

Note-1: If process output is SSR driver output, pay attention to the (+) and (-) pins while doing the connection of the device.



OPTIC ELECTRONIC LTD.

Terazidere Mah.60.Yil Cad.No:5/3
 34035 Bayrampasa/ISTANBUL/TURKEY
 TEL : 0 212 501 48 63
 FAX : 0 212 501 48 83
 Email: opkoninfo@opkon.com.tr



MODEL OP-HC 4

TEMPERATURE CONTROL
 DEVICE

Ver 1.0T USER GUIDE



WARNING!
 READ CAREFULLY BEFORE POWER ON

1. Complete electrical connections according to the Schematic at the last page.
2. Check Supply voltage 230V AC, or DC, due to Specifications on the equipment.
3. Use only shielded cable for thermocouple.
4. Keep away the equipment from direct temperature source.
5. MODEL OP-HC 4 is not suitable for outdoor use.
6. Keep away the equipment from water or other liquid drains.
7. Do not open, modify or replace any component in the equipment, If any problem occurs please contact an authorised OPKON technical Service or OPKON directly.

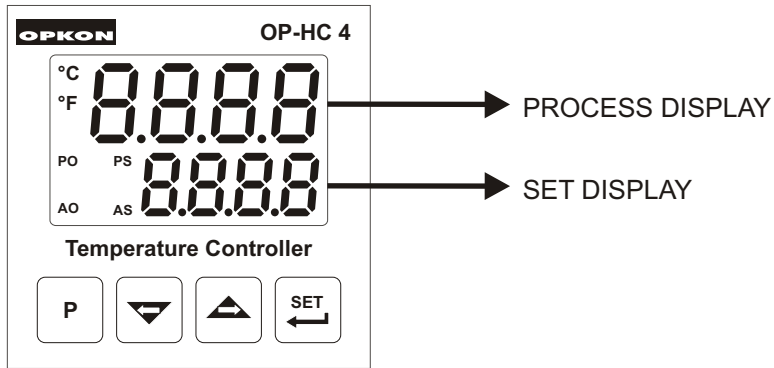
ELECTRICAL SPECIFICATIONS :

Process Input:	TC, RTD
Thermocouple (TC):	J , K , R , S ve T (IEC584.1)(ITS90)
Thermoresistance (RTD):	PT-100 (IEC751)(ITS90)
Measurement Range :	Please refer to Table-1 for selection of input type and scale.
Accuracy :	± 0.25% of scale for thermocouple and thermoresistance
Cold Junction Compensation :	Automatically ±0.1°C/1°C
Line Compensation:	Maximum 10 Ohm
Sensor Break Protection:	Upscale
Sampling Cycle :	3 samples per second
Input Filter:	1.0 second.
Control Form:	ON/OFF, P, PI, PD or PID
Process Output :	Relay (5A@250V~ at resistive load) or SSR Driver Output (Maximum 20mA @12V ---)
Alarm Output :	Relay(5A@250V~ at resistive load)
Power Supply:	230V ~ (±%15) 50/60 Hz - 3VA
Process Display :	10.1 mm Red 4 digit LED Display
Set Display:	8 mm Green 4 digit LED Display
LED Display :	PS (Process Set Value), PO (Process Output Status Led) , AS (Alarm Set Value), AO (Alarm Output Status Led) , °C , °F Leds

MECHANICAL SPECIFICATIONS:

Operating Temperature:	0...50°C
Humidity :	0-90%RH (none condensing)
Protection Class :	Ip65 at front, IP20 at rear
Weight:	220 gr.
Dimension:	48 x 48mm, Depth:95 mm
Panel CutOut:	46 x 46mm

DESCRIPTIONS



BUTTONS



To approve Parameter or Set value



Decrease Parameter value and access to program menus.



Increase Parameter value and access to program menus.



To access the Program parameters

LEDS

°C Process value type is Celsius

°F Process value type is Fahrenheit

PO Turns on when Process output is active.

AO Turns on when Alarm output is active.

PS Turns on when Process Set value shown on the bottom display.

AS Turns on when Alarm Set value shown on the bottom display.

SET PARAMETERS MENU

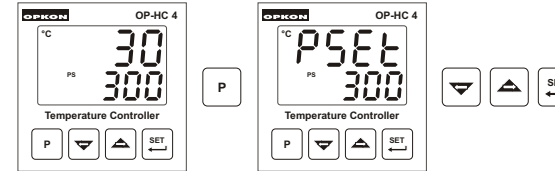
In the Set parameters menu Pset and ASet parameters are available.

PSet : Process Set Value

ASet : Alarm Set Value

Entering Set Parameter Menu and Setting the Parameters is shown below.

PSet - Process Set Value



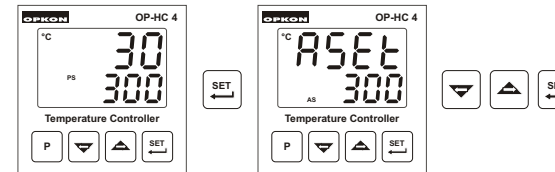
Press **P** button to access PSet value

Press **Increment** or **Decrement** button to change the Process Set value

Press **SET** button to approve the value.

Model OP-HC 4 Process output fixes the temperature to this value.

ASet - Alarm Set value



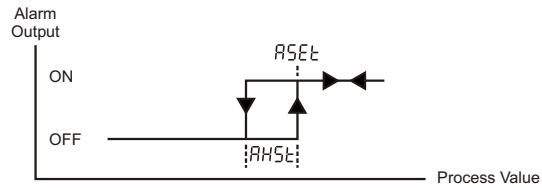
Press **SET** button to access ASet value

Press **Increment** or **Decrement** button to change the Alarm Set value

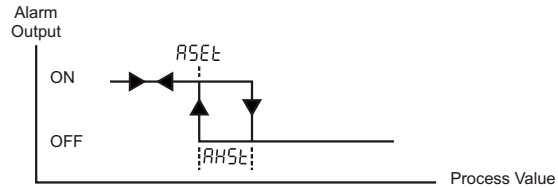
Press **SET** button to approve the value.

ALARM TYPES

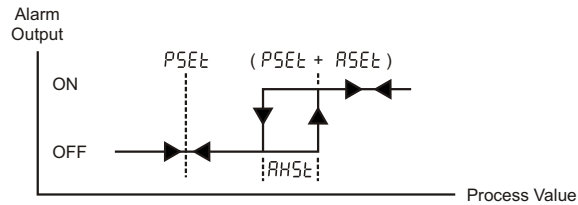
Process High Alarm



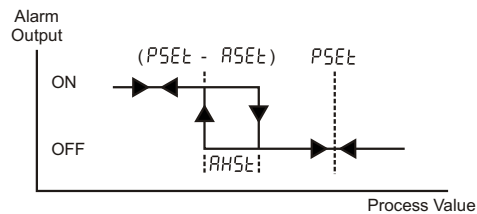
Process Low Alarm



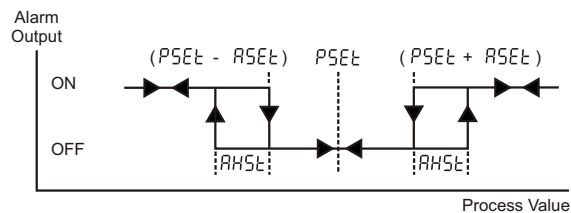
Deviation High Alarm



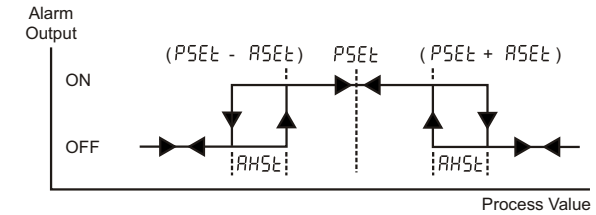
Deviation Low Alarm



Deviation Band Alarm



Deviation Band Alarm



Ordering Information

OP-HC 4 (48x48 DIN 1/16)	A	BC	D	E	/	FG	HI	/	U	V	W	Z
			0	/	01	00	/	0	0	0	0	0

A Supply Voltage	
3	24V ~ (± 15%) 50/60Hz
4	115V ~ (± 15%) 50/60Hz
5	230V ~ (± 15%) 50/60Hz
9	Customer
BC Input Type	
20	Configurable(Table-1)
D Serial Communication	
0	None
E Process Output	
1	Relay Output (5A@250V~ at resistive load)
2	SSR Driver Output Max. 20mA @12V ---
FG Alarm Output	
01	Relay Output (5A@250V~ at resistive load)

Table-1

BC	Input Type(TC)	Scale(°C)	Scale(°F)
23	J ,Fe CuNi IEC584.1(ITS90)	-200°C,900°C	-328°F,1652°F
25	K ,NiCr Ni IEC584.1(ITS90)	-200°C,1300°C	-328°F,2372°F
27	R ,Pt13%Rh Pt IEC584.1(ITS90)	0°C,1700°C	32°F,3092°F
28	S ,Pt10%Rh Pt IEC584.1(ITS90)	0°C,1700°C	32°F,3092°F
29	T ,Cu CuNi IEC584.1(ITS90)	-200°C,400°C	-328°F,752°F

BC	Input Type(RTD)	Scale(°C)	Scale(°F)
39	PT 100 , IEC751(ITS90)	-200°C,650°C	-328°F,1202°F
40	PT 100 , IEC751(ITS90)	-199.9°C,650.0°C	-199.9°F,999.9°F