

Mold Control Systems, Inc.

GITC-15 Operation Manual



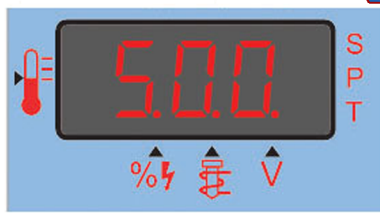
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Controller Layout

Set-Point Temperature Display



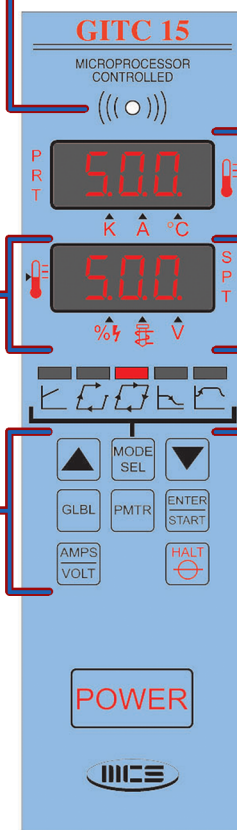
- When decimal is lit, manual percentage power is engaged
- When decimal is lit, output power is on
- When decimal is lit, voltage is displayed

Process Temperature Display

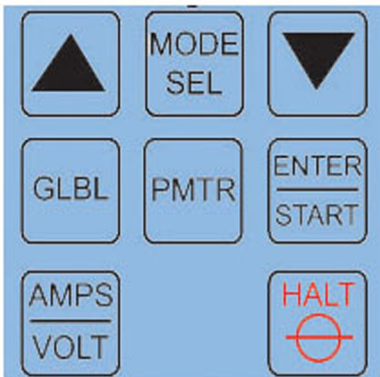


- When decimal is lit, K type T/C is selected
- When decimal is lit, amperage is displayed
- When decimal is lit, temp. is displayed in Celcius degrees

Piezo Alarm

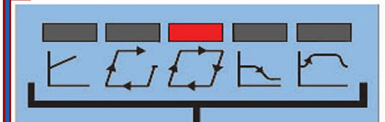


User Input Keypad



- Up/down keys
- Mode Select key
- Global key
- Parameter key
- Amps/Volt key
- Enter/Start key
- Halt key

Mode Indicator LED's






- Soft Start Indicator
- Manual/Open Loop Indicator
- Auto/Closed Loop Indicator
- Standby Mode Indicator
- Boost Mode Indicator



Basic Operation Procedures

The GITC-15 is ready to run from factory settings.






1. Turn power on by pressing the  key.
2. The controller will start in SOFT START mode. To change the set-point press the   keys to the desired temperature indicated in the SPT display. The controller will save changes automatically after 3 seconds.

*Note: After the SOFT START procedure has completed, the controller will go into AUTO mode unless the controller was in MANUAL mode previously. The SOFT START time is configurable in PARAMETER (P20)

Mode Change Procedure




There are 4 running modes available: Manual (open loop), Auto (closed loop), Stby (standby), and Bst (boost) modes. A **solid lit LED** signifies the current mode the controller is in.




To change the mode:

1. Press the  key. A **blinking LED** will indicate a selectable mode. Press the  key until the blinking LED is over the desired mode.
2. Press the  key.
3. If the mode state was entered by mistake, press the  or  keys to return to normal operation mode.

Standby and Boost Modes

The controllers have 2 possible configurations for standby and boost modes: MANUAL or AUTO.

Standby: In Auto Standby Mode, the controller will reduce temperature to a specified set-point that is adjustable in parameter (P19). In Manual Standby Mode, the controller reduces percentage power output to a specified percentage set in parameter (P18). The controller will stay in STANDBY Mode until you exit the mode by pressing  then the  or  key.

Boost: In Auto Boost Mode, the temperature set point will be increased by the set-point that is in parameter (P16). Once the Boost Temperature has been obtained, it will stay at this temperature until the elapsed amount of time in parameter (P15). In Manual Boost Mode, the controller will raise the percentage power output to a specified percentage adjustable in parameter (P17). The controller will stay in this mode until the set time in parameter (P15) has elapsed. To exit this mode, press the  then the  or  key.



Communications

















The MFCP line of mainframes enable the GITC-15 to have communication features which include grouping and global functions.

Grouping

Controllers can be assigned into 4 possible groups (numbered 1 - 4). The setting is configurable in parameter setting (P01). An example use of this feature is to designate controllers for Nozzles (IE: Group 1), Manifold (IE: Group 2), and Sprue (IE: Group 3).

Global Functions

Global functions enable users to apply settings to several or all controllers from a single controller.

Global Function	Description	Key Press Sequence
• Global Power-on	To turn all controllers ON or OFF (Controllers manually turned off will not respond):	  
• Global Start	To start all controllers from the HALT state:	   
• Global Halt	To put all controllers into the HALT state:	  
• Global Set-point	To send the controller's set-point to all controllers within the group:	  
• Global Parameter	To send the controller's parameters to all controllers within the group:	  

Global Modes

Global Modes enable users to set modes for all controllers within the group.

To set the mode for controllers within a group, choose the mode, then press  >  > .

Extended Functions

The MFSB-1 System Communication Interface Module extends the functionality further. Added functions include: Even Rise, Thermocouple Slaving, External Alarm Output, Remote Standby Input, and *Live Swap*TM Zone Retrievable Settings.

Even Rise: Controllers reach set-point evenly based on the “slowest” heater.

Thermocouple Slaving: In the event of Thermocouple Break, the controller uses the closest matching controller within its group to slave from. (Only at Startup)

SPECIAL NOTE: The COMMUNICATIONS BACKPLANE and COMMUNICATION INTERFACE MODULES are updated systems. Please do not attempt to use with older backplane and interface module boards.

Compatible boards will have PCB2007-002-R01 for the INTERFACE MODULE and PCB2007-003-R01 for the BACKPLANE printed on the circuit boards.










Parameters

Changing Parameters:

*Note: Most configurations will not require changes to the parameters. The controller is set to be “plug-and-run” by default under most conditions.

Parameter Change Procedure:

1. Press the  key, and the controller will enter its parameter state. Cycle through parameters by pressing the  key until the desired parameter is reached.
2. Press the  or  keys to cycle through the options/values for the parameter selected. If another parameter needs to be changed, press the  key until the next desired option is selected and make adjustments.
3. When finished, press the  key. Changes are automatically stored to memory.
4. If the parameter state was entered mistakenly, press the  key without making any changes to return to the normal operating mode.



PARAMETER LISTINGS

#	PARAMETERS:	Defaults:
P01	Group - (1 - 4)	1
P02	Global Key Enable - (YES or NO)	YES
P03	Even Temperature Rise - (YES or NO)	YES
P04	Thermocouple Slaving - (YES or NO)	YES
P05	Auto Power On - (YES or NO)	YES
P06	Control Type - Fuzzy Logic Control Phase or Burst Mode (PH or BT)	PH
P07	Load Current - (1 - 21) Amps	16
P08	Temperature Format - Celsius or Fahrenheit (°C or °F)	F
P09	Thermocouple Type - Type J or Type K (J or K)	J
P10	Over-temperature Alarm - (8° - 30° Fahrenheit); (6° - 17° Celsius)	30
P11	Under-temperature Alarm - (5° - 30° Fahrenheit); (5° - 17° Celsius)	30
P12	Thermocouple Pinched - (1 - 250) seconds or (000 = disabled)	60
P13	Open TRIAC or Heater - (1 - 240) seconds or (000 = disabled)	60
P14	APO Enable (YES or NO)	YES
P15	Boost Time Setting - (5 - 999) seconds	30
P16	Boost Temperature - (5° - 250° Fahrenheit); (5° - 120° Celsius)	75
P17	Manual Boost Power - (5 - 100%)	25%
P18	Manual Standby Power - (5 - 100%)	10%
P19	Standby Temperature - (50° - 350° Fahrenheit); (50° - 175° Celsius)	250
P20	Soft Start Time - (0 - 20) minutes	5
P21	Soft Start Lock - (YES or NO)	YES
P22	Audible Alarm - (YES or NO)	YES
P23	Siren Enable LOCAL (per module) - (YES or NO)	YES
P24	Siren Enable GLOBAL - (YES or NO)	YES
P25	Frequency (Hertz) - DISPLAY ONLY	
P26	Address - DISPLAY ONLY	
P27	Keypad Lock - (YES or NO)	NO

Parameter defaults are set in factory.

Notes:

