LEVITON
Building a Connected World

SmartLock*PRO*™ GFCI with Professional Grade Lockout Action

As a leading proponent of electrical safety, Leviton is continually working to improve product design and help ensure the proper installation and testing of GFCIs. That leadership role continues with the introduction of Leviton's new Smartlock*PRO*™ GFCI.

From a true dead-face design for line-load reversals to Leviton's unique patented professional grade lockout action as an end-of-life indication, the new Smartlock*PRO* GFCI sets the highest standard of people protection of any GFCI on the market today.

True Dead-Face Design with LED Indicator for Line-Load Reversals

If a Smartlock*PRO* GFCI is miswired during installation (line-load reversal), it cannot be reset, blocking delivery of power to its feed-through terminals and face. The GFCI is completely dead and the green LED will be ON to indicate a line-load reversal. Once the GFCI is wired properly and the unit can be reset, the LED acts as a power indicator that remains ON as long as the GFCI is operating correctly and providing power.

The SmartLock*PRO* End-of-Life Protection Advantage

The SmartLock*PRO* GFCI features Leviton's unique patented lockout action as an end-of-life indication. If a SmartLock*PRO* GFCI is damaged so that it cannot respond properly to a ground fault, Leviton's SmartLock*PRO* GFCI prevents reset.

SmartLockPRO Line-Load Reversal & End-of-Life Indicators

	LED Indication	Reset Status	Reason
During initial installation	ON	Will not reset	Line and load leads are reversed
	OFF	Press RESET and LED comes ON	GFCI is wired and operating correctly
During normal operation	ON	GFCI is reset	Power is ON
	OFF	GFCI is tripped	Power is OFF

New UL Requirements for GFCIs

JULY 2006

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Meets UL 2006 Requirements

SmartLock*PRO* and The New 2006 UL943 GFCI Safety Standards

Underwriter's Laboratories (UL) has issued new requirements on GFCI functionality effective July 28, 2006:

Line-Load Reversal Indication

If an old style GFCI is miswired with a line-load reversal, it is a potentially hazardous situation because the GFCI receptacle face will be live and unprotected even after the GFCI is tripped.

Current UL Standard:

• There must be a diagnostic indicator if a miswiring (line-load reversal) occurs during installation. However, the GFCI receptacle's face may still be live and unprotected.

New UL 2006 Standard:

• If a miswiring (line-load reversal) occurs during installation, the GFCI must not be capable of supplying power to either the GFCI's face or to feed-through terminals.

The SmartLockPRO Solution:

• SmartLock*PRO* provides a true dead-face design with an LED indicator for line-load reversals.

"End-of-Life" Indication

GFCIs reach the end of their service life when they no longer provide ground fault protection. As with any electronic device, a GFCI can be damaged by surges, other electrical disturbances, or environmental and physical abuse.

Current UL Standard:

• There are no requirements related to "end of life"

New UL 2006 Standard:

• GFCIs are required to provide a visual and/or audible indication OR be able to render themselves incapable of delivering power when they no longer offer ground fault protection based on a failure to pass their internal test.

The SmartLockPRO Solution:

• Though a standard GFCI CAN be reset even if it is not providing protection…the SmartLock*PRO*'s reset button will not engage if protection has been compromised. With SmartLock*PRO*'s unique patented professional grade end-of-life lock-out action you can avoid having a live, unprotected receptacle in the event that the GFCI can no longer provide protection. The robust design of SmartLock*PRO* GFCIs also greatly reduces the frequency of GFCI failures, contributing to a longer GFCI service life.

The Choice for 2006 UL End-of-Life Indication: Protection or No Protection?

Other GFCI manufacturers have taken the alternate route in the 2006 UL Standard by providing an indicator light for end-of-life indication. They allow the compromised GFCI to be reset, thereby permitting it to continue delivering unprotected power to the GFCI face and downstream receptacles. We disagree with this approach.

GFCIs are first and foremost proven safety devices. The National Electrical Code requires GFCIs to be installed in bathrooms, kitchens, workshops and other locations where water is present and there's a risk of ground fault shock

hazard. Leviton believes that a GFCI should be replaced immediately if it no longer provides ground fault protection. There is absolutely no people protection when a compromised GFCI functions as a "live" standard receptacle.

That's why Leviton's SmartLock*PRO* GFCI performs a self-test every time it is reset. If it is not capable of responding to a ground fault, the reset is blocked. Leviton's SmartLock*PRO* approach locks out a compromised GFCI, thereby providing the safest and smartest solution to people protection.

General Testing Procedures

Non-Lockout Style GFCI	SmartLock*PRO* GFCI
Plug a lamp or radio into the GFCI receptacle.	Plug a lamp or radio into the GFCI receptacle.
Turn ON lamp or radio.	Turn ON lamp or radio.
Push the TEST button on the GFCI. If the GFCI is working properly, it will trip and power to the lamp or radio will be cut off. Push reset button to restore power.	Push the TEST button on the SmartLock*PRO* GFCI. The GFCI will trip and power to the lamp or radio will be cut off.
Your GFCI is working properly and should be retested every month.	
If power did not go off: If power did not go off when you pushed the TEST button, then the GFCI is not providing protection and should be replaced immediately. Standard GFCIs can still be reset and provide power even though they are not providing protection. **That's why we developed Smartlock*PRO*…**	You're GFCI is working properly if you can push the RESET button on the SmartLock*PRO* GFCI to restore power to the lamp or radio. **IMPORTANT:** The RESET button **will** not restore power if the GFCI is damaged and cannot respond to a ground fault.

Applications:

Residential - kitchen, bathrooms, garages, basements, and other wet locations around the home where the risk of electrical shock is higher

Outdoors - outdoor receptacles by pools, cabanas, patios, decks, and lanais

Hospitals and Healthcare Facilities - scrub rooms, lavatories, kitchenettes and other potentially wet locations throughout medical facilities

Educational Facilities - classrooms, restrooms, laboratories, dormitories and kitchens

Airports - public bathrooms, general use areas and maintenance areas

Restaurants, **Lodging and Retail Malls** - public bathrooms, general use areas and maintenance areas

Commercial Offices - bathrooms, basement areas, hallways and kitchen facilities

Public Areas - Wherever receptacles are required near wet or damp locations

Features and Benefits:

Lockout Action

- Automatically tests the GFCI every time the RESET button is pushed in. The GFCI will not reset if the GFCI circuit is not functioning properly
- By blocking reset of the GFCI if protection has been compromised, SmartLock*PRO* reduces the possibility of end-users incorrectly assuming that a reset GFCI outlet is providing ground fault protection when it actually is not
- A line-load reversal diagnostic feature is provided which prevents the GFCI from being reset and stops power from being fed to the GFCI receptacle face or through to downstream devices. A green LED indicator on the GFCI's face also illuminates to alert the installer to a line-load wiring reversal
- The trip latching mechanism in SmartLock*PRO* GFCIs is a one-piece "T" design for efficient operation
- There are 4 sets of contacts for load terminals and face. SmartLock*PRO* GFCIs use a patented bifurcated bridge contact for efficient operation
- The SmartLock*PRO* GFCI with lockout action is designed and patented by Leviton

General

- Trip threshold meets or exceeds UL requirements for tripping time
- Improved immunity to high-frequency noise reduces nuisance tripping
- Impact-resistant thermoplastic cover and body
- Advanced electronics design provides superior resistance to electrical surges and over-voltages
- Expanded wiring options with nine back-wire holes (two for each line and load connection plus one for ground with an internal clamp)
- Silver alloy contacts
- Versions available with matching TEST and RESET buttons and traditional black and red models
- Compatible with all Decora® devices and wallplates; available in select Decora colors
- Hospital Grade and Blank Face Switch-Rated models available
- Packed with coordinating wallplate
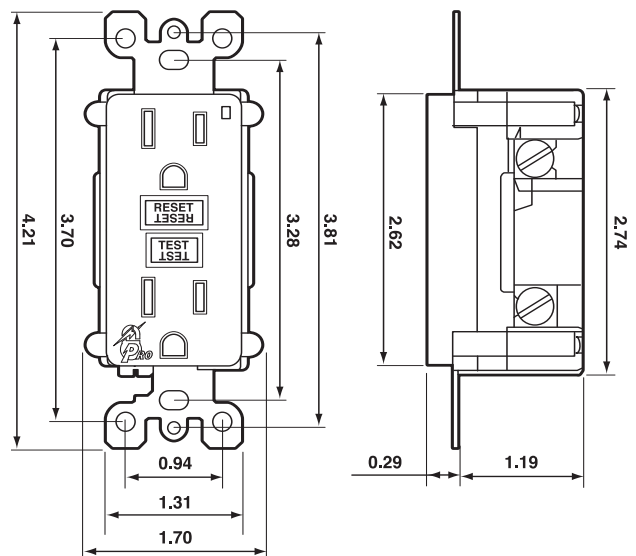- Backed by Leviton's Limited Two-Year Warranty

Agency Standards & Compliance:

- Meet or exceed all new UL requirements for July 28, 2006
- UL Standard 943 Class A (GFCI) and 498 (Receptacles)
- UL Listed (File # E-48380)
- CSA Certified (File #LR-57811
- NOM Certified (File #057)

Material Characteristics

Environmental: Flammability UL-94 V2 Rating
Operating Temperature: -35°C to 65°C

Ordering Information SmartLock*PRO*™ GFCI Receptacles
Hospital Grade — Back and Side Wired*

Description/Rating	Cat. No.	Color
LED Indicator Light 15A-125V @ Receptacle, 20A-125V Feed-Through	7599-HG 7599-HGI 7599-HGW 7599-HGG 7599-HGR 7599-HGA 7599-HGT	Brown Ivory White Gray Red Almond Lt. Almond
LED Indicator Light 20A-125V @ Receptacle, 20A-125V Feed-Through	7899-HG 7899-HGI 7899-HGW 7899-HGG 7899-HGR 7899-HGA 7899-HGT	Brown Ivory White Gray Red Almond Lt.Almond

Spec Grade — Back and Side Wired
Blank Face • Switch-Rated*

Description/Rating	Cat. No.	Color
LED Indicator Light 20A-125V Feed-Through, 1.5 HP @ 120V Switch Rating	7590-I 7590-W 7590-E 7590-A 7590-T	Ivory White Black Almond Lt. Almond

Spec Grade — Back and Side Wired
Combination Switch/SmartLock*PRO* GFCI Receptacle*

Description/Rating	Cat. No.	Color
LED Indicator Light 15A-125V @ Receptacle 20A-125V Feed-Through, 1000W, 8.3A, 1/4 HP @ 120V Switch Rating	7299-I 7299-W 7299-A	Ivory White Almond

Spec Grade — Back and Side Wired*

Description/Rating	Cat. No.	Color
LED Indicator Light 15A-125V @ Receptacle, 20A-125V Feed-Through	7599 7599-I 7599-W 7599-GY 7599-E 7599-A 7599-T	Brown Ivory White Gray Black Almond Lt. Almond
LED Indicator Light 20A-125V @ Receptacle, 20A-125V Feed-Through	7899 7899-I 7899-W 7899-GY 7899-E 7899-R 7899-A 7899-T	Brown Ivory White Gray Black Red Almond Lt. Almond

* This product is covered by U.S.
Patents Nos. 6,040,967; 6,246,558;
6,282,070; 6,381,112; 6,437,953;
6,864,766, as well as other U.S.
and foreign patents pending.

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