

IPLC Model M210 & GFCI Protection Options

GFCI protection is not included in the M210 IPLC control. The IPLC is a computer controlled outlet, providing short circuit and over current protection. A GFCI receptacle can not be installed in the unit because it requires power to function and the IPLC unit only provides power when a load is attached. GFCI protection is added with GFCI Breakers at the panel or with GFCI Deadfront Receptacles for select units. See below for complete details.

Installation Options

Model M210TN or M210TN-15 Units

Two Single Pole GFCI Breakers OR Two Deadfront GFCI's For Two Circuit Installation

The M210TN model has a separate neutral for A and B sides of the control (one white wire and one black/white striped wire). It can have GFCI protection provided by two single pole GFCI breakers at the panel or two GFCI deadfront receptacles between the panel and the M210 unit. (See the GFCI wiring option diagram on the reverse side.) If there is a GFCI event on the A side (the main power supply of the unit) and the breaker is tripped, the B side will not function and the LED lights on the B side will be off. The breaker at the panel or the deadfront GFCI receptacle on the B side will not trip but no power will be available. If the B side is tested for voltage when the A side breaker is tripped the B side will show voltage /current of no more than 120V / 6 ma. No power will be provided because the computer within the IPLC is powered by the A side of the unit and it is not on.

Model M210-15 or M210-20 Units

Double Pole GFCI Breaker For Two Circuit Installation

These models have a common neutral (two white wires that are connected within the unit) therefore to install GFCI protection they must be wired with a double pole GFCI breaker with the proper rating (15 or 20 amps). Connect one hot to the A side and the other hot to the B side, and share the neutrals with the double pole GFCI breaker neutral. When a GFCI event happens the GFCI breaker will trip whether it happens on the A side or the B side.

A deadfront receptacle can only be used with the M210-15 or M210-20 if the install is for 1 circuit. A deadfront is not an option if there are two circuits. This is because these units have two neutral wires that are connected on the board in the unit.

GFCI Testing Procedure

To test you will need to add a parallel load, use an extension cord that allows you to plug in the GFCI receptacle tester as well as a lamp (>40 watt incandescent light bulb). Plug this extension cord in to a powered IPLC (lights flashing), the lamp should light up when turned on. Press the GFCI Test Switch, the upstream GFCI protection will trip if it is wired correctly.

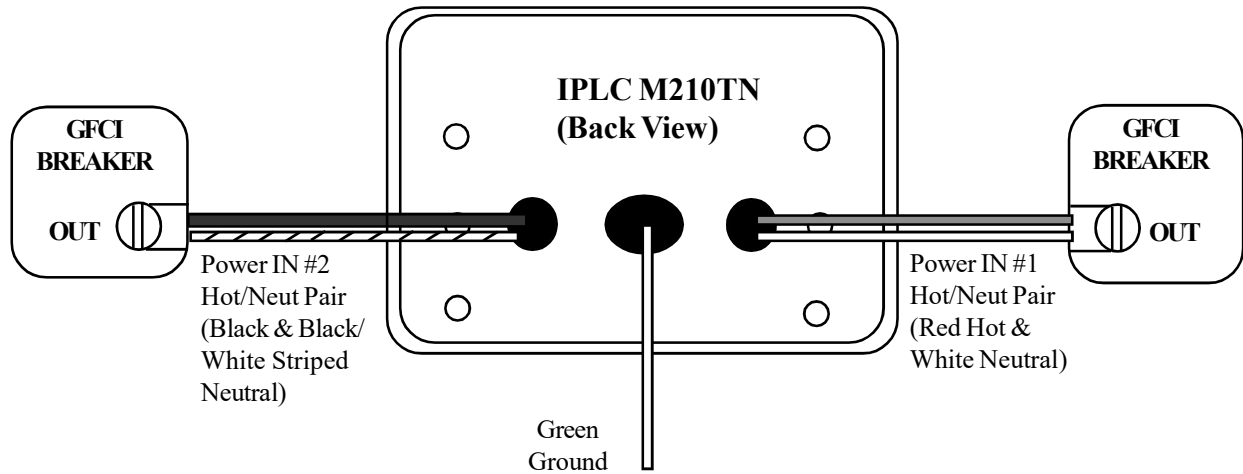
If the GFCI tester is used without a parallel load such as this, GFCI tripping is NOT guaranteed. Tripping may or may not happen. This is due to electronic component variations within the GFCI device and the sense current provided by the IPLC. The IPLC provides a maximum of 6 ma and a GFCI device requires a minimum of 6 ma to trip.

IPLC M210 GFCI Wiring Options

When wiring the IPLC with GFCI protection be sure the IPLC is wired onto the LOAD SIDE of the GFCI protection device (see below). A GFCI Receptacle CAN NOT be used in the M210 Control.

**The diagrams below are only for the M210TN units with split neutrals.*

GFCI Breaker & IPLC M210TN Wiring Diagram (Backview)



Standard Breaker, GFCI Deadfront & IPLC M210TN Wiring Diagram (Backview)

