



GLC 2k

Hot Runner Temperature Control Systems

Global Hot Runner Control Solutions



Gammaflux®



Hot Runner Controls with Unmatched Performance and Value



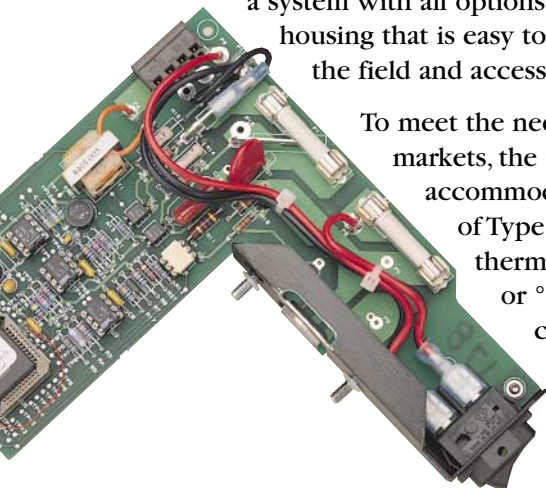
An Advanced Hot Runner Temperature Controller for Global Markets

The new GAMMAFLUX GLC 2K Hot Runner Temperature Controller system is a compact, industry hardened and attractively styled controller based upon single zone integrity using microprocessor based temperature control modules. This new product is affordably priced yet features the same Gammaflux quality you have come to expect over the years.

The modular enclosure packaging of the GLC 2K allows for a very small "footprint" of 19" width by 8" height by 15" depth (483mm X 203mm X 381mm). Each compact enclosure can accommodate up to 12 microprocessor controller modules, each rated at 15 amperes. Each control module uses the Gammaflux proprietary PID control algorithm. This algorithm is time tested and proven on hot runner systems around the world. Expansion up to three enclosures by "linking" the base modular package together provides a maximum of 36 zones per system.

Customer input to the design process has yielded a system with all options "built-in" and a system housing that is easy to install, configure in the field and access for routine service.

To meet the needs of international markets, the GLC 2K accommodates field selection of Type J or Type K thermocouples, °F or °C temperature configuration, and either delta or wye style of main input power.



This standardized product package has also been designed to meet the growing trend for quick delivery and in field flexibility on a global basis. The GLC 2K represents a product that is as close to an "off-the-shelf" control system as is possible - but unlike other off-the-shelf systems, it can be easily customized to meet each molder's unique requirements.

Designed for Ease of Use - Worldwide

Each 12 zone GLC 2K controller includes a unique operator's interface featuring Icons to identify the control functions, process values and alarm status, in a simple and easy to understand format. These Icons allow for the application of the GLC 2K on a global

basis. All hot runner set up and mold performance and monitoring information is accomplished by using the operators interface panel located on the front of the enclosure. GLC 2K users can even program in their temperature deviation alarm band



to meet their specific process or material requirements. Control zone identification can be created in whatever format the user wants (alpha, numeric, etc.)

Eight mold status alarms for each zone are located on the operators panel interface for quick and easy identification of any mold process disturbance. The alarm status center continuously monitors all thermocouples, heater power and the mold temperatures. There is no scrolling required to access any of the alarm functions.



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Also included on the operators panel interface is a 12 zone “Quick Glance” LED array showing the performance of each zone. If all indicator segments in this section of the operator’s panel are green, it is a quick and easy way for the operator to know immediately that the controller is operating within performance specifications. Any red segment is an indication that there is an upset to the process.

System Supports Diagnostic Software

The GLC 2K supports digital communication via either an RS-232 or RS-485 interface. The product has even been developed to work with Euromap 17 communications protocol and to utilize the GammaVision supervisory software package. GammaVision provides data gathering and reporting, as well as industry-standard Gammaflux software packages such as Field Calibrator™ and a special version of Mold Doctor for applications diagnostics.



GLC 2K Features:

- Compact and modular controller enclosures capable of up to 36 zones of control
- Single zone integrity
- “Quick Glance” zone status feature
- User defined zone identification
- Each zone rated for up to 15 Amps
- GAMMAFLUX proprietary PID control algorithm with automatic tuning range selection
- Adaptive Tuning on start-up and additional Selective Ranges for wide range of load response
- Automatic and Manual operating modes
- Thermocouple Open Automatic Standby
- Open, Shorted and Reversed Thermocouple alarms
- Deviation high and low Temperature alarms
- Programmable Deviation Band for Temperature alarms
- Open and Shorted heater alarms
- Open fuse alarm
- °F or °C display
- User selectable Type J or Type K thermocouples
- Programmable Automatic Slaved Power Up
- Remote Communications via RS-232 or RS-485
- Supports Euromap 17 communications protocol
- Menus-4 internal with additional available with the GammaVision software package
- Delta or Wye input power options
- Alarm Relay Output on an HBE-6 connector
- Internal Cold Junction Compensation
- Automatic Soft Start
- User defined zone Groups
- User defined Trim Function
- User defined Boost Function
- Remote and Local Auto-Standby Function
- Remote Control Inhibit
- Special Mold Doctor software package for applications diagnostics
- In field Temperature Calibration with GammaVision

GLC 2K Specifications

Performance Specifications:

Calibration Accuracy	1 °F/ .5 °C
Control Accuracy	± 1 °F/ ± .5 °C
Power Response Time	8.5 milliseconds @ 60 Hz
Control algorithm	Proprietary PIDD with automatic tuning range selection
Degrees F or C	Field Selectable
Type J or K T/C	Field Selectable
Operating Range	0-932 °F/0-500 °C
Output Voltage	0-265 VAC
Line Voltage Maximum	265 Volts
Line Voltage Minimum	160 Volts
Frequency	47-53 Hz, 57-63Hz
Ambient Temperature Range	0-45 °C/ 32-131 °F
Humidity Range	10-95% non condensing

Input Specifications:

Thermocouple	Type J or K user selectable and applied system wide (grounded T/C's only)
Cold Junction Compensation	Internal to enclosure

Load Output Specifications:

Voltage	Line Voltage range is 160 Volts to 265 Volts
Current	15 Amperes per zone maximum/ minimum is .25 Amperes
Single Triac	One side of load switched
Phased Angle Control	
• Short Circuit protection and alarm	• Open Circuit detection and alarm
• Open Fuse detection and alarm	• Adaptive Bake out
Both sides of the Line are fused in Delta Systems	
Both sides of the line switched with On/Off switch in Delta Systems	

Operator Interface Specifications:

Flat membrane interface with Rocker power on/off switch	
Icon based function/key identification	
Fault indicator lights for:	
• T/C Open, Reverse and Short	• Shorted Heater
• Open Fuse and Open Heater	• Deviation High and Low Alarm Indication

Auxiliary/Remote Interface Specifications:

Single interface configurable as RS-232 or RS-485 via jumpers
Remote Standby Input
Remote Control Inhibit Input from Injection Molding Machine
External Alarm Contact

Product Design Standards:

CE Approved
Designed to UL and CSA



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