

AGXCEL'S GX2 PWM ELECTRIC MOTOR DRIVER (EMD)

AgXcel has developed a PWM driver that can handle the harshest demands and environments in controlling its line of precision liquid application solutions. The on board circuit technology can intelligently manage system resources which enables high demanding performance when controlling 12v electric pumps. The durability of this EMD is far superior that any EMD on the market today. With the option to connect with Johnson Connectors this makes this module highly versatile.



Features

LED Status – Multiple LED's that enable enhanced monitoring and troubleshooting.

- **GREEN** – Power indicator that can alert when 12v is present or when voltage has dropped below superior performance levels
- **BLUE** – Complete monitoring of EMD PWM signal. Informs the user or proper signal strength and appropriate duty cycle
- **YELLOW** – Temperature control module that protects the unit from current spikes or high current heat
- **RED** – complete management and monitoring of motor current. This enhancement allows for the proper circuit current for electric motors
- **ORANGE** – intelligently monitors the appropriate voltage to electric pumps and closely monitors pumps performance

AGXCEL GX9I INTELLIGENT PWM ELECTRIC MOTOR DRIVER (EMD)

(Read Instructions Completely before Beginning Installation)

PWM Motor Drive LED trouble Shooting Guide

		Color	Time Line						LED State	Condition
POWER	Power (12V)	Green							Off	No power (or less then 6.8V)
	Power (12V)	Green							1hz Flash	Under Voltage (less then 10.5V)
	Power (12V)	Green							On Solid	12V supplied (power is acceptable)
PWM	PWM	Blue							Off	No PWM Signal to the Module
	PWM	Blue							1hz Flash	PWM signal present
	PWM	Blue							On Solid	Maximum Duty Cycle
TEMP	High Temp	Yellow							Off	Module within Temperature Range
	High Temp	Yellow							1hz Flash	Module Temp is elevated
	High Temp	Yellow							On Solid	Module Auto Shutdown from Temp
MOTOR CURRENT	Current	Red							Off	Normal Operation (Under Max)
	Open Circuit	Red							1hz Flash	Open Circuit Condition
	Over Current	Red							On Solid	Over Current (Output Shorted)
MOTOR RUNNING	Motor	Orange							Off	Motor is not running
	Motor	Orange							On Solid	Motor is running

5 Light GX2 PWM Troubleshooting

No Green Light: Less than 12V is being supplied to the PWM. Ensure that the PWM is connected to the battery of the tractor and the original AgXcel provided harnessing has not been spliced into another harness. Ensure that the 40amp fuse has not blown. And ensure that, by using a voltmeter, how many volts are on the harness going into the PWM. If there is less than 12V, then the PWM will not power on.

Solid Green Light: The PWM is supplied with 12V of power.

No Blue Light: On the clear bulb, if there is no blue light then there is no signal from the liquid rate controller being sent out to the PWM. Or if the liquid rate controller is sending a signal, then that signal is not being delivered to the PWM, indicating that there is a problem with your harnessing.

Flashing Blue Light: The PWM has received the signal to control the pump system from the liquid rate controller and the PWM is now sending voltage to the pumps.

Solid Blue Light: The PWM is at the absolute max duty cycle.

No Yellow Light: The PWM is operating within its temperature range.

Flashing Yellow Light: The PWM is reaching its high temperature limit.

Solid Yellow Light: The PWM is over heated and needs to cool down before it can be used again. This could happen due to the PWM getting older or the power supply or harnessing is not sufficient to meet the PWM's needs.

No Red Light: The PWM is operating within its operating voltage.

Solid Red Light: There is an over current in place to the PWM. This is normally caused by a bad harnesses or pin. Check for damaged harnessing or burnt/corroded pins.

No Orange Light: The 12V pumps are not pumping liquid.

Solid Orange Light: The 12V pumps are pumping liquid.