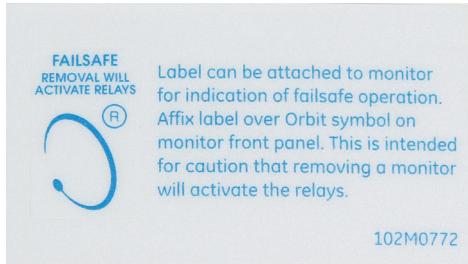


Bently Nevada\* Asset Condition Monitoring  
3500/33 16-Channel Relay "Fail-Safe IO Module"

fact sheet



## Description

The Fail-Safe Relay IO Module is used with the 3500/33 16-Channel Relay Module to provide enhanced fail-safe behavior under certain fault modes. In this context, the term fail-safe means that on certain failures of the relay module the relay outputs will go to the in-alarm state.

The fail-safe relay IO module contains circuitry that detects whether its associated relay controller module is installed in the front side of the 3500 system. In the event that a relay controller module is removed from the rack or not present, the fail-safe relay IO will drive all 16 relays to the in-alarm state.

Additionally, the relay controller module will detect when it is being used with a fail-safe relay IO module and will modify its response to certain internal diagnostic checks. If a diagnostic error is detected that is categorized as a fatal error, the relay controller module will drive all 16 relays to the in-alarm state.

The fail-safe relay IO module is intended for a specific use scenario and is only recommended for applications where the user has performed an FMEA or LOPA on their machinery protection system (including their Electronic Shutdown Device, level of redundancy, and maintenance procedures) and determined that they need this fail-safe behavior. Using the fail-safe relay IO without the appropriate protection system design and maintenance procedures will increase the likelihood of nuisance machinery shutdowns.

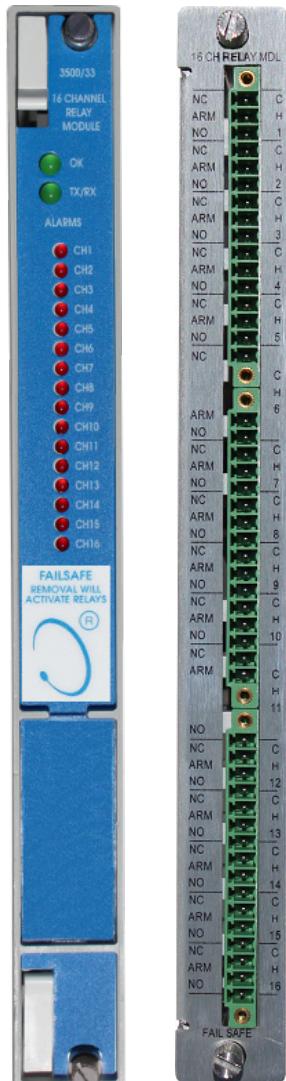
## Key Features

- The fail-safe relay IO provides 16 SPDT relay contacts and Normally Energized/Normally De-Energized functionality the same as the standard 3500/33 Relay IO Module.
- Detects whether its associated relay controller module is installed and if not it will drive all 16 relays to the in-alarm state.
- Relay controller modules used with the fail-safe relay IO will drive relays to the in-alarm state if a fatal diagnostic error is detected by the controller module.

## Benefits

The fail-safe relay IO offers fail safe behavior for those users who have analyzed their protective and safety systems and choose to operate their machinery and processes using a fail-safe (trip on a maintenance or diagnostic fault) methodology.

The fail-safe relay IO is an ordering option on the 3500/33 16-Channel Relay Module.



For additional information, please contact your local GE Representative, visit [www.ge-mcs.com/bently](http://www.ge-mcs.com/bently).

\*Trademark of General Electric Company.  
Copyright © 2011 General Electric Company. All rights reserved.

GEAX30778 (07/2013)

