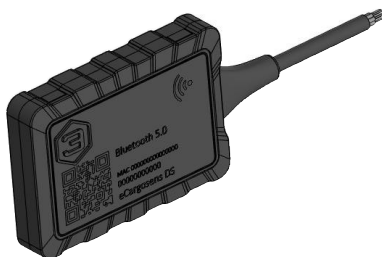




Central Unit
eCargosens DS
Datasheet
Serial number S
Date D
MAC-Adress M



1 GENERAL INFORMATION

Device full designation: Central Unit
eCargosens DS

Device short designation: Central Unit
eCargosens DS

Unit serial number: S

Date of production: D

2 GENERAL INFORMATION

2.1 1.1 The main purposes of the eCargosens DS Central Unit are:

- to receive axle load readings and the readings of the remaining battery charge transmitted by eCargosens Air wireless sensors (up to 10 sensors) via Bluetooth 5.0 Long Range

- to configure and calibrate the wireless axle load sensors eCargosens Air

- to ensure the communication with a smartphone in accordance with BLE eCargosens data communication protocol

- to retransmit the received readings via the serial RS-485 interface in accordance with the LLS communication protocol

2.2 The wiring diagram of the eCargosens DS Central Unit can be found in Annex 1 at the end of the present Datasheet.

2.3 The eCargosens DS Central Unit must be installed in the cabin of a vehicle away from any sources of heat. When selecting the installation spot, it is vital to take the RSSI (received signal strength indicator) that indicates the stability of connection with a particular eCargosens Air sensor. The optimal range is -45...-85 dBm.

2.4 **ATTENTION! DO NOT DISASSEMBLE THE DEVICE!**

2.5 **ATTENTION! DO NOT USE THE DEVICE UNDER THE OPERATING CONDITIONS DIFFERENT FROM THE STATED IN THE PRESENT DATASHEET!**

2.6 **ATTENTION! AVOID ANY MECHANICAL DAMAGE TO THE DEVICE DURING ITS TRANSPORTATION, INSTALLATION AND USE.**

Table 1.

Item	Value
Power supply voltage, V	from 9 to 36
Power consumption (current) , mA, not more than	100
Wired communication interfaces (for connection with GPS trackers/gateways and wired sensors) Data exchange protocol(s) Data exchange baud rate, bps	RS-485 LLS 19200
Configuration interface (for connection with mobile smartphones and eCargosens Air sensors) Data communication protocol(s)	Bluetooth Low Energy (BLE) Escort eCargosens
Bluetooth Standard	Bluetooth Low Energy 5 LR coded PHY (connection - central) Bluetooth Low Energy 4 (connection, advertising)
Receiver sensitivity / transmitter power, dBm	-96 / 8
Operating frequencies, GHz	from 2.402 to 2.480
Support number of wireless axle load sensors eCargosens Air	up to 10
Ingress protection marking	IP54
Electric shock resistance rating	Class III
Operating conditions: - ambient temperature, °C - ambient extreme temperatures limits, °C - atmosphere pressure, kPa	- from -40 °C to 50 °C - from -40 °C to 85 °C from 84 to 106.7

Dimensions, mm, not more than	420x64x16
Weight, not more than	0.2

3 SCOPE OF DELIVERY

Table 2.

Item	Nr.	S/ №	Notes
eCargosens DS Central Unit	1		
Installation kit:	1		
C-485 holder	1		
ST 4,2x16-O-H DIN 7504 self-tapping screw	4 4		
M4x16 DIN 965-H flush cross head screw	4 4		
M4 DIN 934 Hex nut	4		
4 DIN 125 Washer spring			
4 DIN 127 Washer spring			
DATASHEET	1		
Packaging	1		
Note. The manufacturer reserves the right to make changes in the product's design and in its scope of delivery without prior notice to the customer.			

4 SERVICE AND SHELF LIFE, WARRANTY

4.1 Guaranteed service and shelf life is 12 months after the Device is shipped from the manufacturer's warehouse.

4.2 Service life - 8 years.

4.3 The manufacturer guarantees that the Central Unit meets all specifications and requirements stated if the customer adheres to transportation, storage and operation requirements.

4.4 If any defect is found, contact the manufacturer.

4.5 The warranty does not cover defects caused by failure to meet the operation, storage and transportation requirements.

4.6 The manufacturer reserves the right to make changes to the Sensor's design and to the scope of delivery without prior notice to the customer.

5 PACKING CERTIFICATE

_____ eCargosens Air sensor _____ s/n
_____ S _____

_____ designation _____ serial number
packed by _____

_____ manufacturer's name or ID code

In accordance with the requirements of the effective technical
documentation.

Date of packing _____

Packed by _____ / _____ /
_____ job title _____ signature _____ full
name

_____ year, month, date

The packed device received by

_____ / _____
job title _____ signature _____ full name

_____ year, month, date

8 TRANSPORTATION AND STORAGE

8.1 The Device shall be transported in the original packaging in enclosed vehicles or craft.

8.2 The Device must be stored indoors at 75 % humidity level and -20 to 30 °C.

8.3 Do not store in spaces with conductive dust, aggressive substances and their vapors that cause corrosion of parts and destruction of electrical insulation of the Device

8.4 During the installation, operation and maintenance of the Central Unit follow general safety instructions for electric devices and equipment.

9 DISPOSAL REQUIREMENTS

9.1 The Device does not contain any hazardous materials.

9.2 The Device does not contain precious metals in the amount to be accounted for.

APPENDIX 1

Wiring

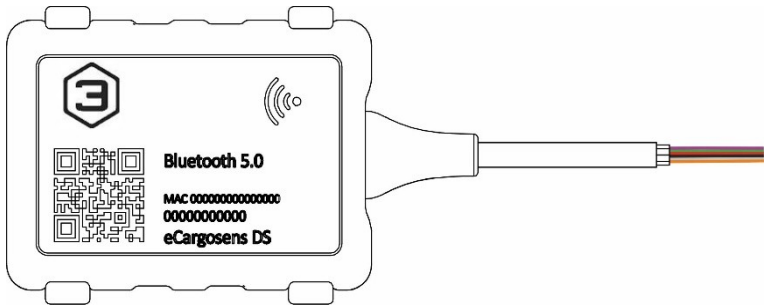


Table 3.

Wire colors	Designation
Orange	RS-485 line A
White	RS-485 line B
Red	+Upwr (GND)
Black	-Upwr (PWR)

For notes