



Reference Guide

AVT-PCS2

Dual Channel Power Current Sensor

OVERVIEW

Power Current Sensor 2-Channel (AVT-PCS2)

The AVT-PCS2 Power Current Sensor provides feedback from two independent 240V AC power outlets, and is designed to suit power sensing requirements for audio-visual, commercial, industrial or domestic applications.

The AVT-PCS2 has a total of four logic output ports providing two tri-state feedbacks:

- Ports 1-2 (STDBY 1 and ON 1) provide *off*, *standby* and *on* state indication for AC outlet "SENSE 1".
- Ports 3-4 (STDBY 2 and ON 2) provide identical indication for AC outlet "SENSE 2".

Two trim potentiometers per sensed channel, adjust the power sense thresholds, between off, standby and on to accommodate different connected devices.

SENSE 1 has been designed to cater for devices which present a high current draw, such as some projectors and display devices. SENSE 2 has been designed to cater for devices which present a lower current draw, such as DVD/CD changers and other source equipment. SENSE 2 is better suited for sensing small differences between states. The increased sensitivity is more applicable for low powered devices, especially if there is very little difference between its standby and on power consumption.

The AVT-PCS2 also supports two modes of operation for the logic outputs.

- "Logic LOW" presents a switch to GND (suitable for AMX™ systems).
- "Logic HIGH" presents a switch to +5 VDC.

Housed in a compact metal enclosure with a textured black powder coated finish, the AVT-PCS2 can be easily fastened to any flat surface using the keyhole-shaped slots in the flanges.

SETUP

Before connecting the unit to a master controller, calibrate the unit with the following procedure.

Calibration Procedure:

1. Plug the AVT-PCS2 into the AC outlet and connect the ports as they would be in normal operation. (*connecting the ports can change threshold levels slightly*)
2. Turn **Sense 1 Stby Adj** and **Sense 1 On Adj** *counter clockwise* until they stop.
3. Connect the device to be sensed to the **SENSE 1** AC outlet and ensure the unit is in *STANDBY* mode.
4. Slowly turn **Sense 1 Stby Adj** *clockwise* until the **Sense 1 Stby** LED illuminates.
5. Turn *ON* the sensed device.
6. Slowly turn **Sense 1 On Adj** *clockwise* until the **Sense 1 On** LED illuminates.
7. Put the device back into *STANDBY* mode.
8. Wait 2 minutes to ensure the PCS doesn't oscillate. If it does slightly turn the **Sense 1 Stby Adj** counter clockwise until it stops oscillating.
9. Repeat steps 2-8 for **Sense 2**

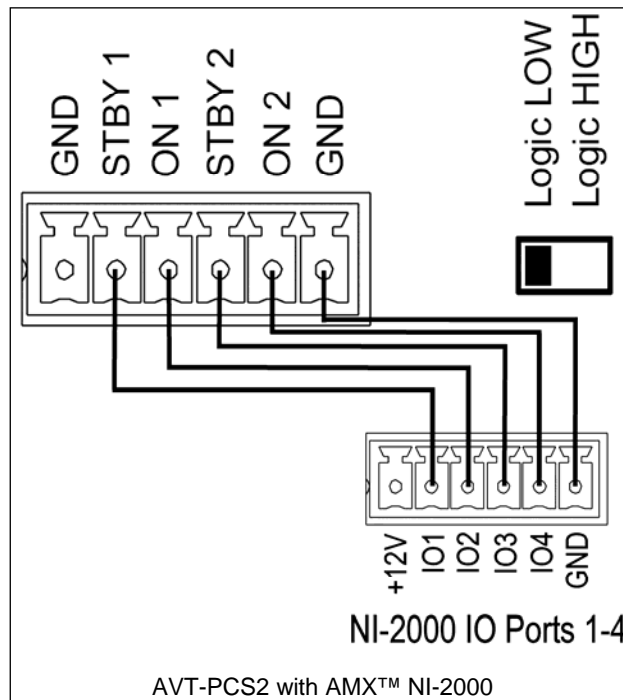
Notes

Some equipment, such as VCRs, will briefly draw a significant amount of current when first turned on even though they may start in standby mode. The system programmer must take this into account.

Filter delay will cause the current sensing to be slow (1-2 seconds) if a threshold is very close. Eg. STANDBY current is 50mA, ON current is 200mA but the STANDBY/ON threshold is set to 51mA. If the threshold is too close this may cause the PCS to oscillate between two modes. In equipment with a very small difference between STANDBY and ON mode current consumption, it is important to set the threshold as close to the centre of the STANDBY and ON current consumptions as possible. Eg. If STANDBY = 50mA and ON = 55mA Threshold should be 52.5mA. This may require some experimenting and very slight adjustments to the potentiometer to obtain.

NOTE: Most equipment will not require the slight adjustments described here.

Sample Wiring Diagram



NOTE: Please ensure the position of the Logic LOW / HIGH Switch is set to LOW for AMX™ systems.

SPECIFICATIONS

Power Requirement	240VAC 5W
Maximum Load	Channel 1: 10A (2400W) Channel 2: 6A (1440W)
Maximum Standby Load	Channel 1: 580mA (135W) Channel 2: 5A (1200W)
Minimum Differential Sense Load	Channel 1: 6mA (1.4W) Channel 2: 4mA (1W) ¹
Signal Out HI/LOW	5V 9mA Source / 0V 25mA Sink
¹ See product data sheet for <i>Min. Differential Sense Load</i> over entire range	

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