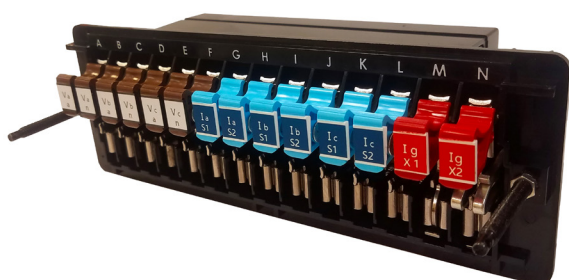


DESCRIPTIVE BULLETIN

# FT-14D Digital Flexitest™ Switch

The innovative test switch for digital switchgear



The FT-14D is a test switch for digital switchgear using low-energy current and voltage sensors. With the FT-14D a new era of testing protection relays can now be performed safer, faster, and easier.

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FT-14D

The FT-14D integrates low-energy current and voltage sensors within digital switchgear and Relion® protection relays. The FT-14D is a member of ABB's FT Flexitest™ switch product family.

## Benefits

- Easy to use- plug and play connections with clearly defined labels for commissioning, testing, and measurement of the relays and current/ voltage sensors
- Safety and protection- small objects (>1mm) and dripping water protection, together with low-energy (mV) through the test switch removing any shock hazards
- Increased efficiency - capable of simultaneous testing of current and voltage circuits
- Easy to install - connect and disconnect: rear plug-in RJ45 connectors labeled for each phase

## Features

- Connects to low-energy current and voltage sensors (millivolts)
- RJ45 connections to the FT-14D rear for interfacing to low-energy sensors and Relion® relays
- No current transformer (CT) shorting required
- Color-coded lamicoid labeled front handles allow for identification of circuits for testing
- Traditional FT-14 knife blades in the front
- Clear covers that allow for easier visual check on switch status
- Meets ANSI/ IEEE Standard C37.90, UL and is ESD proven
- Meets Ingress Protection IP41 for protection against dripping water from the front with shallow clear and black covers installed.
- RoHS compliant

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Figure 01. Test connection diagram (only one phase is shown). The testing of the secondary injection is similar to testing with traditional CTs except injection is performed with an interface adapter.

**Application**

The FT-14D is used for testing, commissioning, and metering of relays, and current and voltage sensors used in digital switchgear.

This innovative test switch incorporates a passive electronic module on the rear with RJ45 connection to the Relion relays with low-energy voltage and current sensor inputs. The FT-14D maintains the same front interface as the standard FT-14 Flexitest™ switch.

**Testing**

For testing purposes, use the FT-14D in conjunction with two accessories: the FT-14 separate source test plug and the FT-14D test harness.

First, connect the FT-14D test harness RJ45 connectors to an interface adapter that is plugged into the protection relay test equipment. Then, insert the banana plugs into the FT-14 separate source test plug. Last, insert the FT-14 separate source test plug into the FT-14D by placing the switch blades in the open position.

This procedure disconnects the low-energy current and voltage sensors from the relay, and allows testing to be performed with the relay test equipment.

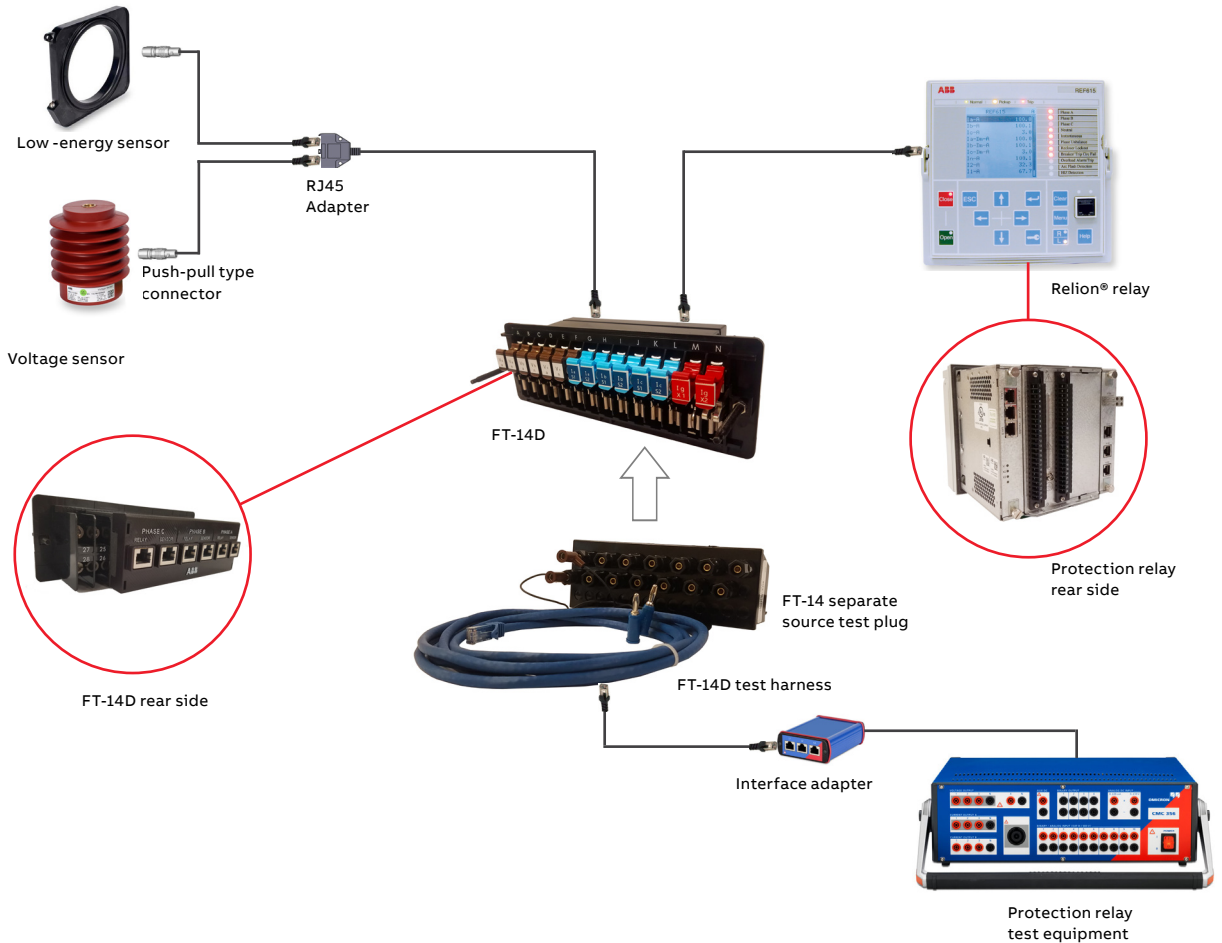
**⚠ Caution**

All relays and test equipment must be properly grounded.

**⚠ Warning**

Connections to all equipment should be made using standard and safe connection practices. Due to the low-energy sensing during system operation, it is important not to touch the open or closed FT-14D switchjaw terminals since relay misoperation can occur. Therefore, during testing and maintenance, it is also recommended the relay trip circuit be disconnected first as a precaution.

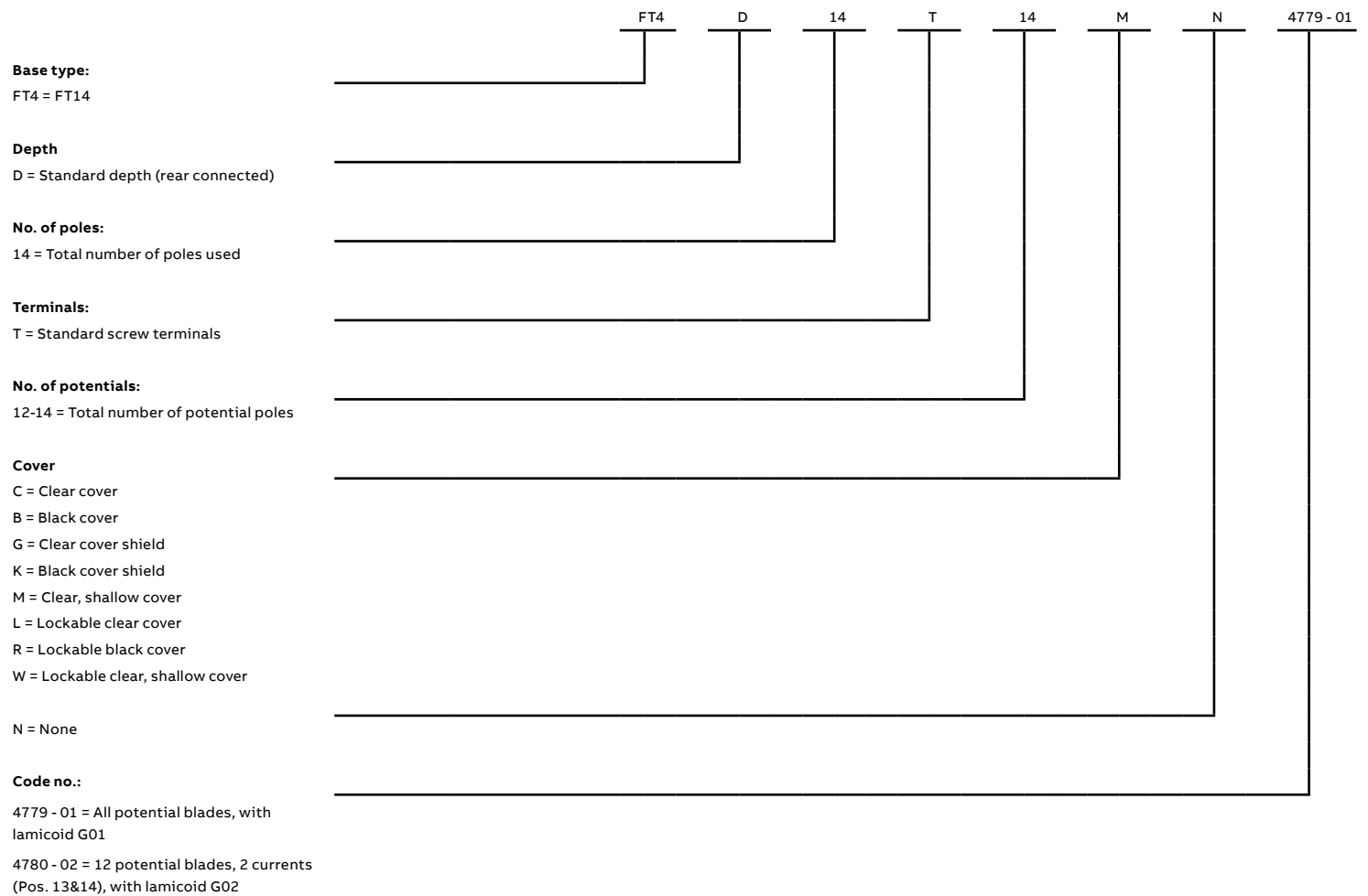
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**FT-14D ordering information**

The FT-14D is available in 2 styles, each consisting of 14 poles. Twelve potential and 2 current (terminals 13 and 14 for an optional ground CT) or all 14 potential poles can be ordered with any clear or black cover option. The shallow clear or black covers come standard with the FT-14D. A test harness, used with existing FT-14 separate source test plugs, can be ordered as an accessory.

**FT-14D ordering information**



FT-14D and cover options	Standard style numbers
Clear shallow cover with potential terminals 13, 14	FT4D14T14MN4779-01
Black cover with potential terminals 13, 14	FT4D14T14BN4779-01
Clear shallow cover with current terminals 13, 14	FT4D14T12MN4780-02
Black cover with current terminals 13, 14	FT4D14T12BN4780-02

FT-14D test harness	Style no.
Quantity 3 (kit for 3 phase testing)	95A1159G01
Quantity 1	95A1159H01

## **Warranty and technical support**

### **Warranty**

FT-14D is backed by a 12-year warranty. The quality of ABB products comes from years of experience and rigorous quality testing programs.

### **Technical and application engineering support**

Available 24/7 at +1 800 222 1946 or  
+1 954 752 6700, option 1.

E-mail: [US-MVRelaySupport@abb.com](mailto:US-MVRelaySupport@abb.com)

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