HRCslot

Hotrunner controller module

Microprocessor based controller with integrated power output

Start-up function

Heating current monitor

Self-tuning function

Communication via RS 485

- **Compact, robust plug-in modules**
  - **with 15 A power output**
  - **with fuses**
  - **and protective cut-out relay**
- **Heating current measurement**
- **Fault monitoring**
- **Triac monitoring**
- **Positioner mode on sensor break**
- **Start-up function**
- **Boost function**
- **Standby function**
- **Communication port**

APPLICATIONS

- **Hot-runner control**
- **General temperature control**

DESCRIPTION

General

The HRCslot system is based on single-loop controllers for smaller hot-runner applications. Each plug-in module is fitted with comprehensive diagnostic options, thus ensuring optimum protection of your injection molds.
Moreover, the flexible plug-in approach – whereby all the necessary components for a control loop are integrated in the module – also permits fast response in case of a fault. Without any further diagnosis, the affected control channel can be replaced within seconds. Consequently, production disturbances are extremely short.

In addition, PMA's HRCslot controllers are fitted with a communication port as standard. This permits centralized control via a master controller or an operating terminal.

Also the synchronization signals required for a machine interface are provided as standard.

Construction

The controllers are compact plug-in modules in the Eurocard format. The slim front of only 8 HP ensures compact overall system dimensions.

Operation is by means of just a few clearly structured buttons in the front panel.
For example, two display lines provide a clear indication of process value/setpoint or process value/heating current.
Indicator LEDs show the controller's operating status.

Ordering data

Description	*Order no.*	*Features*
HRCslot	HRCS-101-00001	Plug-in controller module, 15 A output
Backplane	HRCS-102-00001	Backplane extension for routing the interface signals
Backplane Plus	HRCS-103-00001	Backplane including relays for machine interface

TECHNICAL DATA

MECHANICALS

19-inch plug-in module
Front: 3 HU, 8 HP
Eurocard 160 x 100 mm
Connected via socket in the backplane

MEASUREMENT INPUTS

Thermocouples
Types: L, J, K
Accuracy:
±0,1% of measuring range ±1LSD
CJC error ±1℃

Heating current
0..15A
Accuracy:
±2%

POWER OUTPUT

Triac output
120...240 VAC / 15A @ 25 ℃
Operation: zero-crossing mode

DIGITAL INPUTS

On/Off, Boost, Standby
galvanically isolated

DIGITAL OUTPUTS

Alarm 1, Alarm 2, "Screw enable" signal
galvanically isolated

Relay contacts on backplane
120...240 VAC, 2A resistive load

INTERFACE

RS 485 interface
galvanically isolated

POWER SUPPLY

Supply voltage: 120...240 VAC
galvanically isolated
Current drawn: max. 15 A

ENVIRONMENTAL CONDITIONS

Permissible temperatures
For specified accuracy: 0...55 ℃
Storage & transport: -20...80 ℃

Relative humidity: max. 95 %, no condensation

INFLUENCING FACTORS

Power supply
No effect. No loss of configuration data in case of a power supply failure (Flash EEPROM memory).

Vibration test
sinusoidal oscillations in accordance with
IEC 60068-2-6 and EN 60068-2-6
Test Fc: 10…150 Hz, 1 g

Shock test
to IEC 60068-2-27 and EN 60068-2-27
Test Ea: 15 g for 10 ms, half sinewave

ELECTROMAGNETIC COMPATIBILITY

Immunity
In accordance with EN 61 000-6-2, industrial environment

Emission
In accordance with EN 61 000-6-2, industrial environment

GENERAL

Weight
approx. 0,4 kg

Electrical safety
Complies with EN 61 010-1 and IEC UL3121
Over-voltage category II
Contamination degree 2
Protection class II

CE marking
Fulfills the EU Directives for electro-magnetic compatibility and low voltage.

UL / cUL
Applied for

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