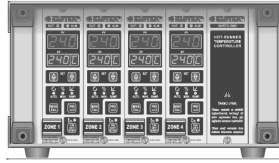
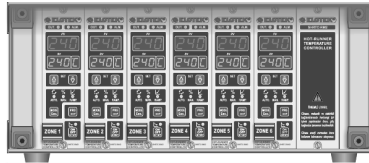


User manual

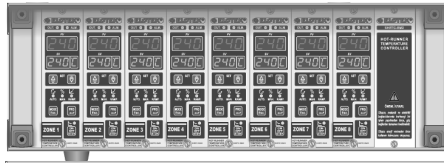
Hot runner control systems / RM2 product family



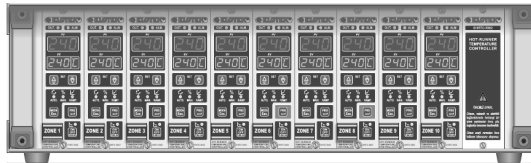
RM2 - 4 zones



RM2 - 6 zones



RM2 - 8 zones



RM2 - 10 zones



RM2 - 12 zones

Read the safety section before energising the device.

Installation / Operation / Settings / Connections

Contents

Select a heading to open the corresponding page.

03 / Safe operation

04 / Technical specifications

05 / Front panel

06 / Keys and setpoint

07 / Operating modes

08 / Programming

09 / Sensor and measurement settings

10 / Auto-Tune

11 / Alarms and warnings

12 / 4 / 6-zone connections

14 / 8 / 10 / 12-zone connections

17 / H1 and H2 connection appendix

19 / Quick operating guide

20 / Technical support

How to use this manual

Read the safety information and specifications first. For daily operation, see the keys and operating-mode cards. For wiring, consult the page for your device model.

Safe operation

Electrical connections

Have a qualified electrician connect the device and mould. Read this manual before making connections or energising the device.

Earth connection

Connect earth at the mould connectors. Check your model's thermocouple, power and alarm pins separately.

Plug and connector compatibility

If replacing the mains plug, use one with the same specifications and a suitable rating. Match connectors by model and pin number, not by appearance.

Operating conditions

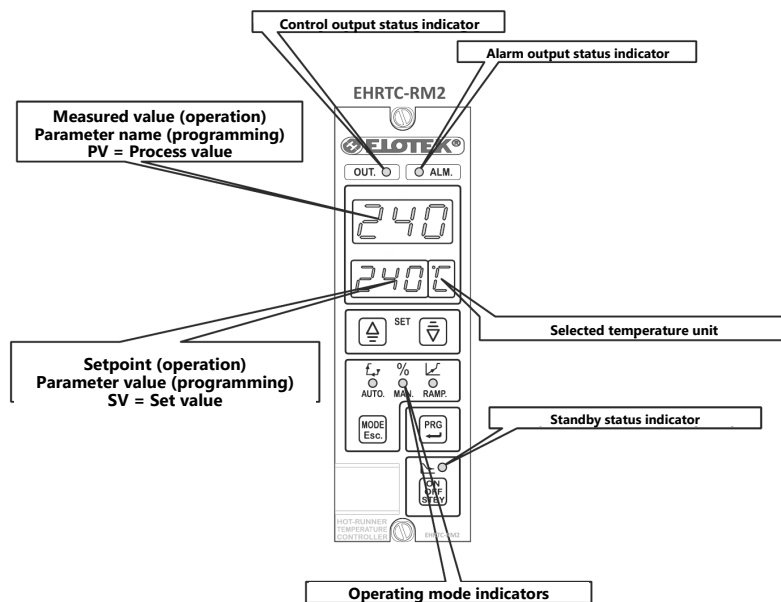
The user is responsible for damage and accidents caused by failure to follow the specified connection and operating conditions. Check the environmental limits in the specifications.

Technical specifications

Specification	Value
Supply	230 Vac, 50/60 Hz, $\pm 10\%$; 3 phases + neutral + earth
Maximum output	14.5 A / 3200 W, approximately 220 Vac
Control method	PID and proportional control
Control range	0-537 °C / 32-998 °F
Sensor	J (Fe-Const) / K (NiCr-Ni); selectable in programming
Input line resistance	Max. 100 ohms; suitable compensation cable
Accuracy	$\pm 0.5\%$ of full scale; at 25 °C ambient
PV / SV display	PV: 3 digits, 13 mm SV: 4 digits, 7/10 mm 7-segment LED
Control output	SSR (Solid State Relay), 40 A
RM2 load protection	16 A type B circuit breaker (W-Otomat)
RM2 alarm output	1 relay, 250 Vac / 3 A, N.O.
Environment / enclosure	0 to +50 °C Powder-coated sheet metal and aluminium

Front panel overview

Display and status symbols



PV / SV

PV shows the measured temperature during operation and the parameter name in programming.
SV shows the setpoint during operation and the selected parameter value in programming.

Status indicators

OUT.: control output. ALM.: alarm output. AUTO. / MAN. / RAMP.: operating mode.
STBY: standby.

Keys and setpoint

PRG / ENTER

Hold for 3 seconds to enter programming. In the menu, opens a setting and confirms the selected value.

Up / down

Increases / decreases the setpoint during operation. In programming, changes values, makes selections and navigates the menu.

MODE / Esc.

Selects the operating mode. In programming, returns to the operating display or exits to the parent menu without saving changes.

ON / OFF / STBY

Hold for 3 seconds: switches the output on / off. Press and release: enters standby.

Automatic setpoint storage

Adjust the target temperature with up / down. The value is stored 2 seconds after the last press; SV flashes once to confirm storage.

Operating modes

AUTO — PID control

Uses PID control to maintain the set temperature. The thermocouple must be correctly connected to the device input for this mode.

MAN — Proportional operation

Select for a TC fault or operation without a TC. 0% fully disables the output; 100% is full power. Cycle time: 0.5 seconds. Intermediate values set the power ratio.

RAMP — Drying / Soft-Start

Prevents sudden thermal shock in damp heaters after prolonged disuse. After the manufacturer-defined period, the device switches to AUTO / PID operation.

Selection with MODE

Each press of MODE selects a different mode. Automatic switching to MAN on sensor failure depends on the programmed setting.

STBY — Standby

Uses the standby setpoint during temporary production pauses. Press STBY to enter standby.

Programming

01 / Enter the menu

Hold PRG for 3 seconds; release when PAr appears on PV. Press PRG to open a setting.

02 / Change and save

While SV flashes, adjust with up / down. Confirm with PRG. Use down to move through the menu. Exit with MODE / Esc.

Code	Function
S.L.h	Upper limit of the maximum adjustable setpoint.
Stb	Standby temperature.
AL.L	Low deviation alarm. Disabled when set to 0.
AL.h	High deviation alarm. Disabled when set to 0.
iGn	Number of low-deviation alarms ignored at initial start-up. Maximum 5. Select OFF below 1 to disable.

Sensor and measurement settings

oFo — Sensor fault switchover

Select automatic or user-controlled switching to proportional operation for a TC open or short circuit. Aut: automatic. MAn: user switches manually.

Behaviour with Aut selected

If a TC fault occurs during operation, the output power calculated in the PID parameters is applied to help maintain a constant temperature.

unt — Temperature unit

Select °C or °F. Related values are converted automatically when the unit changes.

inP — Thermocouple type

Select J (Fe-Const) or K (NiCr-Ni) to match the connected sensor.

oFS — OFFSET

Added to the measured value. Adjustable from -50 to +50 °C; normal value 0 °C. Used for incorrect readings or probe distance from the measurement point.

Auto-Tune

Starting conditions

Set SET first. The measured temperature must be at least 55 °C below the setpoint. If needed, disable the output with ON/OFF before entering programming; SV shows OFF.

01 / YES and PRG

In tun, select YES on the lower display and start with PRG / ENTER. The device begins calculating PID parameters.

02 / First and second stages

After the first calculation (tn1 / tun 1), the second stage (tn2 / tun 2) starts. Normal operation resumes automatically when the setpoint is reached.

Purpose of the second stage

Learns the output power needed for proportional operation during a TC fault. Duration varies with system operating conditions.

Cancel and exit

Use MODE / Esc. to cancel or exit programming.

Alarms and warnings

oPE — Open

Appears on PV if the TC is open-circuit or the upper temperature measurement limit is exceeded.

rEV — Reverse

Appears on PV if the thermocouple polarity is reversed.

Internal buzzer - AUTO / RAMP

Hold ON/OFF for approximately 3 seconds to disable the output, then enable it again. This procedure is for devices with an internal alarm buzzer.

Internal buzzer - MAN

Press and release ON/OFF briefly to silence the alarm.

Check the deviation settings

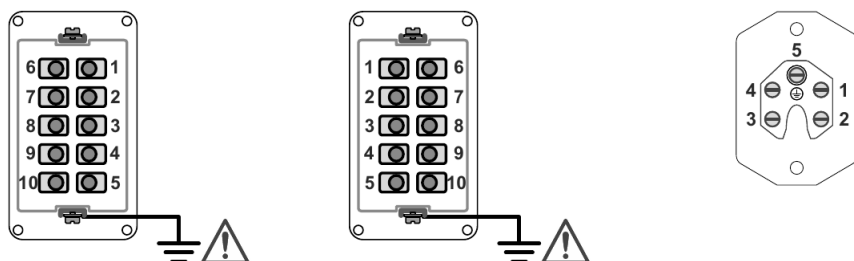
ALL and AL.h are set independently. Deviation settings too close to the setpoint may trigger alarms during temperature fluctuations.

4-zone connections

Thermocouple and power output connectors have different functions. Do not mix up the pins.

Zone	TC +	TC -	Power output
1	1	6	1 / 6
2	2	7	2 / 7
3	3	8	3 / 8
4	4	9	4 / 9

Physical connectors: 4-zone model



Alarm, SSR and earth

Alarm: pins 1 / 4; N.O. relay, max. 3 A / 250 Vac.

SSR in the diagram: max. 16 A, approximately 220 Vac.

Connect earth at the mould connectors.

6-zone connections

Thermocouple and power output connectors have different functions. Do not mix up the pins.

Zone	TC +	TC -	Power output
1	1	9	1 / 9
2	2	10	2 / 10
3	3	11	3 / 11
4	4	12	4 / 12
5	5	13	5 / 13
6	6	14	6 / 14

Alarm, SSR and earth

Alarm: pins 1 / 4; N.O. relay, max. 3 A / 250 Vac.

SSR in the diagram: max. 16 A, approximately 220 Vac.

Connect earth at the mould connectors.

8-zone connections

Thermocouple and power output connectors have different functions. Do not mix up the pins.

Zone	TC +	TC -	Power output
1	1	9	1 / 9
2	2	10	2 / 10
3	3	11	3 / 11
4	4	12	4 / 12
5	5	13	5 / 13
6	6	14	6 / 14
7	7	15	7 / 15
8	8	16	8 / 16

Alarm, SSR and earth

Alarm: pins 1 / 4; N.O. relay, max. 3 A / 250 Vac.

SSR in the diagram: max. 16 A, approximately 220 Vac.

Connect earth at the mould connectors.

10-zone connections

Thermocouple and power output connectors have different functions. Do not mix up the pins.

Zone	TC +	TC -	Power output
1	1	13	1 / 13
2	2	14	2 / 14
3	3	15	3 / 15
4	4	16	4 / 16
5	5	17	5 / 17
6	6	18	6 / 18
7	7	19	7 / 19
8	8	20	8 / 20
9	9	21	9 / 21
10	10	22	10 / 22

Alarm, SSR and earth

Alarm: pins 1 / 4; N.O. relay, max. 3 A / 250 Vac.

SSR in the diagram: max. 16 A, approximately 220 Vac.

Connect earth at the mould connectors.

12-zone connections

Thermocouple and power output connectors have different functions. Do not mix up the pins.

Zone	TC +	TC -	Power output
1	1	13	1 / 13
2	2	14	2 / 14
3	3	15	3 / 15
4	4	16	4 / 16
5	5	17	5 / 17
6	6	18	6 / 18
7	7	19	7 / 19
8	8	20	8 / 20
9	9	21	9 / 21
10	10	22	10 / 22
11	11	23	11 / 23
12	12	24	12 / 24

Alarm, SSR and earth

Alarm: pins 1 / 4; N.O. relay, max. 3 A / 250 Vac.

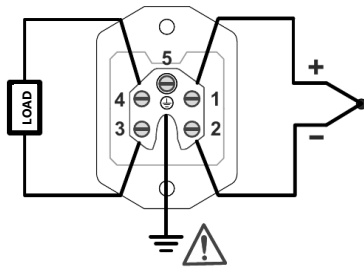
SSR in the diagram: max. 16 A, approximately 220 Vac.

Connect earth at the mould connectors.

H1 connection appendix

Do not use this page in place of the RM2 pin table.

EHRTC H1 connection



1 TC input +
2 TC input -

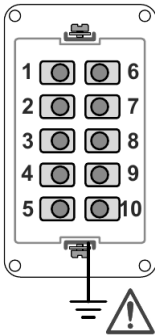
3 / 4 Power output
SSR relay; max. 10 A, ~220 Vac

Specification	Value
TC + / TC -	1 / 2
Power output	3 / 4
SSR limit in the diagram	Max. 10 A, approximately 220 Vac
Supply	230 Vac, 50/60 Hz, $\pm 10\%$; 1 phase + neutral + earth
Load protection	6 x 30 mm ceramic fuse, 16 A

H2 connection appendix

Do not use this page in place of the RM2 pin table.

EHRTC H2 connection



- ZONE1

{

1 TC input +

6 TC input -
- ZONE2

{

2 TC input +

7 TC input -
- ZONE1

{

4 / 9 Power output

SSR relay; max. 16 A, ~220 Vac
- ZONE2

{

5 / 10 Power output

SSR relay; max. 16 A, ~220 Vac

Specification	Value
Zone 1: TC + / TC -	1 / 6
Zone 2: TC + / TC -	2 / 7
Zone 1: power output	4 / 9
Zone 2: power output	5 / 10
SSR limit in the diagram	Max. 16 A, approximately 220 Vac
Supply / fuse	230 Vac, 50/60 Hz, ±10%; 1 phase + neutral + earth. 6 x 30 mm ceramic fuse, 16 A

Quick operating guide

Setting the temperature

Adjust SET with up / down. Stored 2 seconds after the last key press; SV flashes once.

Switching the output on / off

Hold ON/OFF for approximately 3 seconds. Press briefly for STBY.

Entering / exiting the menu

Hold PRG for 3 seconds; release at PAr. Open and confirm settings with PRG. Return to the operating display with MODE / Esc.

Error codes

oPE: open TC / upper measurement limit.
rEV: reversed thermocouple polarity.

Model check

RM2 pin tables differ for 4, 6, 8, 10 and 12 zones. H1 / H2 connections are in separate appendices.

Technical support

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İkitelli Organize Sanayi Bölgesi, Bixsan Sanayi Sitesi,
D Blok, H Kapısı, Kat: 5, No: 106-107-108-109,
Başakşehir / İstanbul

Record your device details

Model:

Serial number:

Installation date:

Service request

Prepare the model, serial number and fault description. If available, share photos of the device label, connections and error display with our team.

We reserve the right to change device design and specifications as part of product development.