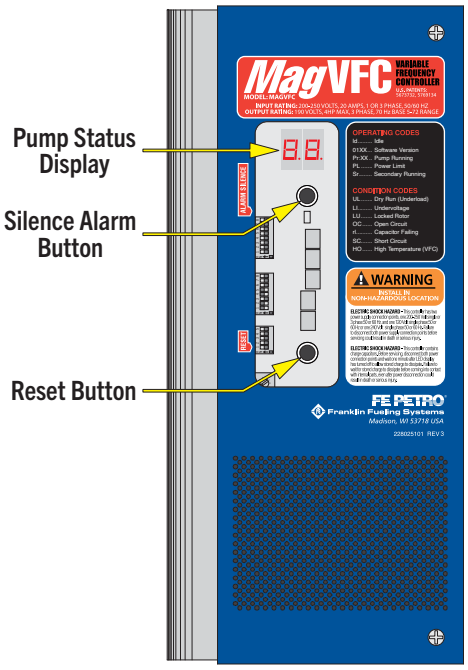
MAGVFC™ / ECOVFC™ ALARMS AND REMEDIES

DISPLAY DEFINITIONS

The MagVFC™ / EcoVFC™ displays several operating parameters of the controller and also indicates a fault code when an abnormal operating condition is detected.

DISPLAY STATUS CODES (THESE ARE NOT ALARMS)

Code	Definition	Description	Displayed
Id	Idle	Controller has incoming power applied, but no hook signal, PMA is not running, and no fault codes active.	Controller is on but idle (i.e. no hook signal is present).
xx : yy	Software revision	Software version of controller where numeric value **xx** displays and then value **yy** to form the revision **xx.yy**	Immediately after the controller has been reset or turned ON.
Pr : NN	Pressure regulate	**Pr** is the pressure setting of **NN** psi that the controller is set to maintain. **Pr** and the numeric value will flash alternately on the display when running.	Primary or Standalone controller is running and operating within pressure regulate setting.
PL	Power Limit	Displayed when MagVFC™ / EcoVFC™ is operating at its power limit. This is a part of normal operation.	The controller is operating at its maximum power.
Sr	Secondary running	Displayed when a secondary in a Primary-Secondary configuration is running, including secondary of EVO™ Turbine Pump Interface™ configuration.	On secondary pump only when operating.



Silence Alarm Button – Push to turn off the audible alarm.

- *Push and hold the **Silence Alarm Button*** to have the pump status display show the last three fault conditions the MagVFC™ / EcoVFC™ encounter (flashes F1 then last fault code detected, flashes F1 then second to last fault code detected, then flashes F2 and third to last fault code detected).

Reset Button – Soft reset of the controller to clear any fault code.

⚠ **CAUTION**: Repeatedly pressing the reset button *(without prior maintenance service)* could cause damage to the controller or STP if the abnormal condition hasn't been properly addressed.

NOTE: If performing a hard reset of controller (power cycle of incoming power), *wait for pump status display to fully turn off before re-applying incoming power to controller.*

TROUBLESHOOTING GUIDE

The MagVFC™/EcoVFC™ can display abnormal operating conditions on the front panel (see the table below).

For additional product information, refer to Franklin Electric documents, *MagVFC™ Install/Owners Guide, p/n **228001101** or EcoVFC™ Install/Owners Guide, p/n **228001102**.*

Code	Condition	Proposed Action
	**Under-Load** (tank-empty/ dry-running/clogged-intake or incorrect horsepower setting)	1. *Check SW3 P6 and verify it matches the horsepower of the pump connected.* Connecting a VS2 motor with a SW3 P6 "ON" (4 hp), may cause this false indication when operating in SW1 positions 0 – 6 operation. 2. If fault reoccurs, it is possible that there is an obstruction (rag or absorbent pad) on the inlet of the PMA. *Contact a service company.* 3. *Check fuel level in storage tank; if product level is low, schedule fuel delivery.* When delivery is complete and fuel level is above PMA end bell, *push the **Reset** button on MagVFC™/EcoVFC™, and check for correct system operation.*
	Low-Incoming (controller incoming supply voltage below range)	1. This alarm will automatically reset when voltage returns to normal. a. If site is experiencing a "brownout" situation, *do nothing.* b. If voltage appears to be normal per the input voltage specifications, push **Reset Button** *once.* 2. If condition is corrected, *check for proper operation of system.* a. If operating correctly, *put STP back in service.* b. If condition reoccurs, *contact a service company.*
	Locked-Rotor (overload fault with running PMA)	1. Push the **Reset** button on the MagVFC™/EcoVFC™ *only once.* 2. If condition is still present or reoccurs, *remove the black end cap from the PMA and attempt to spin rotor with a 3⁄16" Allen wrench to determine if there is any binding. **If binding or physical damage is confirmed, replace the PMA.*** **NOTE**: In rare installations, a partial short can result from a nick in one of the pump power wires coupled with water in the electrical conduit from the MagVFC™ to the pump, resulting in Lr indications.
	Locked-Up (overload fault with starting PMA)	1. Push the **Reset** button on the MagVFC™/EcoVFC™ *only once.* 2. If condition is still present or reoccurs, *remove the black end cap from the PMA and attempt to spin rotor with a 3⁄16" Allen wrench to determine if there is any binding. **If binding or physical damage is confirmed, replace the PMA.*** **NOTE**: Where motor wiring runs are extremely long and/or of a small wire diameter from the MagVFC™ to the pump, false LU indications can result.
	Short-Circuit (overload short detected in field wiring or incorrect horsepower setting)	1. Push the **Reset** button on the MagVFC™/EcoVFC™ *only once.* 2. *Check SW3 P6 and verify it matches the horsepower of the pump connected.* Connecting a VS2 motor with a SW3 P6 "ON" (4 hp), may cause this false indication when operating in SW1 positions 0 – 6 operation. 3. Perform ohmmeter tests/conductivity tests as called out in the MagVFC™ Install/Owner's Guide. *Contact an Electrician to diagnose the problem.* 4. After the problem is corrected, *turn on the power to the MagVFC™ and verify system is operating correctly.*
	Shorted-Upper (overload short detected in controller)	1. Push the **Reset** button on the MagVFC™/EcoVFC™ *only once.* 2. Perform ohmmeter tests/conductivity tests as called out in the MagVFC™ Install/Owner's Guide. *Contact an Electrician to diagnose the problem.* 3. After the problem is corrected, *turn on the power to the MagVFC™ and verify system is operating correctly.*
	Open-Circuit (open connection detected at controller reset/startup)	1. Push the **Reset** button on the MagVFC™/EcoVFC™ *only once.* 2. Perform ohmmeter tests/conductivity tests as called out in the MagVFC™ Install/Owner's Guide. *Contact an Electrician to diagnose the problem.* 3. After the problem is corrected, *turn on the power to the MagVFC™ and verify system is operating correctly.*
	Extended-Run (PMA running at same power level for 60 minutes)	1. Disconnect power at load center. Lock and tag out circuit breaker. Contact electrician is necessary. 2. Check voltages across hook signals with dispenser handles off (there should be no voltage applied). *If voltage is present contact an electrician to correct the problem.*
	Ripple-Load (incoming voltage or controller capacitor bank unbalanced)	1. This alarm condition allows the STP to continue to run. *Push the **Silence Alarm** button to quiet the audible alarm.* 2. If fault clears, *observe the MagVFC™/EcoVFC™ in normal operation for approximately 10 minutes.* 3. If condition reoccurs, *contact a service company.*
	Hot-Operation (controller temperature out of range due to fan failure or ambient conditions)	1. Verify that the fan is running properly. Fan runs as needed, it does not run constantly. 2. Verify proper spacing around vents and confirm they are free from obstruction. 3. Press **RESET** button. If condition persists, *contact Franklin Electric Technical Support.*

franklinfueling.com
3760 Marsh Rd. • Madison, WI 53718, USA
Tel: USA & Canada +1 800 225 9787 • Fax: +1 608 838 6433
Tel: UK +44 (0) 1473 243300 • Tel: Mex 001 800 738 7610
Tel: DE +49 6571 105 380 • Tel: CH +86 10 8565 4566

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