CPAC Systems CPAC-BLE User Manual

Manualsum, simplified manuals

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CPAC Systems Volvo CPAC-BLE User Manual

What is CPAC-BLE

Identificatory unit that communicates with an ECU via BLE

Purpose

The purpose of this document is solely to give general guidelines for the installation of CPAC BLE Tag.

It does not replace the instructions included in the product kit and specific instruction for the intended

use case may vary.

Confidentiality

This document is solely to be used by CPAC and Volvo group, or companies specifically appointed by

Volvo group for integrating the CPAC BLE tag unit into supplied systems.

The document is not intended for the end users.

Feature overview

The CPAC BLE Tag is strive towards a higher level of connectivity for the various asset related to the active segment through a wireless mountable unit. The CPAC BLE Tag unit is developed by CPAC and enables the operator to store and access asset related data from the phone, tablet or other custom

ECU:s connected with a machine though a Bluetooth connection.
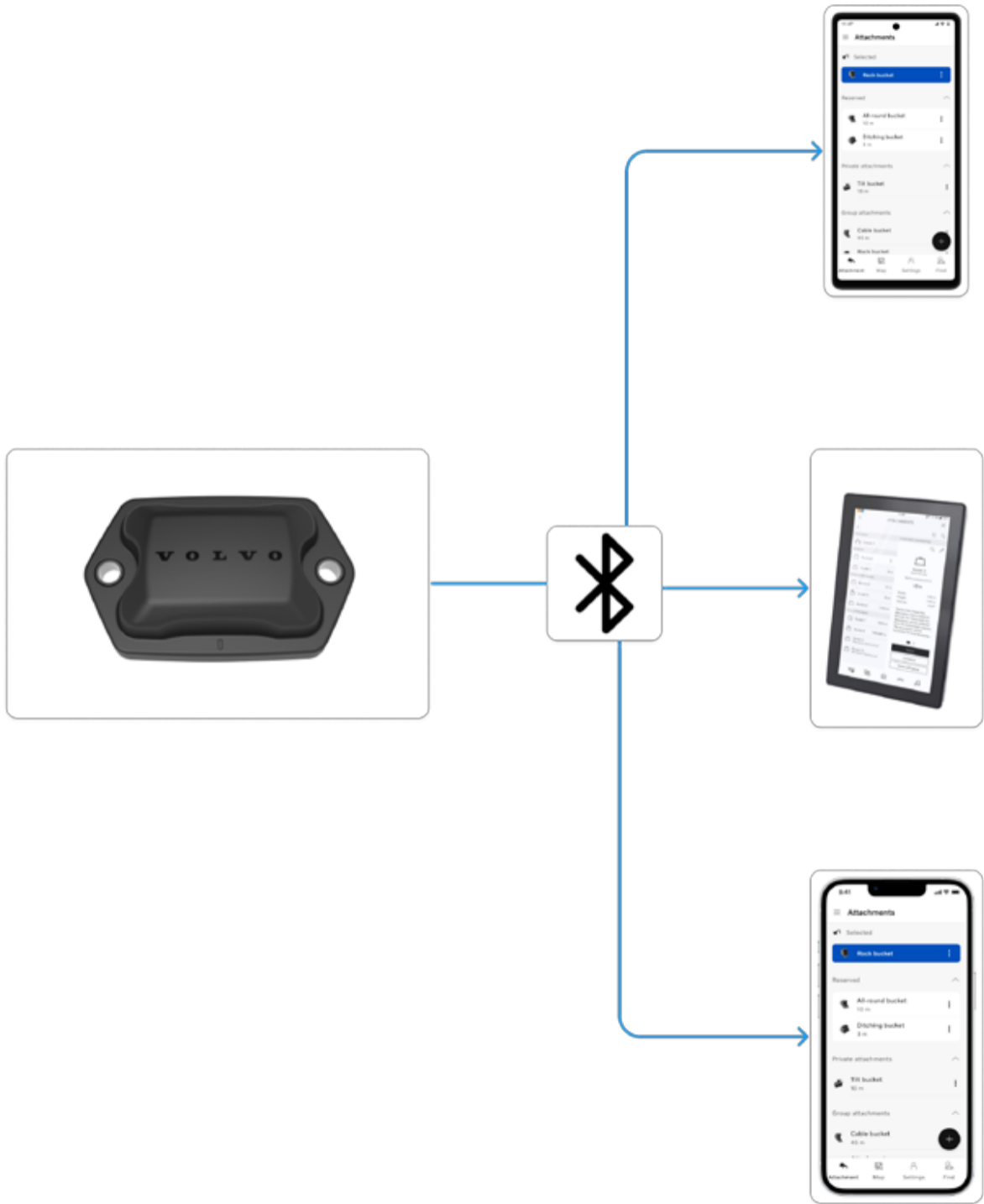
Overview

The unit is a rugged wireless unit designed to handle the harsh environments of a construction use case from both vibration and ingress protection perspective. It consists of a durable plastic housing with a removable lid on the back, in order to allow the user to change the battery. It is completely wireless, communicating through Bluetooth Low Power protocol as a peripheral node. General purpose for the unit is to store and transfer asset related data via Bluetooth protocol to a custom application on a mobile device or custom ECU.

Access stored pre-defined data on the device memory and transfer to device, (app).

Access usage data from device and transfer to device, (app).

Access sensory data from device and transfer data to device, (app).

Support software upgrade:

Over-The-Air (OTA) software upgrade of BLE

Possible to update BLE chip with new software release by using the app.

Set-up / Pairing:

Bluetooth concept is low Energy BLE, security mode 1 and level 2, meaning no authentication paring is used during set-up. Access to services is limited by an optional security code defined by the user for the specific unit.

Installation

Label

Mounting requirements – unit

The unit can be mounted in multiple ways depending on the intended use case and environment requirements. For high stress environment, the device can be mounted with two M6 bolts in the dedicated holes with compression limiters to reinforce the plastic housing and increase torque Manualsum

For less demanding environments, the device can be attached with glue or double-sided tape. Always follow the recommendation stated in the specific product information.
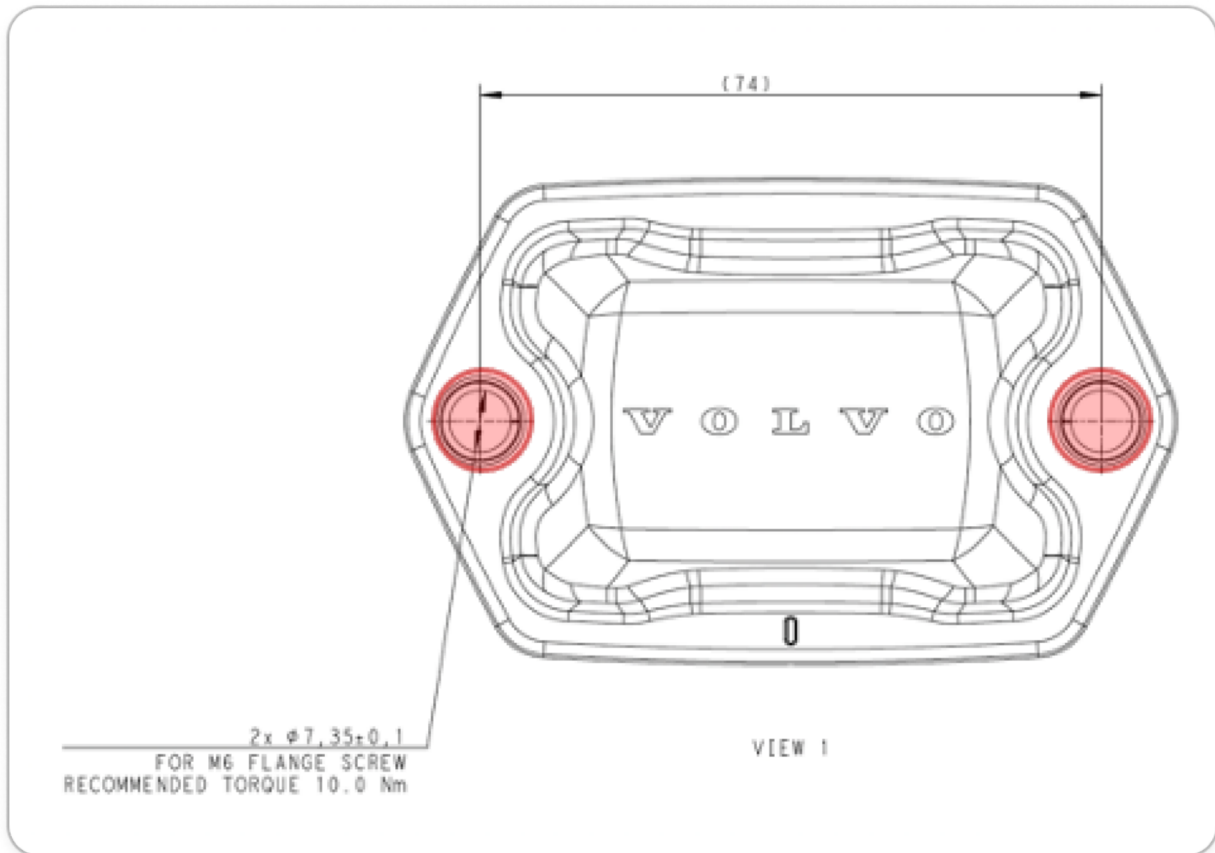

The unit can be mounted horizontally or vertically.

1. No hot surfaces shall be close to or come in contact with the unit.
2. No moving parts shall be allowed touch the unit.

Provisioning – Mobile device app

When first receiving the unit, it will contain a battery thus powered and will have been set to a shelf mode to preserve battery life. To provision the device, a 4 dimensional movement needs to be performed in order to wake the device, to be able to connect to the device with the custom mobile application.

1. Search for the assigned application for your product at App Store (iOS) or Play Store (Android). Download the application to the mobile device.
2. Be sure to allow the location and Bluetooth permission requested by the application.

3. Navigate to the activation of device and follow the instruction in the application.
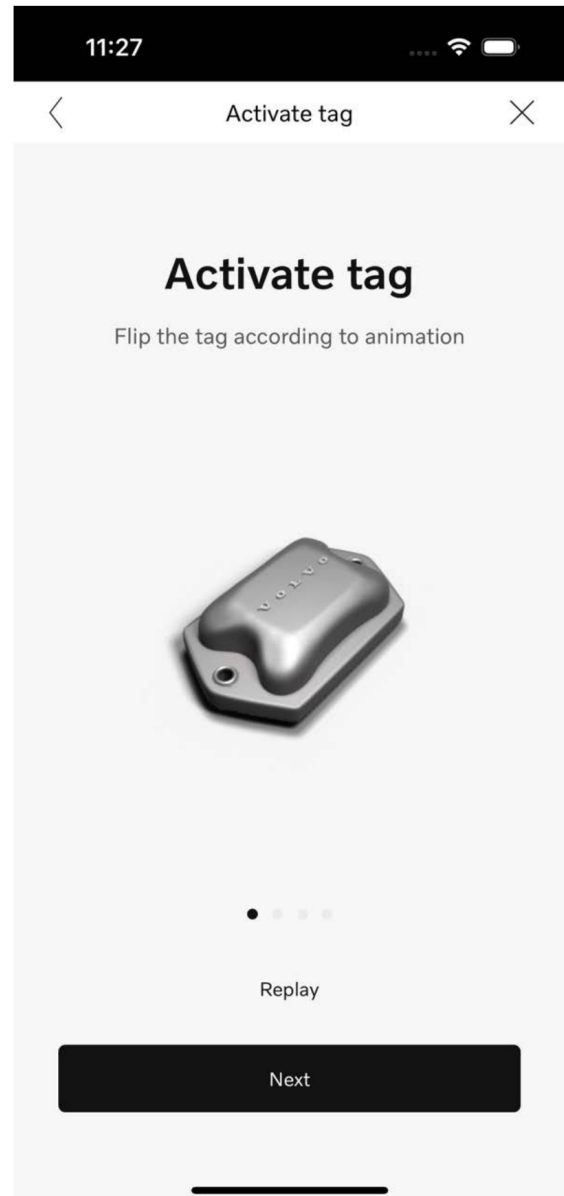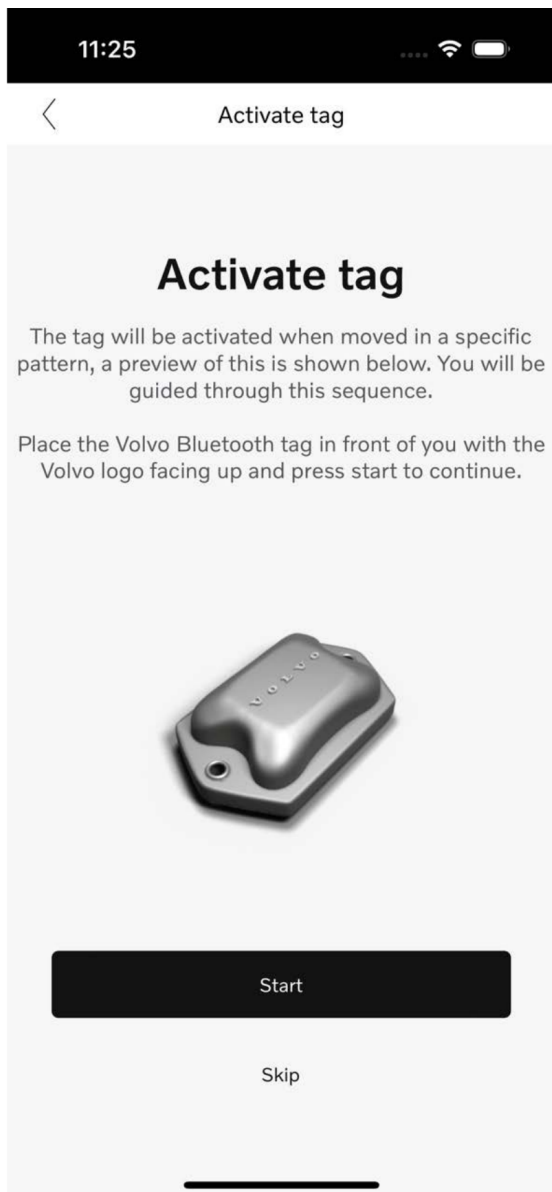
When completed, the device is activated and will be connectable in the application for the intended use case.

Tag activated

Tag has been activated. You can now connect it to an attachment.

Tag ID

00000001

Manualsum

Additional technical data

RF/Physical Layer

Bluetooth Low

Power

1. Power consumption: 10 uA — 15 mA
2. Voltages: 3.3 – 2 is the full supply range

Environment

1. IP class IP6K9K/IPx8 (2 m)
2. Temperature (operational): -40 – +85 °C
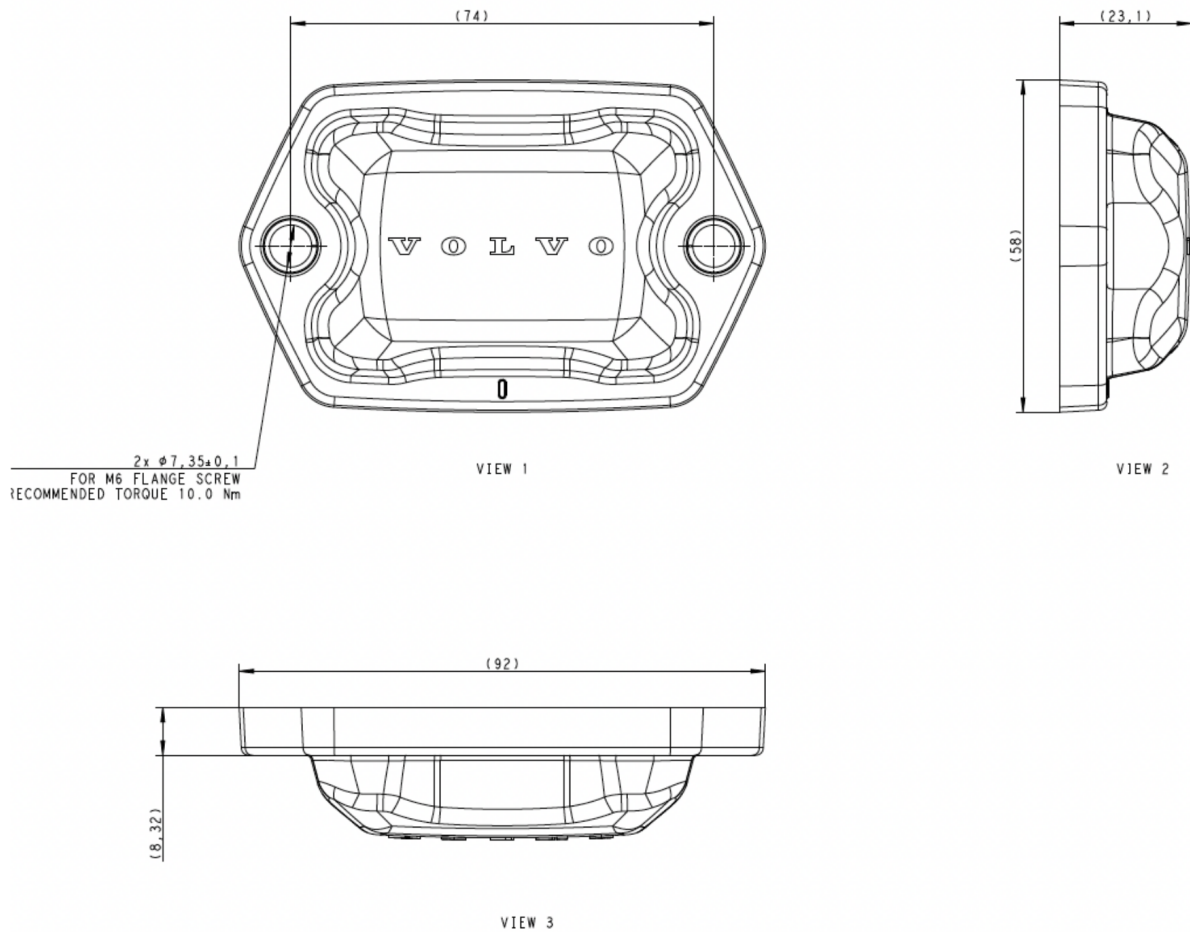
Bluetooth antenna

1. Internal antenna built in unit.
2. Operating Frequency: 2,4GHz
3. Output power:

4. Number of channels: 40 channels

Physical Specification

1. Size: 92 mm x 58 mm x 23,1mm
2. Weight: 62 +- 6g

VIEW 1

VIEW 2

VIEW 3

2x ⌀7,35±0,1
FOR M6 FLANGE SCREW
RECOMMENDED TORQUE 10.0 Nm

Battery safety information

Specified battery type: CR2450

Alternative battery type (with different battery holder): CR2477

CAUTION

1. Risk of explosion if the battery is replaced by an incorrect type.
2. Always insert batteries correctly regarding polarity.
3. Do not dispose a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.
4. Do not leave a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.
5. Do not subject a battery to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.
6. Exhausted batteries should be immediately removed from equipment and properly disposed of.
7. Store unused batteries in their original packaging away from metal objects.

Homologation Label

Model: C-Tag
Mfr: CPAC Systems AB
Box 217
SE-40123 Gothenburg
SWEDEN
Brand: CPAC
Country of Origin: Poland

FCC ID: AHV-CTAG
IC: 10111A-CTAG
HVIN: CTAG
IP 6K9K

VOLVO

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YYWWDnnn 24261

DATA MATRIX

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