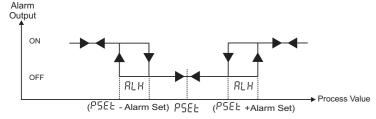
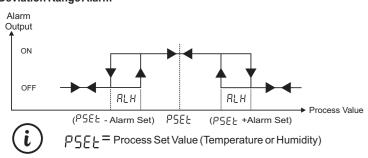
5.2 Alarm Output Graphics of ESM-3723 **Process High Alarm Process Low Alarm** Alarm Output Output Process Value

Deviation Band Alarm



Deviation Range Alarm



5.3 Failure Messages in ESM 3723

- 1-5bc | 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 buzzer function buzz internal buzzer starts to operate
- 2-56-2 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 $\begin{bmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \end{bmatrix}$ is 4, 6,7 or 8 internal buzzer starts to operate
- 3- 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 $b_{u}F$ is 1, 5 or 8 internal buzzer starts to operate.
- 4- 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 buzzer starts to operate.

6. Auto Tune Metod Auto Tune method is used for determining PID parameters used by the device Starting Auto Tune (Limit Cycle Tuning) Temperature Operation by the user: · Adjust temperature control on/off or PID parameter • Adjust auto tune selection parameter (REUn = YES) • In the main screen "Atun" and Temperature value are should alternately If Auto Tune operation is finished without any problem the device saves the new PID coefficients, calculated using the previously found "T" and "B" values, to Heating memory and continue to run.

Cancelling Auto Tune (Limit Cycle Tuning) operation

1 - If sensor breaks;

Termoresistance input type **Humidity input type**

Sensor Break Protection

Accuracy

Control Form

- 2-If auto tune operation can not be completed in 8 hours;
- 3-If user adjusts | REUn | parameter | no 4- During auto tune operation if the user changes the temperature control from pid to on/off

ดิยบก parameter is adjusted _____ automatically.

5 - 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.

: Temperature+Humidity Controller Device Type Housing&Mounting : 76 mm x 34.5 mm x71 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 **Enviromental Ratings** : Standart,indoor at an altitude of less than 2000 meters with none condensing humidity. Storage / Operating Temperature -40 °C to +80 °C / -30 °C to +80 °C : 90 % max. (None condensing) Storage / Operating Humidity Installation : Fixed installation Overvoltage Category : II, office or workplace, none conductive pollution **Pollution Degree Operating Conditions** : Continuous : 230V~ (±%15) 50/60Hz - 1.5VA **Supply Voltage and Power** : 115V \sim (±%15) 50/60Hz - 1.5VA : 24V~ (±%15) 50/60Hz - 1.5VA : 24V (±%15) 50/60Hz - 1.5VA : 10-30V--- 1.5W : NTC, PTC, PT-100,0/2..10V===,0/4..20mA=== or Temperature Sensor Input ProNem Mini PMI-P : NTC (10 kΩ @25 °C) NTC input type PTC input type : PTC (1000 Ω @25 °C) : PT-100 IEC751 (ITS90)

: ± 1 % of full scale

: PID or ON / OFF

: Upscale

: 0/2..10V===,0/4..20mA=== or ProNem Mini PMI-P

5.5 Entering To The Programming Mode, Changing and Saving Parameter



When SET button is pressed for 3 Note1: If programming seconds, "P" led turn. If programming mode accessing password mode entering password is different is 0, Temperature Unit from 0, programming mode entering screen $[\underline{\mathcal{L}} - \underline{\mathcal{F}}]$ is observed screen Pr [] will be observed.

Password Entering Screen

Prob

Entering Screen

and decrement buttons.

Decimal Separator Enabling

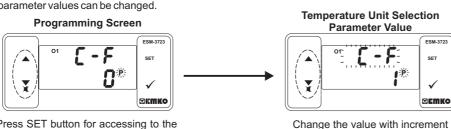
button for accessing to the previous

Press SET button for accessing to the instead of programming password entering screen Pr[

Password Entering Screen

Press SET/OK button for Enter programming mode accessing password with increment and entering the password. decrement buttons.

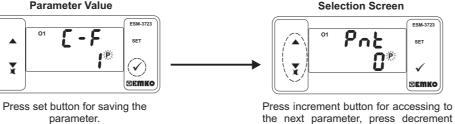
Note2: If programming mode accessing password is 0, only three parameters are accessible, and the parameter values can be changed.



Press SET button for accessing to the parameter value. Press increment button for accessing to the next parameter, press decrement button for accessing to the previous parameter.

parameter.

Temperature Unit Selection Parameter Value



Relay Outputs

LED Displays

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

parameter

: 5 A@250 V \simes at Resistive Load (Heating Output) : 3 A@250 V ~ at Resistive Load ((Heating, (Heating Alarm), (Humidifier), (Humidifier Alarm))

Optional SSR Driver Output : Maximum 30mA, Maximum 15V : 8 mm Red 4 digit LED Display **Temperature Display** : 8 mm Green 4 digit LED Display **Humidity Display**

P (Green), % (Green), °C (Red), °F(Red), Humidifier Output (Red), Humidifier Alarm Output (Red) Heating Output (Red), Heating Alarm (Red)

Internal Buzzer ERI,C€

Upprovals

8. Other Information

ESM-3723 (77x35 DIN Size)			В	С	D	E	1	F	з	ı	1	U	v	w	z	П	Е	Heating Output		
			舌	襾	ī	Ŧ	i ,	T	T	ī	Fi	亐	襾	干	0	il	1	Relay Output (5 A@250 V ~,at Resistive Load 1NC ,1 NO)		
_								L	_	L	<u> </u>	_	Ш	_	Ľ	{ [2	SSR Drive Output (Maximum 30mA, Maximum 15V)		
Α	Power Supply Voltage													ļ	FG	Humidifier Output				
2	24V (±%15) 50/60Hz - 1.5VA														11	01	Relay Output (3A@250 V ~,at Resistive Load ,1 NO)			
3	24V∼ (±%15) 50/60Hz - 1.5VA														١¦	HI Heating Alarm Output				
4	115V~ (±%15)	115V∼ (±%15) 50/60Hz - 1.5VA														Н		· ·		
5	230V~ (±%15) 50/60Hz - 1.5VA] [01 Relay Output (3A@250 V ~,at Resistive Load ,1 NO)				
8	10 - 30 V === 1.5W] [U	Humidifier Alarm Output		
В	Temperature Ser	Scale(°C/°F)										j [1	Relay Output (3A@250 V ~,at Resistive Load ,1 NO)						
1	PT 100, IEC751(ITS90)					0°C/32°F ;100°C/212°F							C/2	12	2°F	1 [٧	Temp.Sensor which is given with ESM-3723		
2	PTC (Not-1)					0°C/32°F ;100°C/212°F								12	2°F	1 [0	None		
3	NTC (Not-1)				0°C/32°F :100°C/212°F								112	°F	11	1	PTC-M6L40.K1.5 (PTC Air Probe 1.5 m silicon cable)			
4	0/210Vdc Voltage Input					User defined										Н	2	PTCS-M6L30.K1.5.1/8"(PTC Liquid Probe with 1.5 m silicon cable)		
5	0/420mA Current Input				User defined										11	3	NTC-M5L20.K1.5 (NTC Probe thermoplastic moulded with 1.5m cable for cooling application)			
6	ProNem Mini PMI-P -20°C/-4°F; 80°C/176°F						°C/	176		4	NTC-M6L50.K1.5 (NTC Probe stainless steel housing with									
С	Humidity Sensor Input Scale							le (e (%)						1	Н	1.5m cable for cooling application) ProNem Mini PMI-P (2.5m cable for Temperature and Humidity			
4	0/210Vdc Voltage	Inp	ut				09	%	- 10	00)%					1	6	application)		
5	0/420mA Current	Inpu	ıt	_	_	Г	09	%	- 10	00)%					1 I	9	Customer		
6	ProNem Mini PMI	-P					09	%	- 10	00)%]				

All order information of ESM-3723 Temperature+Humidity Controller are given on the table at above. User may form appropriate device configuration from information and codes that at the table and convert it to the ordering codes. Firstly, supply voltage then other specifications must be determined. Please fill the order code blanks according to your needs. Please contact us, if your needs are out of the Note-1: If input type is selected PTC or NTC (BC= 2, 3), Temperature sensor is given with the device. For this reason, if input type is selected as PTC, sensor type (V = 0,1 or 2) or if input type is selected as NTC, sensor type (V = 0, 3 or 4) must be declared in ordering information.

Before commissioning the device, parameters must be set in accordance with desired use. Incomplete or incorrect configuration can cause dangerous stiuations.

 Δ Because of limited mechanical life of relay output contact, SSR output is recommended which the device use PID control algoritm. The device with ON/OFF control algoritm, hysteresis parameter must be set a suitable value for your system, to avoid too much relay switching.

> gy Partner web page to download detail www.emkoelektronik.com.tr

BEMKO

Temperature+Humidity

Size

77×35

ESM-3723

C € EHI

ESM-3723 77 x 35 DIN Size Digital Temperature+Humidity 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 **Heating Alarm Output**
- **Humidification Control Output**
- **Humidification Alarm Output**
- Relay or SSR Outputs (Must be determined in order.)
- Selectable Temparature Control (PID or ON / OFF)
- Auto-Tune PID
- Set value boundaries
- Alarm parametreters
- Adjustable internal buzzer according to the alarm situations
- Password protection for programming mode,
- Having CE mark according to European Norms

Instruction Manual. ENG ESM-3723 01 V03 04/16

A visual inspection of this product for possible damage occurred during shipment is recommended 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

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

Never attempt to disassemble, modify or repair this unit. Tampering with the unit may results 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 it's 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

FMKO Flektronik warrants that the equipment delivered is free from defects in ma 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

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

: +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 : +90 224 261 1912

1.Preface

ESM-3723 series Temperature + Humidity control devices, are designed for the control of industrial processes. PID or On / Off control form under the control of the process is a device that can respond to your special needs.

Operating Temperature : 0 to 50 °C

: Up to 2000 m.

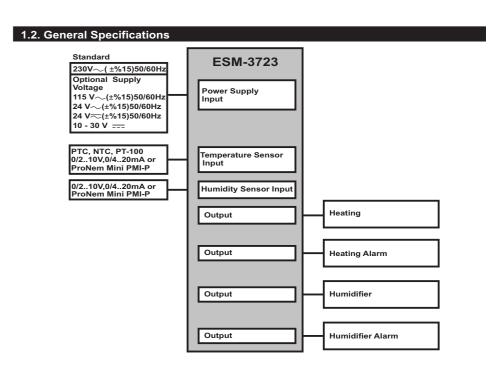


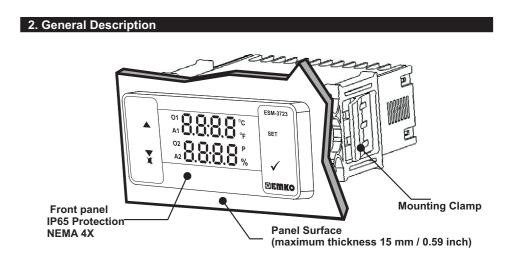
Forbidden Conditions

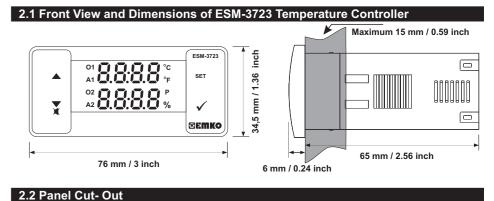
Corrosive atmosphere Explosive atmosphere

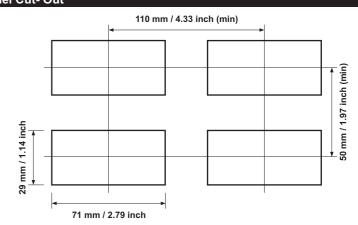
Home applications (The unit is only for industrial applications)

Max. Operating Humidity: 90% Rh (non-condensing)

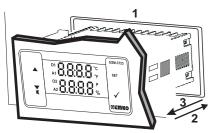








2.3 Panel Mounting and Removing



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 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



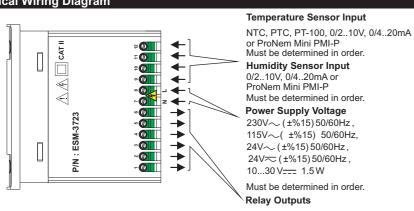
²²8.8:8.8;

fixing sockets.

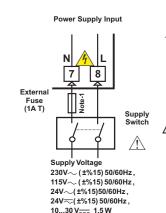
Before starting to remove the unit \ from panel, power off the unit and the related system.

2-Pull the unit through the front side of the

3. Electrical Wiring Diagram



3.1 Supply Voltage Input Connection of the Device



Make sure that the power supply voltage is the same indicated or

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.

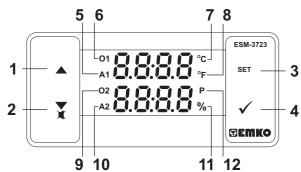
There is no power supply switch on the device. So a power supply switch must be added to the supply voltage input. Power switch must be two poled for seperating phase and neutral

On/Off condition of power supply switch is very important in electrical connection External fuse that on ~power supply inputs must be on phase

External fuse that on ___ power supply inputs must be on (+)

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

** 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. 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 Enter button is pressed again, value is saved and Humidty set value will be displayed next. Value can be changed using increment and decrement buttons. When Enter button pressed again, value is saved and returns back main operating screen

4.Enter Button:

* 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.A1 led:

** It is active when Temperature alarm statuses. 6. O1 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. O2 Led:

This led indicates that Humidifier output is active.

10.A2 Led:

** This led indicates that Humidifier Alarm is active.

11.Precent Sign ledi: ** Indicates that device is in Humidity Set screen or Humidifier output is active

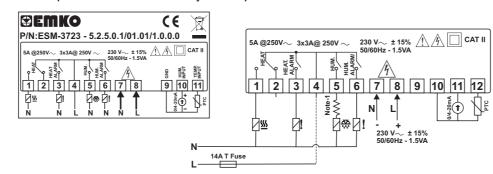
12.Program led:

** Indicates that device is in programming mode.

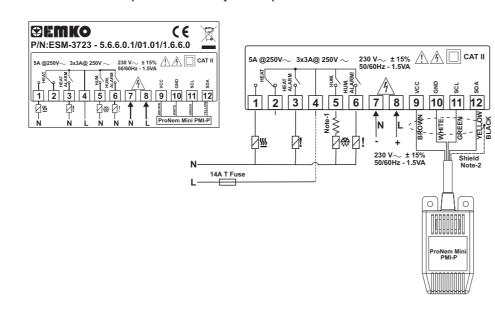
3.2 Device Label and Connection Diagram

230V~ CONNECTION DIAGRAM

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



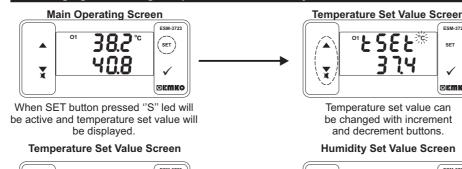
ProNem Mini PMI-P Temperature and Humidity Sensor Input Connection



Note-1: User must be connected the resistor which is inside the box serially as shown in connection diagram when use the ultrasonic humidifier(30W...50W power supply) to protect the relay output contact problem

Note-2: Shield (Black) pin must be connected to number 10 (GND) of the terminal block.

5. Changing and Saving Temperature and Humidity Set Value



Goes Humidity SET When SET button pressed

value screen.

set value can be saved.

temperature set value can be saved.

Humidity Set Value Screen Humidity Set Value Screen When SET button pressed Humidity

Humidity set value can be changed with increment and decrement buttons.



Goes back to main operation screen

Temperature set value parameter (Default =50 °C) Temperature set value, can be programmed between minimum temperature set value <u>\&5UL</u> and

maximum temperature set value ESUA

Nem Set Parametresi (Default = 60%) Humidity set value, can be programmed between minimum Humidity set value [\(\sigma 5UL \)] and maximum temperature set value h5Uh

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) °C selected. °F selected. Decimal Seperator Enabling Parameter (Default = 0) Only Temperature parameters with decimal seperator. Only Humidity parameters with decimal seperator Only Temperature and Humidity parameters with decimal seperator Note: When value of [-F] or Pat parameters are changed, the values of LSEL, LASE, LSUL, LSUL EOFE, ERSE, BREH, BRUL, ERUH, BSEE, BASE, BSUL, BSUH, BOFE, BRSE, BREH, BRUL and BRUH parameters **Note**: $\underline{k551}$, \underline{kopt} and \underline{ktot} 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{U} 0..10V $\frac{(1)}{---}$ or 0..20mA $\frac{(2)}{---}$ 2..10V (1) or 4..20mA (2) Temperature Sensor Scale Low Limit Parameter : (Default = 0) It can be adjusted from -1999 to (EuPL -1). At this value analogue input becomes; =0, according to the device type $0V \frac{(1)}{100}$ or $0mA \frac{(2)}{100}$ =1, according to the device type 2V $\frac{(1)}{-}$ or 4mA $\frac{(2)}{-}$ Temperature Sensor Scale High Limit Parameter : (Default = 100) It can be adjusted from ($\frac{\lfloor \frac{L}{2} \rfloor}{\lfloor \frac{L}{2} \rfloor}$ +1) to 9999. At this value analogue input becomes; According to the device type $10V_{--}^{(1)}$ or $20\text{mA}_{--}^{(2)}$ Note: [Łːoːː], [Łʊ/t] parameters are shown, if the Temperature sensor analogue input type is selected . Temperature Control Selection Parameter On/Off or PID (Default = 0) On - Off selected. PID selected. Note: If this parameter is select 0, PID parameters ($\underbrace{\textit{PLUn}}, \underbrace{\textit{P}}, \underbrace{\textit{P}}, \underbrace{\textit{J}}, \underbrace{\textit{J}}, \underbrace{\textit{J}})$ will be not observed. If this parameter select 1, £h5£ parameter will be not observed Device does not do(Limit cycle Tuning) operation. Device does operation. *485* 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. (1) It is valid, if the device type 0/2...10V === Temperature Sensor Input. (2) It is valid, if the device type 0/4...20mA === Temperature Sensor Input

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 h500h

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 [450] to maximum value of the

Humidity Sensor Offset Parameter (Default = 0.0) From -10 to 10%RH for Humidity Sensor (0%RH-100%RH) From -10.0 to 10.0%RH for Humidity Sensor (0.0%RH-100.0%RH) Temperature Alarm Function Selection Parameter (Default = 0)

Temperature Alarm is inactive. Process High alarm selected. Process Low alarm selected.

Deviation Band alarm selected Deviation Range alarm selected.

Note: If this parameter is select 0, Temperature Alarm parameters [R55], [RLh] [RUL], [RUh], [RUL] and 문유우리 will be not observed.

Temperature Alarm Set Parameter (Default = 50.0 °C) This parameter value can be programmed between temperature minimum alarm set \boxed{ERUL} parameter and temperature alarm set maximum \boxed{ERUL} parameter. Temperature Alarm Hysteresis Parameter (Default = 0)

Temperature Alarm nysteresis i alamost (2500), 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. LRUh 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 & RUL 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 is inactive.

	1 1000351 light didn't Sciented.
2	Process Low alarm selected.
3	Deviation Band alarm selected.
ч	Deviation Range alarm selected.

Note: If this parameter is select 0, Humidity Alarm parameters [1852], [1821], [1821], [1821], [1821] and hapa will be not observed.

From 0.1 to 10.0°C 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°C, 80°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 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 | 505 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 ESUL to maximum value of the device scale. 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 (-20 °C , 80 °C), 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) Humidity Sensor Scale Selection Parameter (Default = 0) Humidity input range is determined with this parameter. $\frac{(1)}{1}$ 0..10V $\frac{(1)}{1}$ or 0..20mA $\frac{(2)}{1}$ 2..10V = 0 or 4..20mA = 0Note: [55] parameter ProNem Mini PMI-P type device are not observed. Hysteresis Parameter for Humidity (Default = 1) From 1 to 10 for Humidity Sensor (0%RH, 100%RH) From 0.1to 10.0 for Humidity Sensor (0.0%RH,100.0%RH) In ON/OFF control algorithm, Humidity 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. (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 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 (32°F, 212°F)

Humidity Alarm Set Parameter (Default = 60) This parameter value can be programmed between humidity minimum alarm set

Humidity Alarm Hysteresis Parameter (Default = 0)

This parameter value can be adjusted form 0 to %50 of the device scale

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 humidty alarm set maximum parameter value. hRUh

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|ト昂ヒヒヒ| to maximum value of the device scale.

հ℞ℴէ∣ parameter and humidity alarm set maximum ဩ೪೮೫ parameter.

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.

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. Buzzer Function Selection Parameter (Default = 0) *-*ԵսԻ Buzzer is inactive.

Buzzer is active during temperature alarm Buzzer is active during humidity alarm Buzzer is active during Temperature sensor failures Buzzer is active during Humidity sensor failures.

> Buzzer is active during Temperature sensor failures or temperature alarm. Buzzer is active during Humidity sensor failures or Humidity alarm

Buzzer is active during Temperature sensor failures or Humidity sensor failures Buzzer is active during Temperature sensor failures or Humidity sensor failures

or temperature alarm or humidity alarm. Buzzer Active Time (Default = |----|)

If buzzer function selection parameter value **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. Button Protection Parameter (Default = 0)

There is no protection Temperature set value can not be changed

accessed and they can changed.

Humidity set value can not be changed. Temperature set value and Humidity set value can not be changed

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 [Lh5L] and [hh5L] parameters are