



A Safe Fleet Brand

# WATCHDOG

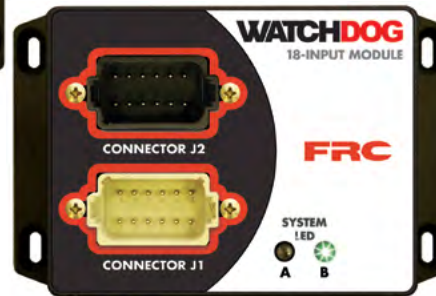
## COMPARTMENT DOOR and EQUIPMENT MONITOR

### MODELS: WDA108, WDA118, WDA208, WDA218

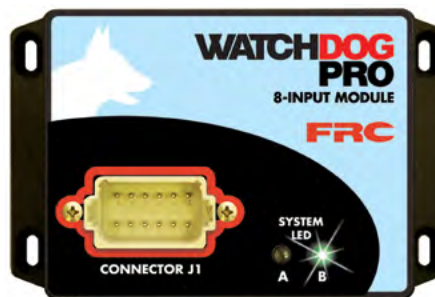


8-INPUT  
MODULE

WatchDog  
WDA108, WDA118

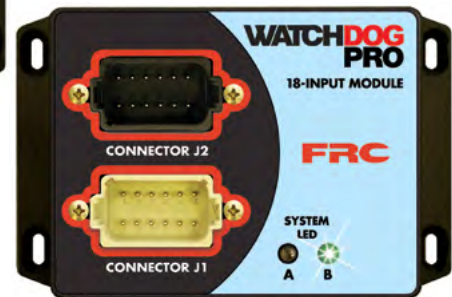


18-INPUT  
MODULE



8-INPUT  
MODULE

WatchDogPRO  
WDA208, WDA218



18-INPUT  
MODULE

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# INTRODUCTION

## Overview

The WatchDog Compartment Door and Equipment Monitor is available in two configurations. The WatchDog stands alone or the WatchDog PRO interfaces with the FRC VDR. Each module has multiple input connections to help monitor doors and other equipment on the apparatus.

### **WatchDog Stand Alone System WDA108, WDA118**

Use one module or a combination of multiple modules to build a stand alone system. As a stand alone system each module output is connected to the hazard warning light in the cab. The module provides an output signal to indicate that a hazardous condition exists on one or more of the inputs.

### **WatchDog PRO Connects to the FRC VDR WDA208, WDA218**

Connect one or more modules to the VDR as part of the FRC Seat Monitor and Data Acquisition System. As part of the SBA system the module output is connected to the VDR FRC datalink. This allows the module to exchange real time data with the VDR and interface with the seat monitor display. The module provides data to indicate that a hazardous condition exists, what that condition is by name, and the location. Each module is addressable when using the FRC datalink by settings on a dip switch.

## Features

- Microprocessor Controlled

- Eight or Eighteen Inputs (Active Low)

- VDR Monitors and Records the Status of all Inputs (PRO Models)

- Display Shows Hazardous Condition by Name and Location (PRO Models)

- Programmable with HAWK Software (PRO Models)

### **Helps meet NFPA 1901 requirements for monitoring the following conditions:**

- Any passenger or equipment compartment door is not closed.

- Any ladder or equipment rack is not in the stowed position.

- Stabilizer system is not in its stowed position.

- Powered light tower is not stowed.

- Any other device permanently attached to the apparatus is open, extended, or deployed in a manner that is likely to cause damage to the apparatus if the apparatus is moved.

## Specifications

Supply Voltage:	9 - 30 VDC
Supply Current:	80 mA
Inputs:	8 or 18, Active Low
Dimensions:	5 7/8" by 3 3/4" by 1 7/8"
Output:	
WatchDog:	Low (500 mA Maximum)
WatchDogPRO:	FRC Datalink to VDR

### Table 1. Models

**Note:** Models must be ordered from the factory to be used as stand alone modules or to be connected to a VDR.

#### WatchDog

WDA108 Stand Alone Module, Single Output, 8-Inputs

WDA118 Stand Alone Module, Single Output, 18-Inputs

#### WatchDog PRO

WDA208 VDR Wired Module, FRC Datalink Output, 8-Inputs

WDA218 VDR Wired Module, FRC Datalink Output, 18-Inputs

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## GENERAL DESCRIPTION

The WatchDog Compartment Door and Equipment Monitor can have up to eight (or eighteen) single-wire input connections. The module recognizes a low input (ground) as a hazardous condition.

### **WatchDog Stand Alone System**

The output of the WatchDog stand alone module is wired to a warning light in the cab. The module provides a low (ground, not to exceed 500 mA) to turn on the light. This output goes low when a hazard condition exist on any of the input pins.

### **WatchDog PRO Connects to the FRC VDR**

The WatchDog PRO module becomes an integral part of the FRC Seat Monitor and Data Acquisition System when it is connected to the VDR via the FRC datalink.

The VDR monitors and records the status of all inputs connected to the module.

The VDR provides an audible alarm output if the vehicle is moved when a hazardous condition exists.

The seat monitor message display shows the name and location for each input that is causing an alarm.

The seat monitor red door-open icon lights when a hazardous condition exists.

HAWK software templates allow the names of inputs and locations to be created or changed.

HAWK reports show past hazardous conditions by name and location with a date and time stamp.

For complete information on programming, transferring data, and generating reports refer to the User Guide (SBA1UG) for HAWK software installation, set-up, and how to instructions for the data management software.

# INSTALLATION

## Set Module Address (WDA208 and WDA218)

Address settings are only required when multiple modules are connected to a VDR datalink. Set each module to a different address (refer to Table 2. Module Dip Switch Address Settings). If modules are connected to the datalink with the same address, a red LED lights on each module.

1. Open the module. (Remove four screws at bottom of box.)
2. Set switches as shown in Table 2.

## Install Input Module

**Note:** Models must be ordered from the factory as stand alone or to be connected to a VDR.

1. Measure and mark mounting location for input module mounting screw holes. Make sure there is clearance for the module and cables before drilling holes. Refer to the Figure 1 for layout and dimensions.
2. Drill four holes, clearance or tapped, for #8 mounting screws.
3. Place input module in position and secure with four screws.
4. Connect the cable(s) to the module. (Refer to Wiring section.)

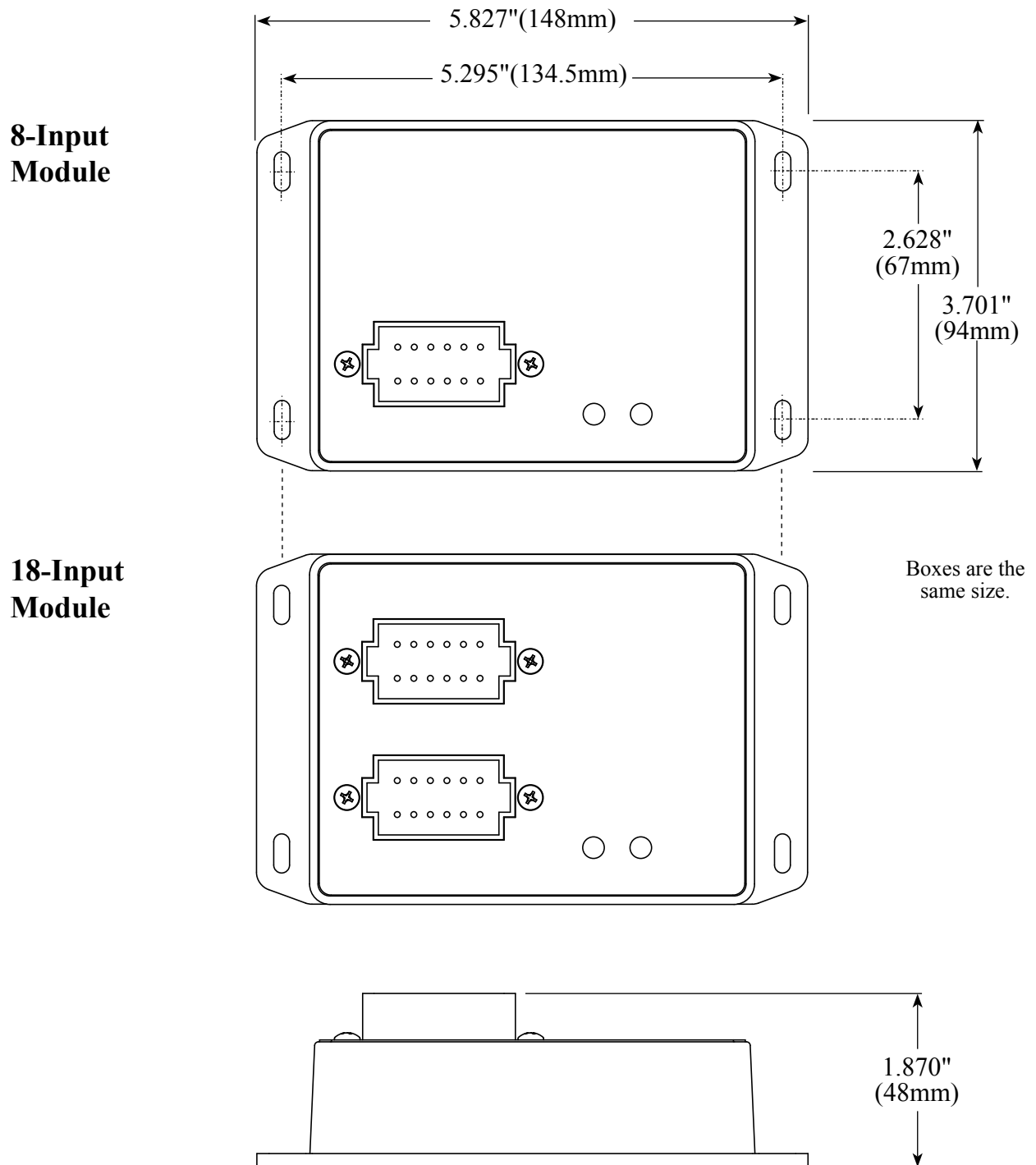
**Table 2. Module Dip Switch Address Settings**

WatchDog PRO WDA208 and WDA218 Modules Only

**Note:** These settings are only required when multiple modules are connected to a VDR datalink. If modules are connected to the datalink with the same address, a red LED will light up on each module.

Module Address	Switch Position	4	3	2	1
1		X	OFF	OFF	ON
2		X	OFF	ON	OFF
3		X	OFF	ON	ON
4		X	ON	OFF	OFF
5		X	ON	OFF	ON
6		X	ON	ON	OFF
7		X	ON	ON	ON
FRC Datalink Terminator On		ON	X	X	X
FRC Datalink Terminator Off		OFF	X	X	X

Mounting holes are  
clearance or tapped  
for #8 screws.



Remove the four screws on the bottom  
and open the box to access the dip switch  
(SW1) to change the address setting.

**Figure 1. Input Module Mounting Dimensions**

# WIRING

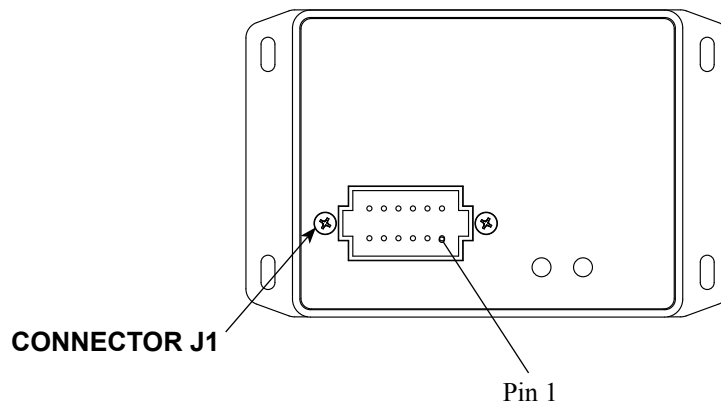
The following figures include the cables, component connector pin outs, and wiring information.

**Note:** When multiple WatchDog PRO modules are connected to a VDR datalink, they must be set for different addresses. (Refer to Table 2. Module Dip Switch Address Settings.)  
 If modules are connected to the datalink with the same address, a red LED will light up on each module.

## Cable Connectors

Gray 12-Pin Deutsch Plug #DT06-12S with W12S Wedge and Deutsch Socket #0462-20116141  
 Black 12-Pin Deutsch Plug #DT06-12SB with W12S Wedge and Deutsch Socket #0462-20116141

## 8-Input Module



WatchDog Stand Alone Unit CONNECTOR J1 12-Pin Connector/Cable	
Pin	Description
1	Ignition (+12/24 VDC)
2	GND
3	Output (Low, 500mA max)
4	N/C
5	Input (Active Low)
6	Input (Active Low)
7	Input (Active Low)
8	Input (Active Low)
9	Input (Active Low)
10	Input (Active Low)
11	Input (Active Low)
12	Input (Active Low)

WatchDog PRO Connected to FRC VDR CONNECTOR J1 12-Pin Connector/Cable	
Pin	Description
1	Supply Power (Battery +)
2	Supply Power (Battery -)
3	VDR FRC Datalink (-)
4	VDR FRC Datalink (+)
5	Input (Active Low)
6	Input (Active Low)
7	Input (Active Low)
8	Input (Active Low)
9	Input (Active Low)
10	Input (Active Low)
11	Input (Active Low)
12	Input (Active Low)

**Figure 2. Wiring 8-Input Module**

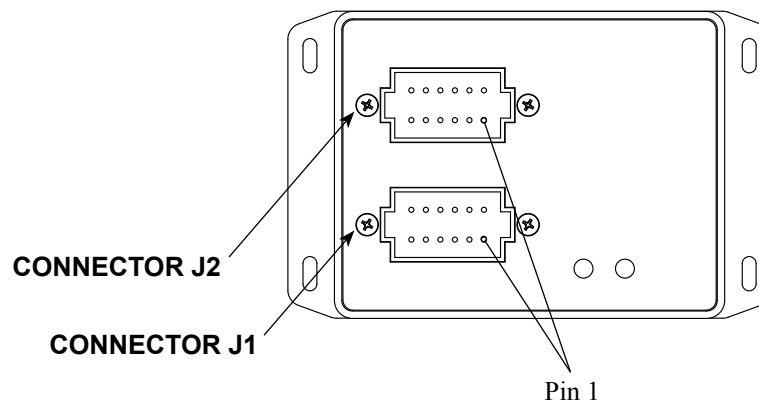


## 18-Input Module

### CONNECTOR J2

#### 12-Pin Connector/Cable

Pin	Description
1	Input (Active Low)
2	Input (Active Low)
3	Input (Active Low)
4	Input (Active Low)
5	Input (Active Low)
6	Input (Active Low)
7	Input (Active Low)
8	Input (Active Low)
9	Input (Active Low)
10	Input (Active Low)
11	Input (Active Low)
12	Input (Active Low)



### WatchDog Stand Alone Unit CONNECTOR J1

#### 12-Pin Connector/Cable

Pin	Description
1	Ignition (+12/24 VDC)
2	GND
3	Output (Low, 500mA max)
4	N/C
5	N/C
6	N/C
7	Input (Active Low)
8	Input (Active Low)
9	Input (Active Low)
10	Input (Active Low)
11	Input (Active Low)
12	Input (Active Low)

### WatchDog PRO Connected to FRC VDR CONNECTOR J1

#### 12-Pin Connector/Cable

Pin	Description
1	Supply Power (Battery +)
2	Supply Power (Battery -)
3	VDR FRC Datalink (-)
4	VDR FRC Datalink (+)
5	VDR FRC Datalink (-)
6	VDR FRC Datalink (+)
7	Input (Active Low)
8	Input (Active Low)
9	Input (Active Low)
10	Input (Active Low)
11	Input (Active Low)
12	Input (Active Low)

Figure 3. Wiring 18-Input Module



### **PERSONAL RESPONSIBILITY CODE**

The member companies of FEMSA that provide emergency response equipment and services want responders to know and understand the following:

1. Firefighting and Emergency Response are inherently dangerous activities requiring proper training in their hazards and the use of extreme caution at all times.
2. It is your responsibility to read and understand any user's instructions, including purpose and limitations, provided with any piece of equipment you may be called upon to use.
3. It is your responsibility to know that you have been properly trained in Firefighting and/or Emergency Response and in the use, precautions, and care of any equipment you may be called upon to use.
4. It is your responsibility to be in proper physical condition and to maintain the personal skill level required to operate any equipment you may be called upon to use.
5. It is your responsibility to know that your equipment is in operable condition and has been maintained in accordance with the manufacturer's instructions.
6. Failure to follow these guidelines may result in death, burns or other severe injury.



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