

Product Overview

NCS37010: Ground Fault Circuit Interrupter (GFCI) with Self Test and Lockout

For complete documentation, see the data sheet.

The NCS37010 is a fully UL943 compliant signal processor for GFCI applications with self test and lockout. The device integrates a flexible power supply (including both shunt and LDO regulators), differential fault, and grounded-neutral detection circuits. Proprietary impedance measurement and signal processing techniques are used to minimize the number of external components and improve performance. The device also includes a specialized DSP controller that offers best in class immunity to nuisance loads without the need for external analog filters. At power up the NCS37010 performs a self test at 60ms and removes the lockout if the test passes. This self test consists of a differential, ground-neutral and solenoid test.

Features

- Full self test and electronic lockout
- Self syncing internal oscillator adjusts to AC mains frequency to guarantee full resolution on 50 and 60 Hz distribution systems
- Randomized testing sequence to noise sensitivity and potential interactions on the AC mains
- High SCR drive current (up to 5 mA)

Benefits

- Fully compliant with UL self test requirements and minimal BOM impact
- Compatible with global power AC power systems
- Robust design
- Compatible with high Igt SCRs for improved noise immunity

Applications

- UL943 compliant GFCI products with self test

End Products

- GFCI receptacles
- GFCI circuit breakers
- ALCI power cords

Part Electrical Specifications

Product	Compliance	Status	Channels	V _{CC} Min (V)	V _{CC} Max (V)	I _T Max (mA)	V _I Typ (V)	T _A Min (°C)	T _A Max (°C)	Package Type
NCS37010DBRG	Pb-free	Active	1	6	12	2.2	1.8	-40	85	TSSOP-20
	Halide free									
NCS37010MNTWG	Pb-free Halide free	Active	1	6	12	2.2	1.8	-40	85	QFN-16

For more information please contact your local sales support at www.onsemi.com.

Created on: 2/15/2019