

FEATURES

- Programmable module using PCTWIN software
- Up to 224 programmable Charge, Discharge or Pause steps
- Measures mA, Voltage, Current, time & more
- Programmable parameters & termination options
- 64K non-volatile memory
- 2 timers and 4 programmable counters
- 2 programmable LED indicator outputs
- Programmable beeper for audio indication
- 12 bit A/D measurement, 10 bit D/A regulation
- Vector input control for manual reset or program redirection
- Charge using current and/or voltage regulation
- Discharge using constant current load
- Wide selection of step termination options
- Special routing features allows for conditional loops, IF and GOTO statements

APPLICATIONS

- Battery chargers
- Dischargers & cyclers
- Load modules
- Special battery test equipment
- Conditioning and commissioning
- Capacity Measurement
- Implementing special charge or test algorithms
- Battery charge monitoring
- Programmable regulated power supply
- Automatic Battery Go / No Go tester
- Warranty validation
- Quality measurement
- Life cycle testing
- Identify under performing batteries
- Select batteries for critical applications
- Recondition battery packs
- Validate manufacturer's specifications

PROGRAMMING REQUIREMENTS

The module must be programmed to perform a particular function. This PCT Open Board version requires the use of the external PCT programmer model PCTCOM. The programmer provides the interface between the computer running PCTWIN and this module.

Once programmed, the programmer PCTCOM can be disconnected and the module will be ready to operate independently from the computer.

The PCT can be reprogrammed any number of times as required by reconnecting the programmer and downloading a new bp3 program routine.



(RoHS)

DESCRIPTION

The PCT OBM is designed to be incorporated into a completed product. This module allows users, manufacturers, OEM companies, suppliers & dealers to assemble a unique battery charger, tester, cycler, analyzer or whatever is required for any particular battery application.

Save the time and cost of developing your own hardware solution by programming and loading your own routine into this module. Think of this PCT module as a battery charger, discharger or tester with a built in operating system that you can program to your own requirements.

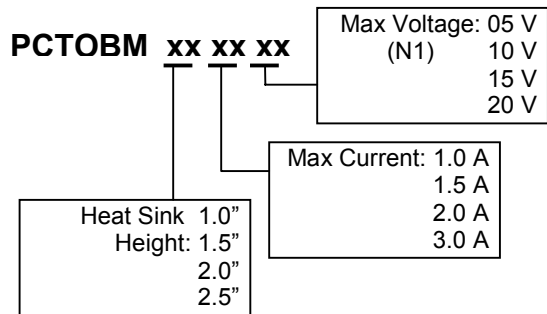
Replace a lost or obsolete battery charger with this universal module.

Create a special production, test or servicing product that can be programmed and reprogrammed as requirements change.

Since this is a module only version you will need to provide your own power supply, enclosure, controls, connectors and cooling provisions.

See www.lamantia.ca more information regarding these modules and the PCTWIN software application.

ORDERING INFORMATION



Ex: PCTOBM251020 = 1A, 20V module with a 2.5" H/S

Recommended Power Supply:
 5 V PCT -> Use 9 – 12 VDC
 10 V PCT -> Use 12 – 15 VDC
 15 V PCT -> Use 18 – 24 VDC
 20 V PCT -> Use 24 VDC

(N1) Maximum battery terminal voltage during maximum charge current = Power Supply Voltage – 5 V.
 Exceeding this limit will result in reduced charge current.

WARRANTY 30 days

This module is intended to be one component of a finished product. As such LaMantia Products has no control over the installation, design or programming of the final product. For this reason we can only offer a 30 day warranty for customers to complete their acceptance testing of the supplied modules.

CONNECTOR DETAILS

CN1 – Battery + / - connection
 – Molex 26-48-1025 or solder
 – Mates with Molex housing 09-50-3021

CN2 – DC Power Supply Input
 – Molex 26-48-1025 or solder
 – Mates with Molex housing 09-50-3021

CN3 – Logic Input / Output port
 Y – Current limited output for programmable Yellow LED
 G – Current limited output for programmable Green LED
 R – Current limited output for Red power indicator LED
 V – Vector input for manual reset or program redirection
 T – Optional temperature probe input
 Gnd – Ground for logic I/O & fan output

CN4 – 5 Pin DIN program port
 – Used to connect to PCTCOM programmer

SPECIFICATIONS

Maximum input voltage 24V
 Regulation Type Linear
 Maximum power dissipation . . . 20W (with 2.5" H/S) (N2)
 Resolution A/D – 12 bit, D/A – 10 bit
 Accuracy (V, I) ± 0.5% full scale
 Dimensions with 2.5" H/S 2.5" w x 4.5" d x 3.0" h

THERMAL CONSIDERATIONS

Since the PCT uses linear regulation for both charge and discharge, there will be heat generated in both cases. The heat is transferred to the integrated onboard heat sink. The heat produced (Watts) is calculated as:

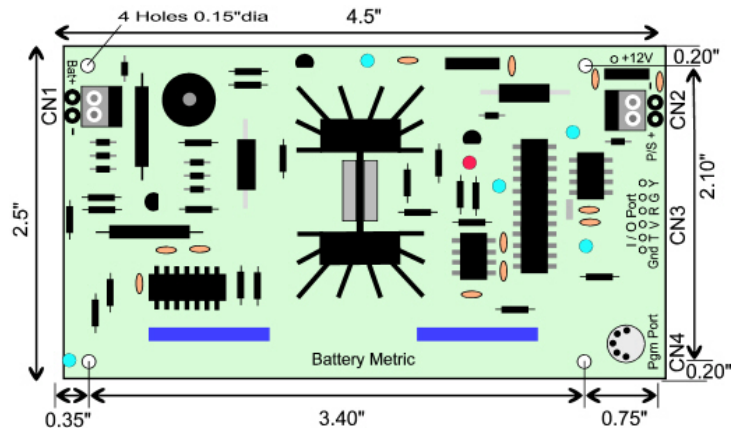
$$\text{Charge Heat} = (V_{ps} - V_{bat}) \times I_{crg}$$

$$\text{Discharge Heat} = V_{bat} \times I_{dcr}$$

Where: V_{ps} = Power supply input voltage (VDC)
 V_{bat} = Battery terminal voltage at any time
 I_{crg} = Charge current (A)
 I_{dcr} = Discharge current (A)

(N2) - Care must be taken to ensure that there is adequate air movement to allow for sufficient heat dissipation. This may include using a ventilated enclosure and/or using a fan. The actual amount of heat generated will depend on the actual battery voltage and currents specified. Unless your design has a height restriction, the 2.5" heat sink is recommended for best performance. A regulated 12VDC output is available for fan use. Maximum fan current determined by P/S input voltage and size of H/S placed on U5 regulator

OUTLINE



Available from:

LaMantia Products Ltd.
 1663 Jubilee Dr.
 London, Ontario, Canada, N6G 5K4
 TEL: 800-673-3585 or 519-472-5566
 FAX: 519-472-1702
 EMAIL: info@lamantia.ca
www.lamantia.ca