COOLING TEMPERATURE CONTROLLER

▣Ordering information

TC 3 Y F – 1 4 R

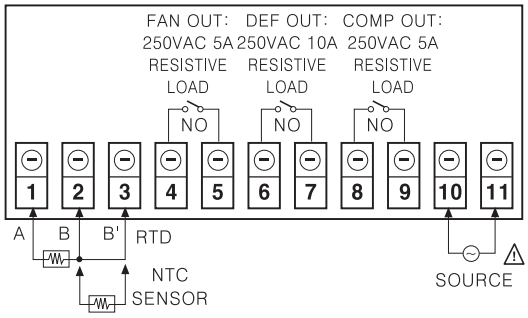
Output	R	Relay output
Power supply	4	100–240VAC 50/60Hz
Control output	1	Compressor
	2	Compressor+Defrost output
	3	Compressor+Defrost output+Evaporation output
Control	F	Freezing(Freezing control)
Size	Y	DIN W72×H36mm
Digit	3	3Digit
Item	TC	Temperature Controller

▣Specifications

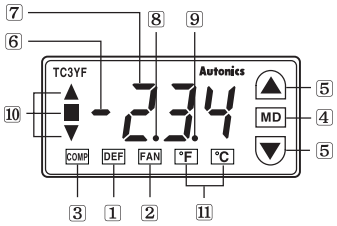
Model	(★1) TC3YF-14R	TC3YF-24R	TC3YF-34R
Appearances & Dimensions	c UL us [W72×H36×L77mm]		NEW
Power supply	100–240VAC 50/60Hz		
Allowable voltage range	90 ~ 110% of rated voltage		
Power consumption	4VA		
Indication method	7 Segment LED Display(Red)		
Display	NTC : −40.0 ~ 99.9℃(40 ~ 212°F), RTD : −99.9 ~ 99.9℃(−148 ~ 212°F)		
Display method	[PV ±0.5% or ±1℃ Max.] rdg ±1digit		
Sampling period	Min. 0.5sec		
Input sensor	(★2)	NTC : Thermistor, **RTD : DIN PT 100Ω**	
Input of line resistance	Tolerance line resistance is max. 5Ω		
Control method	ON/OFF control(Adjustment sensitivity 0.5~5.0℃, 2~50°F variable)		
Control output	Compressor(250VAC 5A 1a)	Compressor(250VAC 5A 1a) Defrost output(250VAC 10A 1a)	Compressor(250VAC 5A 1a) Defrost output(250VAC 10A 1a) Evaporation−fan output (250VAC 5A 1a)
Memory protection	Approx. 10 years(When using non−volatile semiconductor memory)		
Insulation resistance	Min. 100MΩ(at 500VDC)		
Dielectric strength	2000VAC 60Hz for 1 minute(between all external terminal and case)		
Noise strength	±2kV R−phase and S−phase(pulse width 1μs)		
Relay life cycle COMP	Mechanical : Min.20,000,000 times, Electrical : Min.50,000 times(250VAC 5A resistive load)		
Relay life cycle DEF	Mechanical : Min.20,000,000 times, Electrical : Min.100,000 times(250VAC 10A resistive load)		
Relay life cycle FAN	Mechanical : Min.20,000,000 times, Electrical : Min.50,000 times(250VAC 5A resistive load)		
Vibration Mechanical	0.75mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 2 hours		
Vibration Malfunction	0.5mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 10 minutes		
Ambient temperature	−10 ~ 50℃(at non−freezing status)		
Storage temperature	−20 ~ 60℃(at non−freezing status)		
Ambient humidity	35 ~ 85%RH		

※(★1) There is no defrost function (★2) RTD(PT 100Ω) type is optional.

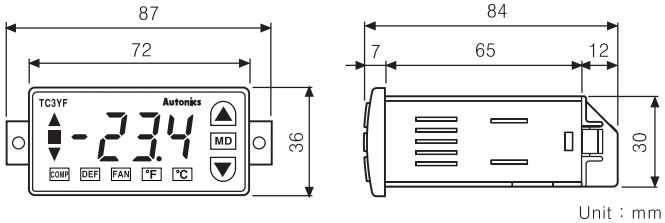
▣Connections



▣Front panel identification



▣Dimensions



Unit : mm

1 DEF(Defrost output lamp) : Light is ON when defrost output is ON
2 FAN(Evaporation−fan output lamp) : Light is ON when evaporation output is ON.
3 COMP(Compressor output lamp) : Light is ON when compressor output is ON.
4 MD(Mode key) : For entering, changing shifting parameters
5 ▼ ▲(Setting key:Up/Down) : For changing parameters
6 − : Displaying minus
7 FND(Display process value) : Display a current value (SV) on RUN mode. Display a parameter and a setting value when setting parameter.
8 ●(Display a decimal point) : Display a decimal point when the time unit is 'Min'
9 ●(Display a decimal point) : Display a decimal point when the temperature unit is '℃'
10 ▲, ■, ▼(Display a deviation) : Based PV on SV−▲, ▼(Red) / ■(Green)
11 ℃, °F(Display a temperature unit) : Display unit for the temperature
※When delay time is applied, the output lamp of defrost output, evaporation−fan and compressor is ON simultaneously after the lamp flickers every one second.