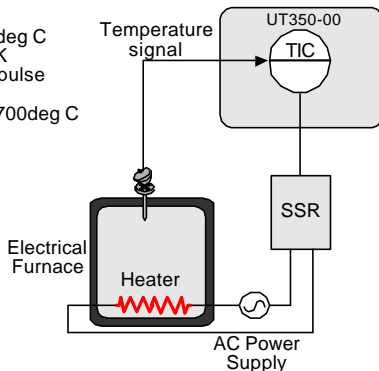


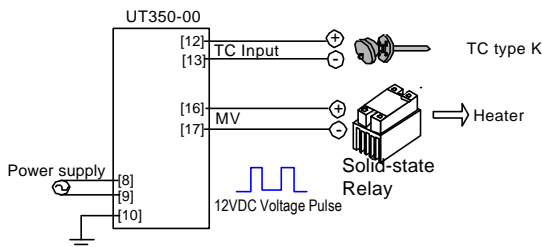
<b>Title</b>	Furnace temperature control with Solid State Relay(SSR)	<b>Number:</b> AP35001
<b>Purpose</b>	Control a furnace temperature by using UT350 temperature controller. Model UT350 can drive SSR as an actuator directly.	
<b>Application</b>	Electrical Furnace	
<b>Controller</b>	UT350-00	<b>File Name:</b> UTAP3501.t3d

**Loop Configuration:**

Input Range: 0 - 1200deg C  
 Input Type: TC type K  
 Output Type: Voltage pulse  
 Cycle time: 3sec.  
 Temperature Set-point: 700deg C  
 PID parameters  
 P=5%  
 I= 240sec.  
 D= 60sec.



**Wiring:**



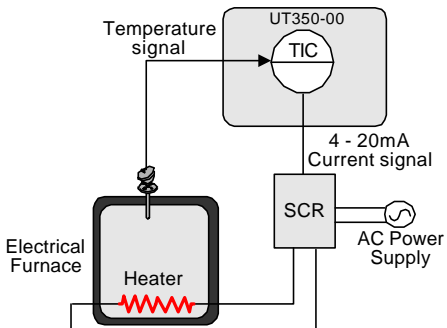
**Explanation**

: This is simple example for temperature control. Model UT350 can read the temperature from Type K sensor directly. Model UT350 also has very powerful control functions, such as Auto-Tuning, SUPER function for overshoot suppression, SUPER2 function for hunting suppression and universal control output. Customer can select a one control output from either Voltage Pulse, Relay Contact or 4 - 20mA Current output.

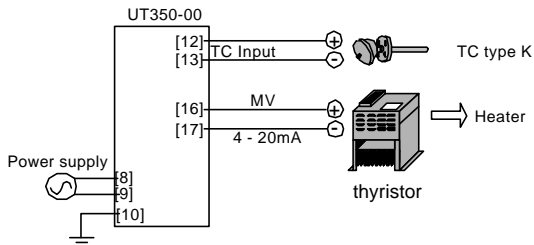
<b>Title</b>	Furnace temperature control with Thyristor(SCR)	<b>Number:</b> AP35002
<b>Purpose</b>	Measure the furnace temperature by using TC. PID Control for a furnace temperature, temperature sensor is a TC and actuator is a SCR.	
<b>Application</b>	Electrical Furnace	
<b>Controller</b>	UT350-00	<b>File Name:</b> UTAP3502.t3d

**Loop Configuration:**

Input Range : 0 - 1200deg C  
 Input Type : TC type K  
 Output Type : Current Output  
 Set-point : 700deg C  
 PID parameters  
 P = 5%  
 I = 240sec.  
 D = 60sec.



**Wiring:**



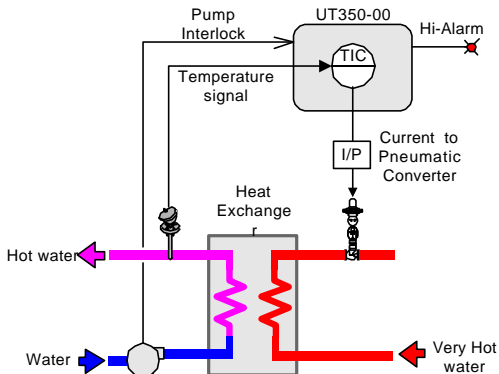
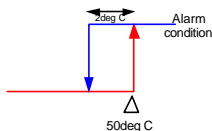
**Explanation**

: A 4 - 20mA current output is used to drive a Thyristor unit. Thyristor unit can control the current for a heater.

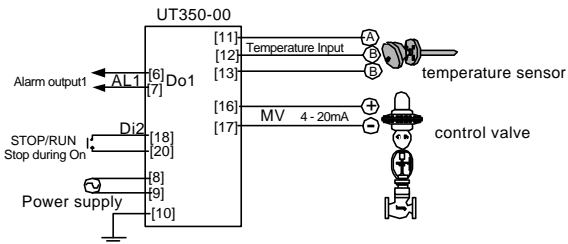
<b>Title</b>	Heat-Exchanger Temperature control	<b>Number:</b> AP35003
<b>Purpose</b>	Produce hot water with constant temperature by using plate type heat-exchanger	
<b>Application</b>	Hot water for air conditioning and environment chamber.	
<b>Controller</b>	UT350-00	<b>File Name:</b> UTAP3503.t3d

**Loop Configuration:**

Input Range: 0 - 100.0deg C  
 Input Type: Pt100ohm  
 Output Type: Current Output  
 Set-point: 45deg C  
 ID parameters  
 P = 30%  
 I = 40sec.  
 D = 5sec.  
 Alarm action :  
 Hi-Alarm  
 ON at 50deg C  
 OFF at 48deg C



**Wiring:**



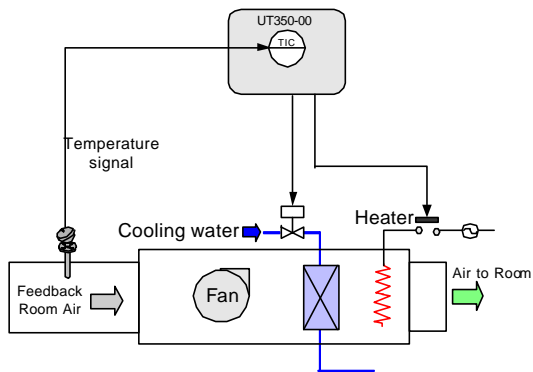
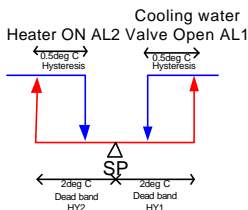
**Explanation**

Alarm set points are displayed on "Select Panel" for easy changing during operation.  
 The ID control function will be stopped and a preset signal (0%) will be outputted when the pump interlock signal will turn to on.  
 The current output signal is used to drive a control valve.

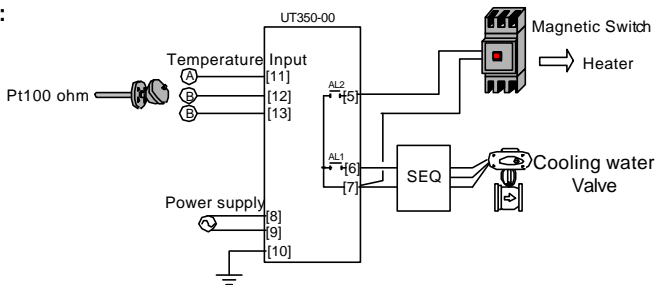
<b>Title</b>	Packaged Air Conditioner Temperature control	<b>Number:</b> AP35004
<b>Purpose</b>	Control ON/OFF valve for cooling water and power switch for Heater to keep the room temperature.	
<b>Application</b>	Packaged Air Conditioner	
<b>Controller</b>	UT350-00	<b>File Name:</b> UTAP3504.t3d

**Loop Configuration:**

Input Range: 0 - 50deg C  
 Input Range: Pt100 ohm  
 Set-point: 25deg C  
 Deviation Hi-Alarm: 2deg C  
 Deviation Low-Alarm: 2deg C  
 Hi-Alarm hysteresis: 0.5deg C  
 Low-Alarm hysteresis: 0.5deg C



**Wiring:**



**Explanation**

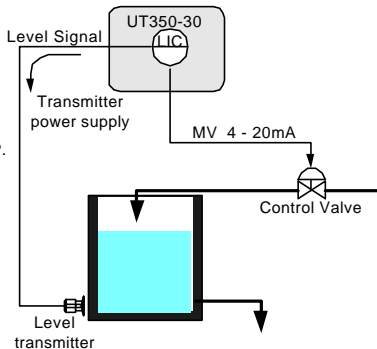
This is a simple Heating / Cooling control example. Model UT350 has a Heating / Cooling control function; however, two alarm outputs are enough to switch a ON/OFF valve and a Heater.

1. If PV temperature is higher than (SP+2deg.C), a deviation Hi alarm turns to ON. Then, a cooling water valve is opened.
2. If PV temperature is lower than (SP-2deg.C), a deviation Low alarm turns to ON. Then, a heater switch is turned to on.

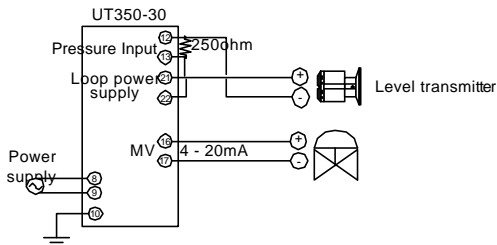
<b>Title</b>	Tank Level Control	<b>Number:</b> AP35005
<b>Purpose</b>	Control a Tank level by using a pressure transmitter. UT350 has a power supply function to a transmitter.	
<b>Application</b>	Tank Level Control	
<b>Controller</b>	UT350-30	<b>File Name:</b> UTAP3505.t3d

**Loop Configuration:**

Input Range: 0 - 1,500mm  
 Input Type: 1.0 - 5.0VDC  
 Output Range: 4 - 20mADC  
 Set-point: 1,200mm  
 PID parameters P = 10%  
 I = OFF  
 D = OFF  
 MR = 0%  
 MR (Manual Reset) is output when PV = SP.



**Wiring:**



**Explanation**

Control the tank level by Proportional control with Manual Reset function. Proportional control may occur small offset; however, the control response is very fast.

UT350 has two types of power supply function to a two-wire transmitter.

All types of UT350 can supply 14.5VDC power to a transmitter.

Model UT350-3\_ can supply 21.6VDC power to a transmitter.

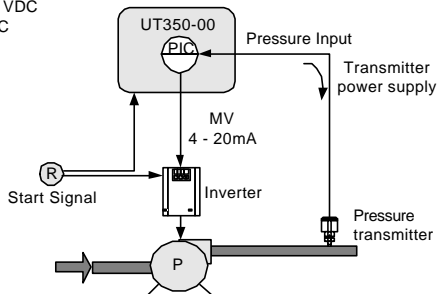
A 14.5VDC will be enough for almost all analog type 2-wire transmitter.

A 21.6VDC will be used to drive microprocessor based 2-wire transmitter.

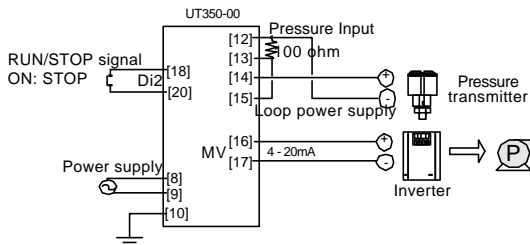
<b>Title</b>	Pump outlet pressure control	<b>Number:</b> AP35006
<b>Purpose</b>	Control the voltage & frequency of a pump to control the pump outlet pressure.	
<b>Application</b>	Pump outlet pressure control	
<b>Controller</b>	UT350-00	<b>File Name:</b> UTAP3506.t3d

**Loop Configuration:**

Input Range: 0 - 1.00 MPa  
 Input Type: 0.40 - 2.00 VDC  
 Output Range: 4 - 20mADC  
 Set-point: 0.7MPa  
 PID parameters P =150%  
 I = 20sec.  
 D = OFF



**Wiring:**



**Explanation**

Model UT350 has a RUN/STOP function.  
 RUN mode(Di is ON): PID control  
 STOP mode(Di2 is OFF): PID computation is stopped.  
 Preset MV is outputted as MV.  
 UT350 can control the pump pressure without overshoot, because control output starts from 0%.  
 UT350 can supply 14.5VDC power to a transmitter.