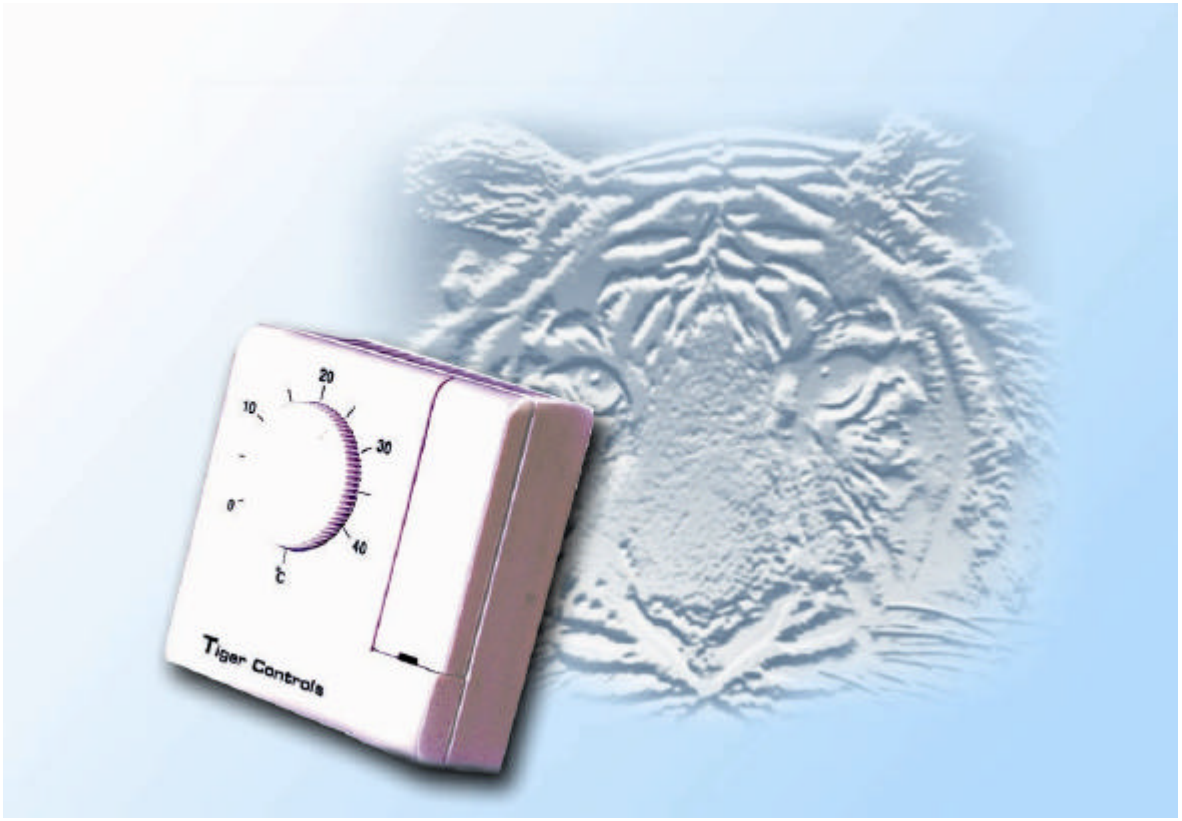


Temperature PI Controller (Knob mode)

TF16 electronic type controller is applied in HVAC control system, connecting and using with NTC10K thermistor, which can easily sense proportional control function for position control valve. It is used comfort air conditioning in low control accuracy widely.

- Application of rotary knob type temperature PI controller: AHU temperature control
- Matching valve type: 3-position valve
- CE authorization

CE

Features

- Controllable temperature range: 0~40℃.
- External temperature sensor (NTC10K thermistor).
- Desired value adjustment: panel knob set.
- Action transform: forward/reversing switch(such as: summer/winter transform), set by local/remote.
- Adjustable proportional band and integration time.
- Flexible mounting style: wall mounting, embeded panel mounting, end mounting etc.
- Working mode: comfort mode, standby mode, energy hold-off mode

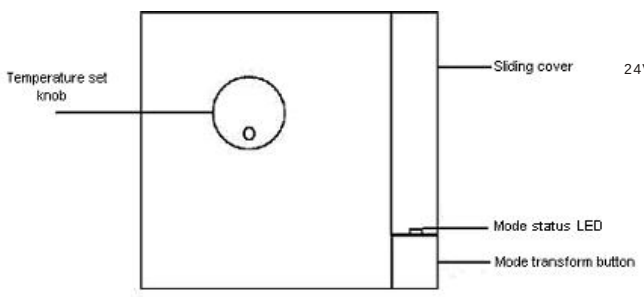
Parameters

Type	TF16, TF16-S
Application	To control heating/refrigeration coil modulating valve used in AHU(combined mode)
Controllable temperature range	0~40℃
External temperature sensor	NTC10K thermistor
Control mode	3-position (to control position valve)
Setting style	panel rotary knob
Function transformation	winter/summer mode transform ation, set by local/distance
Selectable mode	Comfortable mode, economical mode, waiting mode
Power voltage	24VAC±15%、50/60Hz
Power consumption	2VA(0.8A) unload
Controllable silicon output	24VAC,0.5Amax
Integral time	adjustable 2.5, 5min, switch transformation
Outside shell	Flame-resistant ABS plastic, white
Spare setting	2K, close external contact (use/unused)
Wiring	Terminal connecting, 1.5mm^2 screw connecting wire
Ambient temperature	0~50℃
Ambient humidity	10-90% RH non-condensing water
Storage temperature	-40~70℃
Outline dimensions	80× 80× 33mm

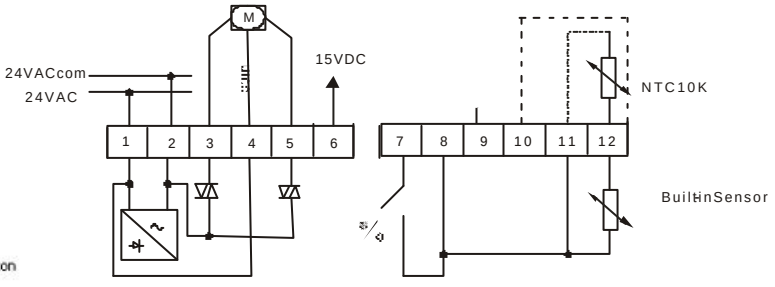
Controller parameters

Controller type	matching sensor	Power supply	Output signal
TF16	external temperature sensor	24VAC± 15%	3-position type
TF16-S	internal temperature sensor	24VAC± 15%	3-position type
Note: TF16 used with TSW-1000T sensor			

Panel display

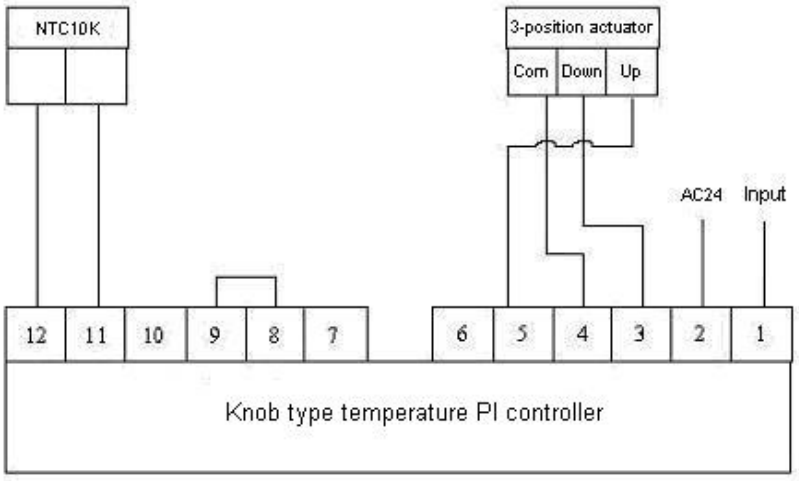


Wiring



Operation

- Wiring diagram



- Temperature set: via temperature knob on the panel
- Transformation between comfort mode and standby mode: comfort or standby mode transformed via button on the right.

LED status	Operating mode	Function
On	Comfort	Controller controls opening of valve to make stable controlled temperature to set temperature. The mode is used when normally operating condition.
Blinking	Standby	Setpoint is excursion automatically, and save system energy. It selected when users step out.
Off	Energy hold-off	The valve is switched off. It selected when controlled region need not control temperature automatically.

Note: after power is turned on, if LED is flicker, please keep ON status by pushing button.

- Cooling/heating mode
  The controller includes DA(direct acting)/RA(reverse acting) mode for adapting cooling/heating control requirements, and transform via Dir/Rev switch.
  - Remove front sliding cover up to switch
  - Switch on the right is DA mode (cooling mode)
  - Switch on the left is RA mode (heating mode)
- PB: Proportional band control: controlled via potentiometer on the back, factory set: 2K
- Tn: Integral time: selected via jumper on the back, factory set: 5min

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