

2WPSM-001 - Pedestrian Station Monitor



The Ped Station Monitor (PSM) works in conjunction with Polara's 2 Wire Navigator system. It monitors the status of each Push Button Station (PBS) along with the status of the associated walk light. Its primary function is to detect a walk indication from the PBS in the absence of a walk signal for the corresponding ped phase. As long as no conflict is present, the PSM will energize a relay delivering power to the Central Control Unit (CCU). In the event of a conflict, the PSM will remove power from the relay which disconnects the power going to the CCU and powers down the Navigator system. The PSM will then be locked in a shutdown state indicating the source of the conflict. A manual reset is required to clear the condition.

The PSM's secondary function is to detect an unresponsive PBS. The PBS is programmed to send its walk code every 1.2 seconds during the walk cycle. This code is unique for each ID. After the PSM has received any particular walk code for 3 consecutive walk cycles, that code will be stored in non-volatile memory and will be expected from that point on. Once a code is expected, if it is not received for 5 consecutive walk cycles, the PSM will remove power from the CCU. There is a rear panel switch which allows the option of disabling this secondary shutdown feature if it is not desired.

Whenever there is a detected fault condition, a second relay contact will close which provides a contact closure available on the PSM as a signal to the traffic signal controller that an error condition has occurred. The two-wire cable from the PSM provides this connection.

This system requires rev. 1.33 or later in each PBS and rev. 1.33 or later in the CCU. All existing Navigator systems can be field upgraded with a PSM system and the required revisions.

The Ped Station Monitor is recommended for all intersections that are not wired per Polara's recommended methods and where a common wire is shared for two Navigator channels. Should a common wire be connected to PBS's on different channels and a break occurs in the common wire between the buttons and the traffic cabinet, a mixing of data communication can occur, possibly causing a PBS to indicate a walk in conflict with its associated ped sign. The Ped Station Monitor will prevent this false walk.

Physical Characteristics

Dimensions (approx.)	5.56"H x 1.57"W x 6.0"D
Enclosure Material	Anodized Aluminum
Power Input Cable	1-2 ft. 16 AWG with 3 conductor AC plug
Power Output Cable	1-2 ft. 16 AWG with 3 conductor AC socket
Front Connector:	15 pin D-Sub Female

Environmental Characteristics

Operating Temperature	-34°C to +74°C (-29°F to +165°F)
Storage Temperature	-45°C to +85°C (-49°F to +185°F)
Humidity	<95% non-condensing

Electrical Characteristics

AC Power Input	115 VAC Nominal, range 89-135
AC Power Output	30 A relay contact from AC input
Power Consumption	3W Max
Walk Inputs	80-160 V AC from cabinet load, input current 1mA typ.
Channel Inputs	22 VDC from Interconnect PCB (ABCD Chan. Outputs)