

Wizard

Refrigeration Control System



Condenser Control System For Air or Evaporative (Wetbulb) (WCFC)

For additional information on these or any other products, please contact the factory.
Genesis International, Inc. reserves the right to change product specifications without notice

CONDENSER FAN CONTROL SYSTEM

The *Wizard* Condenser Fan Control with fixed speed fan control (WCFC) is an ETL listed control and is the most advanced condenser system controller in the industry today. The control will efficiently cycle up to seven fan banks (WCFC) or thirteen fan banks WCFC-13 or one less fan bank with a split condenser, effectively controlling the discharge pressure.

The WCFC was engineered to meet the two main variations in systems today; fixed head and floating head. The Fixed head control will sequence fans based on discharge pressure, while floating head control will sequence fans based on discharge pressure and liquid temperature.

The WCFC will control a wide variety of condenser types, Air Cooled, Cooling Towers, Evaporative Condensers.

The WCFC utilizes three control methods: Fixed Head Pressure Control; Floating Head or Liquid Temperature Control; and Differential or Deadband Control. A few safety setpoints are defined by the User

Minimum Head Pressure

Minimum Head During Defrost

Minimum Head During Heat Reclaim

VARIABLE FREQUENCY DRIVE (VFD)

The WCFC-VFD with variable speed fan control option added to the standard WCFC will control up to 2 variable speed fans with an analog output based upon the system head pressure and up to 5 more fixed speed fans. The rate of change is based upon head pressure.

Deadband Control

Deadband Control provides the flexibility of control of the exact pressures that each stage will cycle. This control scheme is ideal for large, water cooled or air cooled condensers in commercial and industrial applications.

Each stage is provided with a user definable Cut-In and Cut-Out setpoint. Should more than one stages Cut-In levels are exceeded, the controller will stage them in 10 - 15 second increments.

The WCFC provides ambient lockout capabilities for each stage. A control wide Ambient Cutout setpoint is defined by the user. Each stage has the option of lockout at this setpoint or to continue to operate. This feature prevents the need to change staging or wire in thermostats to prevent staging during cold weather.

EVAPORATIVE CONDENSER CONTROL FOR WETBULB (WCFC-EVAP)

The **Evaporative Condenser Control (WCFC-Evap)** controls a small evaporative condenser with multiple VFDs or fixed speed Fans based upon the WetBulb conditions

The WCFC-Evap will sequence VFD fans based on a combination of the ambient temperature, humidity and liquid temperature. All control setpoints are calculated based on the ambient conditions and the WCFC-Evap calculates the liquid line temperature setpoint based upon the WetBulb temperature plus a condenser offset temperature differential.

Kits Include:

Control(s)	Enclosure (Where applicable)
Power Supply	Temperature Sensor (Ambient, Liquid Line)
O-M Manuals	Pressure Transducer (Head)
Installation Hardware	Temp./Humidity Sensor (Where Applicable)



Control Method - Pressure / Temperature	
Condenser Fan Control System 7 Step	blank
Condenser Fan Control System 13 Step	13
WetBulb Temp. Control (Evap Only) 2 VFDEvap-2AO	
WetBulb Temp. Control (Evap Only) 4 VFDEvap-4AO	

Control Method - Pressure / Temperature	
Fixed Speed Condenser (7 Step or 13 Step)	blank
Condenser With VFD (7 Step or 13 Step) 2 VFD VFD	

Enclosure Mounted Alarm Strobe Light Option	
None (Standard)	blank
Enclosure Mounted Strobe Light	S

Communications Option	
RS485 (Gencom) Remote Comm (Standard)	blank
RS232 Communications	232
Ethernet (Gencom) Comm	E
ModBUS Network Comm	M
BacNET Network Communications	B

Enclosure Option	
Nema 1 (Standard)	blank
Panel Mount (Standard)	PM
Nema 4	4



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