Micro Control Systems APPLICATION NOTE

APPLICATION NOTE APP-017

Chilled Water Reset CHLR05.00 & CHLS05.00

Revision History

Date	Author	Description
02/1599	John G. Walterick	Chilled Liquid Reset CHLR05.00 & CHLS05.00
10/14/99	R C Toney	Updated with examples from PC-CFG

APP-017 CWR

Theory

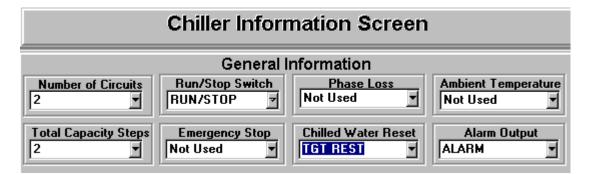
Chilled Water Reset (CWR) provides a Building Management System (BMS) with the ability to alter the leaving liquid set point dynamically. The input is a 0 to 5 volts dc signal on one of the MCS-8 or I/O sensor inputs. The system design provides for both a plus and minus CWR, which is proportional to the input signal.

The following must be completed in the PC-cfg program.

1. In the 'SI Info' screen setup the CWR sensor input as a TRGTRST type.

#	Name	Display Type	Offset
M-1	TRG REST	TRGTRST	0

2. In the 'Chiller Info' screen, under 'General Information' identify the sensor input.



3. In the 'Setpoints' screen set the value and make the Chilled Water Reset 'active'. Set point # 60.

Logic

Chilled Water Reset (CWR) is a 0 to 5 volts dc sensor input to the MCS microprocessor. When CWR sensor input type is TRGTRST, the CWR follows the following rules in CHLR05.00 and CHLS05.00.

- 1. If the input is 2.5 volts dc the CWR is zero.
- 2. At 0 volts dc the CWR is a negative value equal to the set point value.
- 3. At 5.00 volts dc the CWR is a positive value equal to the value in the set point.
- 4. For CHLR05.00 & CHLS05.00 this is set point number 60.
- 5. For values in between 0 2.5 and 2.5 5.0 the CWR is a plus or minus value which is proportional to the sensor input voltage.
- 6. The value displayed for CWR sensor input is the adjustment value. (Note, if the sensor type is not TRGTRST, the value displayed is still used as the adjustment value.)
- 7. In software CHLR05.00-R and CHLS05.00-Z and higher the value of the target setpoint is changed to reflect the new target.

Examples

Set point	LEV. LIQ. TEMP	=	45.0F	
Set point	CH WTR RESET	- =	5.0F	
Sensor Inpu	t volts dc Ch	lled Wate	er Reset	Reset Leaving Liquid Target
0 1.25 2.50 3.75 5.00		-5.0 -2.5 0.0 +2.5 +5.0		40.0F 42.5F 45.0F 47.5F 50.0F