



Attention
Risk of Danger,
Warning



High Voltage,
Risk of
Electric Shock



Double / Reinforced
Insulation



NOT
Litter



CE Mark

TECHNICAL SPECIFICATION



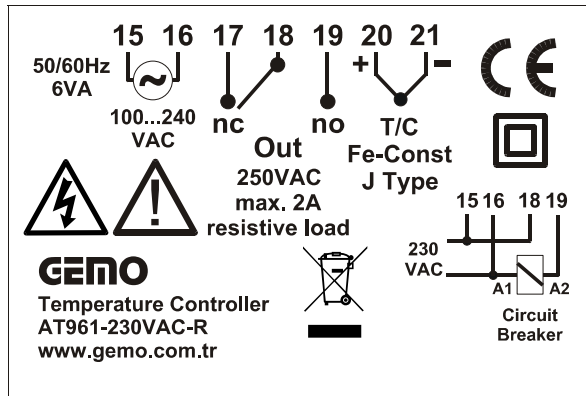
- **Dimensions** : 96x96mm
- **Panel Cut-out** : 91x91mm
- **Display** : 3 Digits 7 Segment
- **Sensor Type** : Fe-Const, J type T/C
- **Control Form** : ON-OFF or Proportional - selectable
- **Measuring Scale** : 0 .. 400 °C
- **SET interval** : 0 .. 400 °C
- **Hysteresis Interval** : 0 .. 20 °C
- **Proportional Band** : 1 .. 30 °C
- **Control Period** : 10 .. 240 sec.
- **Resolution** : ± 1 °C
- **Accuracy** : ± 1 % (Over full scale)
- **Out Output** : Relay (NO + NC), 250VAC, 2A, Resistive load
- **Cold. Junc. Comp.** : 0 .. 50 °C (T/C)
- **Sensor Failure** : Out Relay is OFF in case of sensor failure, measurement out of range or hardware fails to measure input signal.



- **Supply Voltage** : 100..240VAC, 50-60Hz
- **Power Consumption** : < 6VA
- **Humidity** : 80% up to 30°C, then linearly decreases to 50% at 50°C (non-condensing)
- **Altitude** : < 2000 m
- **EMC** : EN 61000-6-1, EN 61000-6-3 (Only light industrial environment)
- **Safety** : EN 61010-1; Pollution degree 1, measurement category I, (Only light industrial environment, double/reinforced isolated, non-conductive pollution environment)


























- **Protection Class** : IP20; according to EN 60529
- **Operation Temp.** : 0 .. 50 °C
- **Storage Temperature** : -10°C .. 60°C (no icing)
- **Weight** : < 0.5 kg
- **Key** : Micro switch
- **Torque for screwing** : Max. 0.5 N.m



no: normally open
nc: normally closed

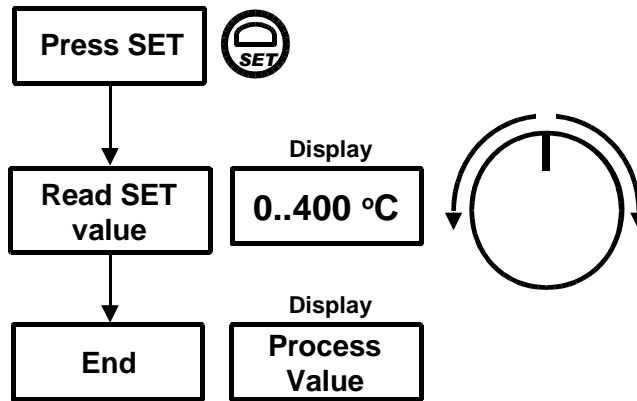
INSTALLATION, USE and WARNINGS

-  ● This device and its packing is NOT litter and may NOT be disposed of with domestic waste. Please return this device and its packing to an appropriate recycling point at the end of its service life.
-  ● Please read this user manual carefully and completely before installation and use. Please take into consideration all warnings mentioned in this manual.
-  ● AT961 is suitable only for permanent panel type mounting
-  ● Installation and use of this device must be done by qualified, authorized and trained technical personnel only.
-  ● Inspect device carefully before installation. Do not install and use broken and defective devices.
-  ● Do not disassemble device. Do not make any repair on any part of the device. There is no accessible part inside the device. Please contact to manufacturer for broken and defective devices.
-  ● Do not use device in environments subject to flammable, explosive and corrosive gases and/or substances.
-  ● This device is designed for applications only in light industrial environments. This device is not suitable for medical and residential use. This device is not suitable for use related with human health and safety. This device is not suitable for automotive, military and marine use.
-  ● Do not allow children and unauthorized people to use this device.
-  ● Before installation and any technical work, disconnect the power supply and mains connections.
-  ● Check the power supply voltage level before power on, and make sure voltage level is in specified limits. Check quality of neutral line. Improper neutral line may give permanent damage to the device.
-  ● Connect an external power switch and an external fuse (1A, 250VAC) to the power supply line that are easily accessible for rapid intervention. Connect an external fuse (2A, 250VAC) for each relay output separately.
-  ● Use appropriate cables for power supply and mains connections. Apply safety regulations during installation.
-  ● Install the device in a well ventilated place. Install the device permanently into a proper panel cut-out. Fix the device with two fasteners supplied with the device. Only front panel must be accessible after installation is completed.
-  ● Do not operate the device other then the environmental conditions given in Technical Specification.
-  ● Do not operate the device in environments that may cause conductive pollution.
-  ● Take precautions against negative environmental conditions like humidity, vibration, pollution and high/low temperature during installation.
-  ● Use correct compensation cables for T/C sensors. Connect T/C cable directly to the device connectors.
-  ● Keep device, signal cables and communication cables away from circuit breakers, power cables and devices/cables emitting electrical noise. Use shielded and twisted signal and communication cables and connect shield to earth ground on device side. Keep length of signal and communication cables less than 3m.
-  ● In your applications, always use separate and independent mechanical and/or electromechanical devices/apparatus to support AT961 to handle emergency cases..
-  ● Use insulated cable end-sleeves at the end of cables screwed to the device connector terminals.
-  ● Maximum torque for screwing; 0.5 N.m.
-  ● Please check www.gemo.com.tr for latest device and documentation updates regularly. All updates and all information are subject to change without notice.

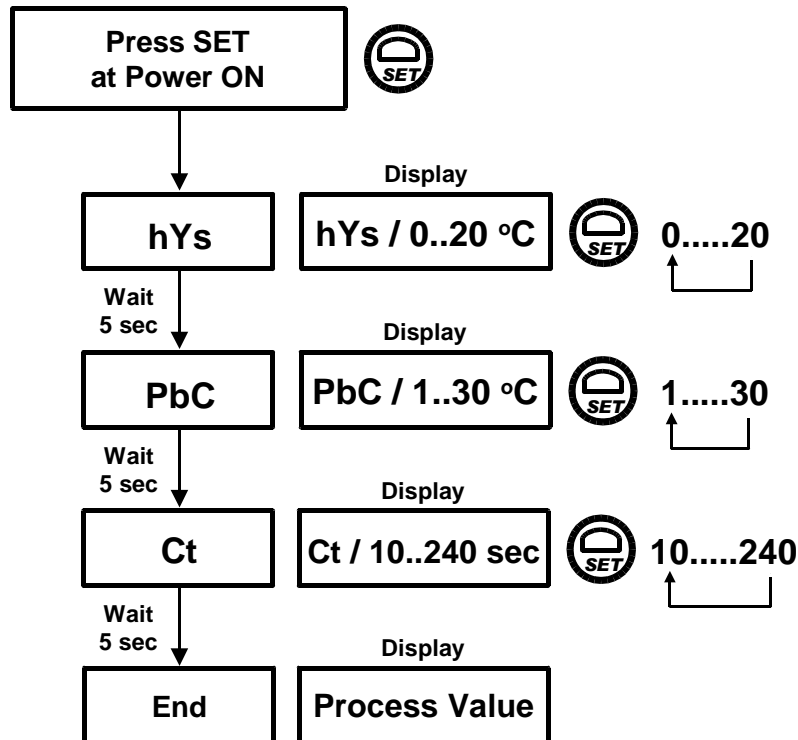
GENERAL SPECIFICATION

- This device is designed for basic temperature control applications only in light industrial environments.
- μ P based, single output digital temperature controller with analogue SET
- Sensor:T/C, Fe-Const, J type
- Control form: Proportional or ON-OFF, selectable
- Adjustable Hysteresis Value
- Displays SET and PROCESS values
- Cold-junction compensation for T/C
- Excellent linearity with $^{\circ}$ C/mV look-up table
- Detects sensor failure
- High accuracy
- EEPROM memory to store settings
- Dimensions; 96x96mm
- Easy connection with plug-in connectors

PROGRAMMING HEAT SET



PROGRAMMING HYSTERESIS (hYS), PROPORTIONAL BAND (PbC) and CONTROL PERIOD (Ct)



FACTORY SETTINGS

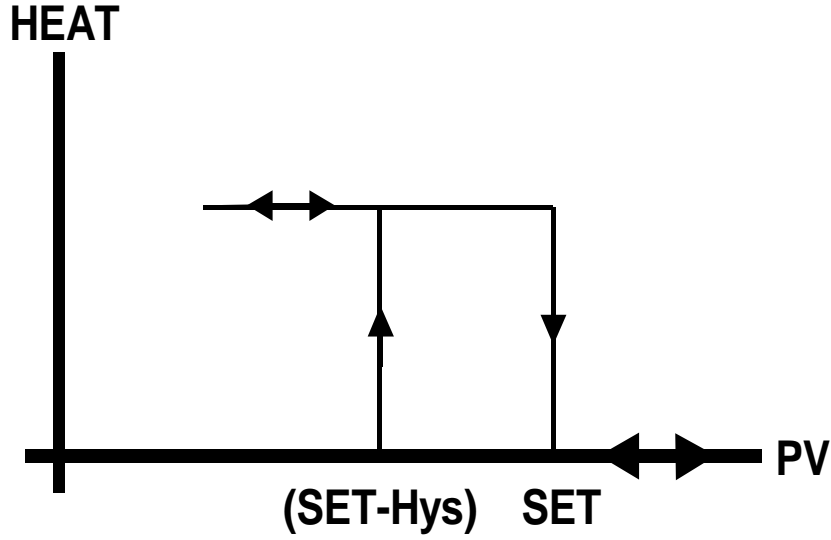
Hys : 3°C
PbC : 12°C
Ct : 30 sec.

ERROR MESSAGE

or: Displays “or” message in case of sensor failure, measurement out of range or hardware fails to measure input signal.

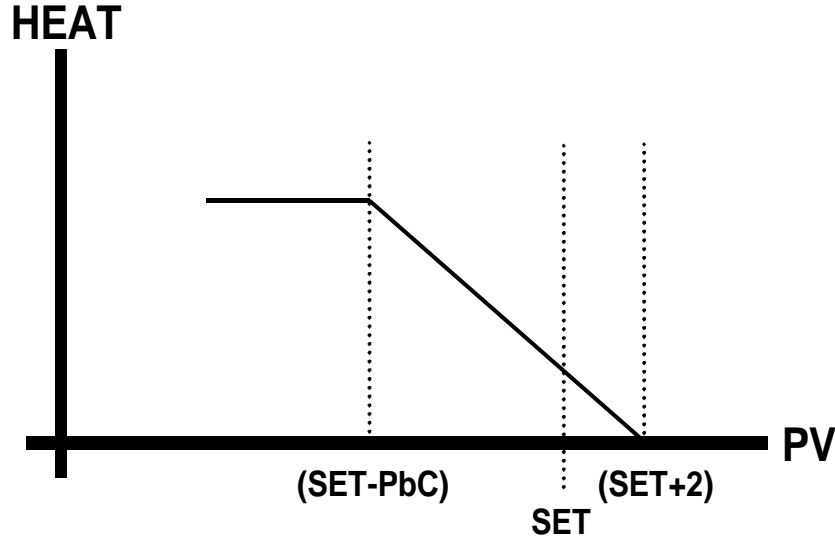
ON-OFF CONTROL

- ON-OFF is active when "H.Hys" is other then 0



PROPORTIONAL CONTROL

- Proportional Control is active if "H.Hys" is set to 0.
- **PbC**: Proportional band in oC.plus 2 degrees. Refer to figure below.
- **Ct**: Control period for proportional control.



CLAEANING



Do not use any solvents (alcohol, thinners, benzine, acid, etc.) or corrosive substances to clean the device. Use only a dry and clean non-abrasive cloth. Before cleaning, disconnect the power supply and mains connections.