NITROGEN N_2 PAC
SPRINKLER CORROSION INHIBITING SYSTEM

Effective: May 2020

UNITED FIRE SYSTEMS

NITROGEN–PAC M SERIES

REFRIGERATED DRYERS
IRD SERIES

Description

The **UNITED Fire Systems** IRD Series refrigerated dryers are used to remove moisture from compressed air sent to a **NITROGEN-PAC™ M Series** sprinkler corrosion inhibiting system nitrogen generator module. Use of an IRD Series dryer ensures that the air sent to the generator module is temperature and moisture conditioned to suit the operating characteristics of the membrane within the generator module.

Graphical Interface

The dryers are equipped with a state-of-the-art graphical interface to make all control and programming functions intuitive and easy. Refer to Figure 1.

DISPLAY	DESCRIPTION
On	the unit is ON with low load
On_	the unit is ON with normal load
On=	the unit is ON with normal-high load
On≡	the unit is ON with high load

LED	STATUS	DESCRIPTION
	ON	Compressor energized
	Blinking	Programming mode activated
	ON	Condensate drain energized
	ON	Speed of the fan = 100%
	Blinking	Speed of the fan < 100%
	OFF	Fan not running

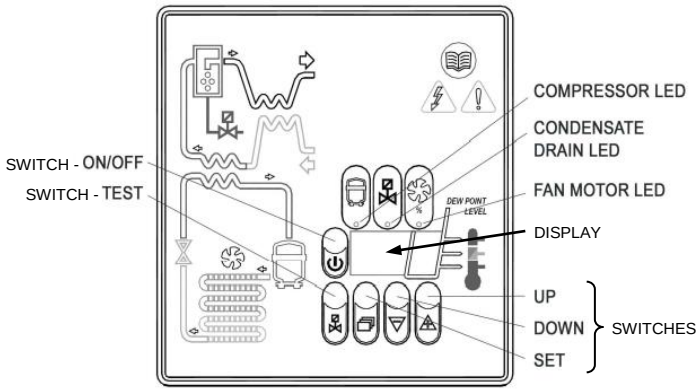

Figure 1 – Graphical Interface

Ordering Information

Part Number	Capacity (SCFM)	Voltage (VAC) / Phase
IRD-07-115-1	7	115 / 1
IRD-11-115-1	11	115 / 1
IRD-15-115-1	15	115 / 1
IRD-25-115-1	25	115 / 1
IRD-32-115-1	32	115 / 1
IRD-42-115-1	42	115 / 1

Notes

1. See Page 2 of 2 for additional specifications.
2. Consult **NITROGEN-PAC™ M Series** Equipment Selection Guide for method to choose proper capacity dryer.
3. Contact **UNITED Fire Systems** for custom dryers available with higher capacity and / or different voltages.

Model IRD Includes:

- Refrigerated Dryer
- Refrigerant Charge
- Power Cord with Plug
- Graphic Interface
- Electronic Drain Valve
- Dry Contact for Remote Signal

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Specifications

Model	IRD-07-115-1	IRD-11-115-1	IRD-15-115-1	IRD-25-115-1	IRD-32-115-1	IRD-42-115-1
Rated Capacity* (SCFM**)	7	11	15	25	32	42
Pressure Drop* (PSID***)	0.2	0.5	0.2	0.5	0.6	1.2
Voltage (VAC)	115	115	115	115	115	115
Frequency (Hz)	60	60	60	60	60	60
Phase	1	1	1	1	1	1
Compressor Motor Power (HP)	0.10	0.10	0.10	0.16	0.33	0.33
Compressor Motor Power (W)	160	160	160	210	370	370
Motor Full Load Current (A)	2.3	2.3	2.3	3.0	5.3	5.3
Motor Locked Rotor Current (A)	18	18	18	23	35	35
Dryer Total Current Draw (A)	2.8	2.8	2.8	3.6	6.0	6.0
Length (in)	16	16	16	18	18	18
Width (in)	12	12	12	16	16	16
Height (in)	16	16	16	18	18	18
Weight (lbs)	40	40	40	60	62	62
Inlet Connection (NPT Female)	3/8”	3/8”	3/8”	1/2”	1/2”	1/2”
Outlet Connection (NPT Female)	3/8”	3/8”	3/8”	1/2”	1/2”	1/2”
Drain Connection	1/4” Polymer Tubing					
Max Air Inlet Temperature (°F)	140					
Min Ambient Temperature (°F)	36					
Max Ambient Temperature (°F)	122					
Max Inlet Pressure (PSIG)	203					
Refrigerant	R-134a					

*Conditions for capacity and pressure drop rating = Inlet pressure 100 PSIG; inlet temperature 100 °F; ambient temperature 100 °F

**SCFM = standard cubic feet per minute

***PSID = pounds per square inch differential

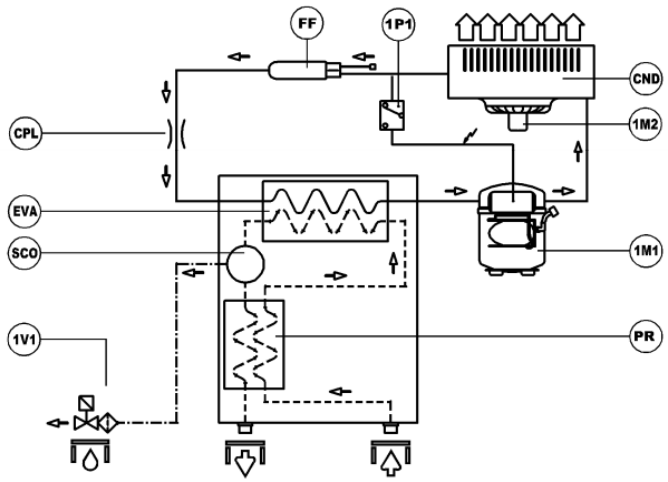

Figure 2 – Mechanical Schematic

LEGEND FOR FIGURE 2		
1M1	Refrigerant compressor	
1M2	Fan motor	
1P1	High pressure switch	
1V1	Solenoid drain valve	
CND	Condenser	
CPL	Capillary tube	
EVA	Evaporator	
FF	Filter	
PR	Air-to-air heat exchanger	
SCO	Condensate separator	
Solid line		Refrigerant circuit
Dotted line		Air path
Broken line		Water drainage
Line as shown		Internal electrical connection

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