

PSM-2 SENSOR POWER SUPPLY MODULE

10, 15, 24VDC / 5VDC FIELD POWER, SENSOR EXCITATION MODULE

Features...

- Field sensor power... current loops and / or voltage excitation source
- Powered from system batteries or external power
- Installs into ModuLogger, Mini and HyperLogger data logging systems
- Control input for ON/OFF output control via software
- Rugged design to take abusive field conditions
- Field programmable output voltages..5, 10, 15, and 24Vdc (custom voltages are available!)
- Low-Power design for optimum battery life

OVERVIEW....

The PSM-2 Power Supply Module is a rugged module that provides excitation power for sensors used with the ModuLogger, Mini and HyperLogger portable and remote site data logging and alarming systems. (See separate data sheets for detailed specifications on the ModuLogger, HyperLogger, and Mini)

The PSM-2 can supply 100mA of current... sufficient to power up to five 4-20mA loops. Alternatively it can be used as a voltage source for sensor excitation. A 5Vdc output is standard and one additional output output is available which can be jumper programmed in the field for 10, 15 or 24Vdc output (custom output voltages are available... contact Logic Beach).

Four standard package versions of the PSM are available for use with the HyperLogger, ModuLogger and Mini portable data logging systems. The unit is offered as a stand-alone module, or incorporated into loggers.

The PSM draws its power from the standard data logger D-cells or an external supply. For connection to the logger D-cells, a pigtail with mating connector projects from the PSM. This pigtail can then be used to connect to the mating connector provided on the logger battery pack. Alternatively, external power can be supplied via terminal strip connections on the PSM.

The PSM outputs are cycled ON/OFF by a software controlled low-level input from the associated logger... providing power only as required for sampling... minimizing power consumption and maximizing battery life.

An LED indicator lights when the outputs are ON providing visual feedback of operation during installation.

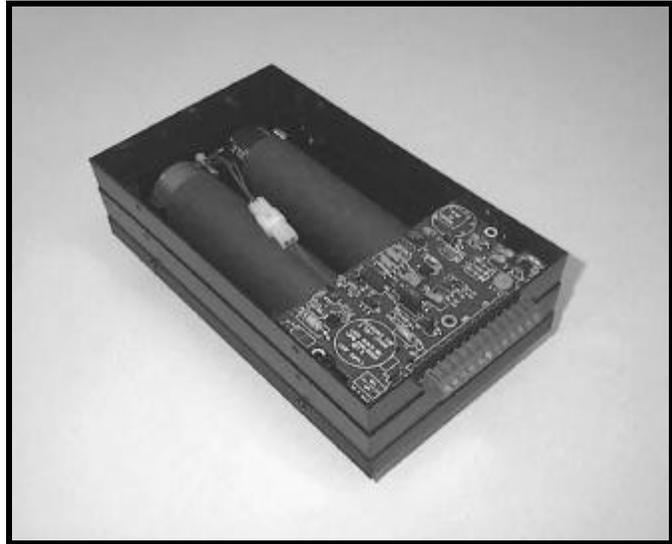


Fig 1: MLBATT-PSM2 (integrated with ModuLogger battery pack)

CONFIGURATIONS....

The PSM-2 is offered in four standard configurations as specified by the part number. Please note that special output voltages can be provided for a minimal additional charge.

PSM-2: (see Figure 2) A metal case housed stand-alone module typically used for door mounted installation into the HyperLogger system. The module is equipped with mounting tabs containing threaded inserts for surface mounting. A pluggable terminal strip provides for easy connection / disconnection of the control, external power, and output voltages.

MLPSM-2: A PSM mounted into the standard ModuLogger stacking frame for installation into the ModuLogger or Mini data logging systems stack. A pluggable terminal strip provides for easy connection / disconnection of the control, external power, and output voltages. Typically this model would be specified if sensor power is desired but the ML-BATT (six D-cell battery pack) module is not.

MLBATT-PSM2: (see figure 1) A PSM is incorporated into the standard ModuLogger / Mini ML-BATT module (six D-cell plug-on battery pack). A terminal strip provides for easy connection / disconnection of the control, external power, and output voltages.

PSM2-PP: A stand-alone portable power supply including 6 D-Cells and the PSM in a small (4.8 x 8.8 x 2.9) package. This supply can be used with other data acquisition, control and annunciator equipment providing power for sensor and loop excitation as well as instrument power.



HYPERWARE™ IMPLEMENTATION....

The PSM outputs can be cycled ON/OFF with a 5Vdc control signal such as one of the Digital Outputs provided standard in the ModuLogger, Mini and HyperLogger data logging systems.

Sensor excitation is easily programmed into the data logger via the existing HyperNet™ graphic programming system implemented within the HyperWare™ software.

HyperWare™ is the standard Windows based software application used in conjunction with the Logic Beach portable and remote site data logging instruments. HyperWare provides serial communication with the loggers, graphic programming of the logger, real-time trending, data plotting and data post-processing (see separate data sheet for details on HyperWare™).

The Warm-Up icon within HyperNet allows for a User specified excitation power supply turn-on time prior to the actual sampling of the resulting sensor output.



Fig 2: PSM-2; Stand-alone Power Supply Module

SYSTEM SPECS...

Terminal Strip: 12 position strip for connection of external power input, control signal input, and the programmable and 5 Vdc outputs and ground.

Pigtail Connection: a pair of pigtails is provided for direct interface to the HyperLogger, ModuLogger and Mini battery pack. In the ModuLogger and Mini implementation, the PSM is wired in series between the battery pack (ML-BATT) and the CPU module using the two provided pigtails and mating polarized connectors.

Output Indication: Output "ON" LED indicator

External Power Input: 8 - 32Vdc input

Control Signal input:

Field Pgmble for Hi Input = ON or Lo Input = ON

LO = 0 to 0.5Vdc ; HI = 3 to 20Vdc

Control current = 400uA at 5 Vdc (On)

Output #1: Programmable Vdc* Output :

Ranges: 10, 15, or 24Vdc (jumper pgmble)

Accuracy: +/- 300 mV (special trim available)

Current: 100mA** (short circuit protected)

Output #2: Fixed 5 Vdc Output:

Accuracy: +/- 150mV

Current: 40mA (short circuit protected)

Parasitic Current (Outputs Off): 300uA typical

Circuit Protection:

Continuous short circuit protection on outputs. Reverse polarity protection on inputs

Operating Temperature Range: -40C to 70C



Fig 3: PSM2-PP Portable Power Supply with Batteries

PRICING...

PSM-2	\$160
MLPSM-2	\$142
MLBATT-PSM2	\$210
PSM2-PP	\$224

* Tighter tolerance and custom voltage outputs from 7 to 25Vdc available. Contact Logic Beach for details.

** Current output capability varies as a function of programmed output voltages due to thermal concerns.

