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Intelligent Parking Lot Controller

IPLC

Régulateur intelligent de stationnement

Vantera Incorporated
P.O.Box 334 Elie, Manitoba R0H 0H0 Canada
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The IPLC Model M210 connected to GFI protection

Understanding the IPLC control and how it works in relation to GFI operations.

The IPLC is a 21st century solution to power control with tens of thousands of units in use working in concert with GFI protection throughout Alaska, the Northern States as well as Canada. The IPLC is a computer controlled outlet, providing short circuit, and over current protection, as well as programmable power delivery management. All loads plugged into the units "MUST" first be accepted and within programmed parameters before the load is connected to the power source. The indicator lights on the face of the IPLC, advises the operator as to the acceptance of the load as noted with a solid Green light. (Please see IPLC Operations Diagram for more detail).

The IPLC M210 with no load attached is in the OFF position and remains in the OFF position, until an acceptable load is acknowledged with the appropriate feedback indication displayed. Upon load acceptance the unit will provide full power for approximately two and a quarter minutes for operator's confirmation before the IPLC computer will conform to its programmed schedule for power delivery.

For installation convenience the IPLC Model M210 provides a small amount of energy to the outlet for testing purposes only, to confirm GFI wiring continuity with a GFI receptacle tester, there is NO connection to the power source, and thus a GFI event cannot be tested in this configuration.

NOTE: Testing a GFI trip event cannot occur until the IPLC has an acceptable load attached. Therefore when testing, you will need to add a parallel load as this is the only condition in which the outlet will be connected to the power source and the GFI protection device. To do this, you will use an extension cord that allows you to plug in the GFI receptacle tester as well as a lamp (100-watt incandescent bulb recommended). This will confirm it is wired correctly if the lamp works and solid green is displayed on the IPLC, and when you press the button on the GFI tester for a GFI event, the GFI breaker or dead front protectors will activate shutting off the power. All GFI testing should be conducted within the first two and a quarter minutes of load acceptance to ensure the test is not attempted when the IPLC is under its programmed schedule as the power may be in the off position as per programmed parameters.

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Model M210 TN

Two Single Pole GFI Breaker Installation.

Two Dead Front GFI Protector Installation.

This model has a split neutral or separate neutral for A and B sides of the control and therefore can have GFI protection provided by a single pole GFI solution whether dead front GFIs, or single pole GFI breakers at the panel. Please see GFCI wiring Options. When a GFI event is encountered on the B side, power is removed from the B side only. When a GFI event is encountered on the A side, power on both A and B side is removed as the IPLC computer's power source is provided from the A side.

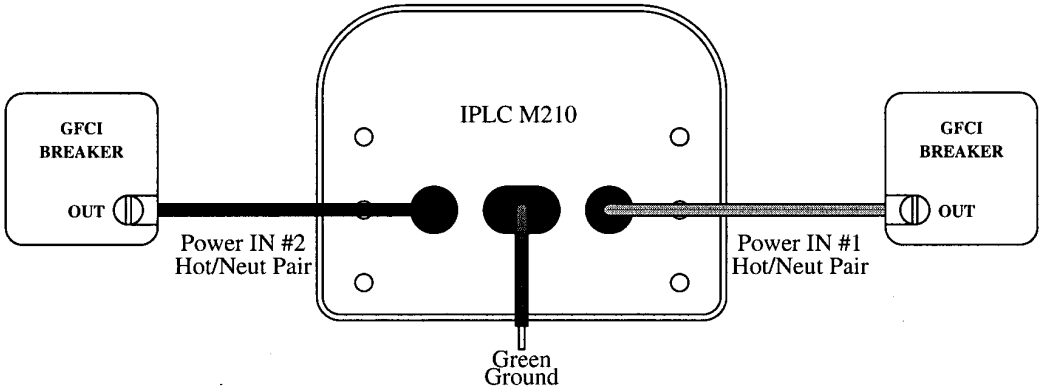
Model M210-15, M210-20

Dual Pole GFI Breaker Installation ONLY.

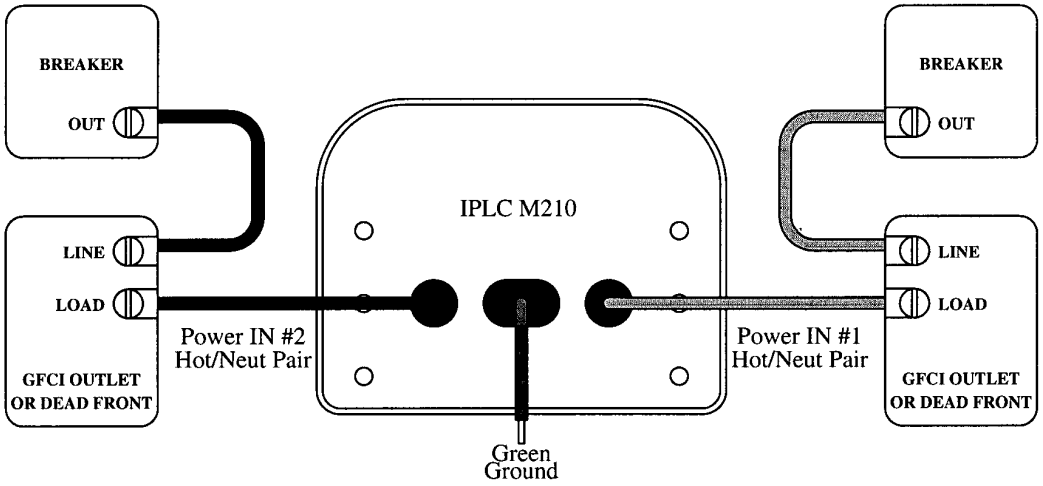
These models have a common neutral therefore to install with GFI protection they must be wired with a dual pole GFI breaker with the proper rating. Connect one hot to the A side and the other hot to the B side, and share the neutral with the dual pole GFI breaker neutral. When a GFI event is encountered the GFI breaker will trip whether the event occurs on the A or the B side of the IPLC Control.

IPLC M210 GFCI Wiring Options

There is ONLY one thing to remember when wiring the IPLC with GFCI protection; The IPLC is wired onto the LOAD SIDE of the GFCI protection device (See Below)..



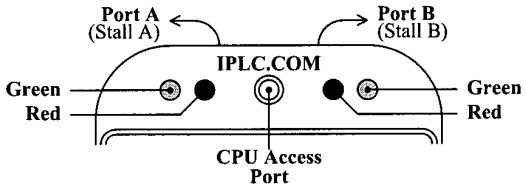
GFCI BREAKER, IPLC M210 Wiring Diagram (Backview)



STD BREAKER, GFCI OUTLET, IPLC M210 Wiring Diagram (Backview)

Intelligent Parking Lot Controller (IPLC) M210 Operation

01/2012



IPLC M210 Diagnostic Lights

Each stall or port has two associated lights, one green and the other red. These lights reflect the status of the IPLC and the condition of any attached loads, such as block heaters, battery blankets, interior heaters, etc. The various light combinations and status is shown on the table below.

Stall Lights		Load Attached	Load Status Description
Green	Red		
Flashing Slowly	OFF	NO	Power is available. Ready to accept user load.
Side A Flashing Green	Side B Solid Red	NO	B Side Of The Unit Is Turned Off. No Power is available on the B side of the unit.
Flashing Slowly	OFF	YES	User equipment has an open circuit condition. ie. your cord is plugged into the unit but may not be connected to your block heater. **Solution**: unplug and check your equipment and retry.
ON	OFF	YES	All is OK! Load is accepted.
Flashing Quickly	OFF	YES	Load is too small, MUST be at least 1/4 Amp. This can also be caused if there is a hesitation when plugging in the cord. **Solution:** Unplug the cord, the unit will return to a slow flashing green, increase load size and retry.
OFF	ON	YES	Load is OVER maximum programmed load limit. The use of a block heater and interior warmer and battery blanket etc. may result in an overload. **Solution**: reduce the number of items connected to your cord and retry.
OFF	Flashing Quickly	YES	There is a short circuit in <u>your</u> equipment or the load is far greater than the rating of the device. **Solution:** Unplug and check your cord, block heater etc. for a short circuit, repair and retry or reduce the load size.
OFF	OFF	N/A	Power is NOT available. Call service personnel.

Before plugging in your car, ensure that the green light is flashing slowly. After plugging in, this green light should be lit solid and should remain solid. The unit offers 2 1/4 minutes of full power at this time for a test period. Factory programming provides a 2 hour power delay following the test period. After this two hour delay the IPLC begins monitoring the ambient temperture and provides power to your car as programmed. **Note regarding vehicles with sensor plugs** (ie GM, Chevrolet, Pontiac etc.) These sensor plugs are designed to allow power to flow to the vehicle at temperatures -18 celsuis or lower. If the outside temperature is warmer than this when you plug in your vehicle, the green light will remain flashing same as prior to plugging in. When the temperture reaches -18 the green light will turn solid confirming a load is attached. The two hour power delay will still happen at this time unless it is removed with a data-mate.

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