TempMaster™ M1 PLUS series

Mold Masters®

ADVANCED, COMPACT TEMPERATURE CONTROL FOR MEDIUM SIZED MOLDS

The M1 platform combines popular features with advanced APS Technology for precision control of up to 48 zones. Powerful performance in a compact unit. Optimize the performance of any hot runner system and unlock your operations full potential with TempMaster.

KEY FEATURES

LARGE, INTUITIVE 7" TOUCH SCREEN COLOR HMI
- Easily monitor and control multiple zones at once.
- Simple to set-up and operate.
- Data displayed in real time.

ADVANCED FEATURES & SETTINGS
- Excellent control and precision.
- Achieve greater process stability.
- Mold parts with higher quality and reduce scrap.
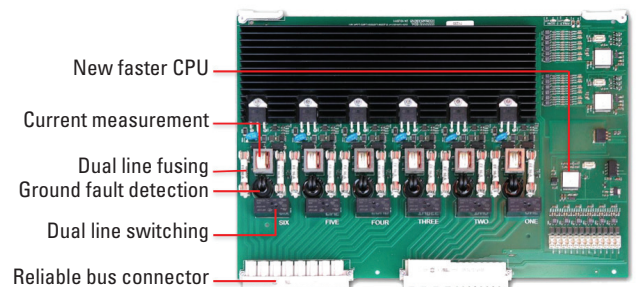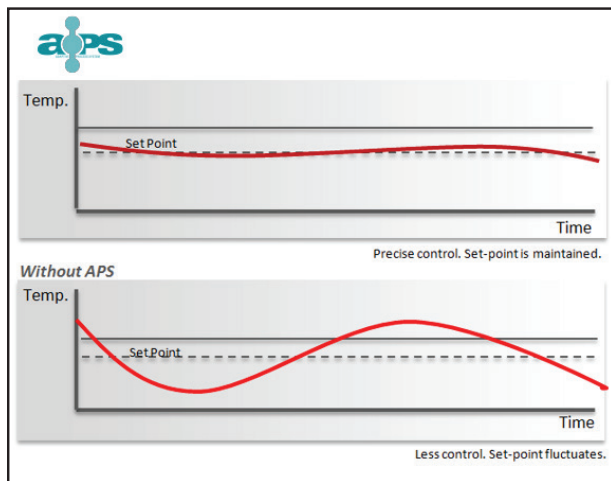
COMPACT CABINET DIMENSIONS
- Preserves valuable space.
- Up to 32% smaller dimensions than competitive systems of the same class.
- Can be placed almost anywhere.

HIGH CAPACITY MODULAR CONTROL CARD
- Reduces number of cards required by up to 60%.
- On-board heater and thermocouple fuses.
- Eliminates excess wiring and improves accessibility.
- Simple to access and maintain.

IMM COMMUNICATION
- Centralized alarm interlock.
- Enhanced process control.
- Prevents damage to equipment.

aPS

Temp.

Set Point

Time

Precise control. Set-point is maintained.

Without APS

Temp.

Set Point

Time

Less control. Set-point fluctuates.

New faster CPU
Current measurement
Dual line fusing
Ground fault detection
Dual line switching
Reliable bus connector

6-Zone, 15A/Zone Control Card

CAPABILITIES

OPERATIONAL FEATURES

Auto/Manual Control
Zone "on", "off" and "locked off"
Menu "Auto Save"
Tool Store (100 Limit)
USB Port
Zone Naming
Purge Wizard (Color Change)
Sequence Start
Sequence Shutdown
Sequenced Power Up (Manual)
Tool Data Export/Archive
Multi-Level Password (2)
Time and Date Change
Network Printing (Ethernet IP)
Touch Screen Calibration
On-Line Help

MONITORING/REPORTING

Power Consumption Monitoring
Instant Data Reporting
Data Report Archive
Print Screen in jpg, png, pdf Format
Save to USB Drive
2-D Historical Graph
Spreadsheet View
Alarm History

PROTECTION FEATURES

On-Board Load Fuses
On-Board T/C Fuses
Soft Start
Continuous Ground Fault Detection
Current Measurement
Overload Protection
Automatic Tool Diagnostics
Plastic Leak Detection (Manual)
LED Fault Indicators (2)
I/O Card (Optional)

CONTROL FEATURES

APS (Adaptive Process System)
Phase Angle, Burst Firing
Low Mass High Watt Nozzle Control
Infield Calibration Mode
Thermocouple Slave (Auto/Manual)
Auto Standby/Alarm Output
T/C Auto/Man Kick-Off
Wet Heater Bakeout
T/C Filtering
Delta/Wye Convertable Option
Circuit Breaker Sized to Load
Interface Autopilot Control
Set Point Limit
Set Power Limit
Auto Load % Output
Standby Timer
Uniform Start-Up
Sequential Melt-Start
Even Heat (Controlled Heating)
Even Cool (Controlled Cooling)

ALARMS

Audible Alarm (Optional)
Alarm Beacon (Optional)
Zone Alarm Configure
(+) High Temperature
(-) Low Temperature
T/C Open (Remembered % Output)
T/C Reversed
Open Fuse
Open Heater
Shorted Heater/Wet
Ground Fault Detection
Plastic Leak Detection

Easy access to control cards

SPECIFICATIONS

User Interface	Full Color LCD Touch Screen
Display Size	7" (178 mm)
Control Algorithm	APS (Adaptive Process System)
Power Control	Phase Angle and Burst Firing Modes (Time Proportional, Zero-Crossing)
Display Resolution	0.1 (°C or °F)
Power Response Time	8.3 ms at 60 Hz
Temperature Scale	°C or °F (Software Selectable)
Thermocouple	J or K-Type (Software Selectable)
Operating Range	0 - 472°C (32 - 882°F)
Output Voltage (Max)	264 VAC
Supply Voltage	200/240V Delta or 380/440V 3Ø Star
Frequency	50 - 60 Hz Automatic Switching
Ambient Temperature Range	5 - 45 °C (41 - 113 °F)
Humidity Range	Up to 95% Non-Condensing
Ground Fault Detection	40mA per Zone
Alarm Output	Closing Contact Relay 5A, 230V (Max)
T/C Connector	HAN 24e
Power Connector	HAN 24e
Input Protection	63mA Nano Fuses on Both T/C Legs
Overload Protection	Semi-conductor Fuses on Both Heater Legs
Heater Fuses	15A @ 220V Super Fast Blow Type (FF)
Control Modes	Closed Loop (Auto), Open Loop (Manual), Standby, Boost, Slave
Ports	USB (Remote USB Optional)
LED Indicators	Scan, Fault (Code Displayed on Zone)
Communications	SPI, Modbus
Languages	English, French, German, Spanish, Chinese, Japanese, Czech, Italian, Hungarian

CABINET SIZE	# OF CARDS (MAX)	# OF ZONES (MAX)	DIMENSIONS WxDxH cm(in)
XS	2	12	35x51x22 (14x20x9)
S	4	24	35x51x28 (14x20x11)
M	8	48	35x51x50 (14x20x20)

INCLUDES
- 4.8 m (15') Cable Set.
- Quick Start Guide.

OPTIONS
- Alarm Beacon.
- Portable Stand.
- I/O Card (Included as standard in EU).

CE FC