



INTEGRATED PROTECTION

Guardian ODS

Overspeed Detection System

Contact your nearest CCC account manager for additional information, or visit: www.cccglobal.com/contact-ccc/

USA | CCC Global Headquarters
4745 121st Street
Des Moines, IA 50323-2316 USA
+1-515-270-0857
www.cccglobal.com





Guardian ODS

The Guardian Overspeed Detection System (ODS) offers certified overspeed protection for your rotating equipment plus integration with industry leading CCC control systems. Protecting your workforce and rotating assets is critical to your business. Accept no tradeoffs between safety and performance with CCC products.



Technical Specifications

- Three (3) independent, hot-swappable, speed monitoring modules with 2-out-of-3 voting
- Overspeed and acceleration detection
- IEC 61508 SIL-3 (Safety Integrated Level 3) certified
- API-670 and API-612 compliant
- Online testing and repair
- 12 millisecond response time for 0.5 to 80,000 rpm
- IP56 and IEC 721-3-3 1994 environmental class 3C2 rated
- Operating temperature of -20 to +60°C

SIL-3 and API-670 compliant for safety you can trust.

Input Signals

Power Source	Speed Signals	Discrete Inputs
2 redundant <ul style="list-style-type: none"> ■ High Voltage Power Supply (88–264 Vac/47–63 Hz; 90–150 Vdc) @ 90 W ■ Low Voltage Power Supply (18–32 Vdc) @ 100 W 	One per module, 3 total <ul style="list-style-type: none"> ■ Inputs can be configurable to accept signals from: <ul style="list-style-type: none"> • MPUs (100–32 000 Hz) @ (1–35 Vrms) • Proximity probes (0.5–25 000 Hz) @ 24 Vdc • Gear Tooth Range (1–320 teeth) 	Three per module, 9 total <ul style="list-style-type: none"> ■ Alarm/Trip Reset Command ■ Start Command ■ Speed Fail Override Command

Output Signals

Discrete Output Relays	4–20 mA Analog Output	Communication Ports
Voted Relay Models <ul style="list-style-type: none"> ■ Shutdown relay output (2 total, 2-out-of-3 voted) <ul style="list-style-type: none"> • Rated for 8 A @ 220 Vac or 8 A @ 24 Vdc ■ Alarm relay output (1/module, 3 total) <ul style="list-style-type: none"> • Rated for 2 A @ 24 Vdc 	One per module, 3 total <ul style="list-style-type: none"> ■ Dedicated to function as a speed meter readout 	One per module, 3 total <ul style="list-style-type: none"> ■ Serial RS-232, RS-422, RS-485 Modbus port

Regulatory Compliance

North American Compliance	European Compliance	Other International Compliance	Other Compliance
<ul style="list-style-type: none"> ■ CSA: Certified for Class I, Division 2, Groups A, B, C, and D, T4 at 60 °C Ambient for use in Canada and the United States 	<ul style="list-style-type: none"> ■ EMC Directive: 2014/30/EU ■ ATEX Directive: 2014/34/EU Zone 2, Category 3, Group II G, Ex nA II T4 ■ WEEE Directive: Exempt/Compliant as a component with 2002/96/EC of the European Parliament and the Council of 27 January 2003 on Waste Electrical and Electronic Equipment (WEEE) ■ EuP Directive: Exempt/Compliant from 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products. 	<ul style="list-style-type: none"> ■ TÜV: TÜV certified for SIL-3 per IEC 61508 Parts 1-7, Function Safety of Electrical/Electronic/Programmable Electronic Safety Related Systems ■ C-Tick: Declared to Australian Radio communications Act of 1992 and the New Zealand Radio communications Act of 1989. 	<ul style="list-style-type: none"> ■ IEC 60068-2-60: 1995 Part 2.60 Methods 1 and 4 (conformal coating) ■ API670, API612, & API611: Compliant ■ RoHS: Exempt per Annex IA of Directive 2002/96/EC referring to “monitoring and control instruments” within the meaning of Category 9