F4 Process Controller

CE

Feature:

- Saving space with the shortest length behind panel.
- 0.4" LED display showing SV/PV at a glance.
- Front panel protection with NEMA-4/IP65. (The attached gasket is required.)
- Higher sampling (100ms) result in better control performance.
- Protect the control object from thermal shock (rapid temperature change) with the excellent ramp rate facility.
- Protect the heating element from excess current during initial power-up.

Specification	
Input	Thermocouple (T/C): J, K, T, E, B, R, S, N, C (ITS-90)
	Pt100: Excitation 180uA. 2 or 3 wire connection (ITS-90 =0.00385)
	Voltage: -60mVdc to 60mVdc or -10Vdc to 10Vdc
	Current: 0mA to 24mA
Sampling Rate	100mS
Control Mode	Proportional Band: 0.0~300.0% (0.0 %=On/Off mode)
	Integral Time: 0~3000 sec
	Derivative Time: 0~1000 sec
	Hysteresis: 0.0~999.9 or 0~9999
	Cycle Time: 1~60 sec
Control Output	Relay Contact Output: 5A/240 VAC (Rasistive load)
	Pulsed Voltage Output: DC 0/24V (Rasistive load 250 Min.)
Alarm Output	Relay Contact Output: 5A/240 VAC (Rasistive load)
General Specifications	Power supply: Universal 90 ~ 265 VAC 50/60 Hz
	Power consumption: 4VA Max.
	Aux. 24Vdc power output: 25mA (max.)
	Common mode rejection ratio: >80dB
	Operating temperature: 0 to 50°C
	Humidity: 0 to 85% RH (Non-Condense Condition)
	Electromagnetic compatibility (EMC): En 50081-2, En 50082-2
	Housing material: ABS plastic. UL 94V0
	Weight: 100g (3.5 Oz)
Digital Communication	EIA RS-485 with ModBus RTU mode Protocol
	Baud Rate: 2400,4800,9600,19200 bps
	1 Start bit, 8 Data bits, None Parity, 2 Stop bits

Measuring Range & Accuracy		
Input signal	Maximum Range	Accuracy
Thermocouple J	-50 to 1000°C (-58 to 1832°F)	±1°C
Thermocouple K*	-50 to 1370°C (-58 to 2498°F)	±1°C
Thermocouple T	-270 to 400°C (-454 to 752°F)	±1°C
Thermocouple E	-50 to 750°C (-58 to 1382°F)	±1°C
Thermocouple B	0 to 1800°C (32 to 3272°F)	±2°C (Note1)
Thermocouple R	-50 to 1750°C (-58 to 3182°F)	±2°C
Thermocouple S	-50 to 1750°C (-58 to 3182°F)	±2°C
Thermocouple N	-50 to 1300°C (-58 to 2372°F)	±2°C
Thermocouple C	-50 to 1800°C (-58 to 3272°F)	±2°C
Pt100 (DIN)	-200 to 850°C (-328 to 1562°F)	±0.2°C
Pt100 (JIS)	-200 to 600°C (-328 to 1112°F)	±0.2°C
mA	-24mA~24mA	±4μA
mV	-60mV~60mV	±0.01mV
Voltage	-10V~10V	±2mV

*Factory Setting

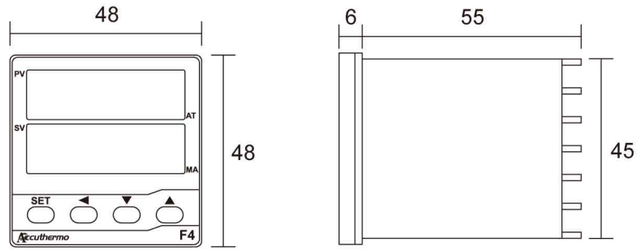
Note 1 : Accuracy is not guaranteed between 0 and 400°C (0 and 752°F) for type B.

Alarm Function	
Alarm Function	No alarm
	Process high alarm
	Process low alarm
	Deviation high alarm
	Deviation low alarm
	Inside deviation band alarm
	Outside deviation band alarm
Alarm Mode	Normal mode
	Standby mode
	Latch mode
	Standby and Latch mode

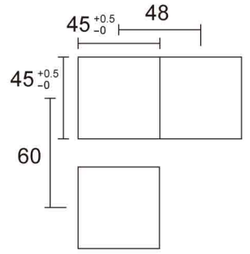
VERTEX

Dimension

● Outline



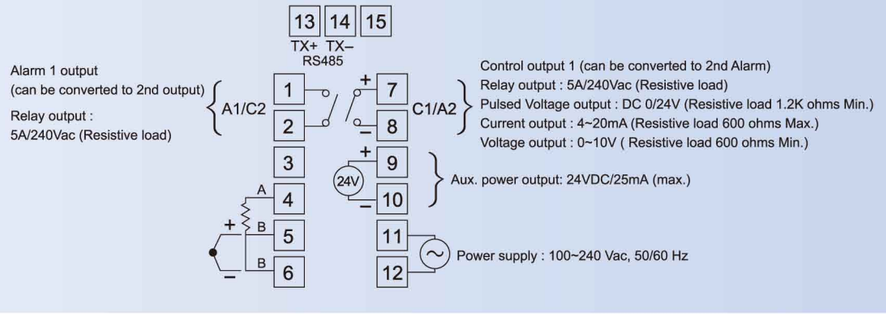
● Panel cut



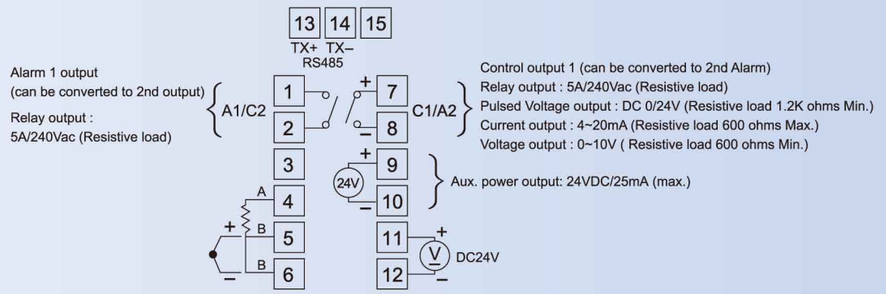
(Unit / mm)

Wiring Diagram

AC power supply



DC power supply



Ordering Information

F4 ☐ ☐ ☐ ☐ ☐ ☐ ☐

Input	Code
T/C	T
PT100 (RTD)	D
0-60mV DC	L
0-10V DC	V
0-24mA DC	M

Output 1 (Alarm2)	Code
Relay	R
SSR	P
4~20mA	M
0-10V	V
Other	O
Alarm 2	A

Alarm 1 (Output2)	Code
Alarm 1	A
Relay	R

Communication	Code
None	N
RS-485	C

Power Supply	Code
100~240 Vac	A
24 Vdc	D

Protection	Code
IP 63	3
IP 65	6