Fan Coil Controller

FX32F

User's Manual

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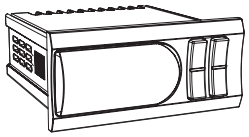
Cautions

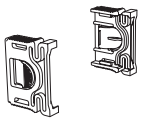
1. This product may cause an electric shock in handling. Please do not attempt to open it with power turned on.
2. This product should be installed in a place fixed secured by a rack or panel.
3. This product can be used under the following environmental condition. ① Indoor ② Pollution Degree 2 ③ At 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 within 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(0.50mm^2).
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 decribed in the guarantee conditions provided by the manufacturer shall not be respoinsible 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.

Components



Product



Bracket 2ea

User's Manual

Technical Specifications

Power	100 – 240Vac, 50/60Hz
Current	MAX 6 VA
Connection	Connector
Output	Relay Output 2 Point (250Vac / 2A)
Input	Temp. Sensor Input 2 Point
Dimensions	78(W)mm X 35(H)mm X 78(D)mm
Operation	Temperature: −10 ~ 50˚C, Humidity: Below 90%RH
Storage	Temperature: −20 ~ 60˚C, Humidity: Below 90%RH

Ordering guide

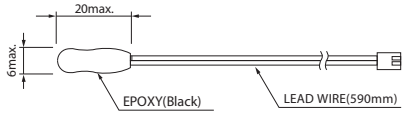
FX32F−00	Basic Model
FX32F−R4	RS485 Comm. model

※ Communication is not supported in standard models.

Accessories

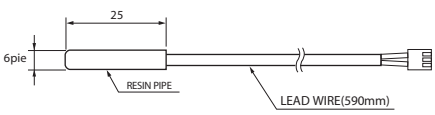
DPR-TH01-AT5-SMH250-02

Sensor type : NTC 5KΩ
Range : -50 ~ 105℃
Accuracy : ±0.3℃ at 25℃



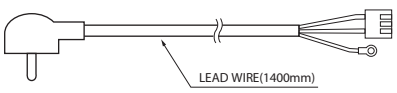
DPR-TH01-RT-SMH250-03

Sensor type : NTC 5KΩ
Range : -50 ~ 105℃
Accuracy : ±0.3℃ at 25℃

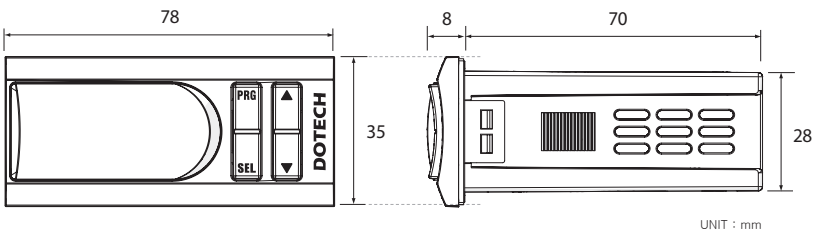


FX32F POWER CABLE / **3P JACK**

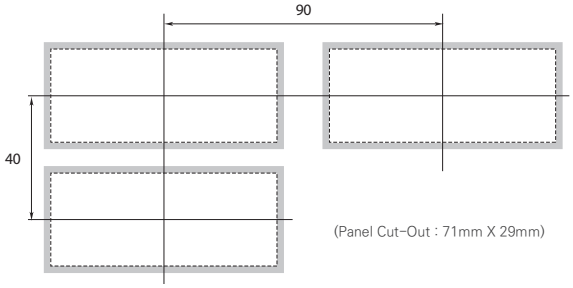
Power : 220VAC (10A 250V)



Dimensions and Panel Cut−Out Form



UNIT : mm



(Panel Cut−Out : 71mm X 29mm)

※ Specifications are subject to change without prior notice.

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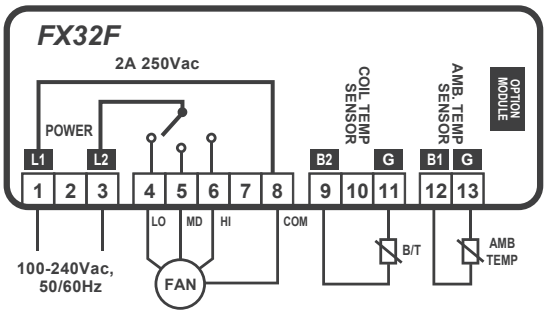
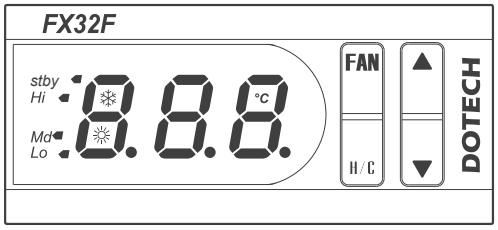
Wiring



- LO : Low speed ON/OFF output
- MD : Middle speed ON/OFF output
- HI : High speed ON/OFF output
- G : Input Signal Command.
- B1 : Input AMB. Temp. Sensor
- B2 : Input COIL Temp. Sensor

NO	Connection	Description
1	POWER	100~240Vac, 50/60Hz
2		
3		
4	FAN	Low speed(Lo) output
5		Middle speed(Md) output
6		High speed(Hi) output
8		Common signal
9	COIL TEMP. SENSOR	COIL(B2) Temp. sensor input
11		Common signal
12	AMB. TEMP. SENSOR	AMB.(B1) Temp. sensor input
13		Common signal

Constitution (Function of Display Lamp and Button)



LED	Stby	Turn on at Stanby.
	Hi	Turn on when High speed airflow running Set.
	Md	Turn on when Middle speed airflow running Set.
	Lo	Turn on when Low speed airflow running Set.
	❄	Display Cooling Control
	☼	Display Heating Control
BUTTON	**FAN**	It is used for fan speed settings, user can set-up it in three stages such as Hi, Md, Lo
	H/C	Choice of cooling / heating (Press 3 sec.Display coil (B2) temp.)
	▲ ▼	Increase and decrease set value for temperature. Temperature Range : 10 ~ 40 ℃
	FAN + ▼	If pushing for 10 sec. at the same time , setup value is initialized

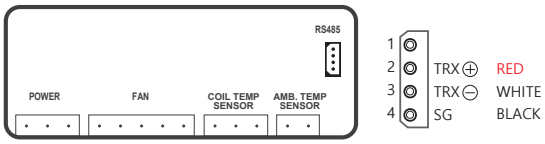
Trip / Alarm Messages

Code	Menu	Description / Instructions	Response at Detection	Reset Type
SYS	Internal Parameter Error	In case of change of set value by an unknown case.	Immediate Stop	Automatic Reset
E01	AMB. Temp. Sensor Open	In Case of Ambient Sensor Open Wire (Normal operation after sensor connecting)	Immediate Stop	Automatic Reset
E02	AMB. Temp. Sensor Short	In Case of Ambient Sensor Short Circuit	Immediate Stop	Automatic Reset
E03	COIL Temp. Sensor Open	In Case of Coil Sensor Open Wire (Normal operation after sensor connecting)	Immediate Stop	Automatic Reset
E04	COIL Temp. Sensor Short	In Case of Coil Sensor Short Circuit	Immediate Stop	Automatic Reset

Communication

Transmission line connection	Multiple line
Communications method	RS485 (2-wire, half-duplex)
Synchronization method	Start-stop syncro.
BPS	BPS default 9600 BPS
Parity, Data, Stop bit	None, 8 Data, 1 Stop
Protocol Type	Modbus RTU Mode

-R4 Model(RS485) Wiring



Communication Table

No	Menu	Unit	Type	Size (Word)	FX	MMI	Scale
4 0079	Communication ID		Analog	INT 16	1 ~ 128		
4 0080	BPS		Analog	INT 16	0: 4800, 1: 9600, 2: 19200, 3: 38400 bps		
4 0095	Control Mode		Analog	INT 16	0: Local, 1: Remote 2: Local + Remote		
4 0096	Set Temp. for Cooling	˚C	Analog	INT 16	10 ~ 40		1
4 0097	Set Temp. for Heating	˚C	Analog	INT 16	10 ~ 40		1
4 0098	Selection of Cooling/Heating		Analog	INT 16	0: Cooling, 1: Heating		
4 0099	Fan Speed		Analog	INT 16	0: stby, 1: Hi, 2: Md, 3: Lo		
4 0101	State Code of Product		Digital	INT 16	Refer to below Bit State		
Bit 0	State of low speed airflow running (ON/OFF)		Digital	Bit	0 : OFF 1 : ON		
Bit 1	State of middle speed airflow running (ON/OFF)		Digital	Bit	0 : OFF 1 : ON		
Bit 2	State of high speed airflow running (ON/OFF)		Digital	Bit	0 : OFF 1 : ON		
Bit 8	Probe (Sensor Input) Alarm		Digital	Bit	00 : Normal, 10 : open, 11 : short		
Bit 9							
Bit 15	EEPROM check alarm		Digital	Bit	0: Normal, 1: Fault		
4 0102	Present Value of Ambient Temperature (PV)	˚C	Analog	INT 16			1/10
4 0103	Displayed Value of Ambient Temperature (PV)	˚C	Analog	INT 16			1/10
4 0104	Present Value of Coil Temperature (PV)	˚C	Analog	INT 16			1/10
4 0105	Displayed Value of Coil Temperature (PV)	˚C	Analog	INT 16			1/10
4 0107	Product's Program Code		Analog	INT 16			

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