NUSI 1100 Series
Magnetic Amplifier Relay

The MAG1100 Magnetic Amplifier Relay replaces the obsolete Hagan magnetic amplifier relay, as a one-channel device that compares an input signal with an internally generated and adjustable set point (BIAS) voltage. Based on this comparison, the MAG1100 actuates three Form C dry contacts. The difference between trip and reset points (DESENSE) is also adjustable. The MAG1100 is intended only for non-safety-related applications in nuclear power plants.

SPECIFICATIONS

Power Supply Voltage: 85 to 132 V ac, 40 to 440 Hz, 110 to 170 V dc
Fuses: 1 A slow blow, 250 V ac, 3AG, PCB mount fuse holders
Inputs: 0 to 20 mA (or 4 to 20 mA) into 250 Ω
0 to 50 mA (or 10 to 50 mA) into 100 Ω
0 to 5 V (or 1 to 5 V) into 20 MΩ
0 to 10 V (or 2 to 10 V) into 200 kΩ
Outputs: 5 A at 28 V dc or 120 V ac, three-pole double-throw relay contacts
Desense (deadband): 2 % to 100 % of input full scale
Switching Time: Adjustable from 100 ms to 500 ms
Voltage Effects: Less than 0.1 % of input span change in set and reset points for all listed voltage and frequency variations
Repeatability: Better than 0.1 % of input full scale
Surge Withstand: Using the waveform described in IEEE-472-1974
Input – Output Isolation: 580 V ac and 250 V dc common mode rejection (line-to-line and line-to-neutral)
Ambient Temperature: 40 °F to 120 °F (5 °C to 49 °C) (normal operation)
120 °F to 140 °F (49 °C to 60 °C) (abnormal operation for 170 hours)
−40 °F to 185 °F (~40 °C to 85 °C) (storage)
Relative Humidity: 0 % RH to 95 % RH, non-condensing
Pressure: Atmospheric
Radiation Limits: $10^4$ rad TID gamma over forty years

**HOW TO ORDER**

Order model number **MAG1100**. Custom calibration is available by request.

Scientech is the premier provider of custom solutions for obsolete analog and digital nuclear power plant instrumentation.