Approvals and Certifications
MHM-100234, Rev 1
February 2024

AMS Wireless Vibration Monitor

Approvals and Certifications

EMERSON

Disclaimer

This manual is provided for informational purposes. EMERSON MAKES NO WARRANTY OF ANY KIND WITH REGARD TO THIS MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Emerson shall not be liable for errors, omissions, or inconsistencies that may be contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material. Information in this document is subject to change without notice and does not represent a commitment on the part of Emerson. The information in this manual is not all-inclusive and cannot cover all unique situations.

Patents

The product(s) described in this manual are covered under existing and pending patents.

Notice

Important
Read this manual before working with the Wireless Vibration Monitor. For personal and system safety, and for optimum product performance, thoroughly understand the content before using or servicing this product.

Product Support

Emerson provides a variety of ways to reach your Product Support team to get the answers you need when you need them:

Phone	Toll free 800.833.8314 (U.S. and Canada) +1.512.832.3774 (Latin America) +63.2 702.1111 (Asia Pacific, Europe, and Middle East)
Email	Guardian.GSC@Emerson.com
Web	http://www.emerson.com/en-us/contact-us

To view toll free numbers for specific countries, visit http://www.emerson.com/technicalsupport.

Contents

1 Introduction

1.1 Safety messages

Instructions in this manual may require special precautions to ensure the safety of the personnel performing the operations.

The AMS Wireless Vibration Monitor complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

This device may not cause harmful interference, this device must accept any interference received, including interference that may cause undesired operation.

This device must be installed to ensure a minimum separation of 20 cm from all persons.

Refer to the following safety messages before performing an operation preceded by the warning symbol:

⚠ WARNING

Failure to follow these guidelines can result in death or serious injury. Only qualified personnel should install the AMS Wireless Vibration Monitor.

Explosions could result in death or serious injury:

- Before connecting a Field Communicator in an explosive environment, make sure the instruments are installed in accordance with applicable field wiring practices.
- Verify that the operating environment of the AMS Wireless Vibration Monitor is consistent with the appropriate hazardous locations certifications.

1.2 Symbols

The following symbols are used throughout:

Note
A note contains special comments or instructions.

⚠ CAUTION

This symbol marks operations that can lead to malfunctions or faulty measurements, but will not damage the device.

⚠ DANGER

This symbol indicates actions that can lead to property damage or personal injury.

⚠ WARNING

This symbol alerts you to actions that can lead to extremely serious consequences for equipment and/or personnel.

The symbols on the device signify compliance to the following:

	Ukraine Restriction of Hazardous Substances (RoHS)
	Regulatory Compliance Mark Australia
	China Restriction of Hazardous Substances (RoHS)
	Lithium-ion cell recyclable
	The documentation must be completely read and understood before installing and commissioning the device. Observe all safety-related instructions in this document.
	Waste Electronic and Electrical Equipment Directive

1.3 Considerations

General

Electrical vibration sensors, such as accelerometers, produce low-level signals proportional to their sensed vibration. With simple HART configuration, the monitor converts the low-level sensor signal to a wireless-enabled signal.

Commissioning

The monitor can be commissioned before or after installation. You can commission it on the bench before installation to ensure proper operation and to be familiar with its functions.

The AMS Wireless Vibration Monitor is powered whenever the battery is installed.

Installation

When choosing an installation location and position, provide ample access to the monitor. The device should be mounted vertically, perpendicular to the shaft and on the bearing case. Horizontal mounting is also an option.

Battery

The AMS Wireless Vibration Monitor uses an off-the-shelf Tadiran TL-4920/VE battery.

The battery comes with the device but it is not connected when the device is shipped. You need to connect the battery before configuring and installing the device.

Environmental

The monitor operates within specifications for ambient temperatures between –40°F and 185°F (–40°C and 85°C).

Verify that the operating environment of the monitor is consistent with the appropriate hazardous location certifications.

1.4 Return of materials

You may need to ship the device to an Emerson Product Service Center for return or replacement in case of warranty issues. Before shipping, contact Emerson Product Support to obtain a Return Materials Authorization (RMA) number and receive additional instructions.

Emerson Product Support contact information:

Phone	Toll free 800.833.8314 (U.S. and Canada) +1.512.832.3774 (Latin America) +63.2 702.1111 (Asia Pacific, Europe, and Middle East)
Email	Guardian.GSC@Emerson.com
Web	http://www.emerson.com/en-us/contact-us

Note
If the monitor has been exposed to hazardous substances, a Safety Data Sheet (SDS) must be included with the returned materials. A SDS is required by law to be available to people exposed to specific hazardous substances.

Shipping considerations for wireless products (Lithium Batteries)

- The unit was shipped to you with the battery inside but disconnected. Connect the battery for proper operation.

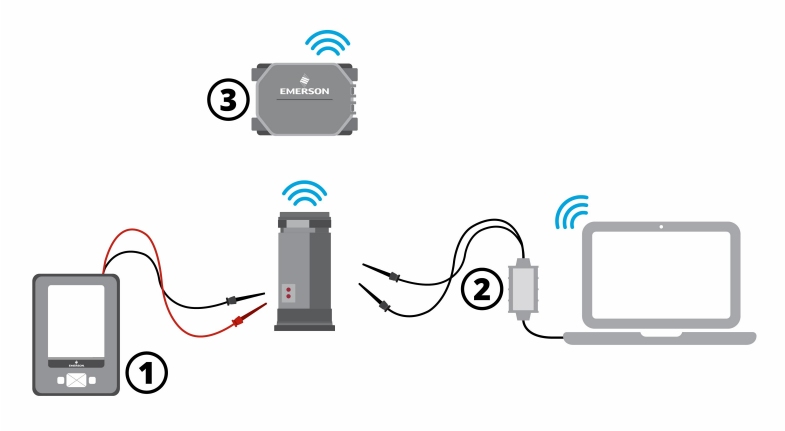
- Primary lithium batteries are regulated in transportation by the U.S. Department of Transportation and are also covered by IATA (International Air Transport Association), ICAO (International Civil Aviation Organization), and ADR (European Ground Transportation of Dangerous Goods).
- It is the responsibility of the shipper to ensure compliance with these or any other local requirements. Please consult current regulations and requirements before shipping.

2 Installation

2.1 Preparing for installation

Unless the AMS Wireless Vibration Monitor is purchased pre-configured from the factory, it needs to be configured prior to installation at the facility or measurement location.

There are three possible setups to configure the device:



1. Connect the device to a field communicator and configure the device using the field communicator.

   Note
   This setup is recommended if you are in a hazardous area.

2. Connect the device to a computer through a HART modem and configure the device using AMS Device Manager.

   Note
   A HART modem must be purchased separately.

3. Connect the device to a computer through a wireless gateway and configure the device using AMS Device Manager.

   Note
   This setup is recommended for standard device configuration.

2.2 Connecting the battery

The AMS Wireless Vibration Monitor is shipped with the battery disconnected from the device to comply with safety requirements. You need to connect the battery before you can configure the device. Remove the battery after configuration to avoid depleting it.

Procedure

1. Use your hands to unscrew and remove the blue cover.

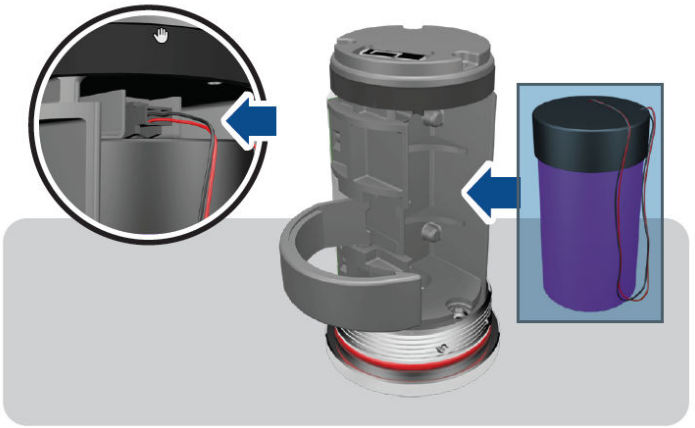
   This exposes the HART ports.

   Use an Allen wrench or a small screwdriver and put it through the Orientation hole to use as leverage while loosening the cover.

   ⚠ CAUTION

   Exercise caution when using your bare hands to remove the cover.

2. Remove the battery with the pull tab.
3. Locate the battery connector and plug it into the socket on the device as shown.



4. Replace the battery. Tuck the wires against the battery and lock them into place.
5. Use a soft synthetic brush (such as nylon) to clear the O-ring and internal cover surfaces of any debris.
6. Mount the cover and tighten.

Note

To avoid depleting the battery, disconnect it when the device is not in use. If you have configured the device and network but are not

ready to commission it, remove the battery to extend its operating life. Reconnect the battery when you are ready to install the device.

2.3 Device handling

Before beginning the installation process:

Make sure the wireless gateway is installed and functioning properly before activating the AMS Wireless Vibration Monitor or any other wireless devices. Power up wireless devices in order of proximity from the gateway beginning with the closest. This will result in a simpler and faster network installation.

Note
The device requires a standard 1/4–28-inch mounting location.

⚠ CAUTION

Do not drop, hammer, or impact the device housing before, during, or after installation.

⚠ CAUTION

When installing the device in hazardous locations, ensure that the device is grounded to the machine case.

⚠ CAUTION

If the equipment is used in a manner not specified by the manufacturer or contrary to the instructions in this manual, the protection provided by the equipment may be impaired.

2.4 Mounting tool and supplies

The following supplies and tools are needed to mount the monitor at the desired location.

Mounting tools

- Drill
- Spot face or end mill tool

The spot face tool attaches to a standard electric drill and provides a machined surface that is at least 1.1 times greater than the diameter of the sensor. The spot face tool also drills a pilot hole that can then be tapped for a stud mounted sensor.

You can purchase the spot face tool from Emerson (MHM P/N 88101), or you can substitute a spot face tool with similar characteristics as required. Contact your local sales representative for assistance.

Attachment tools and supplies

- 1/4-28" taps and tap handle
- 1/8" hex Allen key
- 3/16" ball-end hex wrench
- Wire brush
- Plant-approved cleaner/degreaser
- Plant-approved semi-permanent thread locker (e.g. Loctite)

For epoxy mount, you also need the following:

- 2-part epoxy
- A212 Mounting Pads
- (Optional) Grinder – to create a sufficiently flat mounting surface

For motor fin mount, you also need the following:

- Motor Fin Mount Probe
- Epoxy

2.5 Mounting mechanisms

The device may be mounted using any of the mechanisms listed below. Stud mounting is preferred. The mounts are listed according to our recommendation. Temporary mounting should be a last resort.

- Stud mounting (preferred)
- Epoxy mounting (alternative)
- Triaxial quick connection
- Motor fin mounting
- Temporary mounting

2.5.1 Stud mounting (preferred)

Prerequisites

The mounting location must provide a flat surface of at least 1.1 in (27.94mm) in diameter and a case thickness exceeding 0.4 in. (10.2 mm). If this is not possible, use the epoxy mount method instead.

Stud mount provides increased reliability, improved frequency response, and increased signal sensitivity.

⚠ CAUTION

Do not exceed the specified torque when tightening a stud-mounted device. Over-tightening the device will damage the sensing element and void the manufacturer's warranty.

Procedure

1. Prepare the spot face or end mill tool by setting the drill bit depth to a minimum of 0.325 in. (8.255 mm).
2. Using a wire brush and plant-approved cleaner, clean and degrease the surface area.
3. Keeping the spot face and end mill tool perpendicular to the machine surface, drill into the mounting location until the surface is smooth to the touch with no noticeable irregularities. This may require the spot face tool to remove as much as 0.04 in. (1.016 mm) or more from the surface.

   Note
   If the spot face is not uniform on all sides, it indicates that the spot face tool is not perpendicular to the mounting surface, and the resulting surface will not allow the sensor to be mounted properly.

4. Using 1/4-28 in. tap set, tap a pilot hole to a minimum depth of 0.25 in. (6.35 mm).

2.5.2 Epoxy mounting (alternative)

If it is not practical to drill into the machine casing, then the epoxy mount method is acceptable.

⚠ CAUTION

When installing in a hazardous location, all efforts must be made to ensure that the device is grounded to the machine case.

Note
For more information on epoxy use and grounding methods contact technical support.

Procedure

1. If the equipment surface has a radius of curvature that is less than 4 in. (100 mm), grind a flat surface approximately 0.5 in. (12.7 mm) in diameter.
2. Using a wire brush and plant-approved cleaner, clean and degrease the surface area.

3. Using a two-part epoxy (such as Emerson P/N A92106)), spray the activator onto the mounting surface. Place a light coat of epoxy on the surface of the mounting pad and hold firmly against the machine spot face surface for one minute.

   Note
   If the adhesive does not set within 1 minute, it indicates that too much epoxy is applied or that the mounting surface is not prepared properly. Repeat steps 2–3.

4. Ensure that the mounting pad / base of the device is grounded to the machine case. Use a two-part conductive epoxy (such as Loctite Ablestik 2902) and make a bead that bridges the mounting pad to the machine case.
5. Use a multimeter to check conductivity between the mounting pad and machine surface.

2.5.3 Triaxial quick connection

Use this mount in scenarios where there is a need to remove the monitor from the machine, but you also need a more permanent type of installation. This mounting mechanism has two components: the receptacle that attaches to the device and the base that attaches to the machine. The base itself comes in two options: epoxy mounted, or stud mounted.

Procedure

1. Find the right location for the base. Make sure that the base notch is oriented with either the X or the Y axis of the device.
2. Install the device on the receptacle and orientate the whole assembly together.
3. Install the base on the machine using either Stud mounting (preferred) or Epoxy mounting (alternative).
4. Align the notch on the receptacle with the notch on the base and give it a ¼ turn. It will lock in the same place every single time.

2.5.4 Motor fin mounting

Procedure

1. Prepare cooling fins on motor for mounting by scraping or grinding any paint or debris between cooling fins.
2. Clean mounting area with a spray degreaser that will not leave a thin fil lubricating residue.
3. Mix adhesive.

4. Apply adhesive to the sides and the bottom of the probe portion of the motor fin mount probe/pad (the area is roughened to enhance the bonding area).
5. Place the motor fin mount probe/pad between the motor fins at the location desired.
    - Correct motor fin mount selection is important. The probe must fit in between the motor fins, and the bottom of the probe must contact the motor casing.
    - For motors that have a space greater than ½" between each fin, motor fin mount probe pads with a thickness of ½" are available and will reduce the amount of adhesive needed.
6. Firmly press the motor fin mount probe/pad into place, ensuring the bottom of the motor fin mount probe/pad is touching the motor casing (this contact area is where the vibration is transferred from the motor to the sensor).
    - The tip of the motor fin mount probe/pad should be as flat against the motor casing as possible.
    - The motor fin mount probe/pad should not be resting on the top of the fins – if it does, then the bottom of the probe may not be in direct contact with the motor casing.
7. Use a spatula to redirect any epoxy that has been displaced from the mounting area when pushing the fin mount probe/pad into place.
8. Fill in any remaining voids with the adhesive to ensure the motor fin mount will be fixed in place.
9. Allow full cure for the adhesive prior to installing sensor.

2.5.5 Temporary mounting

Temporary mounting may be required to perform field testing. This allows for testing the location and orientation of each sensor to get the best possible coverage. A magnetic mount is the best solution in this case. Once the optimum location is determined, the device shall be permanently mounted using one of the methods outlined above.

⚠ CAUTION

The recommended magnets have a pull force of 40lb-60lb and are very strong. Handle with care when working with multiple units or near metal structures.

Procedure

1. Prepare the surface. Use a rag or wire brush to remove any loose debris, grease, dirt, or rust.
2. Attach the device on the magnetic base with a ¼”-28 threaded hole.
3. Position the magnetic base on a ferrous surface, making sure that the device is properly oriented.
4. Check to see that the device is properly and firmly attached. Wriggle the device with your hand. It should not wobble or rotate.

2.6 Mount the device

Prerequisites

Prepare the surface according to your mounting method. The mounting location is the machine surface when using stud mount and the mounting pad when using epoxy mount. The mounting location should be prepared according to best practices.

Procedure

1. To stud mount the device (recommended), prepare the machine surface using a spot face tool. Then drill and tap a ¼-28” hole 0.25” (6.35mm) deep. Alternately, a mounting pad with ¼-28” thread can be glued in place using epoxy.
2. With the cover still on the device, use your hand to loosely screw the device into the threaded hole. Do not tighten.
3. Using your hand, loosely screw device into the mounting location.
4. Remove the cover and battery.
5. Set the device in the proper orientation. Insert a small screwdriver through the guide hole in the base of the unit (shown below) and use this to hold the device in the desired orientation.

Make sure that your planes are in the right direction. The Z plane should be vertical. The orientation of the X and Y axis depends on how you configured your device.

To make sure that your X and Y axis stay where they are, use an allen wrench or a small screwdriver while you torque down the device to make sure that everything stays in the correct position. You can also hold the device while you torque it down.

6. While maintaining the device orientation, use a 3/16" ball driver to tighten the captive screw in the center of the base (shown above) to 2-5 ft-lb.

   The mounting screw must be tightened firmly but carefully to prevent stripping out the mounting thread, typically 1/8 turn past finger tight for steel and slightly less for aluminum or brass. For high-frequency applications above 7kHz and all PeakVue measurements, a good quality silicon grease (Dow #4) should be used as a coupling agent on the mounting ring on the bottom of the device. Only a small amount is needed.

7. Insert and connect the battery.
8. Mount the cover and tighten. Tighten the cover all the way down until the bottom of the cover touches the base.

   Ensure that the base does not turn while tightening the cover. Turning of the base causes misalignment of the measuring directions.

   Always ensure a proper seal when screwing the cover. The cover should be tightened all the way down to the base to keep the device watertight and free from the elements.

2.7 Change the battery

The battery that comes with the device is replaceable. The battery may last without need of replacement or recharge for a minimum of 3 years up to 5 years, if used at room temperature while collecting and reporting with default collection parameters.

Note
While the device is approved for battery replacement in hazardous locations, always check with your local Safety Officer before replacing the battery in a hazardous location.

Procedure

1. Using an allen wrench, hold the metal base.
2. Unscrew the device cover and then remove it.
3. Release the holding latch, and then carefully pull the battery tab to take the battery out of the compartment.

4. Use your finger to release the bottom latch on the battery connect by lifting the tab and then gently pull it until the connector is released.
5. Plug the battery wire into the connector and position the wire so that it is held by the battery clamp.
6. Place the battery into the compartment.
7. Snap the battery clamp back into place to secure the battery and wire.
8. Mount the cover and tighten. Tighten the cover all the way down until the bottom of the cover touches the base.

   Ensure that the base does not turn while tightening the cover. Turning of the base causes misalignment of the measuring directions.

   Always ensure a proper seal when screwing the cover. The cover should be tightened all the way down to the base to keep the device watertight and free from the elements.

2.8 Clean the device

Use a soft towel or paper towel to wipe any excess grime.

If necessary, use a cloth dampened with a mixture of water and mild detergent (similar to cleaning household dishes).

Do not use solvents to clean the device.

3 Specifications

3.1 Functional specifications

Input

Three internal MEMS accelerometers oriented in the X-Y-Z direction. The Z accelerometer has the greatest bandwidth and is considered the primary sensor. The device also has a temperature sensor designed to read the temperature near the mounting point.

Output

Wireless-enabled, linear with temperature or input.

Humidity limits

0–95% relative humidity

Transmit rate

User-selectable, 60 seconds to 22 hours.

Measurement

Measurement Parameters

The device is capable of measuring and reporting machine health measurement parameters and generating alerts based on overall vibration in each axis as well as peak impact measurements in the primary axis and temperature readings.

Measurement precision

Measurement precision refers to the variability of the same measurement in a fixed operating environment under steady-state conditions. For vibration, this value is obtained with statistical measurements with 1 g-peak (9.81 m/s^2) input excitation at a frequency of 100 Hz. For temperature, this value is obtained with statistical measurements at room temperature.

- Vibration: 0.2 dB
- Temperature: +/- 2°C

Amplitude Range

Primary axis: +/- 80 g's

Secondary axis: +/- 16g's

Measurement Accuracy

+/- 3 dB from 2 Hz to 10 kHz primary axis, +/- 3 dB from 2 Hz to 1 kHz secondary axis

Dynamic signal range

Target: 80dB

3.2 Physical specifications

Battery

Table 3-1: Tadiran Lithium Batteries Model TL-4920/VE

Nominal capacity @ 3 mA, to 2 V	8.5 Ah
Rated voltage	3.6 V
Maximum recommended continuous current	75 mA
Maximum 1 sec. pulse capability	200 mA
Weight	49.5 g (1.746 oz)
Volume	26 cc
Operating temperature range	-55 ºC to +85 ºC
U.L. Component Recognition, MH 12193	

Field Communicator connections

- HART ports
- Clips attached to the HART ports

Mounting

Mounting tools and supplies depend on the mounting mechanism.

Mounting screw thread is 1/4 - 28

Weight

0.697 lb (315 g)

Enclosure ratings

Housing is NEMA 4X and IP66

3.3 Performance specifications

Temperature Limits

The device is rated for operation in the range from -40 to +85C.

Table 3-2: Temperature limits

Device	Operating limit	Storage limit
AMS Wireless Vibration Monitor	-40 to +85C	-55 to +85C **Note** Prolonged storage above +75 C degrades battery life

3.4 Radio specifications

Parameter	Value
Frequency Band	2.4GHz - 2.4835GHz
Output Power	+8dBm
Receiver Sensitivity	-93dBm
Range	100m (outdoor +25 C, 50% RH)

4 Product certifications

Note
For specific device certifications, always refer to the product nameplate and markings on the device.

4.1 Approved manufacturing locations

Emerson
835 Innovation Drive
Knoxville, TN 37932 USA
T: +1 865-675-2400

Emerson
10 Pandan Crescent, #03-06 UE Tech Park
Singapore 128466
T: + 65-6777-8211

Benchmark Electronics (Thailand) Plc.
109 moo.4, Chaimongkol, Muang, Nakorn Ratchasima
Thailand 30000
T: +66 44-233-800

4.2 9530 Approvals and certifications

The AMS Wireless Vibration Monitor has a number of certifications and approvals including CE, FCC, ISED, RED, CSA, and ATEX. For a complete list of product certifications, see http://www.emerson.com/AMSVibrationMonitor.

Approvals and Certifications

European directive information - CE compliance	
ATEX (2014/34/EU)	This equipment complies with the ATEX Directive. Applicable standards are EN IEC 60079-0 and EN 60079-11.
	Certification NO. CSANe 20ATEX2042X
	 II 1 GD Ex ia IIC T4 Ga Ex ia IIIC T135°C Da -40 °C < Tamb < +85 °C

European directive information - CE compliance	
	CE
Electromagnetic Compatibility (EMC) 2014/30/EU	Tested to the EN61326-1 specifications and IEC 61326-1.
RED (2014/53/EU)	This equipment is in conformity with the Radio and Equipment Directive (RED).
RoHS2 (2011/65/EU)	Product is compliant with the RoHS Directive.
WEEE (2012/19/EU)	Product is compliant with the WEEE Directive.

International certifications	
IECEx	Certification No: CSA 20.0002X
	Ex ia IIC T4 Ga Ex ia IIIC T135°C Da (Ta: -40ºC to +85ºC)

North American certifications	
CSA	This equipment complies with the CSA ordinary location safety directive. Applicable standards: CAN/ CSANo. 61010-1-12, UPD1: 2015, UPD2: 2016, AMD1: 2018 and ANSI/UL 61010-1, 3rd edition (2012), AMD1: 2018.
Canadian Standards Association cCSAus	Certificate No: CSA20CA80026524
	C SP US Class I Div. 1 Groups A, B, C, & D, T4 Class II, Div. 1 Groups E, F & G, T135 °C Ex ia IIC T4 Ga Ex ia IIIC T135°C Da Class I, Zone 0, AEx ia IIC T4 Ga Zone 20, AEx ia IIIC T135 °C Da -40ºC ≤ Ta ≤ +85ºC Type 4X and IP 66

North American certifications	
FCC/ISED	This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. NL5-A95030M1 This device contains license-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Cet appareil contient des émetteurs / récepteurs exemptés de licence qui sont conformes auxRSS exempts de licence d'Innovation, Sciences et Développement économique Canada. 343A-A9530M1

South American certifications	
Brazil	Certificate No: UL-BR 20.1062X
	Ex ia IIC T4 Ga Ex ia IIIC T135C Da -40ºC ≤ Ta ≤ +85ºC

4.3 Conditions for safe use

1. Shall be powered only by C-sized lithium primary cell type TL-4920/VE manufactured by Tadiran or Emerson Part Number A0702PPU.
2. HART Terminal Entity Parameters:
   Uo = 5.84V, Io = 116mA, Po =169mW, Co = 0.1μF, Lo = 5mH;
   Ui = 5.27V, Ii = 5mA, Pi = 6.6mW, Ci = 13 μF, Li = 0.022mH
3. The device may be configured using the HART terminals only by 375, 475, or TREX field communicators
4. Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic discharge. Therefore, the equipment shall not be installed in a location where the external conditions are conductive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.
5. The device shall be installed on an earthed metal frame

6. For installations in potentially explosive dust atmospheres, the equipment shall be fully protected from any possible mechanical impact.

Note
Battery may be replaced in hazardous locations. Only replace battery with Tadiran Part Number TL-4920/VE or Emerson Part Number A0702PPU

Note
The markings that appear on the monitor housing determine whether a device is suitable for operation in a specific hazardous location. This further requires that the monitor is operated in accordance with the installation drawings provided with the unit.

Conditions d'utilisation sûre:

1. Ne doit être alimenté que par une cellule primaire au lithium de taille C de type TL-4920/VE fabriquée par Tadiran ou Emerson Part Number A0702PPU
2. Paramètres d'entité de terminal HART:
   Uo = 5.84 V, Io = 116 mA, Po = 169 mW, Co = 0.1 μF, Lo = 5 mH;
   Ui = 5.27 V, Ii = 5 mA, Pi = 6.6 mW, Ci = 13 μF, Li = 0.022 mH
3. L'appareil ne peut être configuré à l'aide des terminaux HART que par des communicateurs de terrain 375, 475 ou TREX
4. Dans certaines circonstances extrêmes, les pièces non métalliques incorporées dans le boîtier de cet équipement peuvent générer un niveau de décharge électrostatique capable d'allumage. Par conséquent, l'équipement ne doit pas être installé dans un endroit où les conditions externes conduisent à l'accumulation de charges électrostatiques sur de telles surfaces. De plus, l'équipement ne doit être nettoyé qu'avec un chiffon humide.
5. L'appareil doit être installé sur un cadre métallique mis à la terre.
6. Pour les installations dans des atmosphères poussiéreuses potentiellement explosives, l'équipement doit être entièrement protégé contre tout impact mécanique possible.

Warnings:

1. Care should be taken to protect this device from impact or abrasion if located in a zone 0 environment.
2. Substitution of components may impair intrinsic safety.The battery may present a potential electrostatic ignition hazard.
3. Use Caution when replacing the battery.

Avertissements

1. Avertissements: Des précautions doivent être prises pour le protéger des chocs ou de l'abrasion s'il est situé dans un environnement de zone 0.
2. La substitution de composants peut compromettre la sécurité intrinsèque.La batterie peut présenter un risque potentiel d'allumage électrostatique.
3. Soyez prudent lors du remplacement de la batterie

4.4 Waste Electrical and Electronic Equipment

Marking for the Waste of Electrical and Electronic Equipment in accordance with Article II (2) of Directive 2012/19/EU (WEEE). The European Directive 2012/19/EU requires marking:

- That applies to electrical and electronic equipment falling under Annex 1 Category 9 of Directive 2012/19/EU.
- That serves to clearly identify the producer of the equipment and that the equipment has been put on the market after 13 August 2005.
- That the crossed out wheeled bin alerts the end-user to dispose this equipment via the special recycling procedure for electrical and electronic equipment that is applicable in the country of use.
- The shown marking is attached to the product and identifies the product to fall within the scope of this directive.

Approvals and Certifications
MHM-100234, Rev. 1
February 2024

Emerson
835 Innovation Drive
Knoxville, TN 37932 USA
T +1 865-675-2400
F +1 865-218-1401
www.Emerson.com