INNOTECH®

DS 12.05
October 2013

Models:
MPCII: Mid Points Controller, Version 5 Logging With No Display

MPCII
Mid Points Controller

Overview
The Innotech MPCII is a state-of-the-art processing system that has the capability of controlling various types of commercial systems. Although the MPCII is flexible and can be adapted to a variety of applications, it is primarily designed to control large scale heating, ventilation and air conditioning (HVAC) systems.

The MPCII is operationally tailored to the customer's specific application requirements by GEN2 software applications and several types of hardware modules. Many types of software programs are used to configure the hardware to the customer's intended application and to assist in plant-monitoring, analysis, data exchange and troubleshooting.

Because of its flexibility, the MPCII can be connected in a number of different configurations, based on the system's operational requirements. In the simplest configuration, a single controller acts stand-alone for the system.

More complex installations use multiple digital controllers sharing data between themselves and / or a computer. In these applications, communication between the digital controllers is facilitated by a Global Points system and communication with the computer is by a standard RS485 network.

Features
- Powerful digital processing.
- Definable Analogue Input types.
- Opto-Isolated Digital Inputs.
- Analogue Outputs selectable for 0-10 V DC or heat valve (PWM) control using solid state relays.
- LED indication of Digital Output status.
- 1 second scan rate.
- 3 x RS485 network ports: network, global & expansion module comms.
- 1 x RS232 comm port.
- Program resides in non-volatile flash RAM.
- Data logging, up to 1.2 million time stamped readings.
- Real Time Clock battery backed for approximately 5 years

Data Logging
The MPCII is equipped with powerful Data Logging ability. Data Logging can be assigned to hardware and software points and up to 1.2 million time stamped readings are stored on the MPCII. All data is stored in non volatile flash RAM. When the memory is full, new readings replace the oldest.

The MPCII automatically logs User Access and loss or resumption of its power supply via GENII Viewport, Softport and Supervisor.

Applications
The MPCII is designed to be mounted inside a control panel and offers an array of inputs and outputs enabling it to monitor and control all types of plant and equipment.

The creation of control strategies is made simple by the use of the GEN2Config configuration utility, a PC resident, Windows®-based software package. This utility with its powerful Graphical User Interface, allows the user to create an entire strategy in block-diagram form, before downloading it to the MPCII where it is permanently stored in non volatile flash RAM.

User access to the MPCII is via a PC on either the RS232 comm port, RS485 Net Comms or remotely via a modem. From a PC, the user can gain access to manipulate and interrogate the controller using tools from the GEN2 family of software products.

Communications
RS232
RJ45 connection for modem and local PC access.

RS485 Global Comms and Net Comms
5 way plug in connector for global data transfer between devices on the network and for network interrogation from a central PC.

RS485 REM Comms
4 way plug in connector for data transfer between the MPCII and Remote Expansion Modules.

Approved
The MPCII conforms to :
- EN 61326:2013 for CE Marking and RCM Labelling
- Title 47 CFR, Part 15 Class A for FCC Marking
- UL listed to UL916, File Number E242628

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Specifications

Power Supply

- 24VAC ± 10% @ 50/60 Hz
- Power consumption: 7VA
- 24VDC ± 10%
- Power consumption: 4W

The operating voltage must meet the requirements of Safety Extra Low Voltage (SELV) to EN60730. The transformer used must be a Class 2 safety transformer in compliance with EN60742 and be designed for 100% duty. It must also be sized and fused in compliance with local safety regulations.

Inputs

Digital Inputs

- 4 x Opto Isolated Inputs
  24VAC/12VDC ± 15% Trigger signal

Analogue Inputs

- 4 x Definable Inputs
  The Analogue Inputs require an Analogue Input Signal Conditioner (AISC) to determine the Input type. The AISC's must be ordered separately.

Outputs

Digital Outputs

- 8 x Normally Open relays
  2 amps @ 24VAC
  (To be supplied by a Class 2 Transformer)

Analogue Outputs

- 4 x Selectable Outputs
  0-10VDC or PWM for solid state relay control
  Load rating per output: 5mA (2kOhms)

Battery

Contains a Lithium Type Battery, Dispose of Properly.
(In accordance with local regulations)

- Type CR-2032 Lithium Battery
- Nominal voltage 3 Volts
- Shelf life – 5 years, dependent on ambient temperature

Caution: Risk of explosion if battery is replaced by an incorrect type.

Temperature Ratings

- Storage 0 to 50°C non-condensing
- Operating 0 to 40°C non-condensing

Enclosure/Mounting

The MPCII is housed in a case suitable for Switchboard Mounting. The housing is moulded from flame retardant plastics recognised by UL as UL 94-V0.

Colour: Grey
Dimensions: 188(w) x 163(h) x 65(d)

Remote Expansion Modules (REMs)

The MPCII has the facility for I/O expansion using Remote Expansion Modules (REMs). Each REM provides an array of points which can be connected to a sub network up to 500 metres in length. The fifteen REMs can be made up of any mix of the available types with one exception - the MP REM. The MP REM can only be addressed between 1 and 8 and only 8 MP REMS can be used.

MPCII

Remote Expansion Modules

Remote Module	Description
GENII AI REM	Analogue Input Module
GENII AO REM	Analogue Output Module
GENII DI REM	Dry Contact Digital Input Module
GENII DO REM	Digital Output Module
GENII IDI REM	Opto Isolated Digital Input Module
GENII PI REM	Pulse Input Module
GENII CS REM	Control Station Module
GENII CSAH REM	Control Station After Hours Module
GENII CSFCAH REM	Control Station with 3 Speed Fan
GENII MZS REM	Multizone Station Module
GENII MZSAH REM	Multizone After Hours Station Module
GENII MP050 REM	Multipoint Module with 5 Digital Outputs
GENII MP140 REM	Multipoint Module with 1 AO / 4 DO
GENII MP230 REM	Multipoint Module with 2 AO / 3 DO
GENII MP320 REM	Multipoint Module with 3 AO / 2 DO
GENII MP405 REM	Multipoint Module with 5 Digital Outputs
GENII MP414 REM	Multipoint Module with 1 AO / 4 DO
GENII MP423 REM	Multipoint Module with 2 AO / 3 DO
GENII MP432 REM	Multipoint Module with 3 AO / 2 DO
PI REM	Pulse Input Module with Set Point and After Hours REM
SENR1	Wireless Temperature Sensor REM
SENR2	Wireless Temperature Sensor with Set Point REM
SENR5	Wireless Temperature Sensor with After Hours REM
SENR6	Wireless Temperature Sensor REM

AO Analogue Output
DO Digital Output

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Associated Software

Alert is a utility that reports on alarms generated by MPCII. A GENII MPI (Modem/Printer Interface) is required to capture the alarms and forward the details directly, or via modem, to a PC running this utility. Once an alarm has been received, Alert can immediately notify the PC user through its pop-up and sound facilities, or at a later time through its logging facilities.

AutoStart is an automatic program launching utility specifically designed for use with Gen2Xtract. It allows any number of Windows batch programs to be automatically started at regular time intervals. It is aimed at users who wish to regularly extract log data from MPCII.

EasyBill is an automatic charging utility program for use with Innotech's MPCII. Using EasyBill in conjunction with MPCII, a plant administrator is able to analyse plant usage and automatically calculate charges for that usage.

EtherMate is a specialised configuration tool for Ethernet enabled Innotech devices. It provides the functionality to set the RS485 baud rate, serial format and TCP/IP settings. Although the device is setup using the Ethernet interface it is possible to configure using the serial port from Terminal function.

Gen2Config is the configuration tool for Innotech's MPCII. It allows you to internally configure an MPCII by using a simple point-and-click approach on a PC running Windows.

Gen2Mon is a monitoring and debugging utility designed to help with commissioning and trouble-shooting an MPCII. It displays the configuration which resides on an MPCII and allows the user to inspect or trend the value at any of the points in the configuration while the controller is running.

Gen2Simulator is a Windows-based software program that simulates an Innotech MPCII. The Virtual MPCII can be powered on, configured and interrogated in the same way as a physical MPCII . Configurations can be downloaded and checked without any hardware installation. You can even simulate a MPCII network in order to test global points processing. Gen2Simulator can be used in conjunction with any product from the Gen2 Software range.

Gen2Xtract is the data log extraction utility for Innotech's MPCII. It allows extraction of all or part of the history log data residing on an MPCII into a specified data format.

iComm is a communications server used by application software to communicate with Innotech digital controllers. It supports multiple concurrent applications communicating to multiple device networks and serves as the communications hub of any HMI-integrated device network.

InnoGraph is Innotech's data log graphing and analysis tool. It has been designed to specifically cater for the data log graphing capabilities of the MPCII, and it has the flexibility to display data log graphing information from other sources. InnoGraph allows multiple graphs to be displayed in multiple windows simultaneously. Complete with a host of configurable display options, statistical analysis of data points, analogue and digital value support, active cursors, colour printing capability, and comprehensive zooming and panning features, InnoGraph is your complete graphing package.

Magellan is an event-driven, object oriented real-time Supervisory Control and Data Acquisition package. It provides a simple, intuitive mechanism to effortlessly design either trivial or sophisticated supervisory or control programs using a drag-and-drop approach.

NetScan is a network scanning utility designed to help with commissioning & trouble-shooting of a Genesis or Maxim network. It displays real-time information about data on the Global Points network. Current and previous point values are displayed along with the point name and corresponding controller address. History data can be automatically logged to a text file for later viewing.

Softport allows a user to access the HMI (Human Machine Interface) of a Genesis or Maxim network from a PC connected to the controller network. It can be used to search for controllers present on the network, then log onto any one of the available devices.

Supervisor is a dynamic monitoring utility for the MPCII. It provides all the functionality that is available from the MPCII display panel with greater ease-of-use and flexibility. It is aimed at those users who require some feedback or control of the MPCII system, but have no desire to be immersed in the technical details of an MPCII configuration. Supervisor is a user-oriented product: no specialised knowledge of the MPCII is required for its use. It allows the user to view the values of points of interest on an MPCII, change its schedule information, or modify values accessible to the user.

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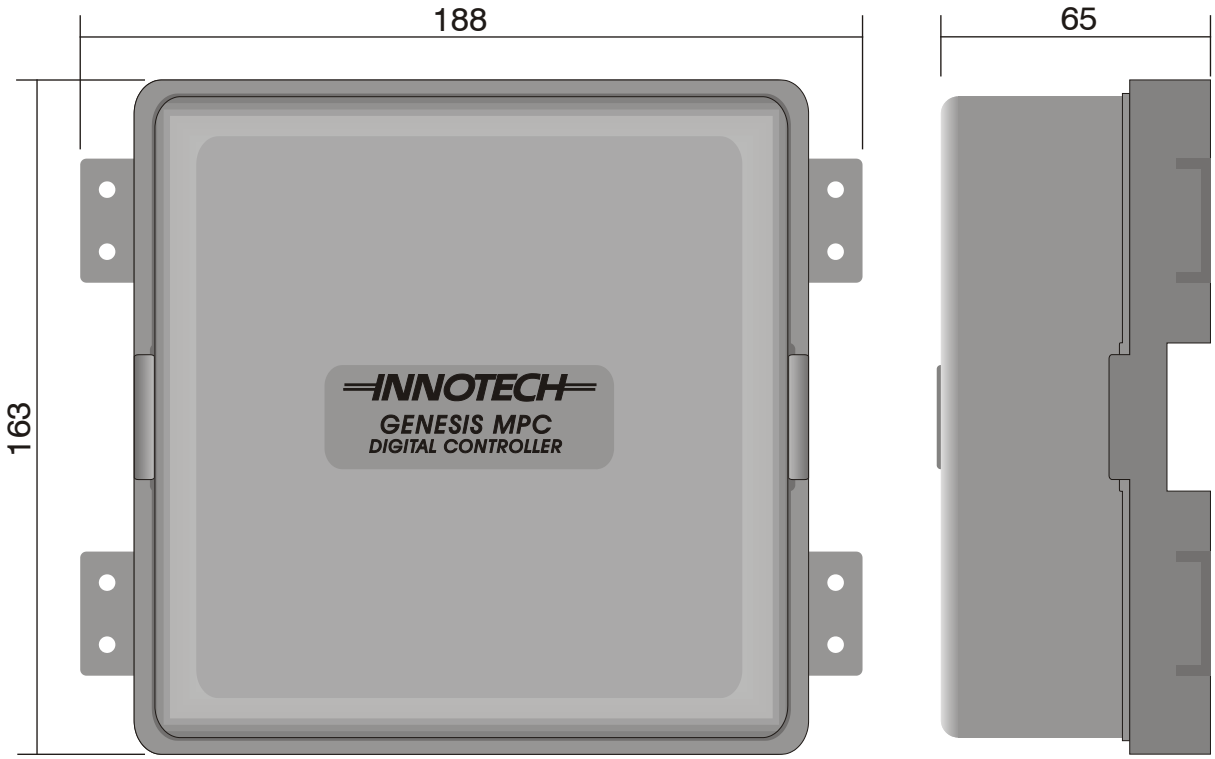
Installation and Wiring

Refer to the Installation Guide and the Innotech Network Cabling Manual DS99.04.

MPCII

Model Number Designations

Model	Logging	Display
MPCII	L	N



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