode. Additionally, the Flexitest test switch meets the highest temperature rating in the latest IEEE proposed standard.

When your requirements call for a test switch, have peace-of-mind by specifying the well-proven ABB Flexitest switch products. And don't forget that ABB can supply specialized test switch products or assemblies to meet special requirements.

Please see descriptive bulletin DB41-077 for selection information.

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