

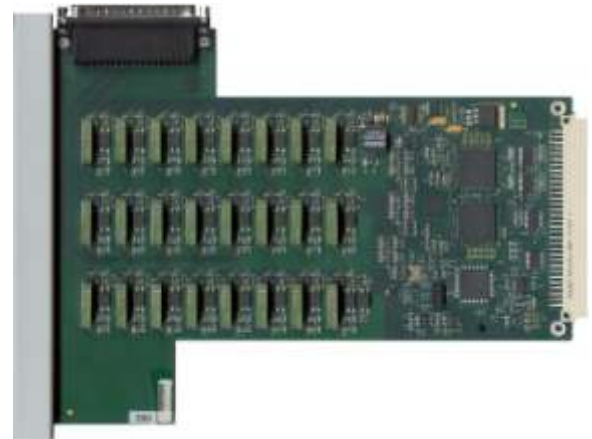


# SIL-3 12 Channel Relay Output Card

3130/3131/3133

## PRODUCT HIGHLIGHTS

- Safety/ Critical Control Applications
- Configurable Redundancy  
Single, Dual, Triple
- Source or Sink up to 2 Amps per channel
- Supports Voltages of 24V AC/DC,  
120 VAC, and 240 VAC
- Two Relays per Channel



3130 12-Channel Relay Output

## PRODUCT OVERVIEW

The 12 Channel Relay Output Card is designed for use in safety and critical control applications. Depending upon your application requirements, you can choose either the 24V AC/DC, 120 VAC, or 240 VAC output card option. The 3130, 3131, or 3133 Relay Output Card can be used in any RTP3000 TAS family chassis to provide sourcing or sinking signals to an indicator lamp, motor starter, or any other discrete control device.

The 3130, 3131, and 3133 Relay Output Card supports single, dual redundant, and triple redundant configurations. Dependent upon the availability, integrity and system cost requirements, the configurable redundancy of the 12 Channel Relay Output Card allows redundant outputs to be on the same card or different cards. These cards may be placed in the same chassis or in different chassis. Available user-friendly redundant termination modules simplify the field wiring. Output channels are wired in parallel for redundant configurations.

The 12 Channel Relay Output Card is cable of sinking or sourcing up to 2 amperes per channel. All channels are optically isolated from RTP chassis ground. The 3130 Relay Output Card supports signals of 24 VDC or 24 VAC. The 3131 Relay output card supports signals of 120 VAC. Signals of 240 VAC are supported by the 3133 Relay Output Card.

Each 12 Channel Relay Output Card channel consists of two relays with normally open contacts connected in series. This arrangement eliminates the possibility of a single fault resulting in an output being stuck in the closed position. Opto-couplers measure the condition of each relay and provide feedback to status registers, which report the position of each relay contact to the operating program for fault detection.

### **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.**

## SPECIFICATIONS

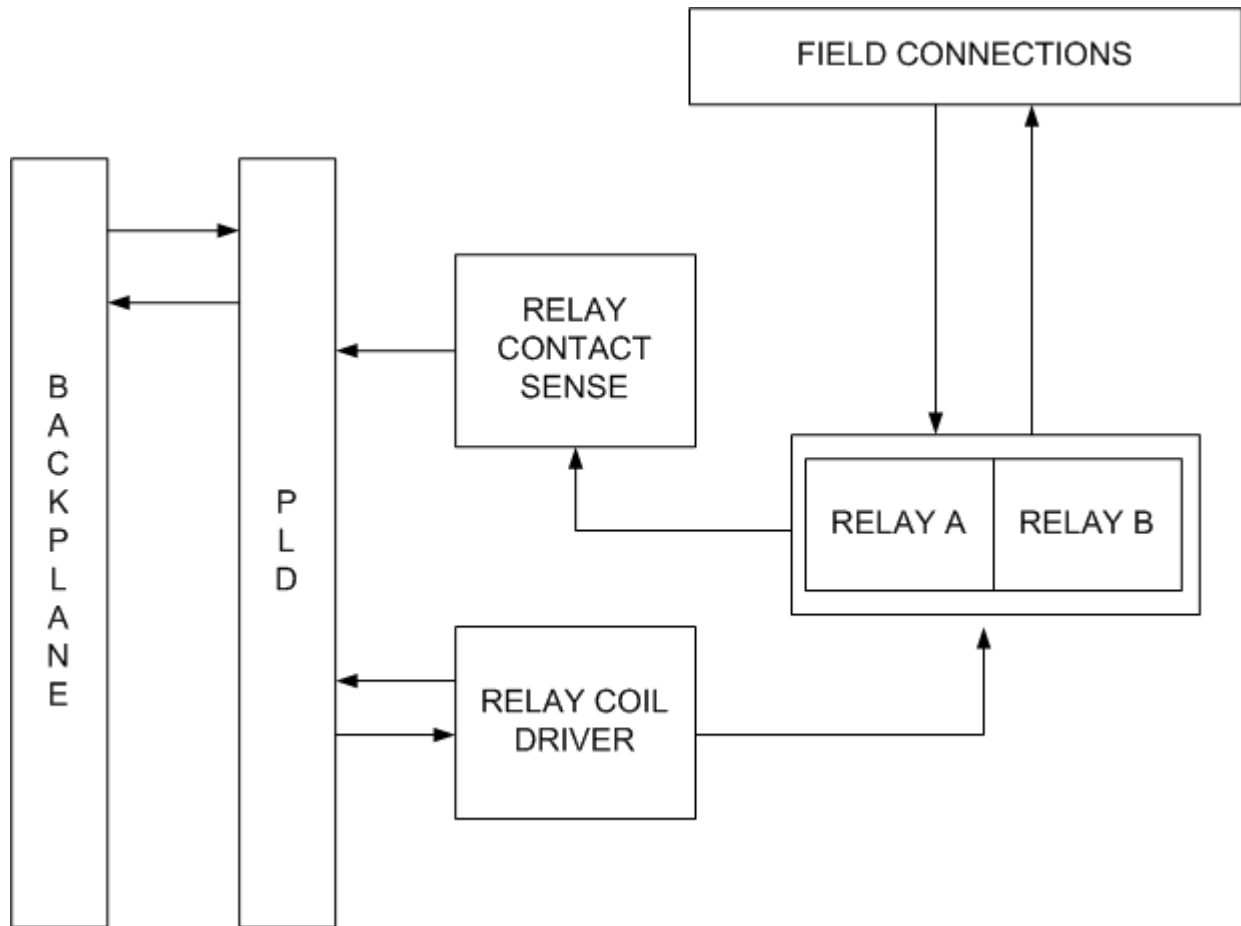
Safety Integrity Level	SIL 3
Number of Channels	12
Maximum Open Circuit Voltage	
3130:	30 VDC
3131:	125 VAC
3133:	240 VAC
Minimum Load:	10 mA, additive for redundant applications.
Maximum Load:	2 A per channel.
Maximum Leakage Current Relay Off	3 mA, additive for redundant applications.
Contact form	Form 1A (Normally Open)
Contact arrangement	12 sets of redundant contacts
Maximum Contact resistance	200 milliohms
Maximum Bounce	3 msec
Backplane to Card Output Delay Time	22 msec (ON to OFF)
Backplane to Card Output Delay Time	22 msec (OFF to ON)
Relay Driver test	< 1 msec
Isolation from RTP system	500 V AC/DC
Channel to Channel Isolation	
3130/3131:	200 V AC/DC
3133:	320 V AC/DC
Backplane power	5 VDC @ 850 mA

## 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

3099/12-100	Single Termination Module – 12 channel relay output, sourcing (breaks the positive), field replaceable fuses, 24 VDC
3099/12-000	Triple Redundant Termination Module – 12 channel relay output, sourcing (breaks the positive), field replaceable fuses, 24 VDC
3099/13-100	Single Termination Module – 12 channel relay output, sourcing (breaks the positive), field replaceable fuses, 24-120 VAC
3099/13-000	Triple Redundant Termination Module – 12 channel relay output, sourcing (breaks the positive), field replaceable fuses, 24-120 VAC
3099/12-101	Single Termination Module – 12 channel relay output, sinking (breaks ground), field replaceable fuses, 24 VDC
3099/12-001	Triple Redundant Termination Module – 12 channel relay output, sinking (breaks ground), field replaceable fuses, 24 VDC
3099/13-101	Single Termination Module – 12 channel relay output, sinking (breaks ground), field replaceable fuses, 24-120 VAC
3099/13-001	Triple Redundant Termination Module – 12 channel relay output, sinking (breaks ground), field replaceable fuses, 24-120 VAC
3099/12-102	Single Termination Module – 12 channel relay output, sourcing (breaks the positive), field replaceable fuses, 24 VDC
3099/12-002	Triple Redundant Termination Module – 12 channel relay output, sourcing (breaks the positive), field replaceable fuses, 24 VDC
3099/13-102	Single Termination Module – 12 channel relay output, sourcing (breaks the positive), field replaceable fuses, 120/240 VAC
3099/13-002	Triple Redundant Termination Module – 12 channel relay output, sourcing (breaks the positive), field replaceable fuses, 120/240 VAC



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