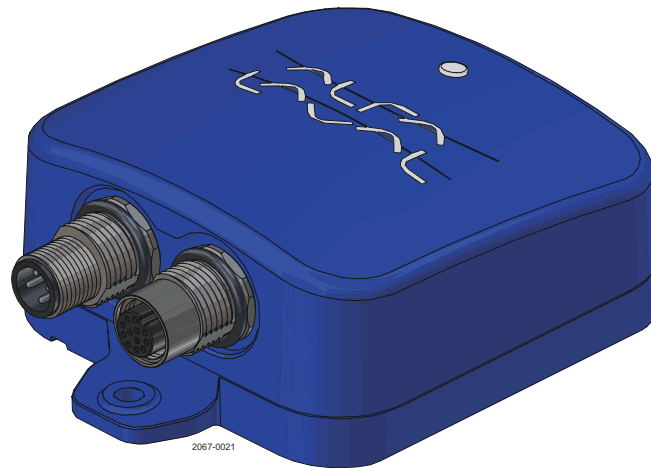


Alfa Laval CM Connect

Condition monitoring



Lit. Code

200005871-2-EN-GB

Instruction manual

Published by
Alfa Laval Kolding A/S
Albuen 31
DK-6000 Kolding, Denmark
+45 79 32 22 00

The original instructions are in English

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1 Declarations of Conformity

1.1 EU Declaration of Conformity

The Designated Company

Alfa Laval Kolding A/S, Albuen 31, DK-6000 Kolding, Denmark, +45 79 32 22 00

Company name, address and phone number

Hereby declare that

CM Connect

Designation

Condition Monitor

Type

is in conformity with the following directives with amendments:

- EMC - Directive 2014/30/EU
- RED 2014/53/EU
- RoHS Directive 2011/65/EU and amendments

The person authorised to compile the technical file is the signer of this document.

Global Product Quality Manager

Title

Lars Kruse Andersen

Name

Kolding, Denmark

Place

2023-06-01

Date (YYYY-MM-DD)



Signature

This Declaration of Conformity replaces Declaration of Conformity dated 2018-10-01



1.2 UK Declaration of Conformity

The Designated Company

Alfa Laval Kolding A/S, Albuen 31, DK-6000 Kolding, Denmark, +45 79 32 22 00

Company name, address and phone number

Hereby declare that

CM Connect

Designation

Condition Monitor

Type

is in conformity with the following directives with amendments:

- The Electromagnetic Compatibility Regulations 2016
- The Radio Equipment Regulations 2017
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Signed on behalf of: Alfa Laval Kolding A/S

Global Product Quality Manager

Title

Lars Kruse Andersen

Name

Kolding, Denmark

Place

2023-06-01

Date (YYYY-MM-DD)



Signature

DoC Revison_02_062023



2 Safety



Read this first



WARNING

Failure to observe the instructions contained in this manual could result in personal injury and property damage, and may void the warranty. Read this manual carefully before installing and using the product.

2.1 Purpose of this manual

NOTE

Save this manual for future reference and keep it readily available. For detailed use of product guidance, consult the Alfa Laval CM Connect App. Requesting other information for instructions, situations, or events that are not considered in this manual or in the sales documents, please contact your local Alfa Laval representative. Always specify the exact product type and identification code when requesting technical information or spare parts.

The purpose of this manual is to provide necessary information for:

- **Installation**
- **Safety**
- **Recycling**
- **Troubleshooting**
- **Related documents**

2.2 Warning Signs in Text

Pay attention to the safety instructions in this manual.

Below are definitions of the four grades of warning signs used in the text where there is a risk for injury to personnel or product damage.

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate damage on the product.

NOTE


Indicates important information to simplify or clarify procedures.


2.3 Safety Instructions and Warnings




2.3.1 Safety Signs

	General warning.
	Hot surfaces.

2.3.2 General Safety Precautions

	<p>Installation</p> <p>This product should only be installed/commissioned by instructed or otherwise competent personnel.</p>
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	<p>Hot surfaces</p> <p>When mounting the CM Connect to external equipment, such as pump gearboxes, be aware of potential hot surfaces, and always wear appropriate protective equipment.</p> <p>The CM Connect can be mounted on surfaces up to 80° C (176° F).</p>
---	--

	<p>Temperature</p> <p>Only expose the CM Connect to ambient temperatures within –30° C to 70° C (22° F to 158° F)].</p>
	
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p> WARNING</p> <p>Heating above these temperatures could result in serious injury. Never dispose of the CM Connect in a fire, this could result in serious injury.</p> </div>	

How to contact Alfa Laval

Contact details for all countries are continually updated on our website.

Please visit www.alfalaval.com to access the information directly.

2.4 Recycling Information

NOTE

The CM Connect should be handled according to local rules for WEEE “small IT and communications equipment”.

3 Introduction

The ability to determine the current running condition of equipment and whether service or maintenance is necessary is paramount to keeping plant and processes running efficiently and cost effective. Having this overview whilst at your desk or on your mobile device without needing to collect data from the process floor increases plant safety.

The Alfa Laval CM Connect is a compact, easy to use, cloud-based gateway which allows the user to connect and remotely monitor the condition and changes in running behaviour of rotating equipment. Providing users via built-in wireless cellular technology with easy, safe data, accessed remotely from a PC or handheld mobile device to enable them to optimise their process uptime, assist in maintenance scheduling and efficiency and reduce operating costs.

The Alfa Laval CM Connect is used as a gateway for up to 10 Alfa Laval CMs connected within Bluetooth range.

All data and alerts are stored in the cloud and can be accessed for easy record keeping and troubleshooting.

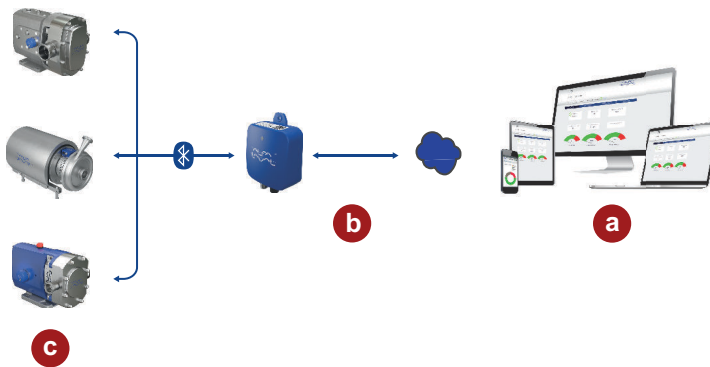
In addition, unique identification can provide the user with service data of the equipment and contacts of service partners to ease the maintenance process, ensuring asset value, total cost of ownership and process continuity.

3.1 About CM Connect

The CM Connect is a compact, easy to use, cloud-based gateway which allows the user to connect and remotely monitor the condition of pumps. The CM Connect communication is performed wirelessly. Via the built-in cellular solution, pumps from critical equipment and application information can be accessed anytime and anywhere from a PC or handheld device.

The CM Connect can be connected to up to 10 Alfa Laval Condition Monitors (CM) via Bluetooth which measures equipment vibration and temperature.

All data and alerts are stored in the cloud and can be accessed for easy record keeping and troubleshooting.



- a) Connected devices and services
- b) Cellular 4G data-connection
- c) BLE connection up to 10 CMs per gateway

! NOTE

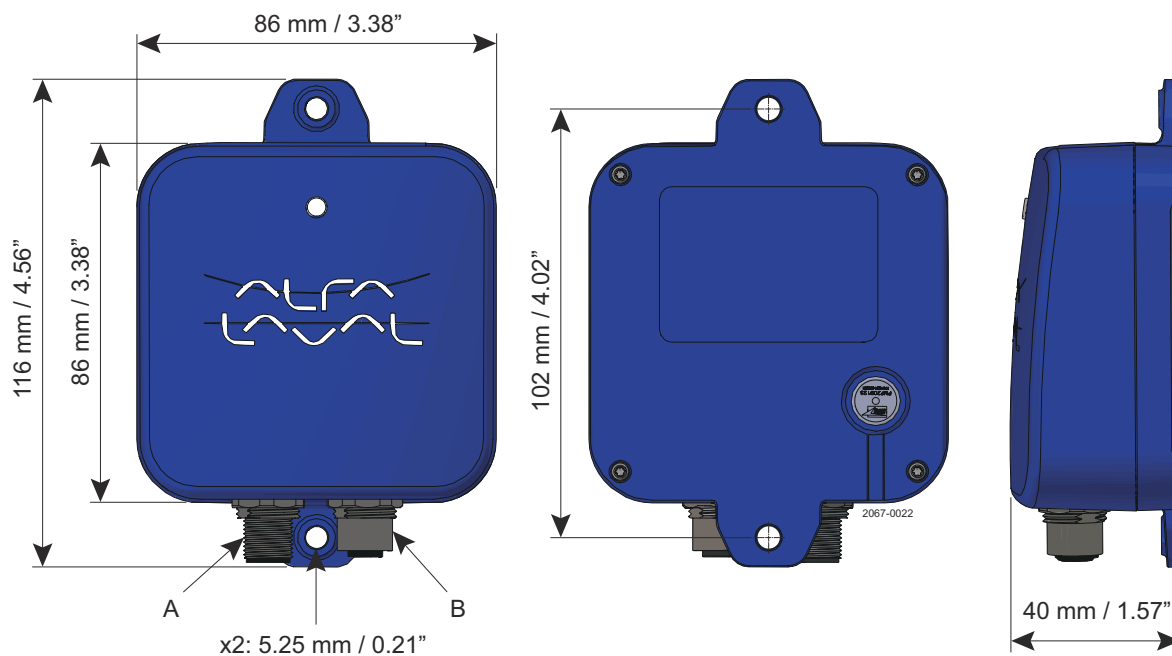
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

4 Installation

How to mount the CM Connect:

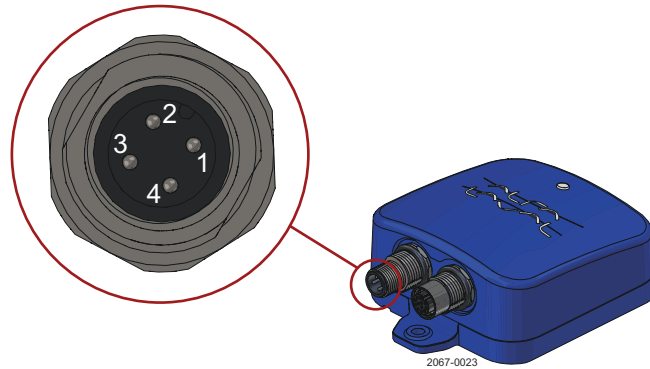
Wall mounted acting as a gateway only.

The CM Connect should be mounted on the wall utilizing two flat or conehead screws (not included).



4.1 Power Supply Connector

Power supply specifications	24VDC, 7 – 15W
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Wiring diagram - power supply connector		
PIN1	Power supply	24VDC (brown)
PIN2	Future option	
PIN3	Power supply	GND (blue)
PIN4	Future option	

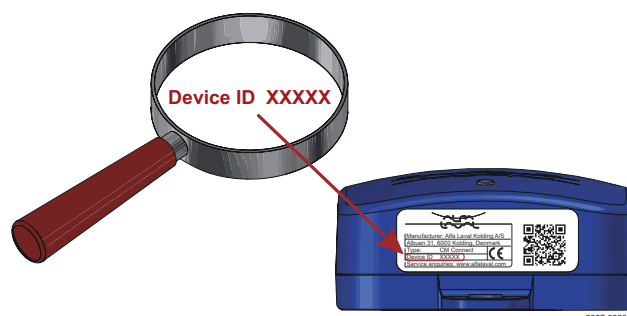
Power connector cables can be ordered through Alfa Laval using following article numbers:				
Cable M12	4 wire female straight connector	10m [30Ft] length	For wall mount	8010000289

4.2 Setting Up the CM Connect

NOTE

Ensure there is 4G mobile coverage at the installation location.

- 1 Mount the CM Connect (see section [Installation](#) on page 11).
- 2 Connect M12 cable to power (order separately) as illustrated in section [Installation](#) on page 11.
- 3 Register device for activation of first 12 months of connected services. Scan the QR code.



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- 4 The CM Connect is accessed through web browser access. Go to www.cm-connect.com.

Alfa Laval CM Connect
Article nr: 8010014918

Getting started:
For PC:
Go to cm-connect.com and follow the instructions in the manual

For mobile device:

1. Scan the QR code
2. Download and open the app
3. Follow the instructions on the screen
(Android user in China: Download the app from CM Connect product page on alfalaval.cn)


Device I.D.





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- 5 For new and existing users: Follow instruction from the registration form.

- 6 When registration is completed – wait minimum 2 minutes until the device LED enters heartbeat mode (connected to CM Connect server).

a) Searching for cellular network.
(Single blinking led).



b) Connected to cellular network.
(Double blinking led).



c) Connected to CM-Connect server.
(Pulsating heartbeat led).

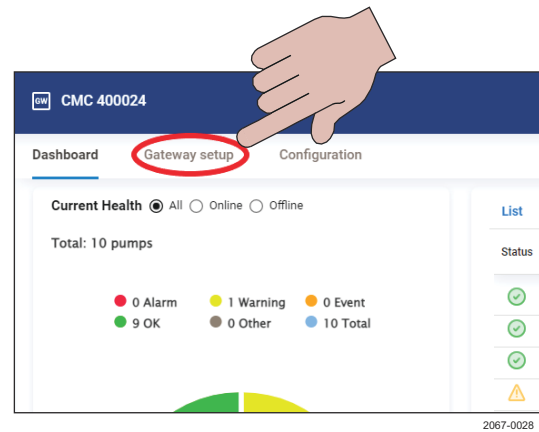


- 7 If there are any issues during the registration process please contact Alfa Laval Customer Support.

4.3 Link CM to CM Connect (gateway)

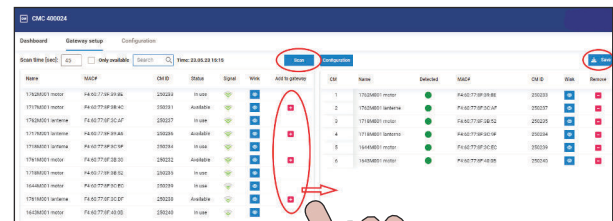
Install and commission the CM on the equipment as described in the CM manual.

- 1 Now enter the setup screen and scan for CMs (the CMs must be within Bluetooth range from the CM Connect).



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- 2 A list of available CMs will appear in the devices in range list.



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- 3 Use the function "Add to gateway" to link the wanted CMs to this gateway. Remember to save the selection.