

# EMR4

## Critical Safety Information

# Notice

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Contact Technical Support for additional troubleshooting information at 800-323-1799.

## **DAMAGE CLAIMS / LOST EQUIPMENT**

Thoroughly examine all components and units as soon as they are received. If any cartons are damaged or missing, write a complete and detailed description of the damage or shortage on the face of the freight bill. The carrier's agent must verify the inspection and sign the description. Refuse only the damaged product, not the entire shipment.

Veeder-Root must be notified of any damages and/or shortages within 30 days of receipt of the shipment, as stated in our Terms and Conditions.

## **VEEDER-ROOT'S PREFERRED CARRIER**

1. Contact Veeder-Root Customer Service at 800-873-3313 with the specific part numbers and quantities that were missing or received damaged.
2. Fax signed Bill of Lading (BOL) to Veeder-Root Customer Service at 800-234-5350.
3. Veeder-Root will file the claim with the carrier and replace the damaged/missing product at no charge to the customer. Customer Service will work with production facility to have the replacement product shipped as soon as possible.

## **CUSTOMER'S PREFERRED CARRIER**

1. It is the customer's responsibility to file a claim with their carrier.
2. Customer may submit a replacement purchase order. Customer is responsible for all charges and freight associated with replacement order. Customer Service will work with production facility to have the replacement product shipped as soon as possible.
3. If "lost" equipment is delivered at a later date and is not needed, Veeder-Root will allow a Return to Stock without a restocking fee.
4. Veeder-Root will NOT be responsible for any compensation when a customer chooses their own carrier.

## **RETURN SHIPPING**

For the parts return procedure, please follow the appropriate instructions in the EMR Products General Returned Goods Policy pages in the EMR4 Products price list. Veeder-Root will not accept any return product without a Return Goods Authorization (RGA) number clearly printed on the outside of the package.

## Introduction

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1. ATEX approved EMR4 systems are marked with the following information defining its limits for safe use.
  - This equipment must be installed according to the applicable installation document. For UL/cUL installations use Control Drawing number 331940-021 and for ATEX installations use Descriptive System Document number 331940-022. For IECEx installations use Descriptive System Document number 331940-022.
  - Defined per certification DEMKO 17 ATEX 1889X or IECEx UL 17.0054X.
2. Refer to the site preparation procedures in this manual for general instructions on safe installation, use, and replacement.
3. The EMR4 system does require periodic calibration. Follow the calibration procedures outlined in the Veeder-Root EMR4 Setup and Operation manual (P/N 577014-350).
4. **The EMR4 system is not serviceable. If a failure occurs, the unit should be replaced in accordance with the requirements of this manual.**

## Special Conditions for Safe Use

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- For ambient temperatures below -10°C and above +60°C use field wiring suitable for both minimum and maximum ambient temperature.
- All installations must be made in accordance with the accompanying Descriptive System Documentation.
- The devices have not been evaluated for use across a boundary wall.
- The display head, remote display head, thermoprobe, pulse encoder, corner switch and optional keypad all contain aluminum. Care must be taken to avoid ignition hazards due to impact or friction.

## General Overview Of The ATEX Directive

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### ASSOCIATED APPARATUS

The Veeder-Root EMR4 Interconnect Box (IB) is installed in an indoor, non hazardous area. The IB has barriers that protect the linked apparatus by an [Exia] intrinsically safe mode of protection and are suitable to control apparatus installed into areas that are likely to become hazardous in the presence of concentrations of gases, vapours or mists formed by group **IIA** dangerous substances. The symbols on the nameplate have the following meaning:

|   |   |
|---|---|
|  | Device suitable to be installed in potentially explosive areas                                    |
| <b>II</b>   | Group II: for installations in areas other than mines and related surface equipment               |
| <b>(I)</b>  | Category 1: suitable to control apparatus installed into Zone 0, Zone 1 or Zone 2 hazardous areas |
| <b>G</b>  | For potentially hazardous areas characterised by the presence of gases, vapours or mists          |

All ATEX models of the **EMR4 IB** are in compliance with Directive **2014/34/EU (ATEX)**.


A sample EMR4 IB has been evaluated and tested by **UL International Demko A/S**, Borupvang 5A, 2750 Ballerup, Denmark Tel.+45 44 85 65 65, [info.dk@ul.com](mailto:info.dk@ul.com), [www.ul.com](http://www.ul.com) and approved by the issue of the EC type certificates:

**DEMKO 17 ATEX 1889X** or **IECEx UL 17.0054X**  
EMR4 Interconnect Box

## INTRINSICALLY SAFE APPARATUS

**NOTICE** IT IS AN INTRINSICALLY SAFE APPARATUS WHEN IT IS INSTALLED FOLLOWING THE MANUFACTURER'S INSTRUCTIONS IN THE MANUAL.

The Veeder-Root EMR4 Display Head is an intrinsically safe apparatus, marked **Ex ia**, suitable for installation into areas that are likely to become hazardous in the presence of concentrations of gases, vapours or mists formed by group **IIA** dangerous substances. The temperature class of the devices is **T4** (surfaces temperatures lower than 135°C). The symbols on the nameplate have the following meaning:

|   |  |
|---|--|
|  | Device suitable to be installed in potentially explosive areas                           |
| <b>II</b>   | Group II: for installations in areas other than mines and related surface equipment      |
| <b>I</b>  | Category 1: suitable for installation in Zone 0, Zone 1 or Zone 2 hazardous areas        |
| <b>G</b>  | For potentially hazardous areas characterised by the presence of gases, vapours or mists |

All ATEX models of the **EMR4 DH** are in compliance with Directive **2014/34/EU (ATEX)**.


A sample EMR4 DH has been evaluated and tested by **UL International Demko A/S**, Borupvang 5A, 2750 Ballerup, Denmark Tel.+45 44 85 65 65, [info.dk@ul.com](mailto:info.dk@ul.com), [www.ul.com](http://www.ul.com) and approved by the issue of the EC type certificates:

**DEMKO 17 ATEX 1889X** or **IECEx UL 17.0054X**

EMR4 Display Head

EMR4 Remote Pulser + Encoder

Symbol **X** used as suffix in all of the EC type test certificates listed above indicates the need for observing special conditions for safe use. Further information is provided in each respective EC type certificate under the paragraph, **SPECIAL CONDITIONS FOR SAFE USE**.

|   |   |
|---|---|
|  <b>1180</b> | Equipment marking is compliant with requirements in the CE Marking Directive. |
|---|---|

The manufacturers Quality System has been reviewed and is notified by *SGS Baseefa, Staden Lane, Buxton, Derbyshire SK17 9RZ, United Kingdom* authorizing the use of its ID **1180** in conjunction with the CE mark. The manufacturer is notified via SGS Baseefa QAN No. BASEEFA ATEX 1968. The CE mark may indicate compliance with other relevant EC directives. Consult the manufacturers EC Declarations of Conformity for details.

In addition to certified intrinsically safe apparatus, Veeder-Root also provides simple apparatus that comply with the requirements of EN 60079-11, Clause 5.7. These devices include; Thermoprobe, Emergency Stop Switch, Corner Switch and the Optional Keypad. Figures showing these devices may contain devices that are outside the scope of this ATEX Certificate.

## EMR4 System Specifications

### COMPONENT LOCATION

The EMR4 system should be located on a fuel delivery vehicle or in a fueling depot. See truck installation or terminal and fueling depot installation sections in the EMR4 Application Guide (577014-339) at [http://docs.veeder.com/gold/gold\\_public\\_access.cfm?section\\_id=210](http://docs.veeder.com/gold/gold_public_access.cfm?section_id=210).

The equipment is designed to operate safely under the following range of conditions:

- Altitude up to 2000m.
- Temperature range - see Table 1.
- A maximum relative humidity of 95% RH (non-condensing) at temperatures shown in Table 1.

- A supply voltage fluctuation not exceeding 28 Vdc.
- Pollution Degree Category 2, Installation Category II.
- Vibration: MIL-STD-810G, Method 514.6; Table 514.6 C-VI Category 4
- Shock: MIL-STD-810G, Method 516.6; 20G, 11ms, 1/2-Sine

**NOTICE** EMR4 IB units are not suitable for external locations and must be installed within the interior of buildings or the cab of the fuel delivery vehicle.

Ensure that the EMR4 IB is located where neither the unit itself nor its associated cabling will be damaged by doors, furniture, barrows, etc. - depot installs or nearby equipment - vehicle installs.

Consider the ease of routing wiring, ducting and cables to the EMR4 IB.

Check that the mounting surface material is strong enough to support the EMR4 IB.

**NOTICE** If the EMR4 IB requires cleaning, do not use any liquid materials (e.g. cleaning solvents). It is recommended that the unit be wiped with a clean dry cloth when necessary.

Overall dimensions and the weight of the various system components are as shown in Table 1 and Table 2:

**Table 1. System Component Information**

| System            | Operating Temperature Range            | Height            | Width   | Depth              | Weight           | Descriptive System Document |
|-------------------|--|-------------------|---|--------------------|------------------|-----------------------------|
| EMR4 IB           | $-25^{\circ} \leq Ta \leq 40^{\circ}C$ | 254mm (10 in.)    | 215.9mm (8.5 in.)   | 80.9mm (3.185 in.) | 7.6 lbs (3430 g) | 331940-022                  |
| EMR4 Display Head | $-40^{\circ} \leq Ta \leq 60^{\circ}C$ | 129.6mm (5.1 in.) | 241.3mm (9.5 in.) - w/o optional keypad<br>330.2mm (13 in.) - w/optional keypad | 215.9mm (8.5 in.)  | 11 lbs (4990 g)  |                             |
| Optional Keypad   | $-40^{\circ} \leq Ta \leq 60^{\circ}C$ | 117mm (4.6 in.)   | 92mm (3.6 in.)  | 59mm (2.3 in.)     | 1 lb (454 g)     |                             |

To allow for maintenance ensure that the EMR4 IB is in an accessible area, even when the unit's doors are open. Ensure that all relevant subcontractors and other personnel are aware of the selected location.

**Table 2. Remote Pulser Information**

| Operating Temperature Range   | Shaft Length      | Shaft Diameter    | Housing Diameter | Housing Depth   | Weight          | Descriptive System Document |
|---|-------------------|-------------------|------------------|-----------------|-----------------|-----------------------------|
| $-25^{\circ} \leq Ta \leq 70^{\circ}C$<br>( $-13^{\circ} \leq Ta \leq 158^{\circ}F$ ) | 11.5mm (0.45 in.) | 6.4mm (0.250 in.) | 101.6mm (4 in.)  | 62mm (2.44 in.) | 1.4 lbs (652 g) | 331940-022                  |



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other assistance, please visit:  
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A blue square containing a white globe icon at the top and contact information for technical support, sales, and assistance below it.