

Solar Photovoltaic Trainer

Educational Training Equipment for the 21st Century

Bulletin 234-7

H-PVIT-MAST

Mobile Solar Array with Solar Tracking Option

Description

The Hampden **Model H-PVIT-MAST** Mobile Solar Array with Solar Tracking System is an optical sensing system used to sense and track the sun's position throughout the day. The sensors feed information to the control box where it processes information on direct component of sunlight available, the diffuse amount of sunlight, the total amount of sunlight as well as the differential amount of sunlight on opposing sensors. Based on this information the controller seeks the optimal position for the solar panels. The tracker controller sends signals to a DC gear motor that provides the movement for the solar panels.

The Hampden **Model H-PVIT-MAST** comes with a solar controller that monitors the input current from the PV panels to charge the batteries. It also controls how much current is needed to keep the batteries charged on the system. The controller has a load output which provides power to the tracking system.

The Hampden **Models H-PVIT-MAST** Mobile Solar Array w/ Solar Tracking Option and **H-PVIT-MA** Mobile Solar Array Option are options of Hampden **Model H-PVIT-1** Photovoltaic Installers Trainer and are dependant upon it. For more information on the **H-PVIT-1** see Bulletin 234-6.



Hampden **Model H-PVIT-MAST** Mobile Solar Array with Solar Tracking Option
Dimensions: 114"L x 32"W x 72"H
Shipping Weight: 620 lbs.

Specifications

Solar Modules

Solar modules are a reliable, virtually maintenance-free power supply designed to convert sunlight into electricity at the highest possible efficiency.

Specifications:

Power	55W
Voltage	12V
Current	2.26A
Inter-Connection Cables	(4) 2 male, 2 female

Sealed Gel Cell Batteries (2)

Features:

- Completely maintenance free. Sealed construction eliminates periodic watering, corrosive acid fumes and spills.
- Electrolyte will not stratify, no equalization charging required. Allows faster recharge.
- Increases durability and deep cycle ability for heavy demand applications.
- Less than 2% per month stand loss means little deterioration during transport and storage.
- Tank formation ensures voltage matching between cells.

Specifications:

Voltage	12
20 Hr Rate (Ah)	73.6
Weight (lb)	54
Interconnect Cables	(4) with hardware
Main Power Cables	(2) with hardware

All Hampden units are available for operation at any voltage or frequency

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