UNIVERSAL EUROPEAN TEMPERATURE RECORDER "OPEN PRO"

FOCUSED TO FLEET MANAGEMENT SYSTEM COMPANIES EASY INTEGRATION: "PLUG AND PLAY"

EN 12830 - 2019
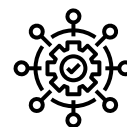
Compliant for: 🇪🇺 European countries

PHARMACEUTICAL INDUSTRY
FOOD SECTOR
ANIMAL TRANSPORT

European

Homologated EN12830

Full functions for transports needs

Easier

For all customers!

Unique in the European market!

The new thermograph is **the full services functions for final customers**: **open frigo doors detections; working hours frigo machine for maintenance;** and **free inputs for any use.**
Approved for Europe complies with the EN12830 standard and the corresponding standars in each country (Spain ITC 3701/2006 - ITC 155/2020). Temperature recorder with **disconnectable probes!**
Installation in 10 minutes
Just connect your GPS system by serial to the temperature recorder, **add 2 commands to your system** and that's it! Easy and simple.

— EUROPEAN UNIVERSAL —
TEMPERATURE RECORDER

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Technical support: (+44) 772 431 3334
help@universalrecorders.com

Temperature recorder **homologated EN12830**
Class 0,5
Compliant for transportation, distribution, storage: **EN 12830 + EN13845 + EN 13486**
Ministry of health (Spain): Sanidad/Farmacia/Alimentación: **ICT 3701/2006 + ICT 155/2020**

Features
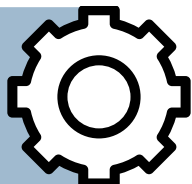
Temperature sensor with 2 sensor, expandable up to 4 sensors
Detachable temperature sensors **one-of-a-kind**
Interchangeable sensors of easy installation, replacement and validation

Configuration/communication with temperature recorder by free App
Printer optional/external Bluetooth printer
Screen data by App in mobile

Fleet management systems connection: Serial port RS-232
Power: 12-24VDC

Inputs: **Frigo on/off motor detection**
Working hours frigo motor detection
Doors open detection
1 free use input and 2 outputs for control (lights, siren, on/

Terms and conditions of guarantee

The complete terms of the guarantee of ANDRA SOLUTIONS are described below.
Through this Guarantee, ANDRA SOLUTIONS guarantees that the product is free from defects in materials and manufacture on the original purchase date for a period of ONE YEAR from that date. If within the warranty period it is determined that the product is defective (on the date of original purchase) due to inadequate materials or manufacture of device, ANDRA SOLUTIONS without charge for parts, will repair or (at the discretion of ANDRA SOLUTIONS) will replace the product or its defect. Parties subject to the terms and limitations below. ANDRA SOLUTIONS can replace defective products or parts with new or reconditioned products or parts. All replaced products and parts become the property of ANDRA SOLUTIONS.
CONDITIONS Warranty services will be provided only if the defective product is presented within the warranty period. ANDRA SOLUTIONS can reject the free warranty service if the product is not presented within this period. This warranty will not apply if the model name or serial number of the product has been altered, removed, removed, or illegible. To avoid data damage or loss / erasure, you must download any data before submitting your product for warranty service. This warranty does not cover transportation costs and risks associated with the transportation of your product to and from ANDRA SOLUTIONS.
This warranty covers only the hardware components of the product. It does not cover software (whether from ANDRA SOLUTIONS or others) for which an end-user license agreement is provided or is intended to apply or independent warranty / warranty statements or exclusions.
This warranty does not cover: - misuse, including: • treatment resulting in physical, cosmetic or superficial damage or changes to the product; • failure to install or use the product for its normal purpose or in accordance with the installation or use instructions; • Failure to maintain the product in accordance with the instructions on proper maintenance; • installation or use of the product in a manner incompatible with the laws or technical or safety standards of the country where it is installed or used. – Programmes Virus infections or use of the product with software not provided with the product or incorrectly installed software - The condition or defects in the systems with which the product is used or incorporated, except other ANDRA SOLUTIONS products designed to be used with the product. - Use of the product with accessories, peripheral equipment and other products of a type, state and standard other than those prescribed by ANDRA SOLUTIONS. - Repair or attempted repair by people who are not approved by ANDRA SOLUTIONS - Adjustments or adaptations without the prior written consent of ANDRA SOLUTIONS, which include: • updating the product beyond the specifications or characteristics described in the manual of instructions, or • modifications to the product to conform to national or local technical or safety standards in countries other than those for which the product was specifically designed and manufactured; negligence; accidents, fires, liquids, chemicals, other substances, floods, vibrations, excessive heat, inadequate ventilation, power surges, excessive or incorrect input voltage or supply, radiation, electrostatic discharge, including lighting, other external forces and impacts.
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Note: For the Spanish market, when an EQUIPMENT WITH A "**VERIFICACIÓN PRIMITIVA**" CERTIFICATE is REQUESTED, issued by a control organism/governmental, and the equipment is returned. **This cost of the "VERIFICACIÓN PRIMITIVA" certificate is NOT included in any part of the guarantee**, as it is a document issued by third parties and expires. And the value expressly indicated in the commercial offer will not be returned under any circumstances.

Learn to use "Open Pro" in 5 minutes

Dimension

Protection level

IP 65 – Easy for installation in external environments

Power

RED	——————————	12 / 24 VDC
BLACK	——————————	GND

Red wire - Positive - 12/24 V (do not use red + with wire)
Black wire - Negative - Ground

Digital sensor

Digital sensors has 2 wired: **Red wire (data) and black wire (negative/ground)**

Sensor 1 connection

Blue dark + white wire from device - connect to red wire of sensor

Sensor 2 connection

Green wire from device - connect to red wire of sensor 2

Sensor 3 (optional)

Green + white wire from device - connect to red wire of sensor 3

Sensor 4 connection (optional)

Blue dark wire from device - connect to red wire of sensor 4
Black + white wire from device - connect to black wire of all sensors

Digital inputs

YELLOW	——————————	IGNITION
BROWN	——————————	FRIGO MACHINE
PINK	——————————	DOOR 1
CYAN	——————————	DOOR 2

Ignition

Yellow wire - Detects ON if has voltage. If not connected or connected to ground, this input will be unvaliable

Frigo machine detection

Brown wire - Detects ON if has voltage. If not connected or connected to ground, this input will be unvaliable

Door 1

Pink wire - Detects ON if has voltage. If not connected or connected to ground, this input will be unvaliable

Door 2

Cyan wire - Detects ON if has voltage. If not connected or connected to ground, this input will be unvaliable

Digital outputs

PURPLE ————————— EXTERNAL WARNING

GREY ————————— REMOTE CONTROL

External warning

Purple wire - Connect to rele by pin 86. Set rele in on/off state

Remote control

Grey wire - Connect to rele by pin 86. Set rele in on/off state
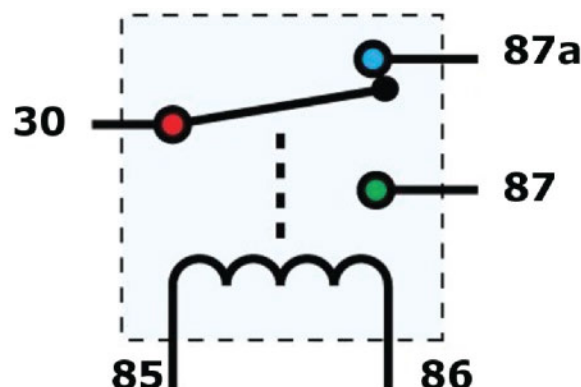
Communication RS-232

White wire - Transmision (TX) - Connect to RXD from external device
Orange wire - Reception (RX) - Connect to TXD from external device
GND - Connect to the ground
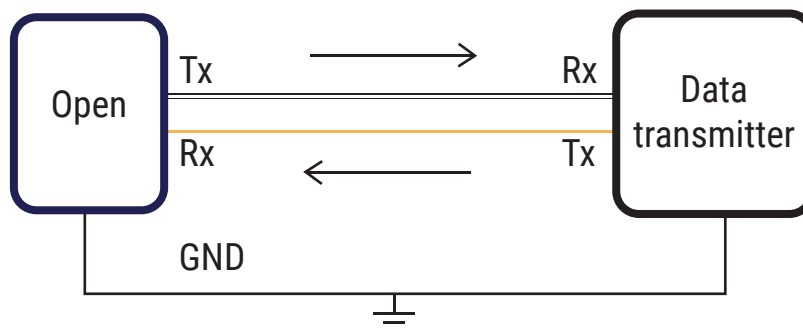
Transmission configuration
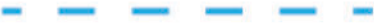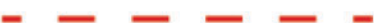
Parameter	Value
Baudrate	115200
Data bits	8
Parity	None
Stop bits	1

RS-232 Commands

AT+TEMP	Returns in five lines the T1, T2, T3, T4 probe temperatures and OK, respectively
AT+STATUS	Returns in two lines the device Status register (2-byte in HEX) and OK, respectively. Status 2-byte register format example: 0x00B5 -> 0000000010110101 - Bit 0: Input 1 (Ignition ON) - Bit 1: Input 2 (Engine ON) - Bit 2: Input 3 (Door open) - Bit 3: Input 3 (User input) - Bit 4: Input 4 (User input) - Bit 5: T1 High Alarm

Complete connection diagram

Wire	Connection
RED	12 / 24 VDC
BLACK	GND
WHITE+BLUE	SENSOR 1
GREEN	SENSOR 2
WHITE+GREEN	SENSOR 3
DARK BLUE	SENSOR 4
YELLOW	IGNITION
BROWN	FRIGO MACHINE *
PINK	DOOR 1 *
CYAN	DOOR 2 *
PURPLE	EXTERNAL WARNING *
GREY	REMOTE CONTROL *
WHITE	TX
ORANGE	RX
WHITE+BLACK	GND
WHITW+RED	+5V OUTPUT

*Inputs receive signal ON by positive
*Outputs need rele

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Smartphone App Android

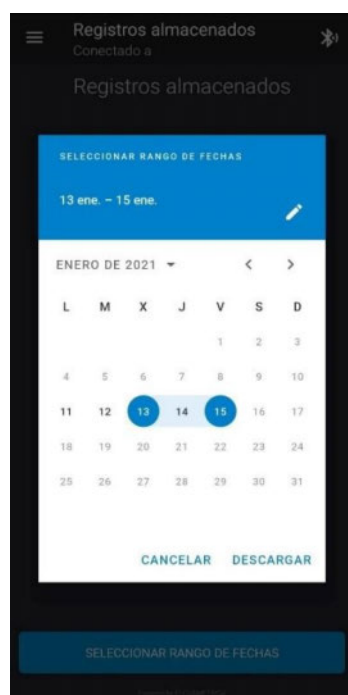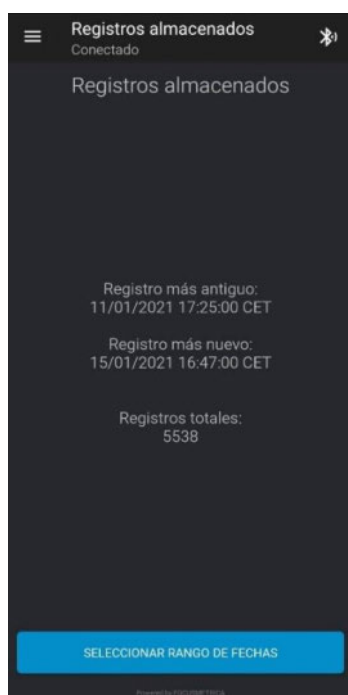Download **Andra Telematics** in Google Play or App Store

Real time display: In this display you can see temperature and state from inputs and outputs in real time.


Principal display

Stored records screen: On this screen you can select download storage records in the internal memory of the device. You can select date range and download the records. You look like a list:
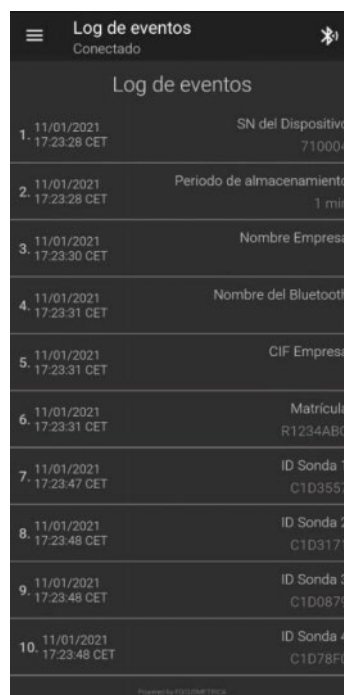

Stored records Screen

Configuration display: You can control the device in this screen. You need password that you received into your invoice. All changes will be recorder in events LOG
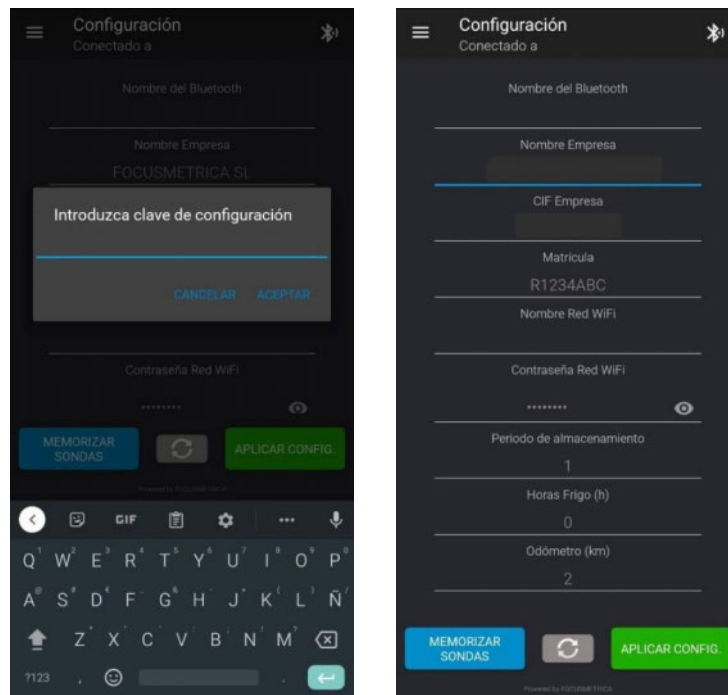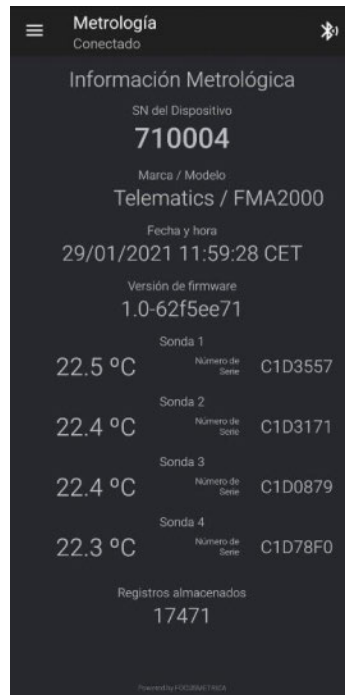

Configuration display

Events Log screen: You can watch all configuration changes that the device was received.

Events log

EN-12830 data screen information: Show all relevant information from device. Serial number, Data, software version and CRC, Sensor temperature identification:

EN-12830 data screen information

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