GE
Grid Solutions

Model PMTB 14

Test Block & Plugs

Key Benefits

- A superior device that has the flexibility and features to meet all electrical utility and industrial requirements for safe, reliable and efficient testing
- Enables the testing of protection relays and meters with no interruption of the power circuit
- Savings in man-hours for testing and trouble-shooting
- Designed and qualified for the unique needs of the protection and control industry and unsurpassed in the areas of security, robustness and reliability under harsh industrial environments
- No need to disturb existing connections, or relay settings for testing purposes

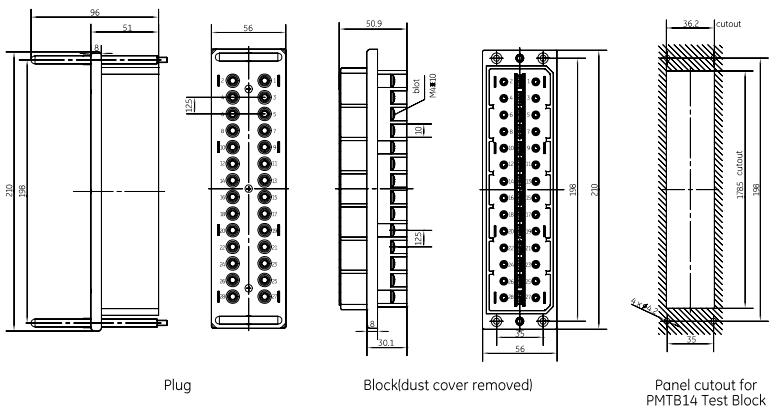
Application

- Isolate protection relays and inject current /voltage into the protective devices to quickly and safely verify system protection performance
- Mount on front of switchboard panels for easy and safe access to current and voltage transformer secondary circuits
- Automatically short CT secondaries with use of any of the three available test plugs
- Measure voltage from VT with or without disconnecting devices from the circuit
- The Test Plug can also be connected continuously to the Test Block in order to supply current or voltage to secondary circuit sub-assemblies
- Test plug available designed to isolate up to three breaker tripcoils during testing operations

Features

- Quickly & safely test current and voltage Circuits
- “Finger-safe” sockets for standard 4 mm (Test Plug) banana plugs
- Separate 14-pole test plug for ease of use
- Simultaneous testing of up to 14 independent circuits
- Isolation of relays and meters from instrument transformers
- Test plug for safely shorting current circuits before isolating current operated devices
- Inject current & voltage into relay and meter circuits
- Measure output of CT’s & VT’s
- Semi-flush front access mounting on switchboard panels
- Removable & sealable clear cover
- Rear access wiring provisions
- Easily identifiable “Live” (Red) & “Equipment” (White) test sockets
- Space saving compact design
- Designed for harsh industrial environments

Outline Drawings for PMTB14 Test Block and Test plug (mm.)



Technical Specifications

Voltage

Rated	400 V
Impulse Withstand	4 kV

Current

Rated	20 A
Short-circuit	100 A/5 s – 400 A/1 s

Temperature Range

Storage	-25 ºC ~ +70 ºC
Working	-25 ºC ~ +55 ºC

IP Rating

Front Panel	IP50 with cover IP20 without cover
Standard Banana Plug:	Rated at 10 A

Maximum Working Voltage: IEC 60255-5

400 V AC or DC continuous rating

Insulation Withstand: IEC 60255-5

- 2 kV RMS for 1 minute between any contact pair and either adjacent contact pair.
- 2 kV RMS for 1 minute between incoming and outgoing contacts when plugged into the Test Block.

5 kV RMS for 1minute between any alternate contact pair, provided that the intermediate pair is not used.

Environmental IEC 60255-6, IEC 60068-2-1/2/3

Enclosure Protection: IEC 60529

Mechanical: IEC 60255-21-1 Class II

EMC:

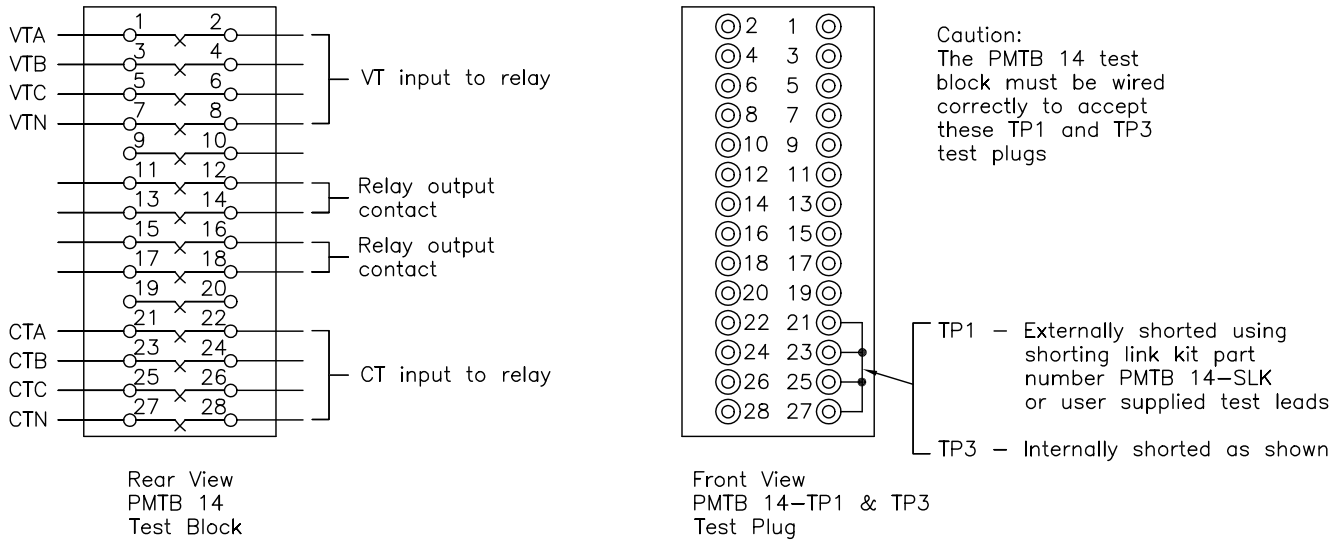
Electromagnetically benign, excluded from Directive 89/336/EEC

Product Safety: CE 73/23/EEC

Ordering

Part Number	Description
PMTB 14	14 circuit panel mount test block with clear cover
PMTB 14-TP1	14 circuit test plug with no internal shorting links
PMTB 14-TP2	14 circuit test plug with internal shorting links at contact pairs 1-3, 5-7, 9-11, & 15-17
PMTB 14-TP3	14 circuit test plug with internal shorting links between terminals 21-23-25-27
PMTB 14-TP4	14 circuit test plug with internal shorting links between terminals 9-11-13-15 and 21-23-25-27
PMTB 14-TP5	14 circuit test plug with no internal shorting links and with six poles designed to prevent breaker tripping during testing operations
PMTB 14-SLK	Shorting link kit (4-50 mm & 4-150 mm plug links)

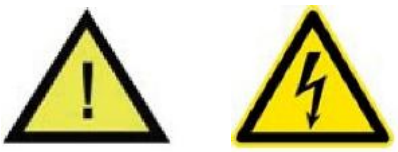
Typical wiring diagram for PMTB 14 Test Block and PMTB 14-TP1 & -TP3 Test Plug



It is recommended that the protection relay or controller is wired to the even-numbered terminals of the Test Block, and the Test Block is mounted on the right-hand side of the relay (front view). The connections to other equipment such as CTs, VTs, and DC supplies should be made to the odd-numbered terminals. This will ensure that on inserting the Test Plug, the sockets on the White side of the Test Plug are connected to the isolated relay circuits and the sockets on the Red side are connected to the potentially live supplies

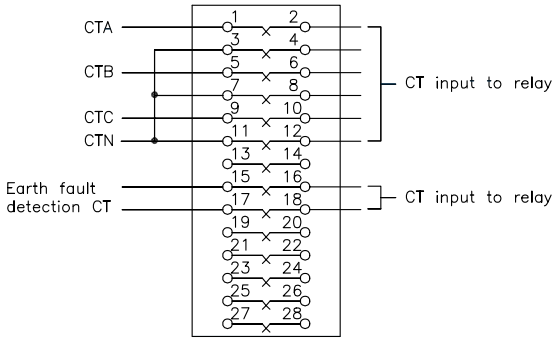
It is important that the sockets on the Test Plug which correspond to the current transformer secondary windings are linked prior to the Test Plug being inserted into the Test Block. This will ensure that the current transformer secondary windings are short circuited prior to disconnection from the protection scheme or relay.

If a few Test Blocks are connected to a relay at the same time, it is recommended that the DC auxiliary supply be routed through each of them to prevent inadvertent operation

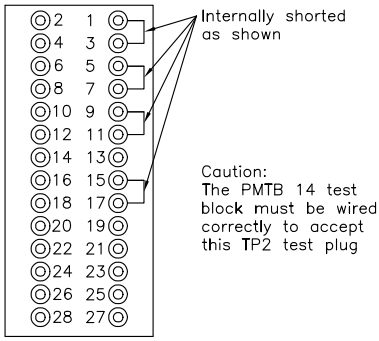


- To avoid high voltage shock hazard, external CT terminals must NOT be open circuited. Shorting links MUST be in place BEFORE Test Plug insertion.
- USERS must ensure that external shorting links are installed for CT secondary windings prior to inserting the Test Plug into the Test Block.
- USERS must ensure that external shorting links are NOT installed on POTENTIAL circuits.
- USERS must ensure that when using test plugs with internally shorted terminals (TP2, TP3, &TP4), the CTs are wired to the corresponding test block terminals.

Typical wiring diagram for PMTB 14 Test Block and PMTB 14-TP2 Test Plug

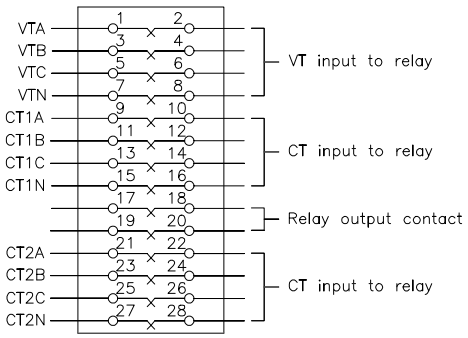


(Rear View)
PMTB 14
Test Block

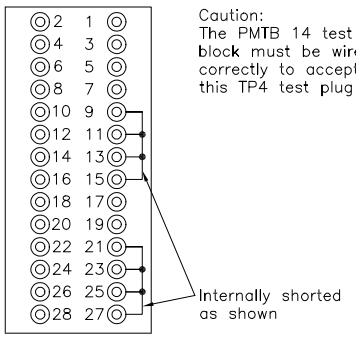


(Front View)
PMTB 14–TP2
Test Plug

Typical wiring diagram for PMTB 14 Test Block and PMTB 14-TP4 Test Plug



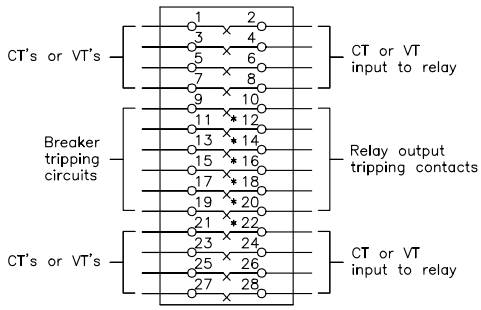
Rear View
PMTB 14
Test Block



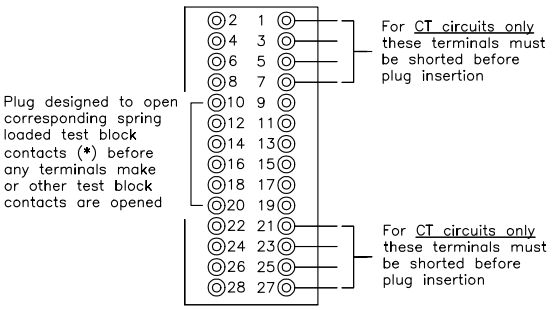
Front View
PMTB 14–TP4
Test Plug

Typical wiring diagram for PMTB 14 Test Block and PMTB 14-TP5 Test Plug

Designed to prevent breaker triping during testing operations.



Rear View
PMTB 14
Test Block



Front View
PMTB 14–TP5
Test Plug

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