

**4-, 6-, 8-, 10-, 16-zone-temperature controller**



- **Microprocessor multi zone controller with LED-Display**
- **Optimized for use in the plastic moulding industry**
- **Available as 2- or 3-point controller**
- **Automatic self-tuning - adapts to different controlled systems**

**Application**

This temperature controller unit was specially designed to fit the demands of the plastic moulding industry. It comes up with a clear design and provides easy operation, good overview on all zones and various self-monitoring features.

The controller is mainly used for hot-runners, but also for extruders and presses.

**Design**

Multi zone controller (4, 6, 8, 10, 16 zones) in norm format 192 x 96mm for cabinet front panel integration.

**Function**

**Closed-loop-control**

Microprocessor-controller with automatic self-tuning establishes best control-results for fast nozzles as well as for slow manifolds or extruders.

**Soft-start**

The controller starts-up (if desired) with a soft-start to preserve cold heating elements.

Time, power-setting and temperature during this phase are variable and can be set-up for every zone as needed.

**Safeguard in case of sensor-breakage**

Sensor-breakage is signalled at the zones corresponding display. The concerned zone switches-over to manual power-control and takes-over the last assigned value, which may be adjusted manually.

**Alarm contacts**

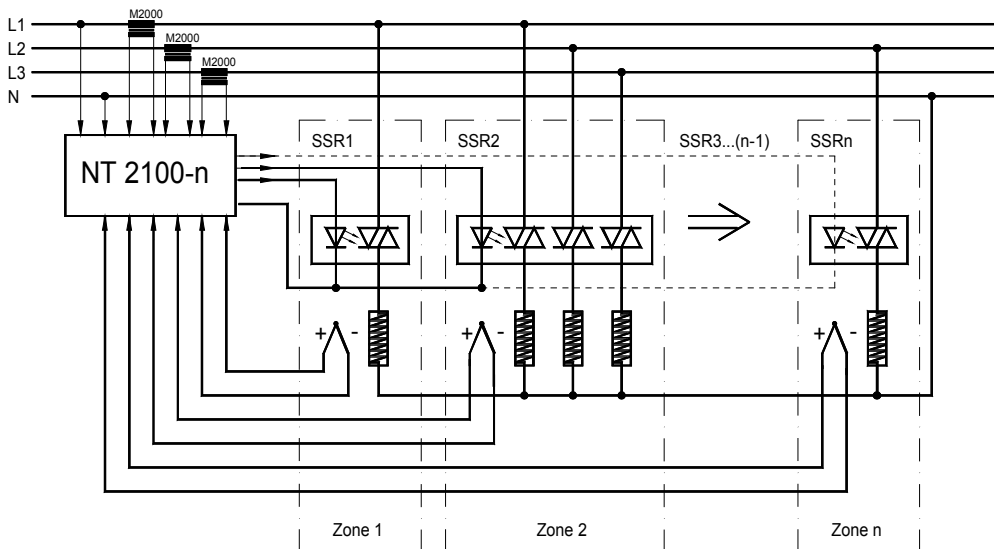
Each heating-zone provides 2 separated alarm-functions, which are wired to 2 floating contacts and operate as a common alarm output. The function of the alarms can be programmed for every zone, possible are

- Signal contact (relative to the set-point)
- Limit contact (absolute)
- Limit comparator within the max./min. -limits of the set-point)

**Heater current monitoring (option)**

Only one current transformer per phase required, this provides simple and cost efficient mounting. Monitoring of heater current disruption or below minimum, partial disruption or short-circuit in the solid-state-relay.

**Example for the wiring :**



**Specification**

**Mains voltage**

230V~ ±10%, 48...62Hz

**Number of zones**

NT2104	4 zones	NT2110	10 zones
NT2106	6 zones	NT2116	16 zones
NT2108	8 zones		

**Control output**

- Heating:  
18V DC, max. 10mA, short-circuit proof  
for the control of a solid state relay (SSR)
- Cooling:  
floating relay contact  
(only 3-point-operation)

**Alarm output**

Relay, floating, max. 250V~, 3A

**TC-input**

Configurable

- Pt100 DIN IEC 751
- Fe-CuNi Typ J DIN IEC 584
- NiCr-Ni Typ K DIN IEC 584

internal zero point correction

Thermocouple is monitored for cable breakage and short-circuit.

**Second set-point**

Each heating-zone is equipped with a second temperature set-point. By closing an external contact, all zones simultaneously are switched-over to the second set-point, which may be used for standby-operation.

**Display**

7-segment LED- 10mm red

**Type of memory**

EAROM

**Monitoring of heater current (option)**

With current transformer M2000 for mounting on 35mm rails

Monitoring range:

0...60,0A with 1~ AC  
0...99,9A with 3~ AC

**Interface (option)**

RS485, RS232, TTY 0/20mA, CANopen, CiA Device Profile DS-404

**Electrical connection**

Terminal strip following DIN 40050

**Dimensions**

Housing 192 x 96mm for cabinet front-panel integration following DIN 43700, depth 122mm  
Protection : IP20; Front: IP50

**Weight**

ca. 800g

**Operation conditions**

Environmental temperature 0... 50°C

Description	Art.-Nr.	2-Point	Art.-Nr. 2/ 3-Point
NT 2104	82104		82104.3
NT 2106	82106		82106.3
NT 2108	82108		82108.3
NT 2110	82110		-
NT 2116	82116		-