

FX7SE series

User Manual

DOTECH
SENSING & CONTROL

DOTECH inc.

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INNOBIZ
www.dotech21.com

1. This Product may cause an Electric Shock in handling, please do not attempt to open it with power turned on.
 2. This Product should be install in a place fixed securely by a rack or panel.
 3. This Product can be use under the following environmental conditions.
① Indoor ② Pollution Degree 2 ③ At an Altitude of 2000m or below
 4. Power input must be within the designated ranges.
 5. To turn on or turn off power supply for this product, please the circuit breaker or switch of a standard product of IEC 60947-1 or IEC 60947-3 product and install it with a close distance allowing convenient operation by user.
 6. Please be understood that if this product is dismantled or modified discretionary, after sales service will not be able to be provided.
 7. An output wire to be used for this product should be inflammable grade FV1 (V-1 grade or above), the thickness of the wire should be AWG No. 20 or above(0.50mm²).
 8. In order to prevent it from an inductive noise, please maintain the high-voltage wire and power wire separated.
 9. Please avoid installing the product in a place where a strong magnetism, noise, severe vibration and impact exist.
 10. When extending the sensor wire, use a shield wire and do not extend it unnecessary long.
 11. The sensor wire and signal wire should be away from the power and load wires using conduits separately installed.
 12. Please avoid using the product near a device generating strong high frequency noise (high-frequency welding machine, high-frequency sewing machine, high-frequency radiotelegraph, high capacity SCR controller)
 13. Product's damages other than those described in the guarantee conditions provided by the manufacturer shall not be responsible by us.
 14. If this unit is used to control machineries (Medical equipment, vehicle, train, airplane, combustion apparatus, entertainment, processing and transportation equipment, elevator and various safety device etc.) enabling to effect on human or property, it is required to install fail-safe device.
- ※ The Aforementioned precautions must be observed, and if you fail to do so, it may cause a product's breakdown.
※ The specifications, dimensions, and etc. are subject to change for enhancement without a prior notice.

1. Overview



※ Special feature

- Inside the desired temperature table
- Sensor error detection, Sensor calibration
- Water proof front (IP65)
- Compact size (34mm)
- RS485
- Select temperature unit (°C, °F)

: Basic Specification

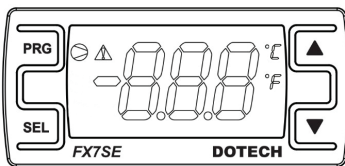
List	Description
Dimensions	79.5(W)mm X 36(H)mm X 39.7(D)mm
Power	200 - 230 Vac, 50/60 Hz
Consumption	MAX 6 VA
Connection	Screw Bolt Connector, wire range : 24~12 AWG
Input	Temp. Sensor Input 1point
Output	Relay Output 1point (250 Vac / 16 A or 5 A)
Operation	Temp.: - 10 ~ 60°C, Humidity: Below 90 %RH
Storage	Temp.: - 20 ~ 70°C, Humidity: Below 90 %RH

: Order Information

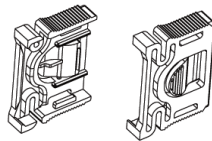
Model	Description
FX7SE-16P-00	Basic Model, Relay Output 16A
FX7SE-16P-R4	RS485 Comm. Model, Relay Output 16A
FX7SE-05P-00	Basic Model, Relay Output 5A
FX7SE-05P-R4	RS485 Comm. Model, Relay Output 5A

※ Specifications are subject to change without prior notice.

: Components

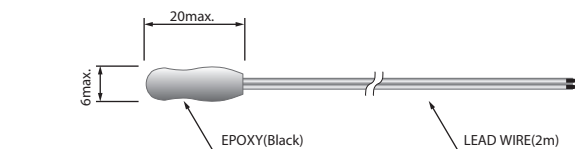


Product

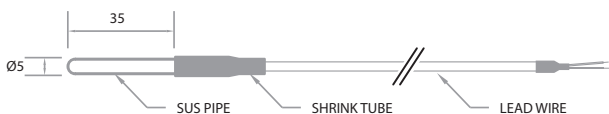


Bracket 2ea

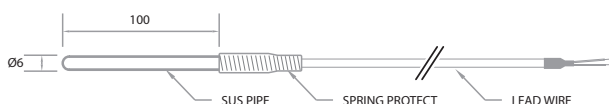
: Accessories



DPR-TH01-AT5-2M : NTC 5KΩ at 25°C / -50~105°C / ±0.3°C at 25°C



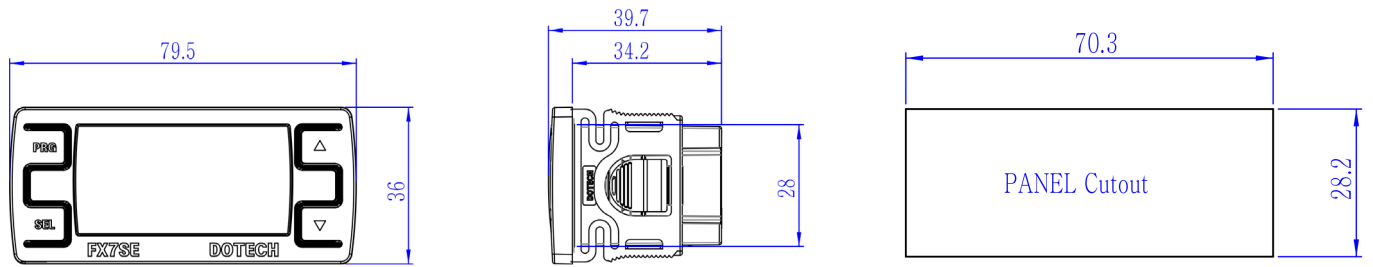
DPR-TH01-ET-2M : NTC 5 KΩ at 25 °C / -50~105°C / ±0.3°C at 25°C



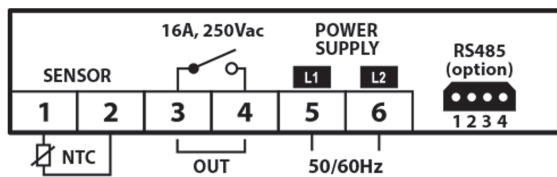
DPR-TH02-P6D100L : NTC 10 KΩ at 25 °C / -50~150°C / ±1.5°C at 25°C

2. Install

: Dimensions and Panel Cut – Out Form



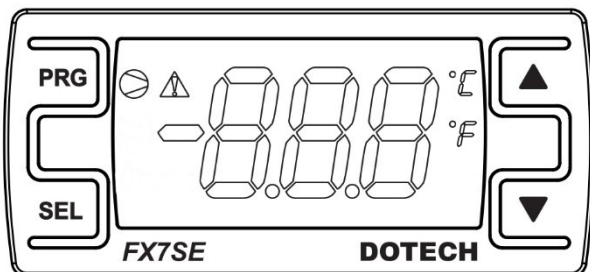
: Wiring



No.	Label	Description
1	SENSOR	Temperature sensor input
2		
3	OUT	Common signal
4		Relay output when closed
5	POWER	200 – 230 Vac, 50/60 Hz
6		

3. User Interface

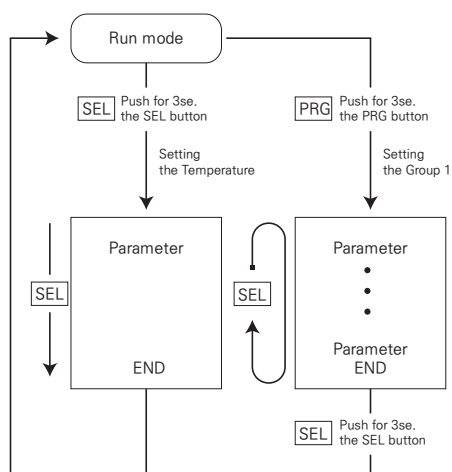
: Constitution (Function of Display Lamp and Button)



	Name	Description
LED		Turn on when COMP output / Flickering at standby
		ON at trip, Flickering at alarm
	°C / °F	Celsius / Fahrenheit display units
Button	PRG	Use at program setup, Off alarm sounds, Off hold
		Move between menus & Increase setup value
		Move between menus & Decrease setup value
	SEL	Select and save & Press once to change setting temperature

4. Parameter

: Parameter Setting



- Press the SEL button for 3 sec while operating to change the set temperature.
- Press the PRG button for 3 sec to enter the group 1 parameter.
- The SEL button is a function for moving the next menu and saving the setting value at Parameter Setting.
- The set value flashes every 0.5 sec, and the set value is set (changed) by using the ▲ key or the ▼ key.
- When the set value is changed and the SEL button is pressed for 3 seconds, the current temperature is displayed.
- If there is no key input for 60 seconds during setting, it automatically returns to operation mode.

: Temperature Setting

No	Menu	Code	Unit	Step	Min.	Max.	Default	Note
4 0001	Temperature setting	<i>St</i>	°C / °F	1	<i>UL</i>	<i>UH</i>	-20	

: Setting Group 1 Parameter

No	Menu	Code	Unit	Step	Min.	Max.	Default	Note
4 0002	Select Temperature Unit	<i>Unit</i>	°C : Celsius °F : Fahrenheit				°C	
4 0003	Select Control Type	<i>tYP</i>	<i>oFF</i> : Display <i>C</i> : Cooling <i>H</i> : Heating				<i>C</i>	
4 0004	Control Deviation	<i>dIF</i>	°C / °F	0.1	<i>1</i>	<i>99</i>	2	
4 0005	ON Delay time	<i>dLt</i>	sec	1	<i>0</i>	<i>999</i>	60	
4 0006	ON Delay time Unit	<i>dLU</i>	-	1	<i>0</i>	<i>1</i>	0	0 : Sec., 1 : Min.
4 0007	Defrost cycle setting	<i>dEF</i>	hour	1	<i>0</i>	<i>24</i>	5	
4 0008	Defrost time setting	<i>dEt</i>	min	1	<i>0</i>	<i>60</i>	5	
4 0009	Defrost termination temperature	<i>dEP</i>	°C / °F	1	<i>UL</i>	<i>UH</i>	5	
4 0010	Max. Set Point	<i>UH</i>	°C	1	<i>UL</i>	<i>105</i>	100	
4 0011	Min. Set Point	<i>UL</i>	°C	1	<i>-55</i>	<i>UH</i>	-50	
4 0012	Buzzer Delay Time	<i>bUr</i>	초	1	<i>oFF</i>	<i>999</i>	<i>oFF</i>	
4 0013	Sensor Correction	<i>Cor</i>	K	1	<i>-199</i>	<i>199</i>	-2	
4 0014	Sensor Type	<i>Sen</i>	<i>t01</i> : TH01, <i>t02</i> : TH02				<i>t01</i>	TH01 : NTC5K, TH02 : NTC10K Temp. Sensor
4 0015	Communication ID	<i>id</i>	-	1	<i>1</i>	<i>128</i>	1	
4 0016	Communication Baud rate	<i>bPS</i>	<i>24</i> :2400 <i>48</i> :4800 <i>96</i> :9600				<i>96</i>	
4 0021	Current temp.	<i>-</i>	°C / °F	0.1	<i>-50</i>	<i>105</i>	-	

: TRIP / ALARM MESSAGE

No	Menu	Code	Setting	Movement	Release
1	Sensor Open	<i>oPn</i>	Need to check the sensor	Stop	Automatic return
2	Sensor Short	<i>SHt</i>	Need to check the sensor	Stop	Automatic return
3	Sensor input lower limit	<i>LLL</i>	Occurs if the sensor input is below the sensor range.	Stop	Automatic return
4	Sensor input upper limit	<i>HHH</i>	Occurs if the sensor input is above the sensor range.	Stop	Automatic return