

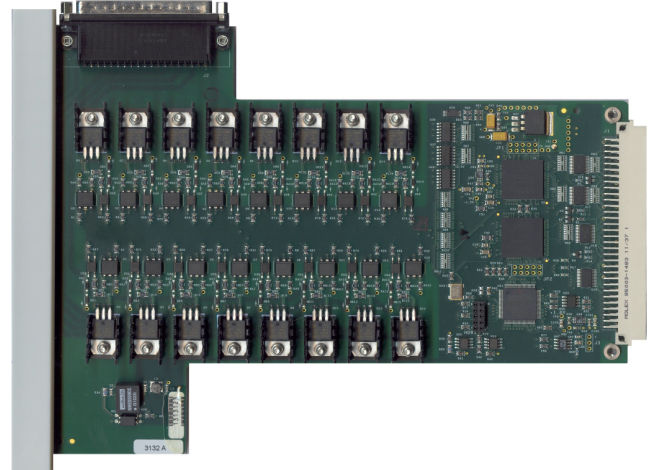


# SIL-2 16-Channel AC Digital Output Card

3132

## PRODUCT HIGHLIGHTS

- 16 AC Digital Output Channels
- 120 VAC or 240 VAC Output Option
- 2A Sustained Output per Channel
- Channel to Channel Isolation
- Fuse Protected Outputs
- Temperature Sensor



3132 16-Channel AC Digital Output Card

## PRODUCT OVERVIEW

The 16-Channel AC Digital Output Card is TÜV approved for SIL-2 applications. When used with the dual redundant, series configuration termination module, 3099/18, the AC Digital Output Card is TÜV approved for SIL-3 applications. The 3132 card provides the user with means to switch 16 points of AC line voltage under solid-state control. The 16-Channel AC Digital Output Card can be used in any RTP3000 TAS family chassis.

Optically isolated triac drivers with zero voltage crossing detectors control power to triac switches. Zero voltage switching reduces load transient currents when compared to randomly phased triacs. Power triacs with high commutation and high transient immunity are used to minimize false triggering due to transients and inductive load components.

I/O Bus self test functions are performed for all data and command transfers to and from the AC Output card. Each transfer is performed twice (all data bits in the second transfer are inverted) Both transfers are then compared to insure that no errors exist in the data path between the card and processor. I/O Bus slot address and control signal contention tests are also performed.

The 3132 16-Channel AC Digital Output Card includes an onboard temperature sensor which provides the operating temperature of the card. Users can then implement limits for alarming based on the board temperature within their application.

### 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 50,000 years an MTTFS of greater than 60,000 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.**

## SPECIFICATIONS

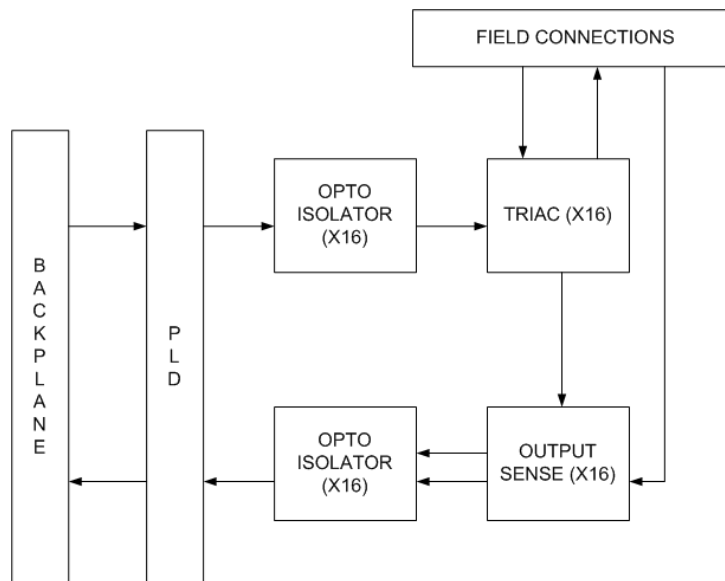
Safety Integrity Level	SIL 2 SIL 3 in Dual Redundant, Series configuration (3099/18 Termination Module)
Number of Channels	16
Maximum open circuit voltage	240 VAC
Maximum closed circuit current per channel	2.0 A
Maximum Peak Voltage	600 Volts
Maximum voltage drop across TRIAC	1.6 Volts
Minimum Load	50 mA
Maximum Leakage Current with Outputs off	1.5 mA
Contact Form	Form A (SPST Normally Open)
Surge Current	25 A peak for 25 msec; repeated no more than twice per second
Critical Rate of Rise – OFF state voltage	500 V/ $\mu$ s minimum; 750 V/ $\mu$ s typical
Critical Rate of Rise – ON state current	20 A/ $\mu$ s repetitive; 100 A/ $\mu$ s non-repetitive
Critical Rate of Removal – ON state current	12 A/msec minimum; 25 A/msec typical
Isolation from RTP system	500 Volts
Channel to Channel Isolation	250 Volts
Backplane Power	5 VDC @ 600 mA
Hardware Watchdog Timer	0.68 to 1.4 seconds

## ENVIRONMENTAL SPECIFICATIONS

Temperature range:	-20 °C to +60 °C, operating, -20 °C to +85 °C, storage
Altitude:	Operation to 10,000 feet
Humidity range:	10 to 95 % relative humidity, non-condensing

## TERMINATION MODULES

3099/17-100	Single Termination Module – 16 channel AC digital output, field replaceable fuses
3099/24-100	Triple Redundant Termination Module – 16 Channel AC digital output, field replaceable fuses
3099/18-000	Dual Redundant (Series) Termination Module – 16 Channel AC digital output, field replaceable fuses



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