

## Didcom Sensor Interface<sup>®</sup> V1.0



DSI is a device designed to obtain information from the physical environment through external components of sensory type, the interface can be digital, analog or direct connection, these devices are classified each by its type, that is, each device only performs one function at a time.

DSI is integrated to a master device (DMI), which can be integrated in turn to a telemetry module (GPS).

### Features

The device is part of a network of sensors, once connected automatically identified and associated with the master module (DMI), the device sends the information according to the type of sensor it reads, then the data is processed and sent by the master module, either through an RS232 port for connected third-party devices or if it is integrated into a telemetry (GPS) device to send the information remotely.

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

The main feature where the DMI module with DSI devices is integrated into a GPS device is the following: each data that is processed and sent by the DMI through the telemetry equipment can be referenced with value, location and date on which the event occurred, the above allows to create data history belonging to each type of sensor connected to the network, in this way the information can be analyzed, and take immediate actions. 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, you have the option of connecting to a third-party device through the RS232 communication port, through the DMI module. \**

## DSI Application Example

**Temperature sensor:** temperature control in cargo transportation.

**Door opening sensor:** Controls access to unauthorized vehicles or compartments.

**Pressure sensor:** Constant monitoring of air or liquid pressure in your vehicles.

DSI obtains either digital or analog information of the type of sensor connected, the information collected has an output through a CAN network which in turn is received by the DMI master module, in it the information output of each of the modules DSI connected, is performed on an RS232 communication port.

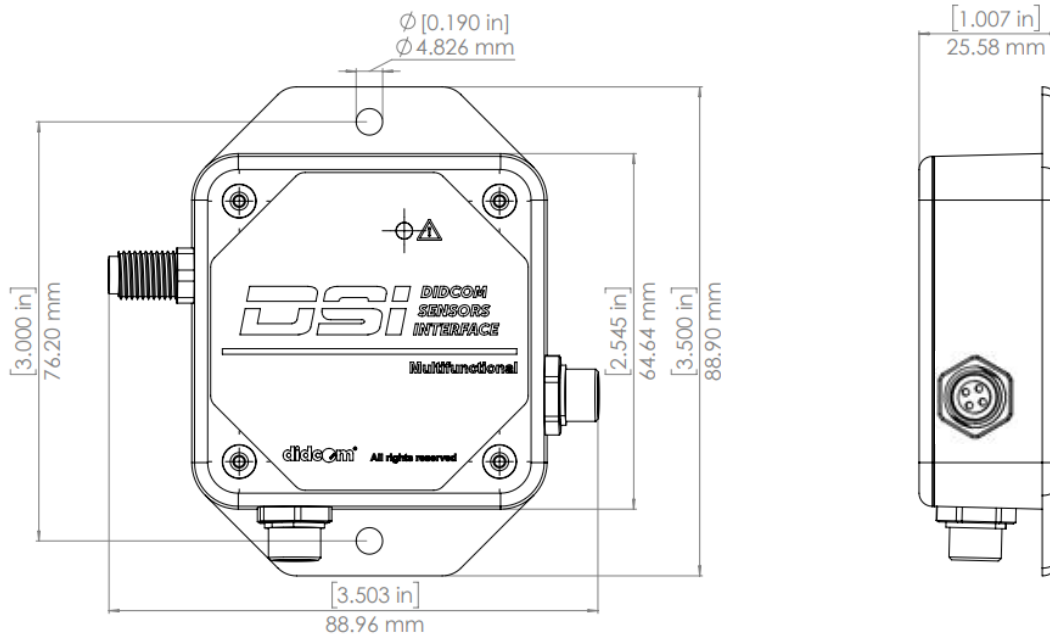
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## Aplications

Connection of DSI modules to a DMI integrated directly with a telemetry device (Go7 of the GEOTAB<sup>®</sup> brand), with which it is possible to send the information remotely and immediately when generating sensor reading events or some status message of the devices themselves, the information is sent through the cellular network and deployed on the WEB platform of said equipment, in the same way the information can be sent through the DMI device through the RS232 port with the proprietary protocol format DIDCOM<sup>®</sup>, 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.

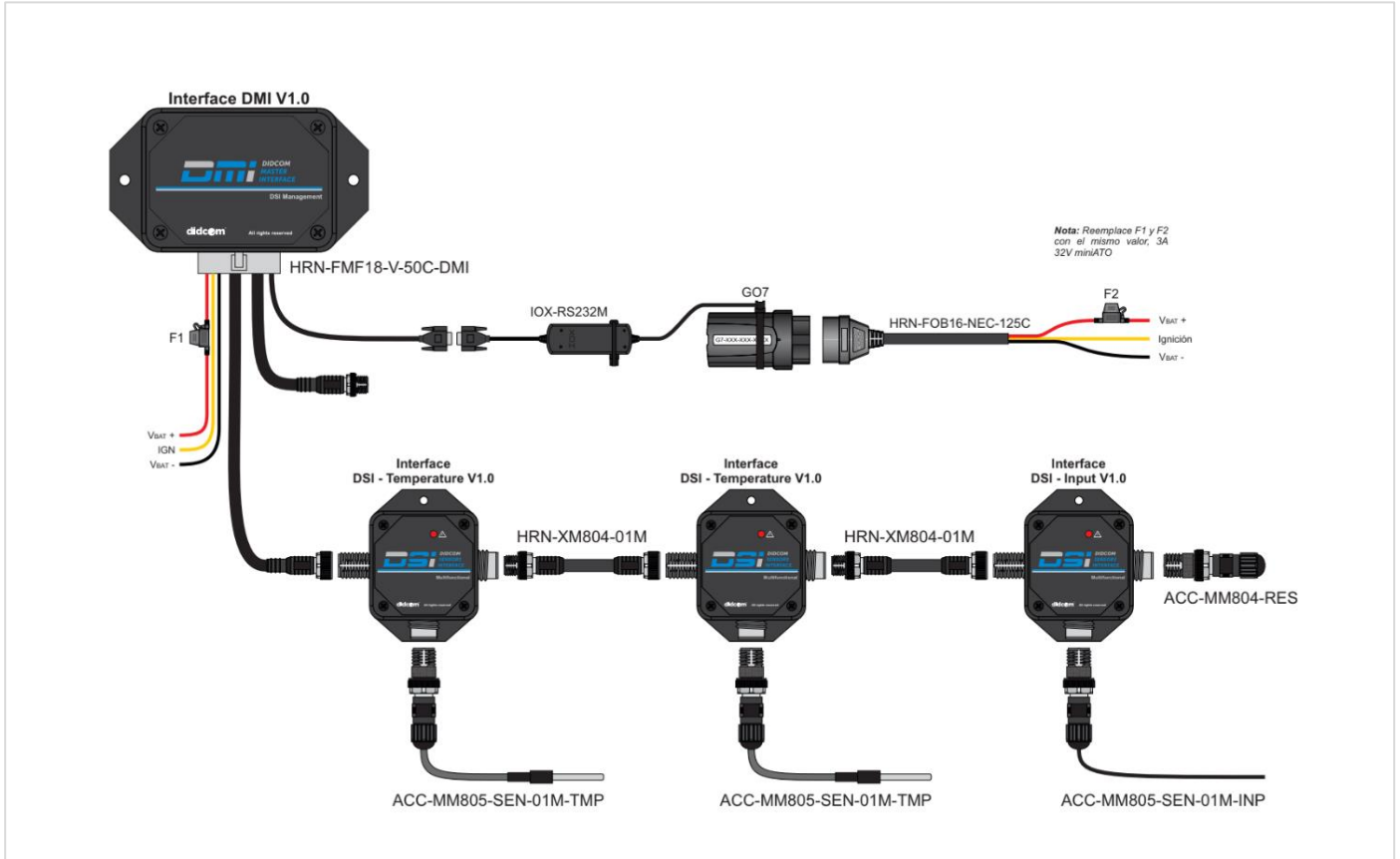
## Mechanical Dimensions



## Specifications

<b>DSI V1.0 General Specifications</b>	
Signals E/S	
Power supply	Systems 12V/24V DC, Consumo: 25mA/15mA
Protections	Against Short Circuit
	Protection against voltage spikes.
	Polarity of Inverted Connection
<b>Communication</b>	
Sensory Input Interface	Digital input (1Wire), +/- input, analog input
Input Interface	CAN proprietary protocol 500 Kbps
Output Interface	CAN proprietary protocol 500 Kbps
Visual interface	Status LED
Energy consumption	Module DSI V1.0 V1.0 <1W
Case material	ABS Black Color, Flame retardant.
Protection Case Index	UL94V-0
Temperature range	-40 a +85 °C
Net weight	Module 86 gr / with harness 276 gr

### Diagrama de conexión DSI V1.0 (Ejemplo de integración con equipo Go7)



## Part Numbers

Didcom Sensor Interface® V1.0 ( Device and Accessories Options )			
DSI Temperature	Temperature monitor with operating range from -40 ° C to 115 ° C		
DSI Input Sensor	Input status monitor, positive (5Vdc - 30Vdc), negative (0v)		
DSI Analog Input	Analog input monitor, positive (5Vdc - 30Vdc)		
Arneses y Accesorios		Incluido	Opcional
ACC-MM804-RES	CAN Bus terminating resistor	I	
ACC-MM805-SEN-01M-INP	Accessory for digital input +/- (DSI Input)	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 interface	I	
HRN-FOB16-NEC-125C	Power harness for GPS device		O
IOX-RS232M	Integrator Device RS232 GEOTAB		O

**NOTE \*** Extension included only mode KIT 2 or more sensors, optional replacement or extend only to 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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