

QUICK REFERENCE GUIDE

altronic[®]
EPC-100E/110/120
AIR-FUEL CONTROLLER

TIPS AND HINTS TO ASSIST WITH INSTALLATION AND/OR OPERATION

1/19/09

EPC “Rich Limit” Diagnostic Messages

“Rich Limit” diagnostic messages on the display are usually due to high concentrations of oxygen in the exhaust as a result of misfire. Even one cylinder that is misfiring due to sparkplug or secondary connection issues can cause this diagnostic message. Too much misfire will allow both fuel and air into the exhaust that enters the catalytic converter where it is burned. This will always cause the catalyst output temperature to increase, and in many cases to shutdown on a high catalyst output temperature. If the units misfire rate is such that the catalyst temperature protection is within limits, the overabundance of air will be sensed by the O_2 sensor and try to compensate by enriching the mixture. This is done by reducing the valve position towards the “open” position (“0” steps). If the position is sensed at “0”, the diagnostic will show “Rich Limit”. Correction of the misfire condition will correct this diagnostic.

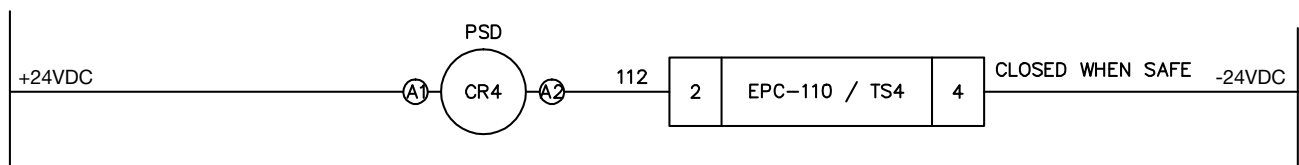
This guide is provided to both clarify and add information to the current Operating Manuals EPC-100E OM 5-06 and EPC-110-120 OM 10-07. This manual can be found on the Altronic website at: www.altronicinc.com.

EPC-110/120 Alarm Outputs

The **CATALYST TEMP ALARM OUTPUT** is configured as a normally closed output signal. Any of the protection shut down (**PSD**) diagnostic thresholds will cause this output to open. Connect this output to the safety shutdown system in combination with a relay to result in an engine shutdown for the purpose of catalyst protection. This output is not latching and self-resetting upon the clearing of related protection conditions. (**SOLID STATE SWITCH RATED 30 VOLTS/0.5 AMPS MAX**)

The **ALARM OUTPUT** is configured as a normally closed output signal. Any diagnostic relating to measured temperatures, O_2 sensor voltages, or rich or lean limit stepper positions will cause this output to open for identification of possible improper airfuel control system operation. This output is not latching and is self-resetting upon the clearing of all the alarm conditions. (**SOLID STATE SWITCH RATED 30 VOLTS/0.5 AMPS MAX**)

THE SAMPLE SKETCH BELOW SHOWS THE TYPICAL EPC-110 WIRING FOR THE CATALYST TEMP ALARM OUTPUT.



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EPC-110/120

These internal switches (**Terminals 1 & 2**) turn on to **Terminal 4 “NEGATIVE (-) COMMON (GROUND)”**. Common wiring practice is to wire **+24VDC** to the relay coil, and the other side of the relay coil to **Terminal 1 or 2** (relay power common must be tied to **Terminal 4**, or be common with the **-24VDC** power common). **Terminal 4** and the **-24VDC** power connection are tied together internal to the EPC-110/120.

