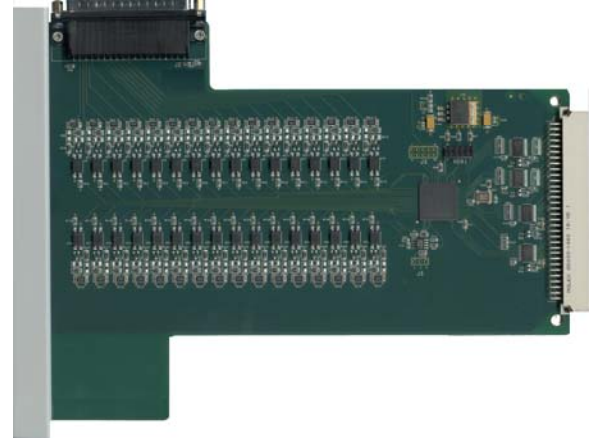




## PRODUCT HIGHLIGHTS

- Compatible with all RTP3000 TAS systems (SIS, DCS, PLC)
- Cost Effective
- 1 msec SOE resolution
- Supports 24V Sinking Input Signals
- I/O Bus Checking Diagnostics
- IEC 61131-2 Compliant



3216 32-Channel Digital Input Card

## Product Overview

The 32-Channel Digital Input card has been designed for use in general purpose PLC or DCS systems and safety applications which have requirements for non-critical, non-SIL rated signals. It provides a low cost option for functionality not directly related to the safety instrumented functions of applications.

The input card 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. When used in a safety system, these cards may co-exist in the same chassis, communicating on the same bus, to the same processors and not interfere with the safety operation of the SIS.

The 3216 Digital Input card provides 32 optically isolated 24 VDC sinking digital inputs. It is also capable of recording SOE data with 1 millisecond timestamp resolution

Each card includes a five foot termination cable. You may choose to use the RTP field termination module or existing terminal blocks. When using existing terminal blocks, the 3216 card can be ordered with a termination cable that includes a connector on one end to mate to the card and stripped wires on the other end to mate to the existing termination assemblies.

Diagnostics detect the presence of the field termination cable. If the cable connection is disconnected, it will result in the card being placed offline and an error message being displayed in the device status window. The corresponding error bit is set in the integer error detection word.

### **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 MTTFS of greater than 60000 years, and a PFDavg of  $5 \times 10^{-5}$ . **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.**

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.

Should a card need replaced, it 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.

## Specifications

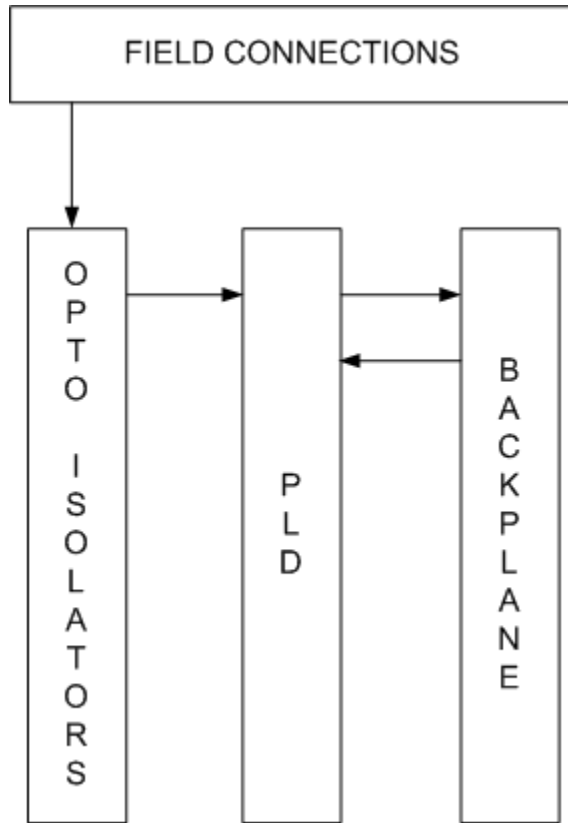
Number of Channels	32
Input nominal voltage	24 VDC - sinking
Input nominal current	10.2 mA
Input low voltage	< 5 VDC
Input low current	< 0.1 mA
Input high Voltage	> 15 VDC
Input high current	> 6.0 mA
Input maximum Voltage	30 VDC
Input maximum current	13.0 mA
Maximum permanent allowed overload	+30 VDC, -30 VDC
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
Power Dissipation	14 Watts or 48 BTU/hr max
Backplane Power	+5VDC @ 250 mA
Field Power	+18-30VDC @ 416mA
Type of Input	IEC61131-2 Type 2
Channel Filtering	25us hardware digital filter; Additional filtering via software
Hardware Watchdog Timer	0.68 to 1.40 seconds

## Environmental Specifications

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

## Termination Module

3099/54-103	Single Termination Module - 32 channel sinking (close to positive) digital input w/ removable field wiring connection, 24 VDC
3099/54-003	Triple Termination Module - 32 channel sinking (close to positive) digital input w/ removable field wiring connection, 24 VDC
3099/55-100	Single Termination Module - 32 channel sinking (close to positive) digital input, 24 VDC - rotatable mounting
3099/55-102	Single Termination Module - 32 channel sinking (close to positive) powered digital input, resettable fuses, 24 VDC - rotatable mounting



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