

DiRXN Smart Condition Monitoring System for A & Y Gear Drives Frequently Asked Questions



DiRXN Smart Condition Monitoring System for A & Y Units

Frequently Asked Questions

To help you understand the features and benefits of the A & Y Gear Drive Smart Condition Monitoring System (SCMS), read our frequently asked questions (FAQs) and their answers below. Don't see your questions? Contact your Rexnord Account Executive or call the Rexnord Support team at 866-REXNORD (866-739-6673).

Questions

Answers

Installation	
How do you calibrate sensors?	The sensors are factory calibrated and do not require additional field calibration.
Can you install during plant downtime?	Yes. The drive will need to be clean, cool and free of oil before Rexnord personnel arrive on site. Please contact Rexnord Customer Care at 1-866-REXNORD (866-739-6673) or fill out the Industrial IoT information request form located here to start the SCMS field upgrade process.
How long does it take to install?	Rexnord installation technicians are able to install the A & Y Field Upgrade in eight hours or less. Please contact Rexnord Customer Care at 1-866-REXNORD (866-739-6673) or fill out the Industrial IoT information request form located here to start the SCMS field upgrade process.
Is any drilling required?	Yes, minor drilling will be required to mount sensors to the gear drive, but we will not be drilling into any surface that will be in contact with the oil to prevent the possibility of metal shavings falling into the gear drive housing.
I am tired of wires, can this be done wirelessly?	No. The SCMS requires local AC power and a wired Ethernet or an AT&T cellular connection.
Why aren't we drilling to the bearing race A's & Y's?	Several factors lead to this decision. Primarily the fact that so many A & Y gear drives are fielded, difficult to swap out and rarely come through our service centers drove the upgrade design. Rexnord wanted to develop a solution that can be easily field installed to reach the greatest amount of customers, while offering a superior Industrial IoT solution.
What does the customer need to hook up the SCMS?	110-220 VAC, 50/60 HZ, ½ Amp for power an AT&T cellular connection or wired Ethernet.
How do we help a customer set up the A & Y?	A Rexnord Industrial Services technician will perform the hardware and sensor installation on site and verify that the system is working correctly before they leave. <i>Rexnord Connect</i> portal access instructions will be sent to the site contact prior to commissioning.
Communications	
How does the Edge communicate to the cloud?	The Edge communicates to the cloud via ethernet or cellular connectivity.
What PLCs does the Edge work with?	We support the PROFINET®, Modbus TCP and EtherNet/IP™ communication protocols, which covers major manufacturers like Allen-Bradley and Siemens.
Does the Edge talk directly to my phone?	Yes, but only by logging into the portal or through emails generated from the portal.
What determines the state and light color of the Andon light?	Utilizing our years of gear drive design and application knowledge, Rexnord has developed proprietary algorithms to set the correct sensor limit levels for each gear drive. These limits trigger three possible conditions of the Andon light: 1) Green – everything is operating within acceptable limits; 2) Yellow – one or more conditions exist that require attention; 3) Red – one or more conditions exist that indicate potential damage or overall failure. It is highly recommended that operations stop immediately during a red condition to avoid any unexpected or unplanned downtime.

Questions

Answers

When do we notify on vibration?	The drive vibration reading will be presented in a 0-100 scale. If the system detects a problem (~80% vibration) a yellow light will be triggered, and the likely source of the vibration will be shown on the portal. Once the vibration has reached 100% a red light will be triggered and again the likely source of the vibration will be shown on the portal.
Is there a way to change the temperature setting to C instead of F (Canada uses SI units)?	Yes. This setting is under the user settings in the <i>Rexnord Connect</i> portal.
How far can you go back and look at data?	Our database will store the collected application data for 24 months.
Performance	
What do you report on?	The SCMS reports the health issues associated with your drive. See the Operations and Owner's Manual for more information.
Can the SCMS shut down equipment on an alarm?	The SCMS will provide data that a PLC can use to make decisions. The SCMS is not designed to shut down any process equipment by itself. The SCMS provides only information to the control system.
Can you install on any other drives or do they have to be Rexnord/Falk?	The only drives that are compatible with the SCMS are A-Plus, Y-Units, and V-Class Units. Currently A-Plus and Y-Units are the only drives that can be upgraded in the field, but V-Class units can have an SCMS added at a Rexnord Certified Repair Shop.
How do you sense vibration on the drive?	We have strategically located vibration sensors that will monitor the gear drive for problematic vibration signatures and communicate problems via the portal interface and an Andon light or through a PLC connection.
Can you detect if the oil is low?	When the critical low oil sensor is installed, we will detect if the oil in a gearbox has reached a critically low level where further loss of oil will result in damage or catastrophic failure of the gear drive. This feature will also detect if there is no oil in a gearbox upon startup.
What do you test the oil for? Is this information available to production and operators?	<p>We monitor the oil for oxidation, water content, viscosity and oil temperature as these factors are the most common contributor to failure for lubricants in gear drives. These pieces of information are run through our proprietary algorithms to develop a composite oil quality level that is reported as a percentage left of oil life 0% - 100%. Based on the rate at which the oil life is declining we will also notify the end user that they have 30 days of oil life along with total number of operating hours remaining to help optimize oil life and maintenance costs.</p> <p>The oil quality measurement will always be available on the <i>Rexnord Connect</i> user portal, and also available to be read by a PLC for the SCMS.</p>
What can the sensors monitor?	Refer to the GR1-011 product catalog for exact sensor and application information.
Hardware	
Do you need one Edge per unit?	Yes, the SCMS will require one Edge device and sensor package per drive.
Maintenance	
How can you read a QR code in harsh environments?	We have specifically chosen QR code materials that can withstand the harsh environments that our drives are installed in. Simply cleaning off the QR code should be sufficient, but we also include a second copy of the QR code along with the drive literature so that it can be scanned if the QR code on the gear drive is damaged or otherwise unreadable.
What lubricants are approved for use in Falk drives?	Our customers are required to use one of the lubricants from the approved lubricant list that can be found in the units Operations and Maintenance manual on Rexnord.com.
Security	
How secure is the SCMS?	We at Rexnord take protecting our systems and our users' information seriously. Because of that, we utilize OAuth which is a strong secure authentication and authorization industry standard. No external parties can access without user permissions.
How secure is the Rexnord Condition Monitoring Unit (CMU) to the PLC?	Data from the CMU device is only provided when requested by the PLC. The architecture does not allow access to the CMU device applications or operating system and will not send any data to the PLC unless requested. The architecture prevents a path or capability for the cloud or CMU to disrupt or change the PLC control.



866-REXNORD/866-739-6673 (Within the U.S.)
414-643-2366 (Outside the U.S.)
www.rexnord.com

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The highest quality products are designed to help prevent equipment downtime and increase productivity and dependable operation.

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An extensive product offering is accompanied by global sales specialists, customer service and maintenance support teams, available anytime.

Solutions to Enhance Ease of Doing Business

Commitment to operational excellence ensures the right products at the right place at the right time.