



8-Channel RTD Analog Input Card

3111

PRODUCT HIGHLIGHTS

- 8 RTD Input Channels
- Compatible with all RTP3000 TAS systems (SIS, DCS, PLC)
- Supports 3-wire 10 Ohm copper RTD
- One ADC per channel
- Ratiometric configuration
- On-board Temperature Sensor

Product Overview

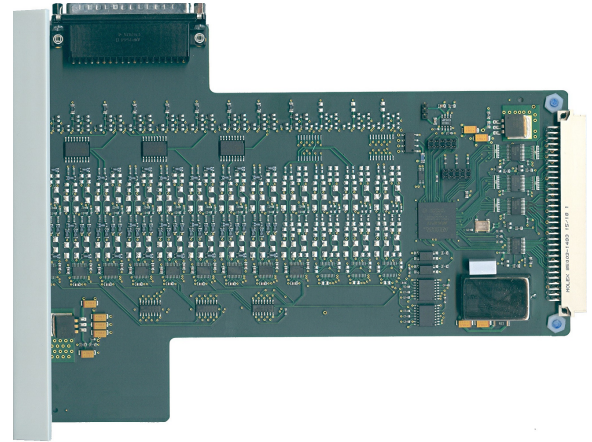
The 8 Channel 3111 RTD input card can be installed into any RTP3000 TAS family chassis and provide temperature measurements from field devices such as temperature sensors or transmitters.

The 8 channel 3111 RTD card supports 3-wire 10 Ohm copper RTD types and can provide temperature measurements of +260 °C to -200 °C.

The 8 channel 3111 RTD card is configured with one analog to digital converter per channel.

The 8 channel 3111 RTD card employs a ratiometric measurement technique. The reference voltage for each analog to digital converter is produced by passing the returning RTD excitation current through a precision resistor. Thus any excitation current source drift is compensated for automatically.

An on-board temperature sensor supports temperature compensated input readings.



3111 8-Channel RTD Input Card

RTP is the Best Technology for Your Investment,

Here's why:

The 3000 TAS is a multi-processor architecture that delivers exceptional Performance and Comprehensive Diagnostics. The results speak for themselves: A reaction time of 12 msec, true 1 msec SOE (Analog and Digital), an MBTF of greater than 50000 years an MTTF of greater than 60000 years, and a PFDavg of 5×10^{-5} . **Compare these numbers to any other system.**

Built-in proof test diagnostics means it will never be necessary to shut down at the proof test interval. Unlimited online downloads of logic and configuration changes do not require a periodic shut down like other systems. **Compare this functionality to any other system.**

NetSuite Software: One-time price includes unlimited use of Logic Development, Alarm Manager, Data Archive and Historian and HMI without hardware or software keys. **Compare this functionality and price to all other systems.**

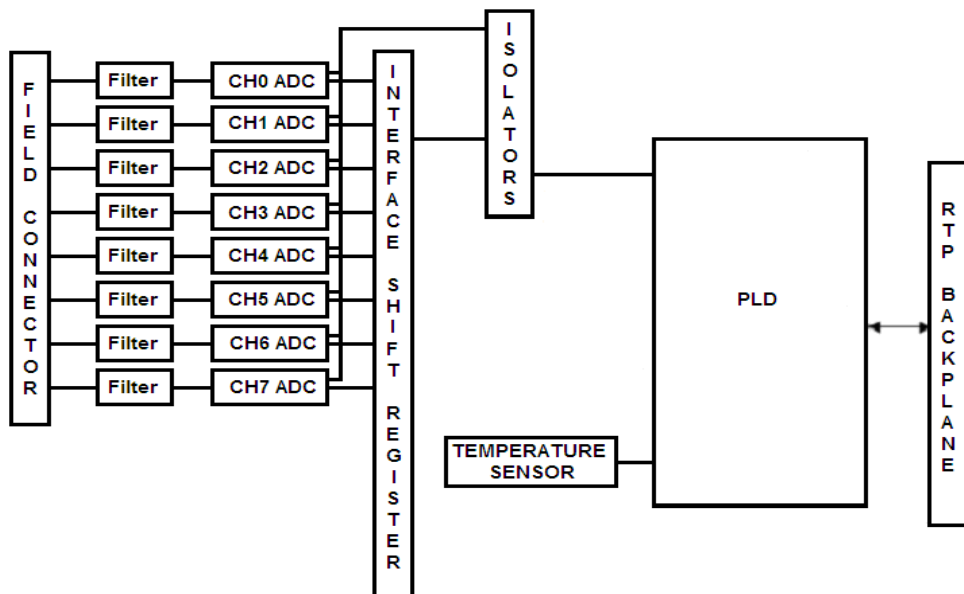
Finally, a Safety Instrumented System (SIS) should always take the process it protects to a safe state when it is required to do so, and it should never interfere with the operation of the process at the time. **The 3000 TAS does this better than any other system.**

Specifications

Number of Channels	8
RTD Type	3-wire 10 Ω Copper
Full Scale Value	32.67 mV
Input Signal Guard Band	32.67 mV to 33 mV
Max Input Source Impedance	21.78 Ω maximum including cables
Analog input error (maximum error at 25 °C)	+/-0.085% full scale value (+/-0.0185 Ohms)
Analog input error (temperature coefficient)	+/-0.0010 full scale value/°C (+/-0.000218 Ohms/ °C)
Maximum error over temperature range (0 to 55 °C)	+/-0.1150% full scale value (+/-0.0250 Ohms)
Digital resolution	15 bits
Type of input	Single ended
Scan Rate	41 sample sets per second
Input filter characteristics - order	Second order
Input filter characteristics – transition frequency	-6dB @ 2.0 Hz
Type of protection	Digital isolators (magnetic)
Isolation	500V Channel to RTP BUS
Common points between channels	All channels common to excitation return
Non-linearty	+/-0.085 % of full scale value
Repeatability at fixed temperature after 10 second stabilization time	+/-0.085 % of full scale value
Backplane Power	5VDC @ 175 mA 24VDC @ 100 mA

Environmental Specification

Operating Temperature Range	-20°C to +60°C
Storage Temperature Range	-25°C to +85°C
Relative Humidity Range	10% to 95%, non-condensing



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