

# IEEE Standard for 4.76 kV to 38 kV Rated Grounding and Testing Devices Used in Enclosures

Sponsor  
**Switchgear Committee  
of the  
IEEE Power Engineering Society**

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**Abstract:** Drawout type grounding and testing (G&T) devices for use in medium-voltage metal-clad switchgear rated above 4.76 kV through 38 kV are covered. The description, design, and testing of these accessory devices that are inserted in place of drawout circuit breakers for the purpose of grounding and testing are also covered.

**Keywords:** electrical operation, grounding and testing (G&T) devices, locking/interlocking, manual operation, one or two terminal sets, selector switch, test port

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## Introduction

(This introduction is not a part of IEEE Std C37.20.6-1997, IEEE Standard for 4.76 kV to 38 kV Rated Grounding and Testing Devices Used in Enclosures.)

Although grounding and testing devices (G&T) have been used as accessory devices in metal-clad switchgear for decades, they have never been covered by standards. This is because they are specialized accessory devices, designed and tested in accordance with applicable sections of circuit breaker standards, and based on user-unique operational requirements.

This standard complements IEEE Std C37.20.2-1993, IEEE Standard for Metal-Clad and Station-Type Cubicle Switchgear, and addresses the more popular G&T device types. This standard also clarifies that G&T devices are not required to have the interrupting and continuous current ratings of the circuit breakers they may temporarily replace for the purpose of grounding and testing medium-voltage circuits.

G&T devices are supplied in various forms and the following generally summarizes the more popular forms:

- a) *Simple manual devices.* These are equipped with either one or two terminal sets for grounding through cables, manually connected to the device ground connection system. Hot stick voltage testing is possible.
- b) *Simple electrical devices.* These are equipped with one terminal set connected, through a power-operated ground-making switch, to the device ground connection system. Voltage test ports may be provided.
- c) *Complex electrical devices.* These are equipped with two terminal sets and a manually operated switch for selecting which terminal set is to be connected, through the power-operated ground-making switch, to the device ground connection system. Voltage test ports may be provided.

All G&T devices are equipped with necessary isolation barriers and locking or interlocking mechanisms to provide some degree of protection during handling and operation.

This standard does not cover G&T devices that are specially equipped with current and voltage transformers, glow-tubes and like components, nor those that have short-circuit current interrupting capability.

G&T devices designed before the approval of this standard may not meet all of these established requirements. The user should consult with the manufacturer if any question exists regarding the proper application of these G&T devices on the user's system.

Suggestions gained from use will be welcomed for guidance in future revisions of this standard.

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