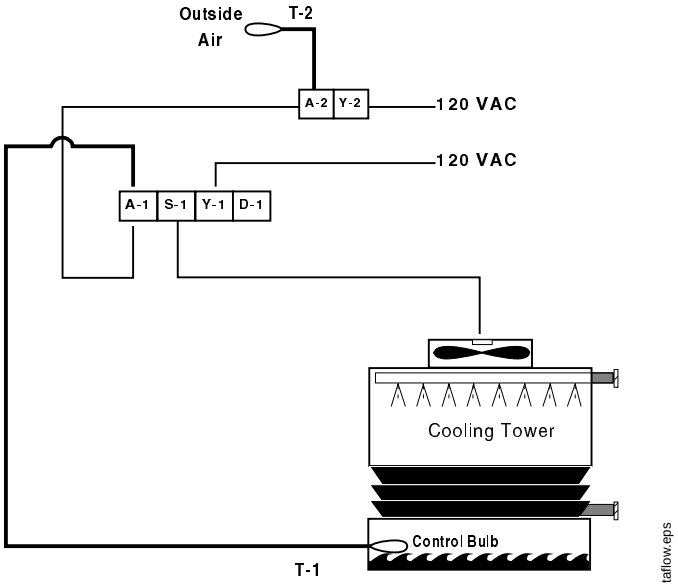
System 350™ Temperature Control Applications

Cooling Tower



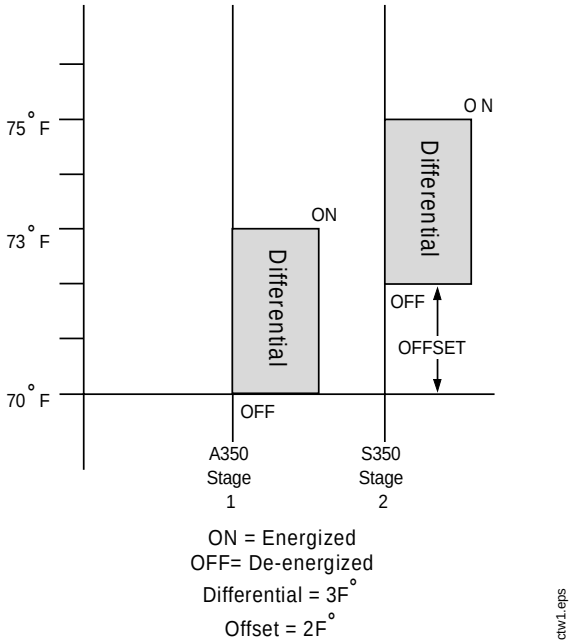
Flow Diagram

Sequence of Operation

Electronic temperature control A-1, powered by Y-1, will monitor water temperature via sensor T-1 in the cooling tower sump. Control A-1 will maintain a sump water temperature of 70°F. On an increase in sump water temperature to 73°F, the low speed fan winding is energized by control A-1 through the normally closed contacts on the S-1 stage module.

As the sump water temperature continues to increase to 75°F, the S-1 stage module energizes, breaking the low speed winding on the fan motor and energizing the high speed winding. A second temperature control A-2, powered by Y-2, is used to de-energize the fan circuit by breaking power to A-1 if the outside air temperature, sensed by T-2, falls below 55°F.

The D-1 digital display module provides continuous readout of cooling tower sump temperature and push button option to read actual setpoint.

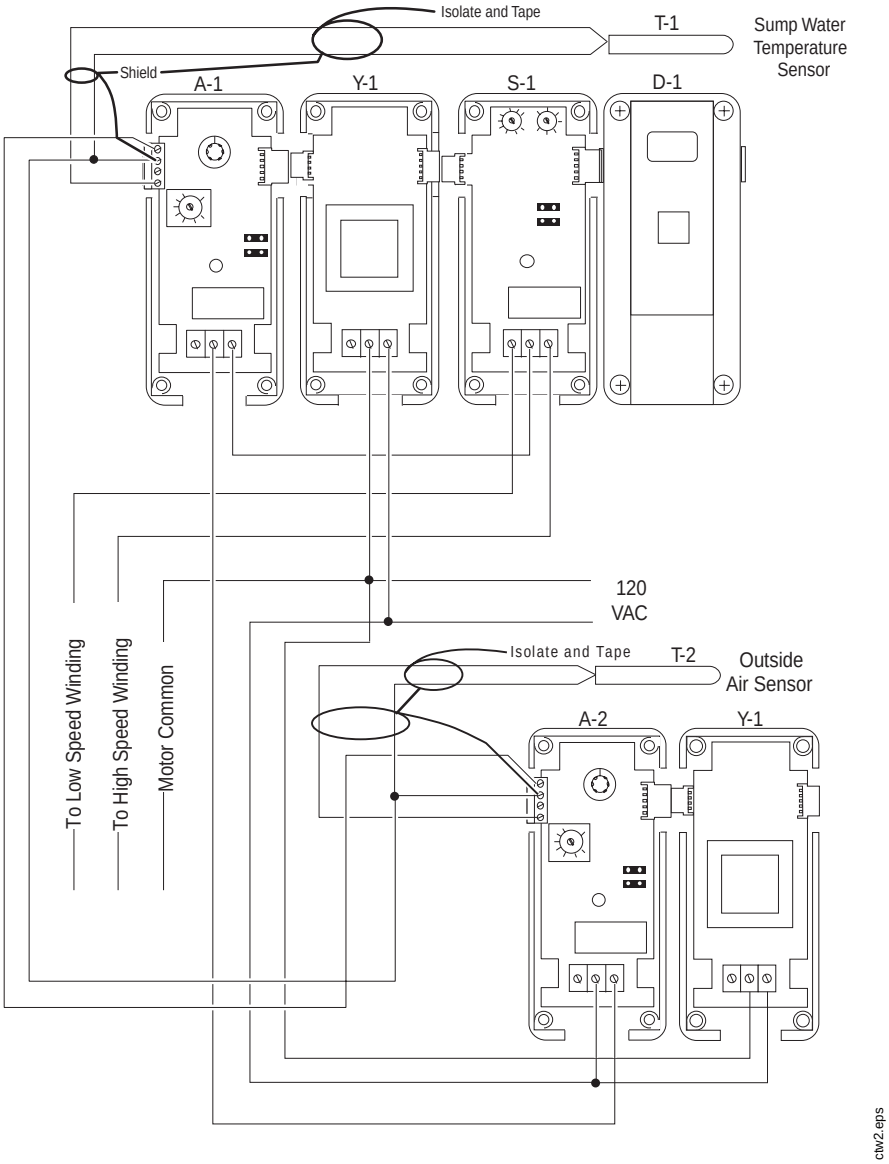


Sequence of Operation Diagram

System 350™ Temperature Control Applications (Continued)

Bill of Materials

ID	Qty	Code Number	Description
A-1	1	A350AA-1C	Electronic Temperature Control with SPDT Relay Output
A-2	1	A350AA-1C	Electronic Temperature Control with SPDT Relay Output
D-1	1	D350AA-1C	Digital Display Module
S-1	1	S350AA-1C	SPDT Staging Module
T-1	1	WEL11A-601R	Immersion Well; A99BC-25C Sensor Comes With A350
T-2	1	TE-6001-2	Outside Air Housing: A99BC-25C Sensor Comes With A350
Y-1	2	Y350R-1C	120/240 VAC Power Module

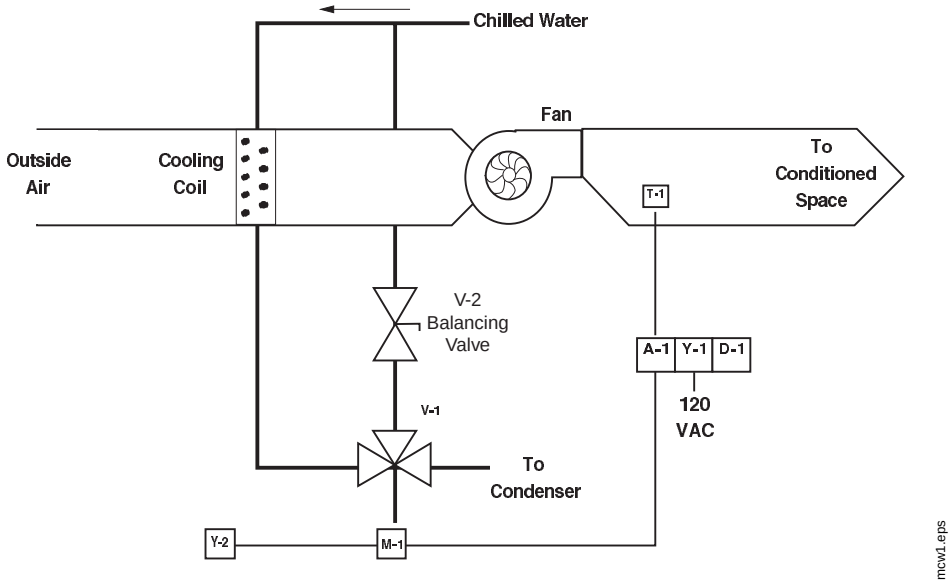


Wiring Diagram

 www.johnsoncontrols.com

System 350™ Temperature Control Applications (Continued)

Modulating Chilled Water



Flow Diagram

Sequence of Operation

Electronic temperature control A-1, powered by transformer Y-1, senses the duct temperature via sensor T-1 while maintaining a setpoint of 70°F. As the duct temperature rises, a proportional voltage signal from A-1 is sent to actuator M-1, powered by Y-2.

This modulates mixing valve V-1, allowing chilled water to flow through the cooling coil.

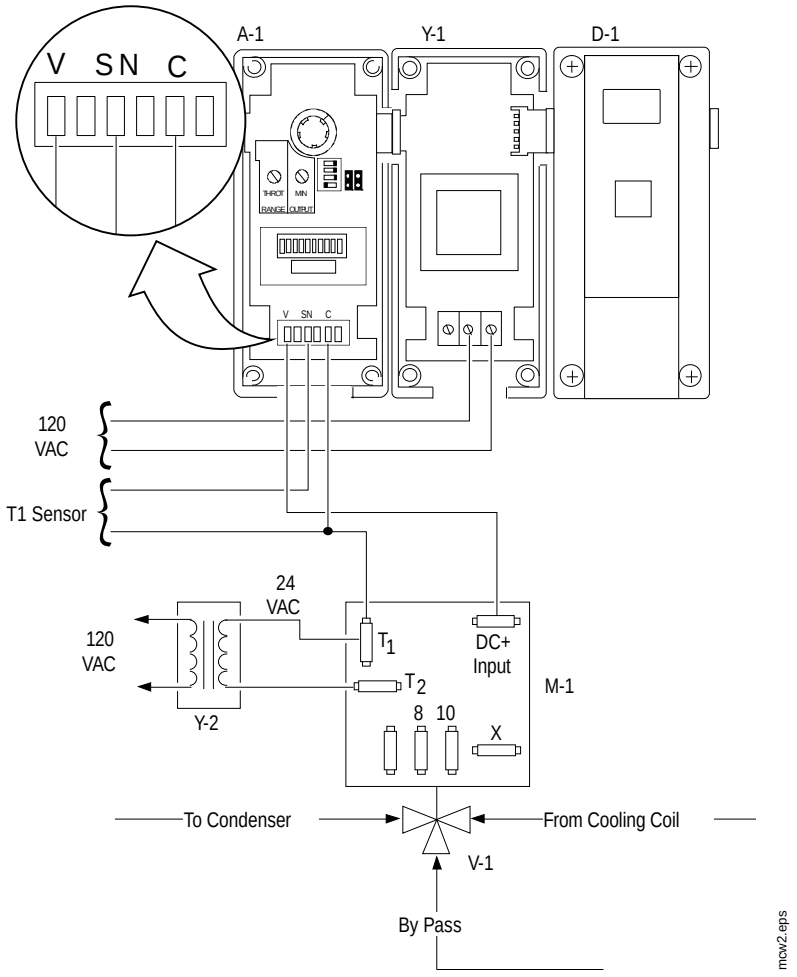
A balancing valve V-2 is used to adjust the restriction in the bypass line to match that of the cooling line. As duct temperature falls, A-1 decreases its signal to M-1, bypassing the cooling coil.

Digital display module D-1 provides continuous readout of the duct temperature and, with the push button, provides readout of the actual setpoint.

System 350™ Temperature Control Applications (Continued)

Bill of Materials

ID	Qty	Code Number	Description
A-1	1	A350PS-1C	Electronic Proportional Temperature Control
D-1	1	D350AA-1C	Digital Display Module
M-1	1	M130GGA-3	Spring-Returned Actuator
V-1	1	VG7842LT	3/4 in., 3-Way Mixing Valve
Y-1	1	Y350R-1C	120/240 VAC Power Module
Y-2	1	Y65T31-0	120 Volt AC Transformer
L-1	1	Y20EBD-6	M130/VB Linkage
T-1	1	TE-6100-962	Duct Sensor Assembly



Wiring Diagram

 www.johnsoncontrols.com