



PRODUCT HIGHLIGHTS

- SIL-3 Approved
- Supports 24, 48 and 120 VDC Sinking Input Signals
- Supports 120 to 230 VAC Sinking Input Signals
- 1 msec SOE resolution
- Single, Dual, or Triple Redundancy

Product Overview

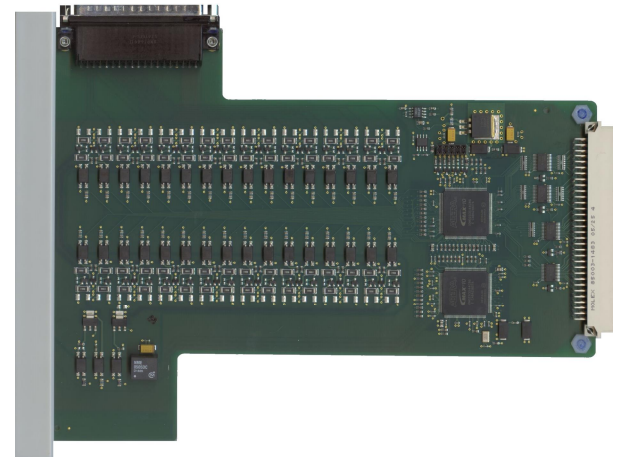
The 3147 Digital Input card provides 32 optically isolated sinking digital inputs. It can be installed into any 3000 TAS family chassis and receive input signals from process switches, limit switches, proximity switches, push buttons, or other suitable digital devices. It is capable of recording SOE data with 1 millisecond timestamp resolution when the input changes states.

This card is IEC 61131-2 qualified and performs comprehensive diagnostic tests on all input channels and backplane communications for detecting internal faults. Any errors detected are reported to the operating program.

I/O bus checking diagnostics, card address tests and configuration tests are performed each time the chassis processor accesses the card. All data and control transfers are performed twice, once using the actual data and then using inverted data. Both versions of the data are compared to verify that all I/O bus data bits are functioning properly on the backplane. I/O bus slot address and control signal contention tests are also performed.

The 3147 Digital Input card has five available options. It can receive input signals of 24, 48, or 120 VDC, as well as inputs voltages of 120 or 230 VAC.

The 3147 does not offer line supervision. If line supervision is required, use the 3153 Digital Input card with the 3099/21-001, 3099/21-101 or 3099/21-201 Supervised Digital Input termination modules.



3147 32-Channel Digital Input Card

Replacing a 3147 card can be done while the system is running. Simply disable the card from within NetArrays, remove the cable attached to the card, replace the card, attach the cable to the card, and enable the card within NetArrays. A front panel LED indicates if the card is online or offline.

RTP is the Best Technology for Your Investment, Here's why:

This product is compatible with the 3000 TAS and N+ systems. It is a multi-processor architecture that delivers exceptional Performance and Comprehensive Diagnostics. The results speak for themselves: A reaction time of 7 msec, true 1 msec SOE (Analog and Digital), an MBTF of greater than 50000 years an MTTFS 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	32				
Input nominal voltage	24 VDC	48 VDC	120 VDC	120 VAC _{RMS}	240 VAC _{RMS}
Input nominal current	5.1 mA	5.1 mA	5.2 mA	3.3 mA _{RMS}	3.2 mA _{RMS}
Input low voltage	< 5 VDC	< 10 VDC	<25 VDC	<20 VAC _{RMS}	<40 VAC _{RMS}
Input low current	< 1.0 mA	< 1.0 mA	<1.0 mA	<0.5 mA _{RMS}	<0.9 mA _{RMS}
Input high voltage	> 11 VDC	>30 VDC	>75 VDC	>79 VAC _{RMS}	>164 VAC _{RMS}
Input high current	> 2.0 mA	>3.0 mA	>3.1 mA	>1.8 mA _{RMS}	>3.9 mA _{RMS}
Input maximum voltage	30 VDC	60 VDC	150 VDC	132 VAC _{RMS}	264 VAC _{RMS}
Input maximum current	6.4 mA	6.1 mA	6.5 mA	3.6 mA _{RMS}	3.5 mA _{RMS}
Maximum permanent allowed overload	±30 VDC	±60 VDC	±150 VDC	132 VAC _{RMS}	264 VAC _{RMS}
Power Dissipation	3.6 Watts	7.1 Watts	19.6 Watts	12.5 Watts	24.8 Watts
Digital input delay time from 0 to 1 transition	1 millisecond maximum (SOE)				
Digital input delay time from 1 to 0 transition	1 millisecond maximum (SOE)				
Common points between channels	All channels share a common return				
Isolation Field to RTP	500 VDC No channel to channel isolation				
Backplane Power	+5VDC @ 250 mA				
Type of Input	Per IEC61131-2 Type 3 for DC options, Type 1 for AC option				
Channel Filtering	Filtering via software				
Hardware Watchdog Timer	0.68 to 1.40 seconds				

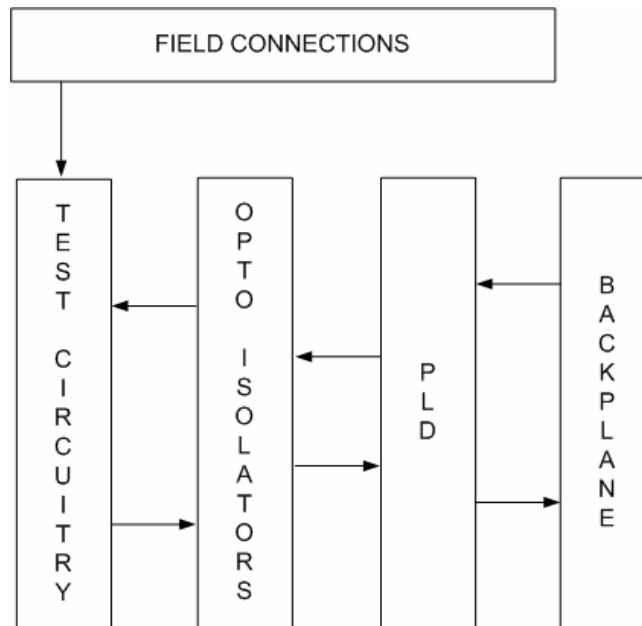
Environmental Specifications

Operating Temperature Range	ó20°C to +60°C
Storage Temperature Range	ó25°C to +85°C
Relative Humidity Range	10% to 95%, non-condensing

Termination Module

3299-00S/D/T*	32 channel sinking (close to positive) digital input w/ channel LEDs
3299-11S	Termination Module ó Single Universal

*Represents (S)ingle, (D)ual, or (T)riple card redundancy



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