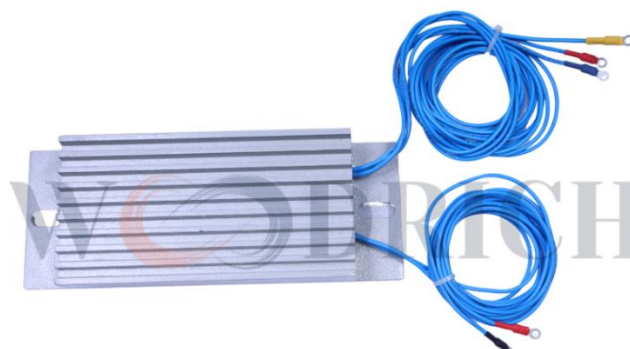


STANDBY INVERTER FOR FUEL TRANSFER PUMP FOR DIESEL LOCOMOTIVES



SPECIFICATIONS

Power Capacity: Continuous-800W, Peak-1500W

Nominal Voltage: 74 VDC

Input Current: 7.5-8A @ 74 VDC with 4Kg/cm² pressure

Output Frequency: 50-60 Hz

Output wave form: Quasi-Sinewave

Motor Drive Method: PWM with V/f control

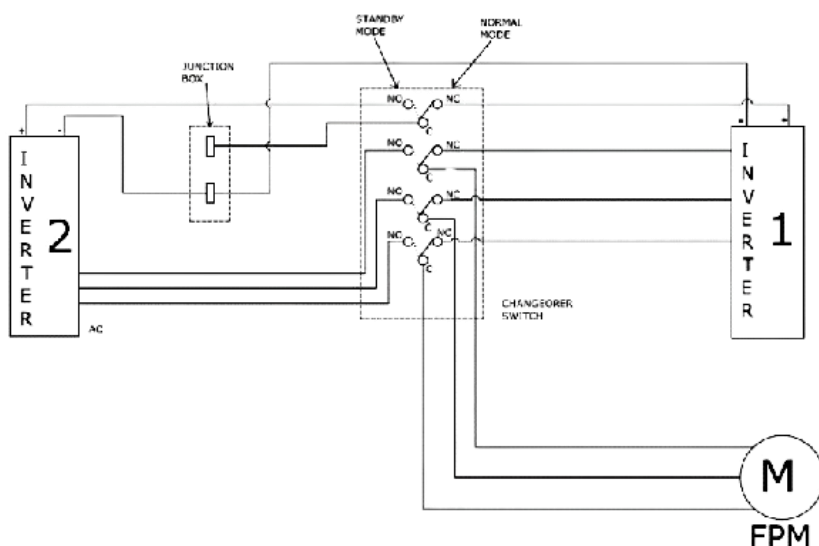
Operating temperature: 50-60 °C @ 25°C ambient temperature

Cooling Method: Convection air cooled

Enclosure standard: IP66

Connection: Power Terminal screw block

CONNECTION DIAGRAM



Why this standby inverter?

In all diesel locomotives, the fuel pumping from tank to engine is like the heart of the locomotive; the main substances of fuel will be transmitted through this equipment. If something goes erroneous with the fuel pump, the consummate engine is going to be shut down, and the locomotive will get line detention due to the failure of this pump.

As was already mentioned, inverter failure will likely be the primary cause of failure. Locomotives will malfunction and fuel transfer will stop when it fails. We recommend adding an additional inverter to the fuel pump circuit in addition to a fuel pump motor in order to avoid locomotive failure. The adscititious (standby) inverter activates by turning on the rotary switch located in the cab or close by if the main pump inverter fails. We can, however, avoid the malfunction and continue to operate the locomotives until it is adjusted.

About the Company




Woodrich Global FZCO is a proven source for the manufacturing and supply of rolling stock supersession components for EMD, GE, and Alco diesel locomotives. We are one of the proven and approved sources for vertical-type AC fuel pump motors, which have been designed with a Monoblock pump and a pristine sinewave DC-AC inverter to drive the motor to transmit the fuel from the tank to the engine through a primary filter.

Following the aforementioned incident, we became interested in determining the primary reason for the OEM Inverter's failure. We discovered a lot of information that we are unable to provide here, but we also developed a better solution: A new Inverter that can directly replace OEM models without the need for modification. The improved, higher-rated MOSFETs with an over-voltage protection circuit and pure PWM sine wave characteristics of the Elixir DC-AC inverter for the Fuel Pump are specifically intended to operate the motor constantly with a constant current. The necessary driver voltage for operating the MOSFET gate is produced by the gate driver. To reduce the amount of negative voltage transients, a unique protective circuit has been built across the MOSFETS.

Additionally, the Inverter body heatsink—which dissipates excess heat generated by the motors during a load—is a crucial design feature. Thermostatic protection is positioned between the body and the Electrical Circuit Board. This is especially significant for Copper Alloys. To connect the motor and Inverter's Three-Phase wires and avoid a short circuit, a Special Terminal Board has been supplied.

Address:

WOODRICH GLOBAL FZCO, OFFICE NO. FC0400WS216, Jebel Ali Free Zone, Dubai, UAE

Phone:  +971 504512135  

Email:  info@woodrichglobal.com Website:  www.woodrichglobal.com