

**GEMINI MODEL 224
CURRENT ISOLATOR ASSEMBLY
PART NUMBER 12M03-00122
APPLICATION NOTES**

1. The output impedance ranges from 8 ohms to 120 ohms depending on the switch setting. It should be used in a circuit with a minimum of 2000 ohms external load on the output of the Isolator.
2. When used for current feedback accuracy is of little concern, but if used for metering, accuracy should be considered in the calibration of the meter. The accuracy depends on the full scale calibration. When calibrated for 16 amperes, accuracy is 10 to 15% and improves to better than 1% when calibrated to 256 amperes.
3. Whenever unbalanced firing of the thyristors causes DC to flow in either of the two AC lines being monitored, accuracy may suffer but the circuit will continue to function. The Model 224 Isolator should never be used in a half-wave (three-pulse) configuration where DC consistently flows through the AC lines. An isolator such as the REFLEX Model 213 Signal Isolator should be used instead.
4. A Phase Loss and Unbalance Detector such as the REFLEX Model 211 may be connected to the output of the Model 224 Current Isolator to shut down the control or sound an alarm if desired when current unbalance exceeds a preset level.
5. The Current Isolator is furnished as an assembly with buss bars suitable for connecting lugs or wires with connectors adequate for the currents involved.
6. The Current Isolator is normally calibrated so that 115% of full-load current produces approximately 2 volts DC output. It can be calibrated for other values to produce 2 volts at the current-limited value depending on the application. Exact limit values are obtained by adjusting the "Current Limit" potentiometer (reference for the Inner Current Loop Regulator).

Example 1: A 5 HP DC Motor is rated at 20 amperes full load. 115% current is 1.15×20 or 23 amperes. Close switch position #4 (16 ampere position). This 16 amperes is added to the minimum 16 amperes for a total of 32 amperes. Adjust "Current Limit" Potentiometer for 23 amperes.

Example 2: A 100 HP DC Motor rated at 160 amperes is used. 150% current is (1.5×160) or 240 amperes). Close switches 1, 2 and 3. $(16 + 128 + 64 + 32 = 240)$ amperes). Adjust "Current Limit" Potentiometer for 240 amperes.



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