Honeywell 900a01-0202

Honeywell Universal AI (900A01-0202)
The Universal Analog Input module supports up to 8 user-configurable inputs on a per point basis for thermocouple, RTD,
Resistance, V, mV, mA. Point-to-point isolation and back-plane isolation are provided. Modules perform analog to digital
conversion in synchronization with CPU control execution, eliminating data interchange latency. All analog input modules are
processed in parallel, eliminating scan time increases as modules are added. A green blinking status LED on the module
indicates when the module is being scanned and red status LED when module diagnostics exist. A user-selectable
BURURNOUTN value is supported on a per channel basis. A warning signal is provided for thermocouple inputs to indicate
maintenance is needed prior to a sensor failure. A sensor failure signal is also provided.
Item Specification
Inputs per module 8 (isolated)
Input types mV, V, T/C, RTD, ohms, mA
Signal Source
See Analog Input Reference Accuracy for range types. Thermocouple with cold
junction compensation
RTD, PT100 3 wire, 40 ohms balanced maximum
Thermocouples: 100 Ohms/Leg
100 (except Low), 500 & 1000 RTD: 100 Ohms/Leg
100 YIS: 100 Ohms/Leg
100-Low RTD & 10-ohm Cu: 10 Ohms/Leg
Input Impedance 10 megohms for T/C and mV inputs; >1 megohm for volts and 250 ohms for mA inputs
Galvanic Input Isolation 400 VDC point to point, 1K VDC to logic
RTDs are isolated in pairs
Noise Rejection Series Mode >60dB.
Common Mode >130dB at 120VAC.
Burnout T/C, mV, V configurable to upscale, downscale, defined value, or none.
Over-range limit +/- 10% for linear ranges (volts). +/-1% for non-linear ranges (T/C, RTD).
T/C Break Detection Via current pulse
Faulty thermocouple detection If greater than 100 ohms, a warning status is provided as an output for the AI
block
Accuracy Factory configured accuracy = ± 0.1 % of range (± 0.2 % of range for 0V

to 10V and -10V to 10V)
Cold junction accuracy = ± 0.7 ° C
Reference conditions:
Temperature = 25 ° C ± 3 ° C (77 ° F ± 5 ° F)
Humidity = 45 % to 55 % RH non-condensing
Line voltage = Nominal ± 1 %
Source resistance = 0 ohm
Series mode and common mode = 0 V Frequency = Nominal ± 1 %
Temp. Effect on Accuracy ± 0.01% of full scale per degree Celsius maximum
A/D Converter One per module
A/D Resolution 15 Bits
Reference Junction Sensing Via 2 RTDs at top/bottom of module
Update rate 500ms (Analog to Digital Converter per module)
Long term Stability 0.1% per year
Calibration Data is stored in non-volatile memory Redundant Factory Calibration Individual
Diagnostics Monitoring of Factory Calibration, 24 VDC supply, and configuration.
Channel Configuration Data Stored in non-volatile memory