

Product manual

PDV-SMD Pallet tracker - SM2

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Revisions

RC VISIONS		
Version	Date	Comment
0.1	18-3-2018	First draft
0.2	30-6-2018	Second draft
0.3	01-10-2018	Third draft
0.4	30-10-2018	Fourth draft
0.5	12-12-2018	Fifth draft
0.6	13-12-2018	Sixth draft

Distribution

Version	Date	

Approval

Version	Date	

Related Document

Document	Date	Author



The Pallet tracker - SM2 is a battery powered radio frequency Pallet tracker. It uses Bluetooth technology with a special Ahrma protocol. It contains a temperature and shock sensor. It is programable to transmit its status data: default this is 1x per hour. The data is received by a gateway (either an Ahrma gateway or a third party Bluetooth gateway).



Figure 1. The Pallet tracker without enclosure

The Pallet tracker does have a non-volatile buffer memory and will store all recorded data with a time stamp of the measurement if the Pallet is not in range of a gateway.

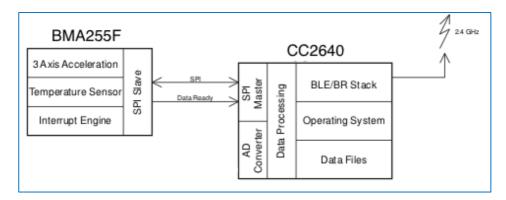


Figure 2: the Pallet tracker schematics

The Pallet tracker is wrapped in a foam jacket as depicted in figure 3.

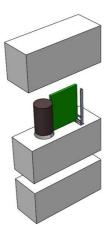


Figure 3. The transponder is mounted in a foam jacket

The Pallet tracker inside the foam jacket is than placed in the middle block of the pallet as depicted in figure 4. This is the position with the least chances of damage occurring by forklift truck handling.



Figure 4. The mounting position of the Pallet tracker inside the middle block of the pallet.

The block is made from pine wood and coated with a 0.3mm thick PU coating. The transponder is wrapped inside a foam jacket.

Technical specifications

Technical data				
Dimensions	96x96x90 mm			
Weight	360 grams			
Power supply	SAFT LS14250 battery, 3.2V / 1200mAh The battery is fully enclosed and can only be replaced by the manufacturer.			
Battery life	10 year Note: based on ambient temperature conditions (~25°C)			
Transmission technology	Bluetooth 2.4GHz			
Range	>300 meter free line of sight, with prescribed gateway			
Housing material	Pine wood with PU coating			
Certifications	FCC, CE, ATEX on request			
Operating temperature	-20°C - 40°C			



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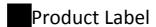
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Schedule of limitations

Ex-Component PDV-SMD Palette tracker - SM2, shall be installed in enclosure (which can be a part of final equipment, e.g. pallet), which protect the cell (battery) against mechanical damage and water according to manufacturer's specifications for cell SAFT LS14250.

Note: If the enclosure is sealed so that internal pressure can be higher than 30 kPa the enclosure needs to be equipped with venting device, see clause 10.5.4 of EN 60079-11: 2012.

Ex-Component is suitable for temperature class T4 if ambient temperature at location of the installation does not exceed +40°C



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Pallet tracker - SM2
FCC ID: 2AHGQ-SM2
Y: 2018

The label will be applied on the side of the middle block as depicted in figure 6.

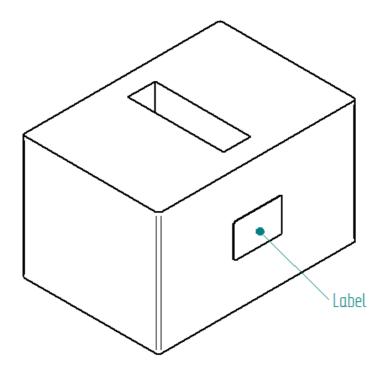


Figure 6: Position of the label on the pallet block



Regulatory notes

Disposal according to the WEEE Directive 2012/19/EU

The unit, accessories and packaging should be sorted for environmental-friendly recycling. Do not dispose of the device into the household waste! According to the European Guideline 2012/19/EU, electric and electronic devices that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The Federal Communications Commission (FCC) warns the users that changes or modifications to the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE

Hereby, Ahrma Holding B.V. declares that the radio equipment type Connect is in compliance with Directive 2014/30/EU, 199/5/EG and 2011/65/EU.

Operating the device in countries out of the EU

The Pallet tracker carries the CE mark and is certified for operation in the European Union. For countries out of the EU validate that local legal regulation allows the operation of the Pallet tracker.



CAUTION: Lithium Battery!

The device contains a lithium battery. Handling the battery incorrectly could cause fire. Read and follow the valid transportation regulations. Do not damage or cut the device.