PI440

Prosess Display
USER GUIDE's

ORDEL   **PI440**

ERROR MESSAGES

Error Message	Meaning
-SB-	Sensor connection is broken.
-Uf-	Process value is below the sensor scale.
-Of-	Process value is above the sensor scale.
_nn_	Process value is too high that it cannot be displayed.
-vv-	Process value is too low that it cannot be displayed.

SAFETY PRECAUTIONS

☞ Before using the device, please read the warnings below and this guide carefully.

☞ The accidents and damages resulting from not following the warnings included in this guide are under user's responsibility.

☞ Take the necessary precautions in order to prevent accidents and damages that may result in case the device gets faulty.

☞ Do not use this device in environments where flammable or explosive gases exist.

☞ Do not allow metal fragments or lead wire scraps or liquid matters to fall inside this device.

☞ Do no touch the terminals while the device is energized (power on)

☞ Device will be out of guarantee when it gets faulty resulted from misusages.

☞ Do not power up the device before the connections related with the device are performed in accordance with connection diagram.
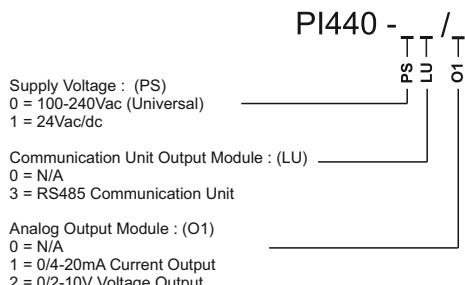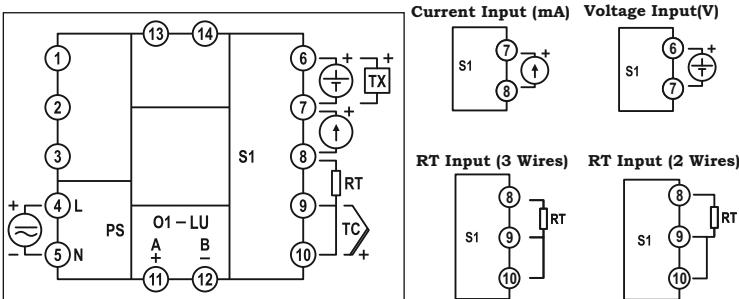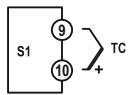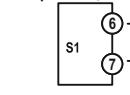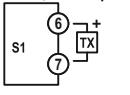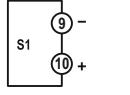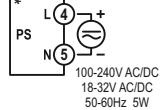
TECHNICAL SPECIFICATIONS

Besleme Gerilimi	100-240Vac/dc: +%10 -%15	24Vac/dc: +%10 -%20
Power	3W,5VA	
Universal Analog Input(S1)	Termocouple (B,E,J,K,L,N,R,S,T,U), Resistance Thermometer (Pt100),2 WireTransmitter, Current(0/4-20mA), Voltage (0-50mV, 0/2-10V)	
Transmitter Voltage	24Vdc (Isc = 30mA)	
Analog Input Impedance	Termocouplel: 10MΩ, Current: 10Ω, Voltage: 1MΩ	
Analog Output (O1)	Current: 0/4-20mA, 20-4/0mA (RL ≤ 500Ω)	
	Voltage: 0/2-10V, 10-2/0V (RL ≥ 1MΩ)	
Memory	100 yıl, 100.000 renewals	
Doğruluk	+/- %0,2	
Sampling Time	100ms	
Environment Temperature	Operation: -10...+55C, Storage: -20...+65C	
Protection	IP20	
Dimensions	Width: 48 mm, Height: 48 mm, Depth: 108 mm	
Panel Cut-Out Dimensions	45+/-0,5 mm x45+/-0,5 mm	
Weight	154 gr	

SENSOR TYPES

| Sensor Type	Standart	Temperature (°C)	Temperature (°F)
Type B Thermocouple	IEC584-1	60, 1820	140, 3308
Type E Thermocouple	IEC584-1	-200, 840	-328, 1544
Type J Thermocouple	IEC584-1	-200, 1120	-328, 1562
Type K Thermocouple	IEC584-1	-200, 1360	-328, 2480
Type L Thermocouple	DIN43710	-200, 900	-328, 1652
Type N Thermocouple	IEC584-1	-200, 1300	-328, 2372
Type R Thermocouple	IEC584-1	-40, 1760	104, 3200
Type S Thermocouple	IEC584-1	-40, 1760	104, 3200
Type T Thermocouple	IEC584-1	-200, 400	-328, 752
Type U Thermocouple	DIN43710	-200, 600	-328, 1112
Pt100 Resistance Thermometer	IEC751	-200, 840	-328, 1544

PRODUCT CODE

PI440 - □□/□
PS LU O1

Supply Voltage : (PS)
0 = 100-240Vac (Universal)
1 = 24Vac/dc

Communication Unit Output Module : (LU)
0 = N/A
3 = RS485 Communication Unit

Analog Output Module : (O1)
0 = N/A
1 = 0/4-20mA Current Output
2 = 0/2-10V Voltage Output

COMMUNICATION ADRESSES

Adress	Description	Unit	Mul.	Setting
0	Decimal Point (DP)			No
1	Process Value	EU	10^DP	No

Bit Type Parameters Adress

Adress	Setting	Description(1 / 0)
0	No	Process value is below the sensor scale (Yes /No)
1	No	Process value is above the sensor scale (Yes / No)
2	No	Sensor connection is broken error. (Var / Yok)
3	No	Process Measurement Error (Yes/ No)

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`23.8` **Process-Screen**

`* ↻` (Press these keys simultaneously for 2 seconds)

Entering Configuration Page Security Code

`C2` Enter security code with "⌃" and "⌄" keys.
(Default factory setting for the security code is

`↻`

`FS`

`↻`

`dP`

`↻`

`S1t`

⋮

`SC.2`

Configuration Parameters:
Upper display shows parameter name, lower display shows setting option.
To change the setting option, "⌃" and "⌄" keys are used.

CONFIGURATION PAGE PARAMETERS

Par. 01 `FS` `oFF`
In order to restore the settings to the factory default, this parameter should be set to "on" and "↻" key should be pressed for two

Setting Preferences: oFF , on

Par. 02 `dP` `1`
It determines the decimal level (number of digits after dot) of all parameters which have a unit of "EU".

Setting Range : 0 - 3

Warning: *When this parameter has been changed, all parameters which have a unit of "EU" should be set again.*

Note: *"EU", which is determined by "HU" parameter is a temperature unit for thermocouple or resistance thermometer measurements   Otherwise, it is an engineering unit that*

Par. 03 `S1t` `tC-J`
"S1" determines the sensor type which is connected to the universal sensor input. This sensor is used to measure the process

Setting Preferences: Table-1

Table-1	No	Sensor Type
tC-b	0	Type-B Thermocouple (Pt%18Rh-Pt)
tC-E	1	Type-E Thermocouple (Cr-Const)
tC-J	2	Type-J Thermocouple (Fe-Const)
tC-K	3	Type-K Thermocouple (NiCr-Ni)
tC-L	4	Type-L Thermocouple (Fe-Const)
tC-n	5	Type-N Thermocouple (Nicrosil-Nisil)
tC-r	6	Type-R Thermocouple (Pt%13Rh-Pt)
tC-S	7	Type-S Thermocouple (Pt%10Rh-Pt)
tC-t	8	Type-T Thermocouple (Cu-Const)
tC-U	9	Type-U Thermocouple (Cu-Const)
rt	10	Pt-100 Resistance Thermometer
0-50	11	0-50mV
0-20	12	0-20mA
4-20	13	4-20mA
0-10	14	0-10V
2-10	15	2-10V

Par. 04 `S1L`
It determines the lower scale value of "S1" universal sensor input module.

Setting Range : -199.9 - 999.9	*Unit : EU*

Par. 05 `S1H` `800.`
It determines the higher scale value of "S1" universal sensor input module.

Setting Range : -199.9 - 999.9	*Unit : EU*

Par. 06 `S1b` `H`
It determines the value which scala will be set to when the universal sensor input connection is broken.

Setting Preferences : L (Low value) , H (High value)

Par. 07 `HU`
It determines the temperature unit for the measurements of thermocouples or resistance thermometers.

Setting Preferences : ºC (ºC), ºF (ºF)

Par. 08 `tSu`
While measuring with thermocouples or resistance thermometers, in order to correct measurement errors, it is

Setting Range : -100.0 - 100.0	*Unit : EU*

Par. 09 `FtC`
It determines the time constant of digital filter that is applied to analog inputs. If this value is increased, reading stability increases but

Par. 10 `o1t`
It determines the type of "O1" analog output module.

Setting Preferences : Table-5

Table-5	No	Analog Output Type
0-20	0	0-20mA
20-0	1	20-0mA
4-20	2	4-20mA
20-4	3	20-4mA
0-10	4	0-10V
10-0	5	10-0V
2-10	6	2-10V
10-2	7	10-2V

Note: *In order to be able to use the first four preferences, this module should be identified as being "0/4-20mA" in product code. As for the last four preferences, "0/2-10V" should be*

Par.11 `o1L`
It determines the lower value of output scale when "O1" analog ouput module is used as a transmitter.

Setting Range: -199.9 - 999.9	*Unit : EU*

Par.12 `o1H` `800.`
It determines the upper value of output scale when "O1" analog ouput module is used as a transmitter.

Setting Range: -199.9 - 999.9	*Unit : EU*

Par. 13 `Add`
It determines the serial communication address. All addresses should be unique that are connected to a serial

Setting Range : oFF (Closed) , 1 - 255	*Birim : EU*

Par. 14 `bAU`
It determines the serial connection speed.

Setting Preferences : 9.6 , 19.2 , 38.4	*Birim :*

Par. 15 `Prt` `Eu`
It determines the parity type in serial communication.

Setting Preferences : nonE (None) , odd (Odd) ,

Par. 16 `SC.2`
It determines the security code for Configuration page.

Setting Range : -1999 - 9999