

PIR DC-SWITCH

DC Passive infra-red Detector

Model No.

PDS-10 V2.0

Owners Manual

Please read this manual before operating your DETECTOR



Read the user manual thoroughly before connecting the PDS10!

DESCRIPTION

The PDS10 (PDS) is a motion-activated switch for 12 V and 24 V systems. The switch uses a Passive Infrared (PIR) sensor. A 12 V or 24 V lamp or other load can be connected to the PDS' LOAD output with a continuous load of up to 10 amperes. The PDS is intended solely for indoor use. Examples of this include loading bays for trucks, busses and inside ships. In addition to the basic functionality, the PDS also has a number of safety features to prevent overvoltage, undervoltage and overcurrent.

INSTALLATION

Step	Action
1.	Connect the negative (-) pole of the load to the LOAD (-) output.
2.	Connect the positive (+) pole of the load to the LOAD (+) output.
3.	Connect the negative (-) pole of the battery to the INPUT. (-).
4.	Connect the positive (+) pole battery to the INPUT. (+).
5. (optional).	Connect the negative (-) pole of the battery to the PROG/SWITCH input with a switch.
6. (optional).	Connect the positive (+) pole of the battery to the STOP input.

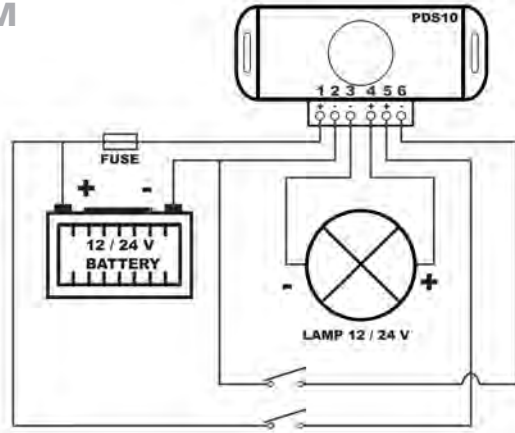
If the lamp switches on immediately after connecting it, the INPUT and LOAD connections have likely been reversed, or the positive and negative poles on the INPUT have been reversed.

Warnings:

- The product must only be connected by skilled fitters/mechanics who are aware of the regulations for working with high battery voltages.
- Using inferior connection material and/or wiring that is too thin may damage the product.
- A short circuit between the positive and negative terminals of the battery may severely damage your system.
- Do **not** open the product if it is connected to a power source.
- Always use fuses rated to a minimum of 10 A.

WIRING DIAGRAM

1. INPUT (+)
2. INPUT (-)
3. LOAD (-)
4. LOAD (+)
5. STOP (+)
6. PROG/SWITCH (-)



OPERATION

The PDS switches the LOAD output if it detects motion or if the PROG/SWITCH input is briefly (<1 sec) connected to the negative (-) pole of the battery. The LOAD will be switched off with a delay once the PDS no longer detects motion and the PROG/SWITCH input is no longer connected to the negative (-) pole of the battery. The user can set the duration of the delay from 10 seconds up to 30 minutes.

Overvoltage

If the input voltage exceeds 16 V (32 V for 24 V systems) for longer than 1 second, the PDS will switch off. The PDS will resume normal operation once the voltage drops below 15.8 V for longer than 5 seconds.

Undervoltage

If the input voltage drops below 10.5 V (21 V for 24 V systems) for longer than 5 seconds, the PDS will switch off. The PDS will resume normal operation once the voltage exceeds 12.6 V for longer than 5 seconds.

STOP input

The above will only work as described if the STOP input is not connected to the positive (+) terminal of the battery. If the STOP input is connected, the PDS will not switch on.

PROGRAMMING

The PDS' switch-off delay duration can be programmed by connecting the PROG/ SWITCH to the negative (-) pole of the battery. Once the connection has been established for ± 15 seconds, the LED and the PDS output will flash once.

The connection must then be broken.

This same connection must briefly be made again to select the correct configuration – the LED will light up as feedback (the output will also be briefly activated).

Configuration #1 has then been selected. Making the connection again will select configuration #2, etc.

If no connection has been made for ± 4 seconds, the LED (and the output) will indicate the selected configuration again. Example: Configuration #4 has been selected, the LED will flash 4 times.

CONFIGURATION TABLE

#	Switch-off delay
1	10 seconds
2*	1 minute
3	3 minutes
4	6 minutes
5	15 minutes
6	30 minutes

*) Default setting

ELECTRICAL DETAILS

Description	12 V	24 V
Auto 12 V / 24 V detection		
Output current (continuous)	10 A	
Output current (peak)	± 70 A (max. 170 μ s) @ 12 V	
Overload protection (shutdown)	± 14 A (after 5 sec)	
Power consumption (standby)	± 2 mA	
Undervoltage switch-off threshold	10.5 V	21.0 V
↳ Start-up voltage after undervoltage switch-off	12.6 V	25.2 V
Overvoltage switch-off threshold	16.0 V	32.0 V
↳ Start-up voltage after overvoltage switch-off	15.8 V	31.6 V

GENERAL TECHNICAL DETAILS

Description	Value
Programmable switching time	10 seconds to 30 minutes
Start-up time after overload	30 seconds
Undervoltage delay	60 seconds
Start-up delay	± 30 seconds
Detection angle	60° (horizontal) – 60° (vertical)
Detection distance (max)	5 meters
Connector type	screw
Dimensions	L 76.5 * W 48.5 * H 30.0 (mm)
Weight	30 g