



GENESIS INTERNATIONAL, INC.

Wizard

Single Zone Evaporator / Defrost Control System with Sherlock Refrigerant Leak Detection & Humidity Control (WEC-L-H)



Wizard Evaporator / Defrost With Humidity Control (WEC-L-H), Part #88-0306-00

The Wizard Industrial Control System (WEC-L-H) was designed to incorporate the functions necessary to control one valve group in a large refrigerated spaces into a compact, simple to install package. The WEC-L-H is compliant with ASHRAE 15-2019 and MECHANICAL CODE requirements for refrigerant gas monitoring with the addition of a Sherlock refrigerant gas sensor. A single WEC-L-H can replace the following items:

- Evaporator Valve Group Status Monitor
- Multi-Function Defrost Clock
- Temperature Control
- Temperature Monitoring and Alarming
- Refrigerant Gas Leak Monitor and Alarm
- Humidity Monitor
- De-Humidification
- Load Shedding Control
- System Shutdown
- Temperature Recorder

NEMA 1 Compliant Enclosure - This enclosure is intended for indoor use only primarily to provide a degree of protection against contact with the enclosed equipment. The enclosure is not designed to provide protection from water or to be placed in a hazardous environment. Mount only in Pollution Level 2 environments, ie. environmentally controlled offices, control rooms, or environmentally controlled machine rooms.

Specifications

- Dimensions** 12.0 x 9.5 x 5.0 (305 x 241 x 127)
Inches (mm)
- Power** 100 to 240vac, 50/60 hz, 2.5 Amps
- Inputs** Up to Three (3) NTC Thermistor Temperature Sensors
One (1) **SHERLOCK** Refrigerant Sensor *Cmos, Infrared or Electro-Chemical*
One (1) 1-2 VDC Humidity Sensor, 10-90% RH
Three dry contacts -- *Force Defrost, Shutdown, Load Shedding.*
- Outputs** Fourteen (14) SPDT, 1 Form C, 250V AC, 5.0 Amp relays.
- Optional VSD** Dual Variable Speed Drive control relay, (Fans, Compressors, Etc.)
- Alarms** System Alarms (2 relay)
Low & High Temperature
Termination Failure / Coil Recovery
Refrigerant Gas Leak Alarm, Two (2) alarm levels (2 SPDT Relays per level)
- Display** 2 lines by 20 characters Alphanumeric LCD with back light.
Evaporator Control Status LEDs -- indicates Control Operating Status of Evaporator Controls Circuits
Alarm Status LEDs -- indicates Alarm Status
- Keypad** 5 tactile pushbuttons: Scroll up, Scroll down Select/Edit/Change, Force Defrost Start/Advance
- Alarm Indicators**
 - LCD** Name, description, and current reading of alarming sensor
 - Buzzer** piezo-electric, 90db @10ft, silenceable
 - Status LED** Two on front panel of control. Indicates alarm status of the System Alarm
 - Optional Strobe Light** Mounted on the enclosure, activates during any alarm condition.
- Listings** ETL, Conforms to UL Std. 61010-1
Certified to CAN/CSA, C22.2 Std. No. 61010-1
- Warranty** 15 Month Limited

Temperature Control & Alarming - Each WEC-L-H is equipped with a temperature sensor for monitoring and controlling temperature. The control monitors alarms both high and low levels, each having its own programmed delay. The WEC-L-H can also monitor coil temperature, and an auxiliary temperature.

Defrost Control - The WEC-L-H is an electronic control and time clock which can operate up to 12 defrost cycles per day with three separate defrost schedules as well as manual defrost. The defrost can be gas, electric, water or off-time defrost. During a defrost cycle the Wizard will sequence solenoids, valves, fans & heaters as required.

Defrost Termination - A defrost cycle can be terminated by clicks-on thermo-disk, temperature termination sensor, suction pressure switch or time.

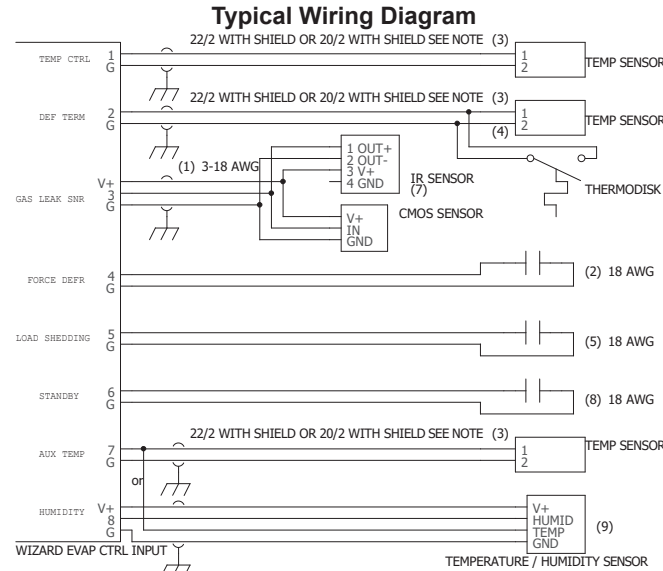
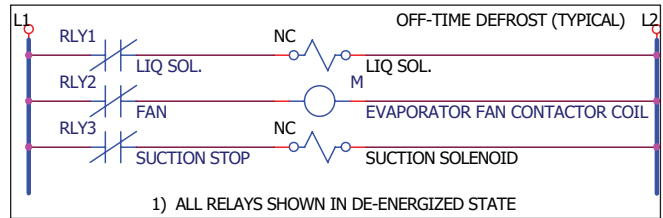
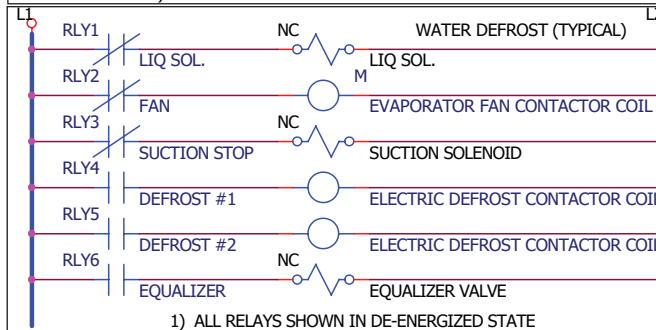
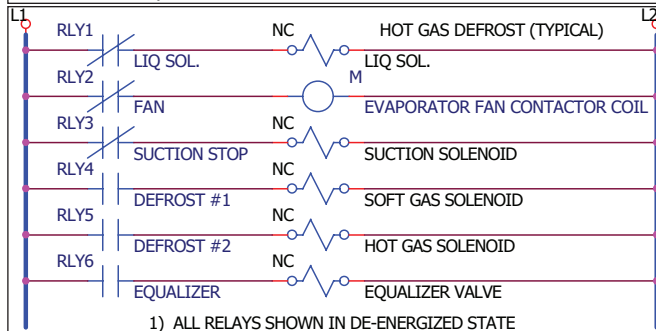
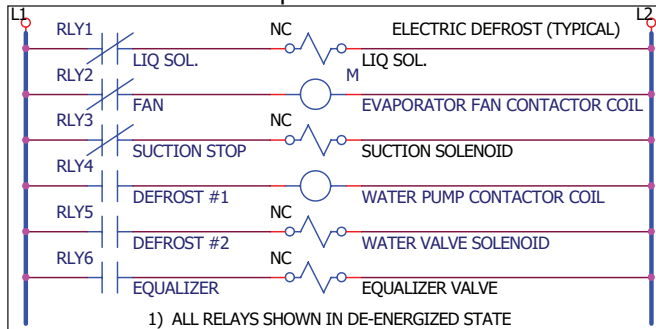
Load Shedding / Temperature Control Setback - The WEC-L-H allows the user to change the temperature control setpoint during peak energy times to a higher value in order to reduce energy demand.

Shutdown (Standby) - The WEC-L-H can be configured to shutdown the system on a daily schedule, during off-season or maintenance periods.

Refrigeration Leak Monitoring - The WEC-L-H makes a room code compliant with the addition of a Sherlock refrigerant sensor (Solid State CMOS, Infrared or Electro-Chemical). The WEC-L-H will activate four separate alarm relays based upon two alarm level threshold set-points energizing alarm indication equipment and any additional safety procedures as required by local codes. The WEC-L-H gives the user an option to pump down, then isolate the evaporator coil should the leak concentration exceed level two.

Humidity / Dehumidification Control Relays - Used with the Wizard Temperature/Humidity Sensor. One relay is for humidity and the second relay is for de-humidification. The heat will come on as the cooling is used for room dehumidification.

Remote Communications & Data Logging - GenCom communications software allows the computer operator to access and change the WEC-L-H within a facility via a PC connection. The WEC-L-H will record up to 1500 temperature log entries into its internal memory.



- (1) USE BELDEN 8770, 3-18 AWG, TWISTED SHIELDED
- (2) MOMENTARY DRY CONTACT SIGNAL ONLY. FORCE DEFROST UPON CLOSURE. CAN BE CONNECTED TO A GANG DEFROST CLOCK FOR SEQUENCING OF MULTIPLE WIZARD CONTROLS.
- (3) FOR CABLE RUNS OF 0 TO 250FT USE BELDEN 8451, (FOR PLENUM INSTALLATIONS 83552) FOR CABLE RUNS OF 250 TO 1000FT USE BELDEN 8760, (FOR PLENUM INSTALLATIONS 83652).
- (4) DEFROST CYCLE CAN BE TERMINATED BY EITHER A TEMPERATURE SETPOINT AND PROBE, A "MAKE ON RISE" CLICKS-ON THERMODISK, OR BOTH.
- (5) DRY CONTACT SIGNAL ONLY. SYSTEM SHALL GO INTO LOAD SHEDDING MODE UPON CLOSURE OF CONTACT. SYSTEM SHALL RETURN TO NORMAL MODE IMMEDIATELY UPON OPENING OF CONTACT.
- (6) MAKE ALL SPLICES WITH 3M 'UR' CONNECTORS OR ANOTHER CORROSION RESISTANT CRIMP.
- (7) USE EITHER SHERLOCK CMOS SENSOR OR SHERLOCK IR SENSOR
- (8) DRY CONTACT SIGNAL ONLY. SYSTEM SHALL GO INTO STANDBY MODE UPON CLOSURE OF CONTACT. SYSTEM SHALL RETURN TO NORMAL MODE IMMEDIATELY UPON OPENING OF CONTACT.
- (9) USE 4-18 AWG, TWISTED SHIELDED



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