

Human-Machine Interface - IDNHM1

Features

- 64-bit identification of driver using iButton® technology
- High sensitivity 5Hz GPS with integrated or external antenna, WAAS/EGNOS
- Visual and audible alarms
- Integrated emergency button
- Data transmission via the CAN network
- Small size and ergonomic

Description

The IDNHM1 is a Human-Machine interface. The IDNHM1 connects to ISAAC Instruments' DRU9xx through the ISAAC Device Network (IDN).

Refer to page 2 (User Interface) for more details on the operation of IDNHM1.

When necessary, an external antenna can be used for the GPS receiver. The following antennas are available for the GPS receiver:

Part Number	Description
WRLGPS-MAG-001	Magnetic base for the GPS
WRLAN4-111	Antenna to be fixed on the roof of the vehicle. 4 frequency bands for Wi-Fi, GPS, and cellular (850/1900 MHz)
WRLAN4-110	Antenna to be fixed on the roof of the vehicle. 2 frequency bands for Wi-Fi and GPS



IDNHM1 - Dashboard User Interface



ACCIB1 - Identification key

Installation

Setup:

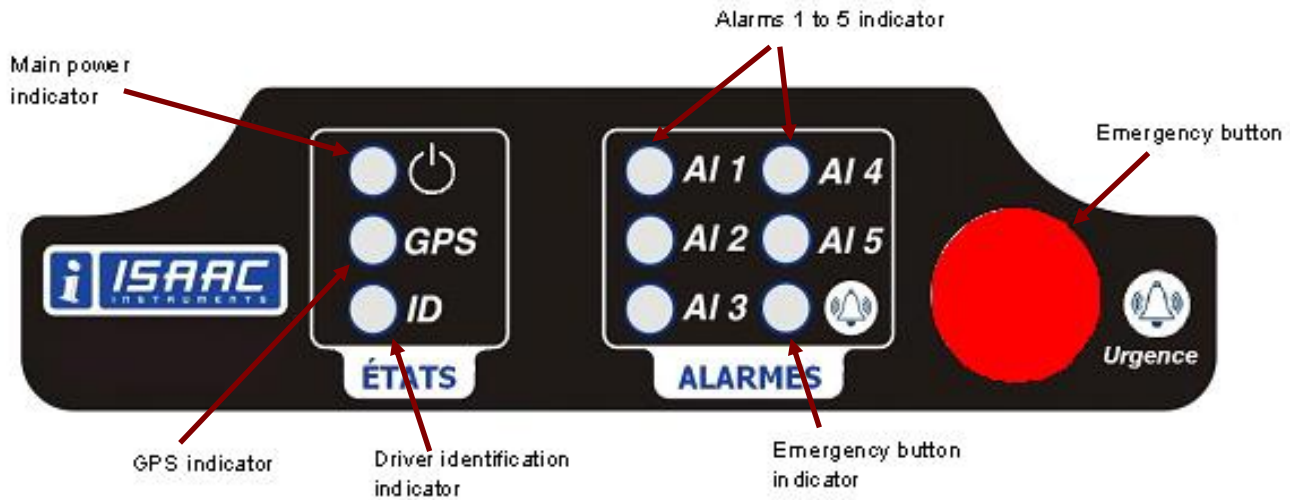
- Connect the IDNHM1 to the ISAAC Device Network (IDN).
- Connect the termination resistor (IDNTR1) at the end of the IDN.
- Route the cable at least 20cm (8") away from high interference electrical devices, such as: ignition coils, plug leads, high-current leads, high emission electronic modules or antennas.
- Refer to page 4 for an example of installation.

Software configuration:

CAN Port Activity: ISAAC Device Network

CAN bit rate: 500 Kbit/s

User Interface:



Description of the LED status

Function	LED status	Description
Main power indicator	ON	The IDNHM1 is powered
	OFF	The IDNHM1 is not powered
GPS indicator	ON	The GPS is receiving
	OFF	The GPS is not in reception mode
Driver identification indicator	ON	The Driver identified (using the Identification Key ACCIB1)
	OFF	The driver was not identified
Alarms indicator	ON	The alarm, preprogrammed in the Recorder, is reached
	OFF	The alarm, preprogrammed in the Recorder, is not reached
Emergency button indicator	ON	The emergency button is activated
	OFF	The emergency button is not activated

The emergency button can be pressed by the driver to initiate an emergency

Buzzer:

1. The vehicle is in motion but the driver was not identified
2. The alarms, preprogrammed in the Recorder, are reached

Specifications
IDNHM1:

Description	Symbol	Min	Typ	Max	Unit
Power requirements Power supply voltage Current @12V	V I	10	50	30	V mA
Communication interface Type Speed	S_{can}	HS CAN 500			Kbps
Driver identification Type Refresh	$I_{d_{type}}$ $I_{d_{rafr.}}$	jButton® (64 bits) 2			Hz
Environment Operating temperature Storage temperature Humidity	T_{Oper} T_{Stor}	-40 (-40) -40 (-40)		85 (185) 85 (185)	°C (F) °C (F)
Up to 95% non-condensing					
Mechanical properties Height Width Depth	H W D	35 (1.376) 102 (4) 76 (3)			mm (in) mm (in) mm (in)

GPS:

Description	Symbol	Min	Typ	Max	Unit
Performance Number of channel Type		14 GPS L1 C/A-code, SPS			
Acquisition Time Hot Start Warm start Cold start	T_{hot} T_{warm} T_{cold}		1 33 33		sec sec sec
Refresh Position Measures	UR_{Pos} UR_{Meas}		5 5		Hz Hz
Differential mode		WAAS / EGNOS			
Antenna Certifications(WRLAN4-xxx) Electromagnetic compatibility Environmental	MIL-STD 461 MIL-STD 810F MIL-STD 810F MIL-STD 810F MIL-STD 810F MIL-STD 810F IEC 68-2-52	Immunity against electromagnetic interferences 514.5 (vibrations) 501.4 (low temperature) 502.4 (high temperature) 507.4 (humidity) 516.5 (shock) IEC 68-2-52 (salt) The housing is resistant to petroleum products			
Environnement Température de fonctionnement Température de stockage	T_{Oper} T_S	-30 (-22) -40 (-40)		85 (185) 85 (185)	°C (F) °C (F)

Typical installation of ISAAC Device Network (IDN)

