

AMS 6300 SIS

Digital Overspeed Protection System

- API 670 compliant overspeed protection system
- SIL certification according to latest relevant standards
- SIL 3 capable overspeed protection
- SIL 2 rotational direction detection function
- Integrated Proof-Test function
- 42-Month warranty
- Airborne contaminants resistance class G3 according to ISA-S71.04



AMS 6300 SIS Digital Overspeed Protection System.

Overview

Overspeed conditions on critical rotating equipment are potentially damaging to the equipment and to plant personnel around it. In addition, damaged equipment is expensive and time-intensive to repair or replace.

Research shows that while 10% of time is spent in a transient condition, 50% of all safety incidents occur during this period.

New, stricter regulations have made compliance and insurance requirements even more difficult to meet and maintain. And additional testing to meet requirements cuts into available resources and can even introduce new issues to the system.

You need an overspeed protection system that integrates with your existing systems and meets all the latest regulatory standards – like Safety Integrity Levels (SIL), API 670, IEC 61508:2010, and the European Machine Directive 2006/42/EG.

Insurance and regulatory requirements dictate the presence of an overspeed system for critical rotating equipment, but not all systems are the same. More advanced systems will not only ensure protection against overspeed conditions, but can deliver additional value to your facility.

Regulatory requirements have changed recently and existing equipment is no longer compliant when major changes are done to the asset, based on the new stricter standards.

Without compliant equipment, you risk higher insurance rates, regulatory sanctions, and not getting the approval to start up the asset.

Start up and shutdown periods are when the majority of equipment issues can occur. Imbalance or excess vibration can cause equipment to trip, you can miss or lose your load, or your pumps for example can begin rotating in the wrong direction. Significant events can cause extensive equipment damage and delay or halt your return to production.

False trips interrupt production and introduce risk during restart. At the same time, you need the confidence every day that your overspeed system will work if needed. Proof tests are conducted infrequently and require focus from your limited resources.

Fully Compliant with Multiple Standards

Emerson's AMS 6300 SIS Digital Overspeed Protection System is TUV-certified for SIL 3 and complies with the latest versions of industry safety standards IEC 61508:2010 and European Machine Directive 2006/42/EG. The entire system also meets the API 670 standard for machinery protection systems. The AMS 6300 SIS implemented the stricter development regulations during production to actively ensure compliance.

In addition, the AMS 6300 SIS rotational direction detection functionality is certified for SIL 2 and the speed sensors also comply with SIL 2 requirements and are capable for SIL 3 in a 2003 configuration.

SIL-rated Rotational Direction Detection Functionality

The rotational direction detection functionality available with the AMS 6300 SIS uses the same sensors that measure overspeed to detect rotational direction at start up. Used mainly on pumps, this capability helps operators and maintenance personnel to verify that equipment is functioning correctly – or to take corrective action to avoid equipment damage and process upsets.

When paired with the AMS 6500 Machinery Health Monitor, the AMS 6300 SIS not only helps ensure safe start up of equipment, but will also deliver a transient recording of the start up process so that reliability analysts can review and determine the root cause of any issues.

Proven Expertise and Certifications Establish System Reliability

The AMS 6300 SIS is designed and certified for reliability for the lifetime of the system (20 years). Without conducting a single proof test, the system maintains its TUV certification for SIL 3. However, you can also conduct periodic proof tests on the AMS 6300 SIS to improve the safety number of the entire chain to maintain your SIL certification. This can enable you to extend the life of older equipment in the chain.

Special input signal filtering functionality in the AMS 6300 SIS ensures the system's accuracy while helping you to avoid false trips. False trips not only interrupt your production, but require you to send a technician to the field to manually check on the machine. Eliminating these upsets and keeping your resources focused on other issues improves your entire process.

Instrumentation

AMS 6300 SIS Overspeed Protection System components:

A6370D

- 1 Channel Overspeed Protection Card
- Display
- Configurable (USB)

A6370D/DP

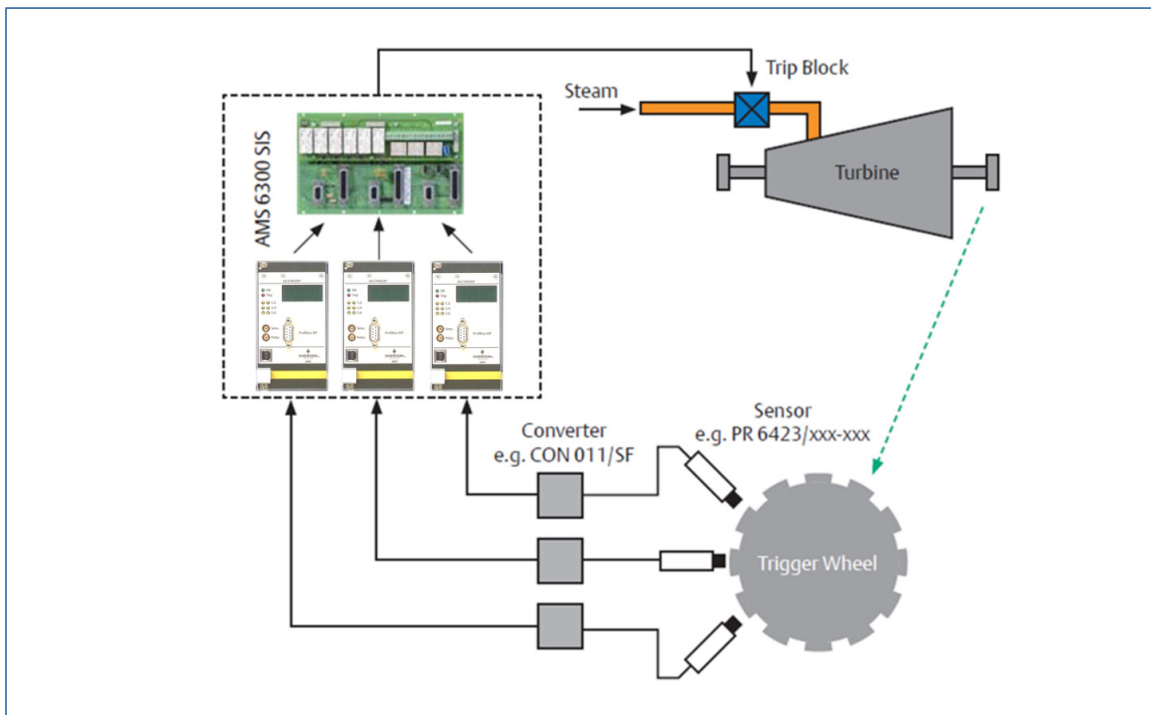
- 1 Channel Overspeed Protection Card
- Display
- Profibus DP
- Configurable (USB)

A6371/00

- Backplane with slots for 3 measurement cards
- Trip voting intern

A6371/10

- Backplane with slots for 3 measurement cards
- Trip voting external



Emerson Support Reduces Downtime

Guardian is Emerson’s digital platform for addressing the end-to-end lifecycle needs of control software and assets. The Guardian digital experience enables users to quickly connect to product support and interact with additional software and services that propel performance.

Product support for AMS Machinery Health Monitors, delivered by Guardian, provides system content-specific technical support and system management for Emerson price book hardware. Included in the service are normal Wear and Tear repair, advanced exchange, priority handling and discounts on accessory items and training classes.

AMS Spare Parts Optimization

Emerson recognizes that having spare parts available when they are needed is critical to attaining necessary system availability. Emerson’s Spare Parts Optimization Tool for AMS products can be used in a collaborative process with the customer to define availability and operational goals.

The tool allows the service or sales engineer to create a list of spare parts the customer needs to reach their availability goals.

Based on statistical data and coverage targets, the tool calculates the optimal number of spare parts for each part in the list. Manual changes to the calculated figures can be used to tweak the coverage ratio or to take already stocked parts into consideration.

For further information on Emerson’s lifecycle services, please contact your local Emerson Sales Office / representative for quotation.

Ordering Information

Model Number	Product Description
A6370*	AMS 6300 SIS - MONITOR, 1 CH SPEED WITH PROFIBUS OPTION
A6371/xx*	AMS 6300 SIS - BACKPLANE, TRIP VOTED OR TRIP NOT VOTED OPTION

*Please see individual component spec sheets for specific model number coding.

System Packages

Model Number	Product Description	Content
A6300/P1	AMS 6300 SIS - PACKAGE: VOTED	(3x) A6370D (1x) A6371/00 (3x) A6380 & (3x) A6381 (3x) A6384 & (3x) A6386 (3x) A6385 & (3x) A6387 (1x) A6352 & (1x) A6000/BLP-3U-42HP (1x) A6910
A6300/P2	AMS 6300 SIS - PACKAGE: NOT VOTED	(3x) A6370D (1x) A6371/10 (3x) A6380 & (3x) A6381 (3x) A6384 & (3x) A6386 (3x) A6385 & (3x) A6387 (1x) A6352 & (1x) A6000/BLP-3U-42HP (1x) A6910
A6300/P3	AMS 6300 SIS - PACKAGE: VOTED, PROFIBUS	(3x) A6370D/DP (1x) A6371/00 (3x) A6380 & (3x) A6381 (3x) A6384 & (3x) A6386 (3x) A6385 & (3x) A6387 (3x) A6363 (1x) A6352 & (1x) A6000/BLP-3U-42HP (1x) A6910
A6300/P4	AMS 6300 SIS - PACKAGE: NOT VOTED, PROFIBUS	(3x) A6370D/DP (1x) A6371/10 (3x) A6380 & (3x) A6381 (3x) A6384 & (3x) A6386 (3x) A6385 & (3x) A6387 (3x) A6363 (1x) A6352 & (1x) A6000/BLP-3U-42HP (1x) A6910

©2024, Emerson. All rights reserved.

The Emerson logo is a trademark and service mark of Emerson Electric Co. The AMS logo is a mark of one of the Emerson family of companies. All other marks are the property of their respective owners.

The contents of this publication are presented for informational purposes only, and while diligent efforts were made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.

Contact Us

 www.emerson.com/contactus