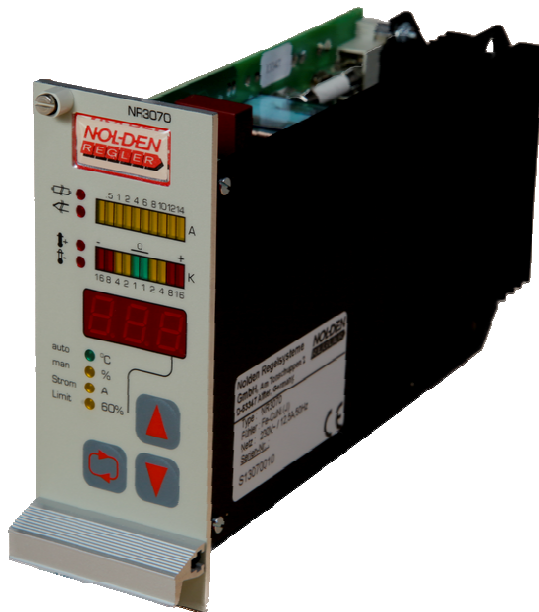


Plug-in 19" temperature controller NR3070



- **Microprocessor compact controller-unit with LED-display and bargraphs**
- **Very easy 3-button-operation**
- **Automatic self-tuning - adapts to different controlled systems**
- **Bargraph indicates the control deviation**
- **Integrated current-transformer**
- **Flexible softstart-routine**
- **Various self-monitoring features (with additional alarm unit)**

Application :

This temperature-controller plug-in unit was specially designed to fit the demands of the plastic molding industry. It comes up with a clear design and establishes easy operation and various self-monitoring features.

The unit is inserted in multi-zone mainframes, which are used to control hotrunners, presses and extruders.

Construction :

Control-electronics with integrated solid-state relay in a compact plug-in unit complying with 19"-rack-standards 3HE/10TE, pin-compatible with controller-unit-type 3080TPS, operated in mainframes RG225 ... RG3060 (2... 30 zones).

Function :

Controller

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

Display

During normal operation the actual temperature value is displayed on the 3-digit LED-display. The 10-digit, 3-color (gn/y/r) bargraph above the display indicates the control deviation in a +/-16K-logarithmically scaled range.

Setpoint temperature

Pushing the UP/DOWN-buttons switches the display to setpoint value. Possible changes can be confirmed by pressing the mode-button, after 20sec. they are accepted automatically.

Process-high/-low alarm

Process-high/-low-limits can be set between +/-3 ... 99K. When passing a limit the corresponding red LED flashes and the relay-exit switches-over.

Sensor-breaking-guard

Sensor-breakage is signalled by a flashing red LED. The controller switches over to manual power-control and effects the last used power setpoint, which may be adjusted at any time.

Manual power-control

Manual power-control is possible even whilest sensor is working properly.

Power limitation

For further protection of sensitive heating-elements the assigned power can be permanently limited to 60%. The corresponding LED indicates that power-limitation is active.

Softstart

During softstart the controller-unit works with reduced setpoint temperature 80°C for 5min (factory preset). Cold heaters are slowly pre-heated, moisture is expelled.

Boost-function

The NL 3070 THD temperature-controller-unit features a facility to override the normal setpoint temperature with 1 - 9K at the first heating-up.

This intended overshooting shortens the required time to „melt“ frozen injectors. As soon as the increased boost- temperature has been reached, the unit immediately reduces the temperature to the normal setpoint and thus ends the boost-routine.

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Load-current monitor

Load-current is permanently displayed on a 10-digit bargraph. The exact current can be shown on the multi-purpose-display.
Load-breakage is additionally indicated with a flashing red LED.

Standby-function

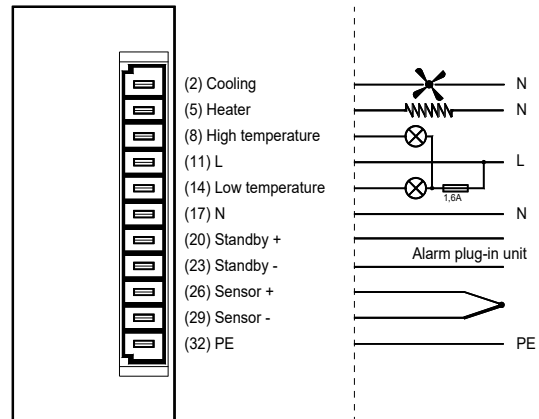
The control-unit is provided with a signal-port to activate the standby-routine by the signal/alarm plug-in-unit NL 3053SX.

The standby-value effects the temperature-termination to a defined percentage of the desired temperature.

The standby-routine permits a reduction of the desired temperature of all heating-zones in a unit simultaneously. This way mass variations as a consequence of long-term high-temperature during machine-downtime is avoided.

Further **Self-monitoring features**, such as safeguard in case of wrong sensor polarity or triac-failure are described in detail inside the operating-manual.

Pin assignment H11 transfer plug :



Specification

Mains voltage

230V +/-10%, 48...63Hz

Nominal rating heating load

2,85kW/12,5A

Fuses

16AFF, 6,3x32mm, heating
0,1AM, 5x20mm, controller

Power control

0...100% , proportional
Zero voltage switching

Power limitation

60%

Automatic softstart

Depends on mould temperature (<80°C), reduced power and temperature during 0...9 min.

Bargraphs

10-digit load-current,
10-digit temperature deviation

LED display

Shows actual temperature and setpoint, load current, configuration parameters, alarms and defaults

Mode-LEDs

Normal operation, manual power control, current monitor, 60%-limitation active

Alarm-/ Info-LEDs

Load breakage, thermocouple breakage, process high/low alarm

Safety load shedding

Electro-mechanical relay opens in case of process high alarm.

Limit comparators

+3...99°C
- 3...99°C
Each alarm 1 relais contact to N

Standby-input

9V DC, 15mA

Thermocouple input

Fe-CuNi type J 0...500°C

Precision

0,5% FS

Insulation

2,5kV mains / thermocouple

Transfer plug

H11 DIN41612

Dimensions

50,5 x 128,5 x 195mm

Size

19" / 3HE / 10TE

Weight

0,8 kg

Designation	Art.Nr.
NR 3070 (Fe-CuNi)	80376