

STANDARD INFORMATION

Standard: UL 943 / CSA C22.2 No. 144.1

Standard ID:

Ground Fault Circuit-Interrupters [UL 943:2016 Ed.5+R:25Aug2025]

Ground Fault Circuit-Interrupters [CSA C22.2#144.1:2016 Ed.2+U1;U2;U3]

Previous Standard ID:

Ground Fault Circuit-Interrupters [UL 943:2016 Ed.5+R:05Sep2023]

Ground Fault Circuit-Interrupters [CSA C22.2#144.1:2016 Ed.2+U1;U2]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: August 25, 2027

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

This standard contains Functional Safety requirements.

Overview of Changes:

- Remote Critical Software Update Functionality
- GFCI that relies solely on the handle position
- Other than 60 Hz

Specific details of new/revise requirements are found in table below

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		<i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i>
3	Info	Definitions <i>New clause added;</i>
3.7A	Info	FREQUENCY FACTOR (FF) – Defines the frequency factor as the ratio of the current as it relates to physiological effects at the respective frequency to the current limit at nominal 60 Hz. See Figure SB2.1 and Table SB2.2. <i>New clause added;</i>
3.11A	Info	HIGH-FREQUENCY HF rating – Devices that have been evaluated for their performance to be immune to differential (or ground) current of less than 4 IIU (4 x Frequency Factor) from 60 Hz to 150 kHz. See Supplement SB, Optional High Frequency – HF Rating. <i>New clause added;</i>
3.12A	Info	INTEROPERABILITY INDICATION UNIT (IIU) – Is weighted differential current from the measurement instrument in Figure 3.1 and Figure 3.2: IIU is the output voltage (V2) in millivolts rms. For additional details see the Standard for Leakage Current for Utilization Equipment, UL 101.
6	Info	Tests
6.31	Info	Auto-monitoring function tests
6.31.8		<p>As an alternative to meeting the requirements described in 6.31.5 – 6.31.6, failure modes in 6.31.2 that reference 6.31.8 may comply with the requirements listed below. A representative GFCI, having been subjected to a failure mode simulation, shall be correctly connected to rated line voltage and allowed to stabilize. The manually operated supervisory test function shall be performed, after which the reset button shall be operated. Each representative GFCI shall be considered as meeting the requirements of Clause 6.31.1 if one of the following conditions is met:</p> <p>a) The GFCI visually or audibly indicates if it does not interrupt the electric circuit to all loads. <u>For a circuit breaker-type GFCI that relies solely on the handle position as visual indication, the handle position shall not remain at the "ON" position at the conclusion of the test sequence;</u> or</p> <p>b) The GFCI interrupts the electric circuit to all loads or does not permit power to be applied to any loads, each time the reset is operated when reset is attempted.</p>



CLAUSE	VERDICT	COMMENT
<i>New supplement added;</i>		
OPTIONAL HIGH FREQUENCY – HF RATING		
Supplement SB	Info	These requirements cover a supplemental test procedure for a ground-fault circuit interrupter HF rating compatible with utilization equipment evaluated to the GFCI Interoperability Test of UL 101.
		These requirements are intended to evaluate a ground fault circuit interrupter’s resistance to false tripping for weighted differential current of less than 4 IIU from 60 Hz to 150 kHz.
		The ground-fault circuit-interrupter mentioned in SB1.1 shall comply with the applicable requirements of this Standard, except as modified by the requirements contained in this Supplement.
		See standard for details.
<i>New section added;</i>		
REMOTE UPDATE OF SAFETY SOFTWARE		
Supplement SC		These requirements cover Ground Fault Circuit Interrupters that are networked and employ programmable components with the capability for remote update of safety software.
		See standard for details.