

## Didcom Temperature Monitor<sup>®</sup> V1.0



TPM is a module designed for constant temperature monitoring from 3 to 5 DSI devices, in addition a digital input monitor module is included, which will check the compressor status.

Together this kit helps you generate special temperature reports per unit and even per sensor, making comparisons against the compressor status.

### Features

The TPM device is a CAN proprietary network controller, in this network the temperature sensors and the compressor monitor (DSI) are connected, when connected to said network they are automatically identified and associated with the TPM module, made the association, The device sends the information according to the type of sensor it reads, then the data is processed and sent by the controller module, either through an RS232 port for connected third-party devices or if it is integrated into a computer Telemetry (GPS) to send information remotely.

The information that is received is divided by **ID, Sensor type and Status data on the health of the device.**

As the main TPM functionality integrated into a GPS device is the following: each data that is processed and sent through the telemetry equipment can be referenced with value, location and date on which the event occurred, the above allows to create large data histories belonging to each sensor connected to the network, in this way the information can be analyzed and plotted on the telemetry equipment's WEB portal. On the other hand, it is possible to identify the health of the devices with their status data.

*In addition to the integration of the network to a telemetry device, TPM has the option of connecting to a third-party device through the RS232 communication port. \**

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## TPM Application Example

**3 or 5 Temperature sensors:** Have control of indoor temperatures in your passenger transport, or refrigerated cargo transport.

**Compressor monitor:** Constantly check the compressor status, considering the recorded temperatures.

TPM obtains the information of each of the sensors connected to the proprietary CAN network, the information is collected and evaluated within the device, this having some characteristics with respect to the temperature monitoring functionality, firstly it has temperature alert configuration functionality with adjustable ranges, constant data sending when changing the measurement value, in addition to other settings.

The output of TPM information is performed on an RS232 communication port.

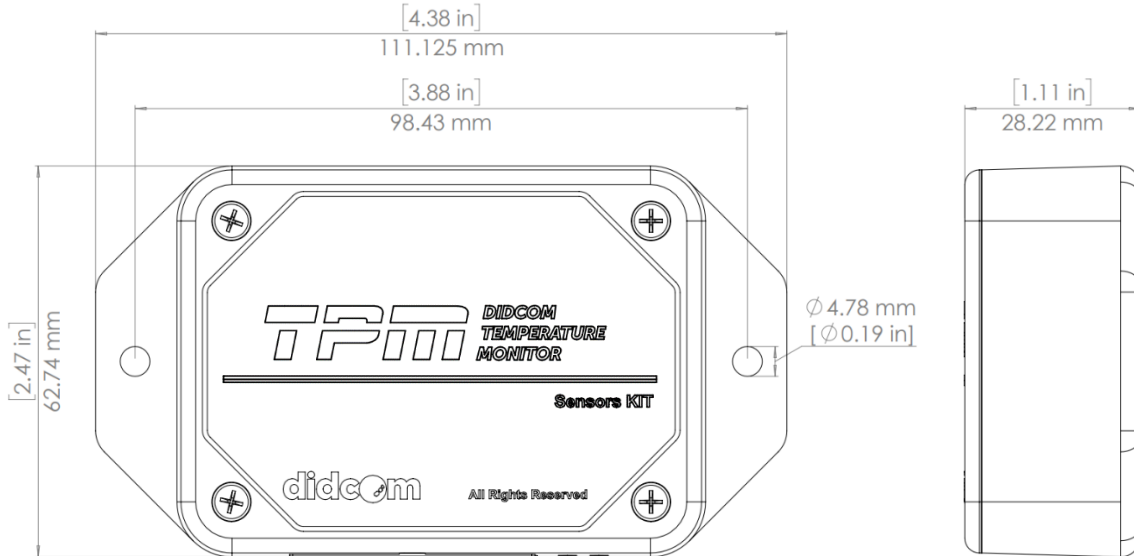
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## Applications

Connection of DSI modules to an integrated TPM with IOX-RS232M directly with a telemetry device (Go7 of the GEOTAB® brand), with which it is possible to send the information remotely and immediately when generating sensor reading events or any status message of the devices themselves, the information is sent through the cellular network and deployed on the WEB platform of said device, on the other hand the information can also be sent through the TPM device on the RS232 port with the format Proprietary DIDCOM® protocol, this information is obtained through an integrated third-party device or through an on-board computer.

**NOTE:** *The data generated by the DIDCOM protocol will be interpreted either by the integration of a third-party device or on-board PC software.*

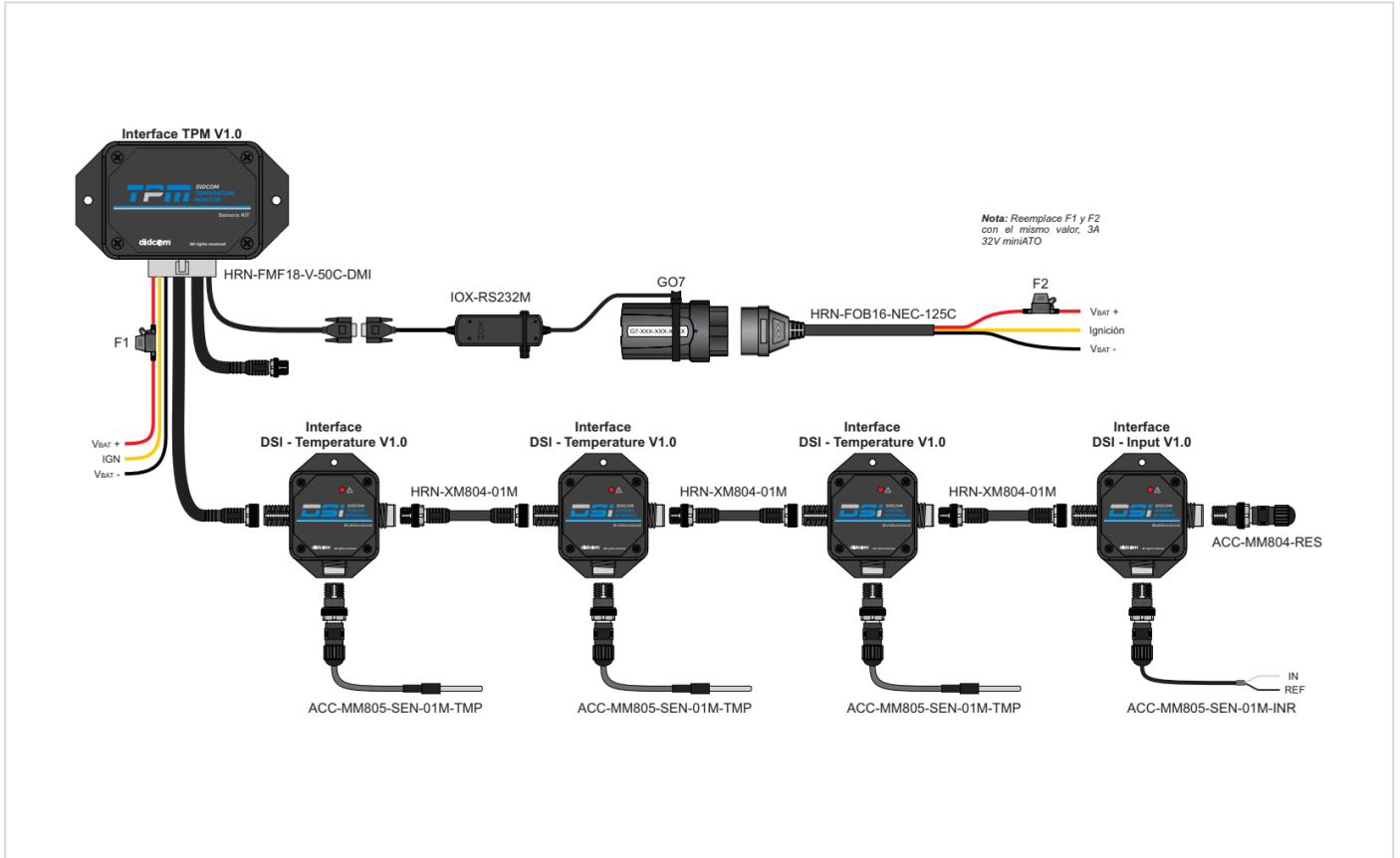
## Mechanical Dimensions



## Specifications

<b>TPM V1.0 General Specifications</b>	
Signals E/S	
Power supply	Systems 12V/24V DC, Consumo: 53mA/32mA
Protections	Against Short Circuit F1= 3 A, 32V miniATO <b><u>Replace with the same value.</u></b>
	Protection against voltage spikes.
	Polarity of Inverted Connection
<b>Communication</b>	Mode RS232, 115200 baud
Sensory Input Interface	Digital input (1Wire), +/- input, analog input
2 I / O interface	CANBus, DIDCOM <sup>®</sup> Proprietary Protocol
Visual interface	2 bicolor status LED
Energy consumption	Module TPM V1.0 <1W
Case material	ABS Black Color, Flame retardant.
Protection Case Index	UL94V-0
Temperature range	-40 a +85 °C
Net weight	Module 83 gr / with harness 140 gr

**Connection diagram TPM / DSI Temperature / Input V1.0 (Example of integration with Go7 device)**



**Números de  
Parte**

Didcom Temperature Monitor® V1.0 (Device and Accessories Options)			
TPM V1.0	Control and communication module for Sensor network.		
DSI Temperature	Temperature monitor with operating range from -40 ° C to 115 ° C		
DSI Input Sensor	Input status monitor, positive (5Vdc - 30Vdc), or negative (0v)		
Arneses y Accesorios		Incluido	Opcional
ACC-MM804-RES	CAN Bus terminating resistor	I	
ACC-MM805-SEN-01M-INR	Accessory for digital input - with reference	I	
ACC-MM805-SEN-01M-TMP	Temperature sensor accessory	I	
<b>HRN-XM804-01M*</b>	<b>Extension 1M sensor interconnection</b>	I	<b>O</b>
HRN-FMF18-V-50C-DMI	Main harness for DMI / TPM interface	I	
HRN-FOB16-NEC-125C	Power harness for GPS device		O
IOX-RS232M	Integrator Device RS232 GEOTAB		O

**NOTE** \* Extension included only in KIT mode of 2 or more sensors, optional only to replace or extend the network.

**Important safety and usage information.**

**WARNING!** The devices to be installed must be firmly fastened so as not to interfere with the controls of the vehicle, some of the cables with which they could interfere are those of the accelerator pedal, brake and clutch. For this procedure make use of plastic straps to fix the devices including their respective cables, they must be fastened along the harness and the module itself. The use of belts is essential in the installation since if they are not used the vibration of the vehicle can loosen the connection, indirectly causing some part of the vehicle to fail, control is lost or serious damage occurs. Inspect connections regularly to avoid accidents.

**WARNING!** If at any time after installing a new device in the vehicle a warning light on the dashboard comes on, or a general failure is caused, turn off the engine, remove the device and contact your dealer. Continuing to use the vehicle with any of these conditions may cause major failures to the vehicle, or cause loss of control of the vehicle.

**WARNING!** Devices connected to the vehicle must be kept clean, dry and free of contaminants; If this is not the case, it may present a malfunction or cause a short circuit, with the risk of accidents such as fire, damage to the vehicle or serious injury.

**WARNING!** Do not attempt to switch devices between vehicles where they were originally installed to install them in others. Not all vehicles or connection types are compatible; Doing so could have an unexpected effect with the connection to the vehicle, even causing the vehicle to fail or run erratically, causing more serious problems to the vehicle. If you have questions about compatibility or connection between devices, contact your distributor.

**NOTICE**

The device does not have any type of maintenance that can be performed by the user. Only distributors or installers authorized by the company can handle special configurations, maintenance and / or repairs. If any type of violation or maintenance of these products is made without the relevant authorization, the product warranty will be voided immediately

*NOTE: RevA Data Sheet first edition October 02/19.*

The information contained in this document regarding the device, features and applications is provided for the convenience of the end user and may be replaced by subsequent updates. It is the responsibility of the end user to ensure that the specific application is complied with the use of the device. DIDCOM® DOES NOT MAKE ANY MANIFESTATION OR OFFER ANY EXPRESS OR TACTILE WARRANTY, RELATED TO THE INFORMATION CONTAINED IN THIS DOCUMENT RELATING TO QUALITY, PERFORMANCE, TRADE OR FITNESS TO COMPLY WITH THE PURPOSES OF THE END USER. This document does not grant license or assignment of industrial property rights, copyrights or any other protected by intellectual property laws in favor of Grupo Tecnológico Didcom S.A de C.V.

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#### **Company information and support.**

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