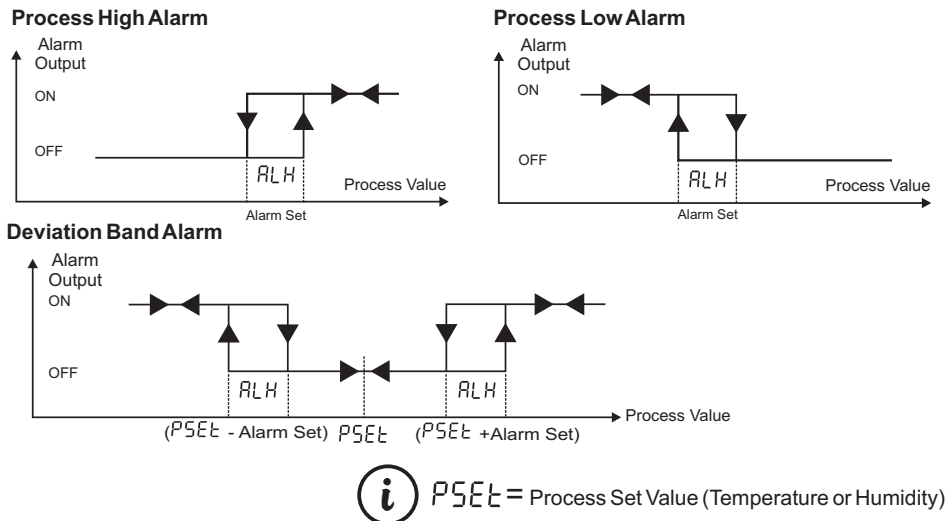
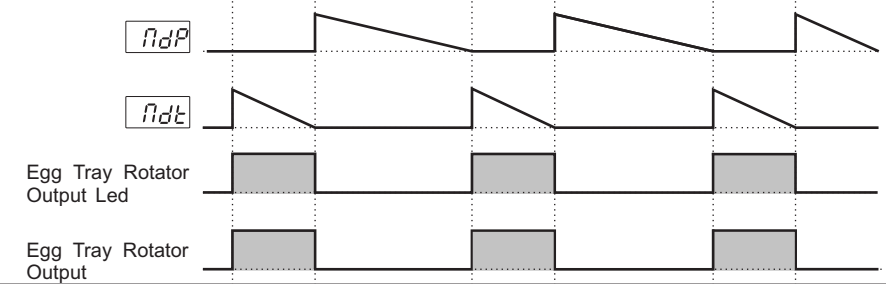


5.2 Alarm Output Graphics of ESM-3722HT



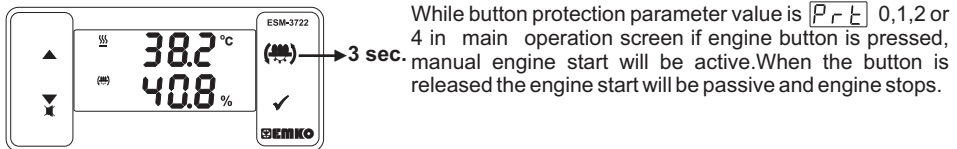
5.3 Egg Tray Rotator Operation Graphics of ESM-3722HT



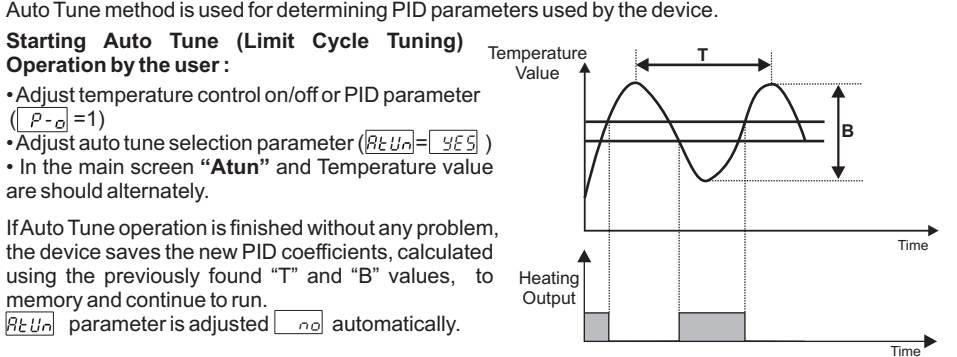
5.4 Failure Messages in ESM 3722 Hatcher Controller

- Screen Blinking Temperature Sensor failure. Sensor connection is wrong or there is no sensor connection. While this message shown on this display, if buzzer function selection [BUF] is 3, 5, 7 or 8 internal buzzer starts to operate.
- Screen Blinking Humidity Sensor failure. Sensor connection is wrong or there is no sensor connection. While this message shown on this display, if buzzer function selection [BUF] is 4, 6, 7 or 8 internal buzzer starts to operate.
- In main operating screen if the upper display is blinking, it means that temperature alarm exits and alarm output is active. If buzzer function selection [BUF] is 1, 5 or 8 internal buzzer starts to operate.
- In main operating screen if the lower display is blinking, it means that humidity alarm exits and alarm output is active. If buzzer function selection [BUF] is 2, 6 or 8 internal buzzer starts to operate.

6. Manual Start of Egg Tray Rotator Operation with Engine Button



7. Auto Tune Method



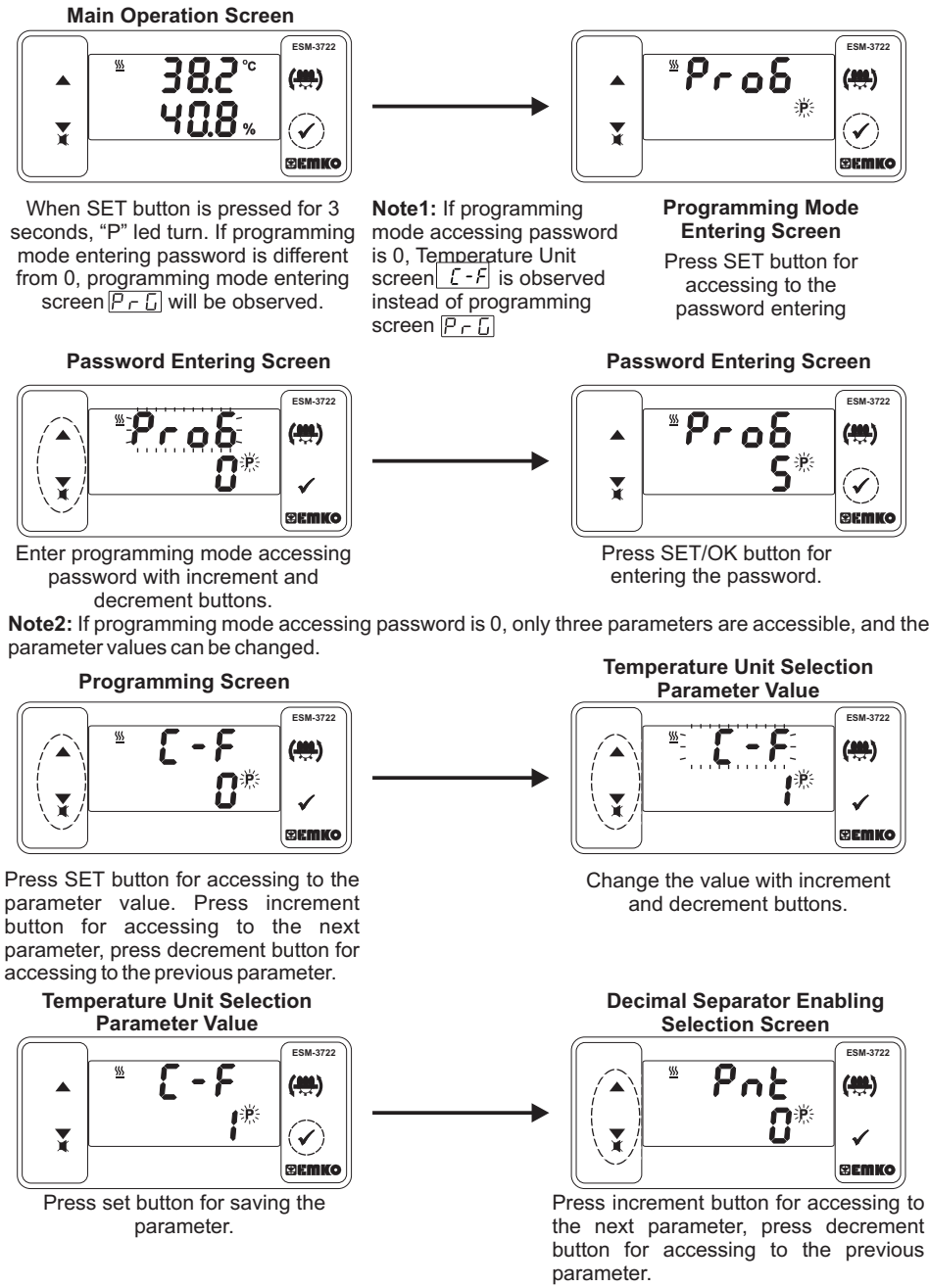
Cancelling Auto Tune (Limit Cycle Tuning) operation:

- If sensor breaks;
 - If auto tune operation can not be completed in 8 hours;
 - If user adjusts [RLU] parameter [On];
 - During auto tune operation if the user changes the temperature control from pid to on/off;
 - If process set value is changed while auto tune operation is being performed;
- Auto tune is canceled. "Atun" is not displayed. Then, without doing any changes in PID parameters, device continues to run with previous PID parameters.

8. Specifications

Device Type	: Hatcher Controller
Housing&Mounting	: 76 mm x 34.5 mm x 71 mm Plastic housing for panel Panel cut out is 71 x 29 mm.
Protection Clas	: Ip65 at front, Ip20 at rear.
Weight	: Approximately 0.2 Kg
Environmental Ratings	: Standart, indoor at an altitude of less than 2000 meters with none condensing humidity. -40 °C to +80 °C / -30 °C to +80 °C : 90 % max. (None condensing) : Fixed installation : II : II, office or workplace, none conductive pollution : Continuous
Storage / Operating Temperature	: 230V ~ (±15%) 50/60Hz - 1.5VA
Storage / Operating Humidity	: 115V ~ (±15%) 50/60Hz - 1.5VA
Installation	: 24V ~ (±15%) 50/60Hz - 1.5VA
Overvoltage Category	: 24V ~ (±15%) 50/60Hz - 1.5VA
Pollution Degree	: 10 - 30V = 1.5W
Operating Conditions	
Supply Voltage and Power	
Temperature Sensor Input	: NTC, PTC, PT-100, 0/2..10V =, 0/4..20mA = or ProNem Mini PMI-P

5.5 Entering To The Programming Mode, Changing and Saving Parameter



If no operation is performed in programming mode for 20 seconds, device turns to main operation screen automatically.

ESM-3722 77x35 DIN Size Hatcher Controller



ESM-3722 77 x 35 DIN Size Digital Hatcher Controller

- 4 Digits for Temperature Display
- 4 Digits for Humidity Display
- Temperature Sensor Input
NTC, PTC, PT-100, 0/2..10V, 0/4..20mA or ProNem Mini PMI-P (Must be determined in order.)
- Humidity Sensor Input
0/2..10V, 0/4..20mA or ProNem Mini PMI-P (Must be determined in order.)
- 4 Output
Heating Control Output
Egg tray rotator Output
Humidification Control Output
Alarm Control Output
- Relay or SSR Outputs (Must be determined in order.)
- Selectable Temperature Control (PID or ON / OFF)
- Auto-Tune PID
- Set value boundaries
- Manual Start of tray rotator from front panel
- Alarm parameteraters
- Adjustable internal buzzer according to the alarm situations
- Password protection for programming mode,

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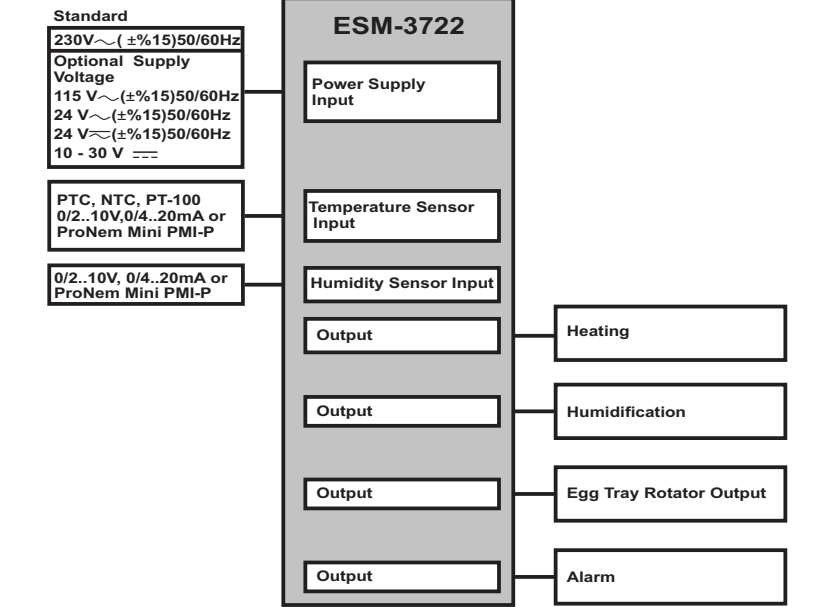
1. Preface

ESM 3722-HT series Hatcher controllers are designed for controlling hatcher process. Device can be used easily with PID or On-Off control form and manual start of egg tray rotator properties.

1.1 Environmental Ratings

- Operating Temperature : 0 to 50 °C
- Max. Operating Humidity : 90% Rh (non-condensing)
- Altitude : Up to 2000 m.
- Forbidden Conditions:
Corrosive atmosphere
Explosive atmosphere
Home applications (The unit is only for industrial applications)

1.2. General Specifications



1.3 Installation

A visual inspection of this product for possible damage occurred during shipment is recommended before installation. It is your responsibility to ensure that qualified mechanical and electrical technicians install this product.

If there is danger of serious accident resulting from a failure or defect in this unit, power off the system and separate the electrical connection of the device from the system.

The unit is normally supplied without a power supply switch or a fuse. Use power switch and fuse as required.

Be sure to use the rated power supply voltage to protect the unit against damage and to prevent failure. Keep the power off until all of the wiring is completed so that electric shock and trouble with the unit can be prevented.

Never attempt to disassemble, modify or repair this unit. Tampering with the unit may result in malfunction, electric shock or fire.

Do not use the unit in combustible or explosive gaseous atmospheres.

During putting equipment in hole on the metal panel while mechanical installation some metal burrs can cause injury on hands, you must be careful.

Montage of the product on a system must be done with its fixing clamps. Do not do the montage of the device with inappropriate fixing clamp. Be sure that device will not fall while doing the montage.

It is your responsibility if this equipment is used in a manner not specified in this instruction manual.

1.4 Warranty

EMKO Elektronik warrants that the equipment delivered is free from defects in material and workmanship. This warranty is provided for a period of two years. The warranty period starts from the delivery date. This warranty is in force if duty and responsibilities which are determined in warranty document and instruction manual performs by the customer completely.

1.5 Maintenance

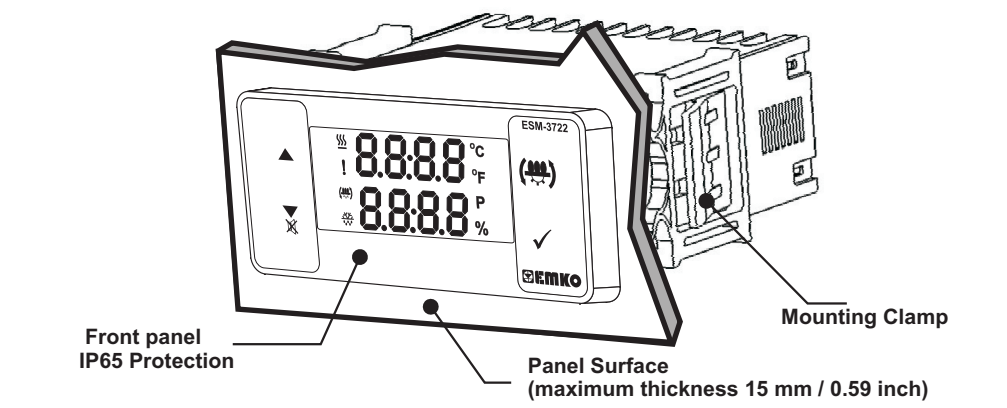
Repairs should only be performed by trained and specialized personnel. Cut power to the device before accessing internal parts. Do not clean the case with hydrocarbon-based solvents (Petrol, Trichlorethylene etc.). Use of these solvents can reduce the mechanical reliability of the device. Use a cloth dampened in ethyl alcohol or water to clean the external plastic case.

1.6 Manufacturer Company

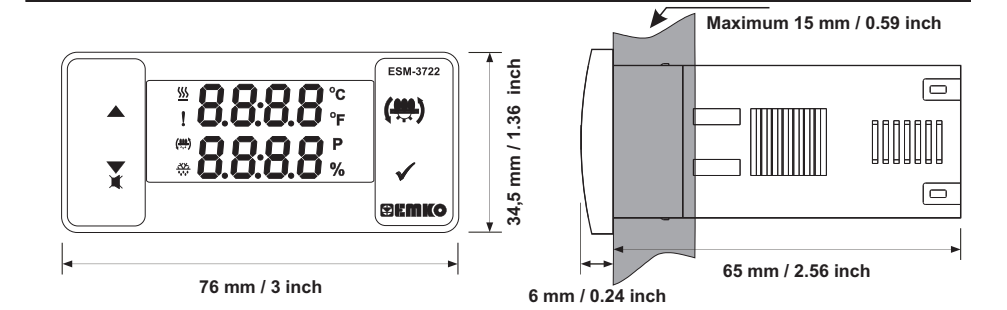
Manufacturer Information:
Emko Elektronik Sanayi ve Ticaret A.Ş.
Demirtaş Organize Sanayi Bölgesi Karanfil Sk. No:6 16369 BURSA/TURKEY
Phone : +90 224 261 1900
Fax : +90 224 261 1912

Repair and maintenance service information:
Emko Elektronik Sanayi ve Ticaret A.Ş.
Demirtaş Organize Sanayi Bölgesi Karanfil Sk. No:6 16369 BURSA/TURKEY
Phone : +90 224 261 1900
Fax : +90 224 261 1912

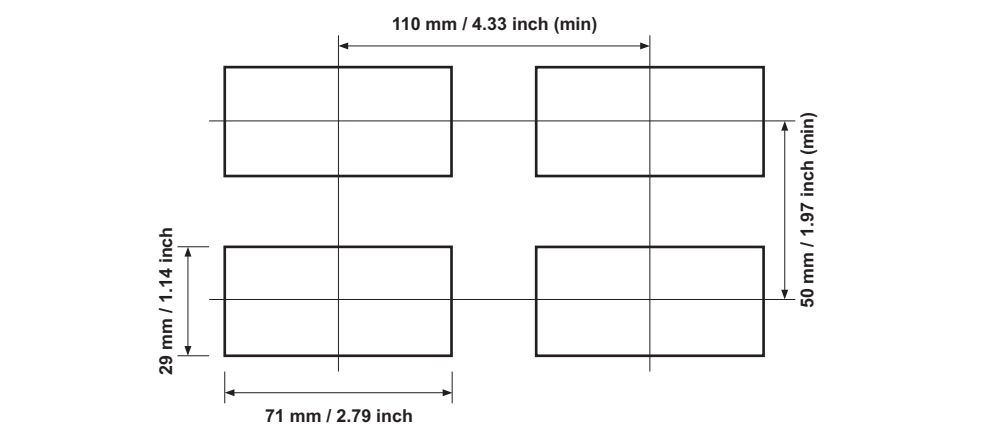
2. General Description



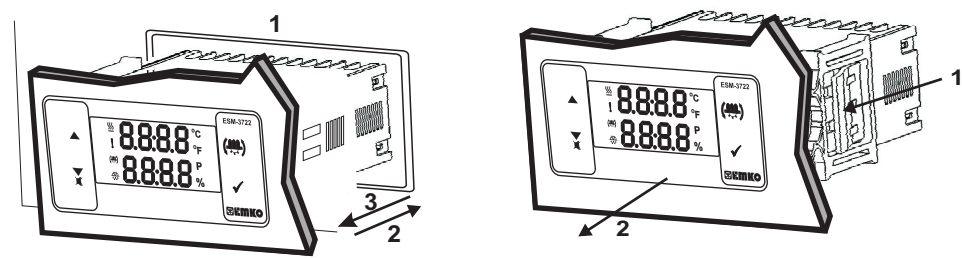
2.1 Front View and Dimensions of ESM-3722 Hatcher Controller



2.2 Panel Cut-Out



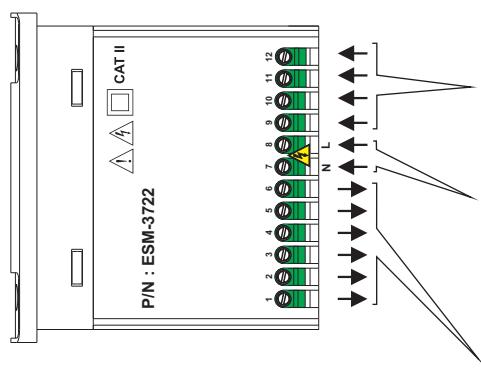
2.3 Panel Mounting and Removing



1-Before mounting the device in your panel, make sure that the cut-out is of the right size.
2-Insert the device through the cut-out, if the mounting clamps are on the unit, put them out them before inserting the unit to the panel.
3-Insert the mounting clamps to the fixing sockets that located left and right sides of device and make the unit completely immobile within the panel.

1-Pull mounting clamps from left and right fixing sockets.
2-Pull the unit through the front side of the panel.
Before starting to remove the unit from panel, power off the unit and the related system.

3. Electrical Wiring Diagram



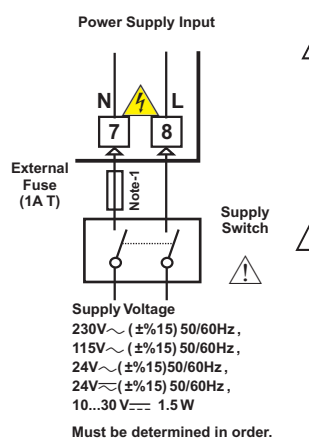
Temperature Sensor Input
NTC, PTC, PT-100 or ProNem Mini PMI-P
Must be determined in order.

Humidity Sensor Input
0/2..10V, 0/4..20mA or ProNem Mini PMI-P
Must be determined in order.

Power Supply Voltage
230V~(±15%) 50/60Hz,
115V~(±15%) 50/60Hz,
24V~(±15%) 50/60Hz,
24V~(±15%) 50/60Hz,
10...30V= 1.5W
Must be determined in order.

Relay Outputs

3.1 Supply Voltage Input Connection of the Device

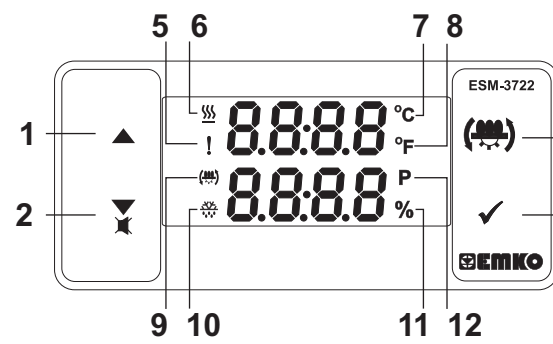


Make sure that the power supply voltage is the same indicated on the instrument.
Switch on the power supply only after that all the electrical connections have been completed.
Supply voltage range must be determined in order. While installing the unit, supply voltage range must be controlled and appropriate supply voltage must be applied to the unit.

There is no power supply switch on the device. So a power supply switch must be added to the supply voltage input.
Power switch must be two poled for separating phase and neutral, On/Off condition of power supply switch is very important in electrical connection.
External fuse that on ~ power supply inputs must be on phase connection.
External fuse that on = power supply inputs must be on (+) connection.

Note-1: External Fuse is recommended

4. Front Panel Definition and Accessing to the Menus



BUTTON DEFINITIONS

1. Increment Button :
** In main operation screen, press this button to change display temperature and humidity sensor value.
** It is used to increase the value in the Temperature and Humidity Set screens and Programming mode.

2. Decrement, Silencing Buzzer Button :
** It is used to decrease the value in the Set screen and Programming mode.
** It is used to silence the buzzer.

3. Manual Start of Egg Tray Rotator Operation Button :
** In the main operation screen, if this button pressed engine starts. When the button is released the engine start will be passive and engine stops.

4. Set Button :
** In the main operation screen; if this button pressed for the first time, Temperature set value will be displayed. Value can be changed using increment and decrement buttons. When Set button is pressed again, value is saved and Humidity set value will be displayed next. Value can be changed using increment and decrement buttons. When Set button pressed again, value is saved and returns back to main operation screen.
** To access the programming screen; in the main operation screen, press and hold this button for 5 seconds.
** It is used to save value in the Set screens (Temperature or Humidity) and programming screen.

LED DEFINITIONS

5. Alarm led :
** It is active when alarm statuses.

6. Heating Output Led :
** This led indicates that heating output is active.

7. Celcius led :
** Indicates that device is in °C mode.

8. Fahrenheit led :
** Indicates that device is in °F mode.

9. Egg Tray Rotator Output Led :
** This led indicates that Egg Tray Rotator Output is active.

10. Humidifying Output Led :
** This led indicates that Humidity output is active.

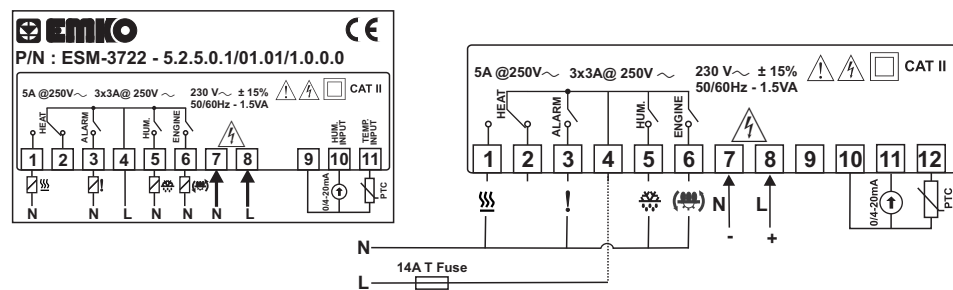
11. Precent Sign ledi :
** Indicates that device is in Humidity Set screen.

12. Program led :
** Indicates that device is in programming mode.

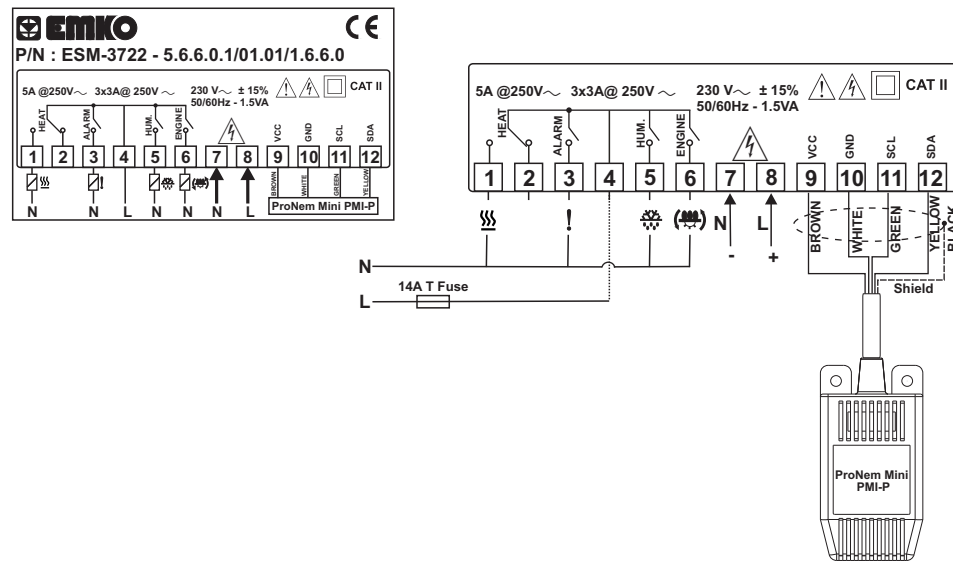
3.2 Device Label and Connection Diagram

230V~ CONNECTION DIAGRAM

PTC Temperature and 0/4..20mA Humidity Sensor Input connection

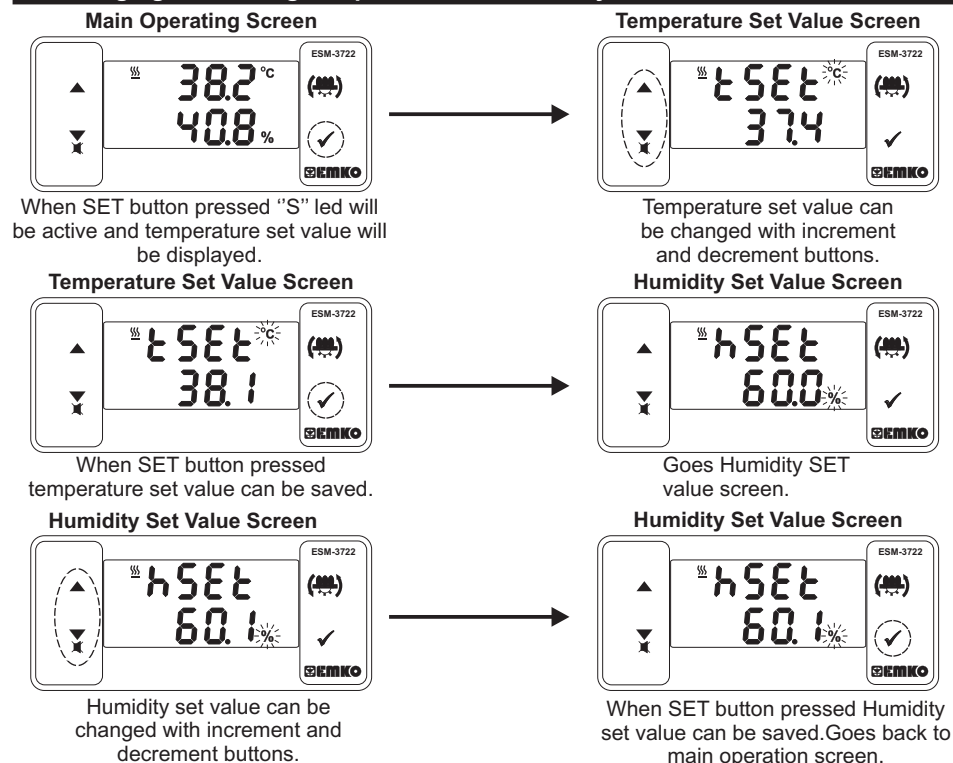


ProNem Mini PMI-P Temperature and Humidity Sensor Input Connection



Note : Shield (Black) pin must be connected to number 10 (GND) of the terminal block.

5. Changing and Saving Temperature and Humidity Set Value



Temperature set value parameter (Default =37.4 °C)
Temperature set value, can be programmed between minimum temperature set value $\overline{t_{SSL}}$ and maximum temperature set value $\overline{t_{SUH}}$.

Humidity set value parameter (Default = 60%)
Humidity set value, can be programmed between minimum Humidity set value $\overline{h_{SSL}}$ and maximum temperature set value $\overline{h_{SUH}}$.

If no operation is performed in Humidity set value changing mode and temperature set value changing mode for 20 seconds, device turns to main operation screen automatically.

5.1 Programming Mode Parameter List

- Temperature Unit Selection Parameter (Default = 0)**
- $\overline{t-f}$ 0 °C selected.
1 °F selected.
- Decimal Separator Enabling Parameter (Default = 0)**
- \overline{pnt} 0 None.
1 Only Temperature parameters with decimal separator.
2 Only Humidity parameters with decimal separator.
3 Only Temperature and Humidity parameters with decimal separator.

Note : When value of $\overline{t-f}$ or \overline{pnt} parameters are changed, the values of $\overline{t_{SSL}}$, $\overline{t_{SUH}}$, $\overline{h_{SSL}}$, $\overline{h_{SUH}}$, $\overline{h_{oFt}}$, $\overline{h_{RSL}}$, $\overline{h_{RLH}}$, $\overline{h_{RUH}}$ and $\overline{h_{RdL}}$ parameters should be changed accordingly.

5.1 Programming Mode Parameter List

Note : $\overline{t_{SSL}}$, $\overline{t_{UPL}}$ and $\overline{t_{LoL}}$ parameters are shown, if the Temperature sensor analogue input type (0/2..10V or 0/4..20mA) is selected.

- Temperature Sensor Scale Selection Parameter (Default = 0)**
Analogue (Temperature) input range is determined with this parameter.
- $\overline{t_{SSL}}$ 0 0..10V $\overline{(1)}$ veya 0..20mA $\overline{(2)}$
1 2..10V $\overline{(1)}$ veya 4..20mA $\overline{(2)}$
- Temperature Sensor Scale Low Limit Parameter : (Default = 0)**
It can be adjusted from -1999 to $(\overline{t_{UPL}}-1)$. At this value analogue input becomes;
If $\overline{t_{SSL}}=0$, according to the device type 0V $\overline{(1)}$ or 0mA $\overline{(2)}$.
If $\overline{t_{SSL}}=1$, according to the device type 2V $\overline{(1)}$ or 4mA $\overline{(2)}$.

- Temperature Sensor Scale High Limit Parameter : (Default = 100)**
It can be adjusted from $(\overline{t_{LoL}}+1)$ to 9999. At this value analogue input becomes;
According to the device type 10V $\overline{(1)}$ or 20mA $\overline{(2)}$.

Note : $\overline{t_{LoL}}$, $\overline{t_{UPL}}$ parameters are shown, if the Temperature sensor analogue input type is selected.

- Temperature Control Selection Parameter On/Off or PID (Default = 0)**
- $\overline{p-o}$ 0 On - Off selected.
1 PID selected.

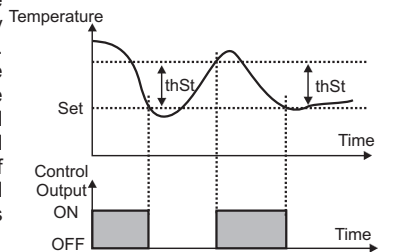
Note: If this parameter is select 0, PID parameters ($\overline{Rt_{U}}$, \overline{p} , \overline{I} , \overline{d} , \overline{t}) will be not observed. If this parameter select 1, $\overline{h_{St}}$ parameter will be not observed.

- Auto Tune (Limit Cycle Tuning) Selection Parameter (Default = 0)**
- $\overline{rt_{on}}$ 0 Device does not do(Limit cycle Tuning) operation.
1 Device does operation.

- PID - Proportional Control Parameter (Default = 50)**
This parameter value can be adjusted form 0 to 100.
- PID - Integral Parameter (Default = 1000)**
This parameter value can be adjusted form 0 to 3600.
- PID - Derivative Parameter (Default = 250)**
This parameter value can be adjusted form 0 to 3600.
- PID - Period Time Parameter (Default = 1)**
This parameter value can be adjusted form 1 to 50 second.

Hysteresis Parameter for Temperature (Default = 0.1 °C)
From 1 to 10°C for NTC, PTC, PT-100 (0°C, 100°C), From 1 to 18°F for NTC, PTC, PT-100 (0.0°C, 100.0°C), From 0.1 to 18.0°F for NTC, PTC, PT-100 (32.0°F, 212.0°F), From 1 to 10°C for ProNem Mini PMI-P (-20.0°C, 80.0°C), From 1 to 18°F for ProNem Mini PMI-P (-4°F, 176°F), From 0.1 to 10.0°C for ProNem Mini PMI-P (-20.0°C, 80.0°C), From 0.1 to 18.0°F for ProNem Mini PMI-P (-4.0°F, 176.0°F).

In ON/OFF control algorithm, temperature value is tried to keep equal to set value by opening or closing the last control element. ON/OFF controlled system, temperature value oscillates continuously. Temperature value's oscillation period or amplitude around set value changes according to controlled system. For reducing oscillation period of temperature value, a threshold zone is formed below or around set value and this zone is named hysteresis.



Alarm Output Function Selection Parameter (Default = 0)

- \overline{lowt} 0 Alarm is inactive.
1 Alarm-Temperature sensor failures.
2 Alarm-Humidity sensor failures.
3 Alarm-Temperature or Temperature sensor failures.
4 Alarm-Humidity or Humidity sensor failures.
5 Alarm-Temperature sensor failures or Humidity sensor failures.
6 Alarm-Temperature or Humidity or Temperature sensor failures or Humidity sensor failures.

Note : if $\overline{t_{oVt}}$ parameter value is 3 or 6 $\overline{t_{RSL}}$, $\overline{t_{RSL}}$, $\overline{t_{RLH}}$, $\overline{t_{RUH}}$, $\overline{t_{RdL}}$ or $\overline{t_{RPd}}$ parameters are observed.

Note : if $\overline{h_{oVt}}$ parameter value is 4 or 6 $\overline{h_{RSL}}$, $\overline{h_{RSL}}$, $\overline{h_{RLH}}$, $\overline{h_{RUH}}$, $\overline{h_{RdL}}$ or $\overline{h_{RPd}}$ parameters are observed.

- Temperature Alarm Function Selection Parameter (Default = 0)**
- $\overline{t_{RtS}}$ 0 Process High alarm selected.
1 Process Low alarm selected.
2 Deviation Band alarm selected.
3 Deviation Range alarm selected.

Temperature Alarm Set Parameter (Default = 50.0 °C)
This parameter value can be programmed between temperature minimum alarm set $\overline{t_{RUH}}$ parameter and temperature alarm set maximum $\overline{t_{RUL}}$ parameter.

Temperature Alarm Hysteresis Parameter (Default = 0)
This parameter value can be adjusted form 0 to %50 of the device scale.

Alarm Set Minimum Parameter (Default = Minimum Value of Device Scale)
if temperature alarm is active, this parameter value can be adjusted from minimum value of device scale to temperature alarm set maximum parameter value. $\overline{t_{RUH}}$

Alarm Set Maximum Parameter (Default = Maximum Value of Device Scale)
if temperature alarm is active, this parameter value can be adjusted from temperature alarm set value parameter $\overline{t_{RUH}}$ to maximum value of the device scale.

Temperature Alarm On Delay Time Parameter (Default = 0)
Temperature Alarm On Delay Time can be defined with this parameter. It can be adjusted from 0 to 99 minutes.

Temperature Alarm Delay After Power On Parameter (Default = 0)
When power is first applied to the device, this time delay must be expired for activation of temperature alarm. It can be adjusted from 0 to 99 minutes.

- Humidity Alarm Function Selection Parameter (Default = 0)**
- $\overline{h_{RtS}}$ 0 Process High alarm selected.
1 Process Low alarm selected.
2 Deviation Band alarm selected.
3 Deviation Range alarm selected.

Humidity Alarm Set Parameter (Default = 50)
This parameter value can be programmed between humidity minimum alarm set $\overline{h_{RUH}}$ parameter and humidity alarm set maximum $\overline{h_{RUL}}$ parameter.

$\overline{t_{SUH}}$ **Minimum Temperature Set Value Parameter (Default = 10.0°C)**
Temperature set value can not be lower than this value. This parameter value can be adjusted from minimum value of device scale to maximum temperature set value parameter $\overline{t_{SUH}}$

$\overline{t_{SUH}}$ **Maximum Temperature Set Value Parameter (Default = 40.0 °C)**
Temperature set value can not be greater than this value. This parameter value can be adjusted from minimum temperature set value parameter $\overline{t_{SUH}}$ to maximum value of the device scale.

$\overline{t_{oFt}}$ **Temperature Sensor Offset Parameter (Default = 0)**
From -10 to 10°C, NTC, PTC, PT-100 (0°C, 100°C)
From -18 to 18°F, NTC, PTC, PT-100 (32°F, 212°F)
From -10.0 to 10.0°C, NTC, PTC, PT-100 (0.0°C, 100.0°C)
From -18.0 to 18.0°F, NTC, PTC, PT-100 (32.0°F, 212.0°F)
From -10 to 10°C, ProNem Mini PMI-P (-20°C, 80°C)
From -18 to 18°F, ProNem Mini PMI-P (-4°F, 176°F)
From -10.0 to 10.0°C, ProNem Mini PMI-P (-20.0°C, 80.0°C)
From -18.0 to 18.0°F, ProNem Mini PMI-P (-4.0°F, 176.0°F)

$\overline{h_{SSL}}$ **Humidity Sensor Scale Selection Parameter (Default = 0)**
Analogue input range is determined with this parameter.

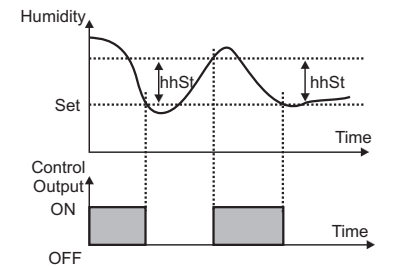
$\overline{h_{SSL}}$ 0 0..10V $\overline{(1)}$ or 0..20mA $\overline{(2)}$
1 2..10V $\overline{(1)}$ or 4..20mA $\overline{(2)}$

Note : $\overline{h_{SSL}}$ parameter ProNem Mini PMI-P type device are not observed.

(1) It is valid, if the device type 0/2..10V Humidity Sensor Input.
(2) It is valid, if the device type 0/4..20mA Humidity Sensor Input.

Hysteresis Parameter for Humidity (Default = 1)
From 1 to 10 for Humidity Sensor (0%RH, 100%RH)
From 0.1 to 10.0 for Humidity Sensor (0.0%RH, 100.0%RH)

In ON/OFF control algorithm, Humidity value is tried to keep equal to set value by opening or closing the last control element. ON/OFF controlled system, temperature value oscillates continuously. Temperature value's oscillation period or amplitude around set value changes according to controlled system. For reducing oscillation period of temperature value, a threshold zone is formed below or around set value and this zone is named hysteresis.



$\overline{h_{SUH}}$ **Minimum Humidity Set Value Parameter (Default = Minimum Value of Device Scale)**
Humidity set value can not be lower than this value. This parameter value can be adjusted from minimum value of device scale to maximum Humidity set value parameter $\overline{h_{SUH}}$

$\overline{h_{SUH}}$ **Maximum Humidity Set Value Parameter (Default = Maximum Value of Device Scale)**
Humidity set value can not be greater than this value. This parameter value can be adjusted from minimum humidity set value parameter $\overline{h_{SUH}}$ to maximum value of the device scale.

$\overline{h_{oFt}}$ **Temperature Sensor Offset Parameter (Default = 0.0)**
From -10 to 10°C, PTC, PT-100 (0°C, 100°C)
From -18 to 18°F, PTC, PT-100 (32°F, 212°F)
From -10.0 to 10.0°C, PTC, PT-100 (0.0°C, 100.0°C)
From -18.0 to 18.0°F, PTC, PT-100 (32.0°F, 212.0°F)

\overline{ndt} **Time of Automatic Egg Tray Rotator (Default = 00:00)**
This parameter value can be adjusted form 00:00 to 99:00 minute/second.

\overline{ndP} **Repeat cycle of Automatic Egg Tray Rotator (Default = 00:00)**
This parameter value can be adjusted form 00:00 to 24:00 hour/minute.

$\overline{h_{RtH}}$ **Humidity Alarm Hysteresis Parameter (Default = 0)**
This parameter value can be adjusted form 0 to %50 of the device scale.

$\overline{h_{RUL}}$ **Humidity Alarm Set Minimum Parameter (Default = Minimum Value of Device Scale)**
if humidity alarm is active, this parameter value can be adjusted from minimum value of device scale to humidity alarm set maximum parameter value. $\overline{h_{RUL}}$

$\overline{h_{RUH}}$ **Humidity Alarm Set Maximum Parameter (Default = Maximum Value of Device Scale)**
if humidity alarm is active, this parameter value can be adjusted from humidity alarm set minimum parameter $\overline{h_{RUL}}$ to maximum value of the device scale.

$\overline{h_{RdL}}$ **Humidity Alarm On Delay Time Parameter (Default = 0)**
Humidity Alarm On Delay Time can be defined with this parameter. It can be adjusted from 0 to 99 minutes.

$\overline{h_{RPd}}$ **Humidity Alarm Delay After Power On Parameter (Default = 0)**
When power is first applied to the device, this time delay must be expired for activation of Humidity alarm. It can be adjusted from 0 to 99 minutes.

- \overline{bUF} **Buzzer Function Selection Parameter (Default = 0)**
- 0 Buzzer is inactive.
1 Buzzer is active during temperature alarm
2 Buzzer is active during humidity alarm
3 Buzzer is active during Temperature sensor failures.
4 Buzzer is active during Humidity sensor failures.
5 Buzzer is active during Temperature sensor failures or temperature alarm.
6 Buzzer is active during Humidity sensor failures or Humidity alarm.
7 Buzzer is active during Temperature sensor failures or Humidity sensor failures
8 Buzzer is active during Temperature sensor failures or Humidity sensor failures or temperature alarm or humidity alarm.

\overline{bon} **Buzzer Active Time (Default = ---)**
If buzzer function selection parameter value \overline{bUF} = 0, this parameter is not observed. Buzzer active time can be define with this parameter. It can be adjusted from 1 to 99 minutes. When this parameter is 1, if decrement button is pressed, --- is observed. In this condition buzzer is active till buzzer silence button is pressed.

\overline{prt} **Button Protection Parameter (Default = 0)**

- 0 There is no protection.
1 Temperature set value can not be changed.
2 Humidity set value can not be changed.
3 Manual engine start is not available.
4 Humidity set value and Temperature set value can not be changed
5 Humidity set value can not be change and Manual engine start is not available.
6 Temperature set value can not be change and Manual engine start is not available.
7 Temperature set value and Humidity set value can not be changed. Also Manual engine start is not available.

\overline{PAS} **Programming Mode Accessing Password (Default = 0)**
It is used for accessing to programming mode. It can be adjusted from 0 to 9999. If it is 0, password is not entered for accessing to the parameters. When the password screen is not set as "12", if the user enters "12" in password screen $\overline{t_{St}}$ and $\overline{h_{St}}$ parameters are accessed and they can be changed.