

**Commercial Refrigeration Defrost Controls**



**8040 Series Defrost Controls 40 Amp, Time Initiated, Time Terminated**



- Frequency of defrost initiation is adjustable from one to six cycles per day. Minimum of four hours between successive operations.
- Duration of defrost cycle adjustable from four to 110 minutes in two minute increments.
- Accuracy of defrost duration +/- two minutes.
- Choice of four contact arrangements for electric heat, hot gas or compressor shutdown defrost.
- Positive switch action slider bar.
- Switch rating per pole: 40 amps, 2 hp per pole; 690 VA pilot duty 120-240 volts AC.
- Heavy duty steel enclosure. Gray finish. Knockouts on bottom, back and sides. Hasp and staple for padlock. Available on bracket for sub-panel mounting.
- Operating voltage: 120 or 208-240 volts, 60 Hz (50 Hz – see chart below).
- Heavy duty synchronous industrial type motor.
- Shipping weight = 3-1/2 lbs
- Control supplied with four dial pins. Extra pins, part number X-3596.
- UL Listed and CSA Certified

Mfg Part No	Volts 60 Hz	Description	Switch Arrangement Contacts			Adj Length of Defrost
			2-4	1-3	3-N	
8041-00	120	For electric heat defrosting (Auxiliary contract models), Bracket available	Closed	Open	Closed	4-110 min
8041-20	208-240	For electric heat defrosting (Auxiliary contract models), 50 Hz available	Closed	Open	Closed	4-110 min
8045-00	120	For electric heat, hot gas, or compressor shutdown defrosting, bracket available	Closed	Open	None	4-110 min
8045-20	208-240	For electric heat, hot gas, or compressor shutdown defrosting, bracket & 50 Hz available	Closed	Open	None	4-110 min
8047-00	120	For electric heat defrosting (Auxiliary contract models)	Open	Open	Closed	4-110 min
8047-20	208-240	For electric heat defrosting (Auxiliary contract models), 50 Hz available	Open	Open	Closed	4-110 min

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**8140 Series 40 Amp, Time Initiated, Temperature or Pressure Terminated**



- Frequency of defrost is one to six cycles per day. A minimum of four hours between successive defrost cycles.
- Adjustable back-up defrost termination from four-110 minutes in two minute increments.
- Control works with an external temperature or pressure sensor.
- Choice of three contact arrangements for electric heat, compressor shutdown or hot gas defrost.
- Positive switch action slider bar.
- Heavy steel enclosure. Gray finish. Knockouts at bottom, back and sides. Hasp and staple for padlock. Available on bracket for sub-panel mounting.
- Operating voltage: 120 to 208-240 volt, 60 Hz (50 Hz – see chart below).
- Heavy duty, synchronous industrial type motor.
- Shipping weight = 3-3/4 lbs
- Control supplied with 4 dial pins.

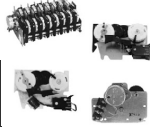
Mfg Part No	Volts/60 Hz	Normal Position of Contacts During Refrigeration Cycle/Contact			Comments
		3-N	1-3	2-4	
8141-00	120	Closed	Open	Closed	Bracket available & 50 Hz
8141-20	208-240	Closed	Open	Closed	Bracket available & 50 Hz
8143-00	120	Open	Closed	Open	Bracket available
8143-20	208-240	Open	Closed	Open	Bracket available
8145-00	120	None	Open	Closed	Bracket available & 50 Hz
8145-20	208-240	None	Open	Closed	Bracket available & 50 Hz
E-357-00	120	None	Open	Closed	Bracket available, 48-hr dial bracket mount
A-633-20	208-240	Open	Closed	Open	Bracket available, 48-hr dial bracket mount

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## Commercial Refrigeration Defrost Controls



### RM Series



- Frame Modules: Four or 8 circuits available. Two snap-in base brackets per frame section for mounting. 7/32" diameter mounting holes for #12 screws.
- Motor Modules: Heavy duty synchronous industrial type motor with sealed permanently lubricated gear train. Up to 24 program modules can be driven with one motor. Input voltage: 120 or 208-240 volts 60 Hz. Two 1/4" male push-on terminals on drive module.
- Program Modules: Defrost initiation is adjustable from one-12 operations per circuit, per day; minimum 2 hours required between successive operations. Mechanical defrost termination is adjustable from 6-106 minutes in one-minute increments. Solenoid termination is optional. Instantaneous transfer if solenoid is energized at time of defrost initiation. Two SPDT snap switches per module. 3/16" male push-on switch terminals. Switch rating: 10 amps, 1/3 hp, 120-240 Vac; 345 VA pilot duty.
- Extra trippers, part number X-7248 (12 per bag). Recognized under the component program of UL and CSA.
- Ru Listed and CSA Approved.

Mfg Part No	Use With Series	Circuit	Volts/60 Hz	Ship Wt (lbs)	Comments
A876-99	Circuit Mod	Even Hour		3/4	Without solenoid
B876-99	Circuit Mod	Even Half Hour		3/4	Without solenoid
D876-99	Circuit Mod	Odd Hour		3/4	Without solenoid
E876-99	Circuit Mod	Odd Half Hour		3/4	Without solenoid
A877-20	Circuit Mod	Even Hour	208-240	1	With solenoid
B877-20	Circuit Mod	Even Half Hour	208-240	1	With solenoid
D877-20	Circuit Mod	Odd Hour	208-240	1	With solenoid
E877-20	Circuit Mod	Odd Half Hour	208-240	1	With solenoid
A878-00	Drive Mod		120	1	
A878-20	Drive Mod		208-240	1	

## Electronic Refrigeration Control



### ERC-2



The Paragon ERC-2 is a microprocessor-based controller designed to manage all of the temperature and defrost functions in a typical piece of commercial refrigeration equipment. By integrating these functions into one device, the ERC-2 can replace up to five different controls; the case thermostat, defrost timer, defrost termination switch, fan delay switch, and thermometer. The ERC-2 features two NSF approved temperature sensors for the case and the evaporator. Also featured are four powerful relay outputs; one each for the compressor, fan, defrost and alarm. Selectable line voltage input power (120/208/240VAC at 50/60Hz) enable it to handle a wide range of equipment.

Input Power: 120/208/240 VAC (+10, -15%), 50/60 Hz  
 Temperature Setpoint Range: -40F to 60F (-40C to 16C)  
 Defrost Cycles: 1 to 8 per day or 1 every 48 hours  
 Temperature Sensors: NTC thermistor  
 Ambient Operating Conditions: -40F to 122F (-40C to 50C), 0 to 95% RH (non-condensing)  
 Case Dimensions: 4.40" W x 7.82" H x 3.80" D  
 Display Module Dimensions: 2.75" W x 1.10" H x 1.38" D  
 Shipping Weight: 2.7 lbs  
 Agency Approvals: UL, NSF

Mfg Part No	Description
ERC2-212111-370	NEMA 1 case w/integrated display
ERC2-222111-370	NEMA 1 case w/ remote display
ERC2-1309007-045	10' leads. -40 to 60 F. Extend up to 100' w/18-22 gauge wire.

## Accessories



### Dial Trippers/Pins



Mfg Part No	Use With Series	Quantity Per Set/Description
X2772	4000, 4010, 4400	1 On/1 Off
X3495	4000-S	6 Cutout Pins
X3596	8025	5 Dial Pins
X4296	4000-S	Cutout Index Tripper (On)
X4299	7000	1 On/1 Off
X9242	P100	1 On/1 Off

Albany, NY	518-489-0010	Rochester, NY	585-482-3876	Allentown, PA	610-437-9818	Scranton, PA	570-346-1565
Binghamton, NY	607-724-2451	Syracuse, NY	315-475-3131	Altoona, PA	814-941-7617	Stroudsburg, PA	570-424-5724
Buffalo, NY	716-853-1291	Utica, NY	315-732-4077	Erie, PA	814-459-4559	Wilkes-Barre, PA	570-824-8779
Middletown, NY	845-733-5666			Harrisburg, PA	717-558-0828	Williamsport, PA	570-323-4606

**Time and Energy Controls**



**24-Hour Timers**

**P100 Series**



A rugged working environment dictates a 24-hour time switch to match. Paragon's non-metallic P100 Series withstands the elements while reliably running up to 48 ON/OFF events per day. Fast, easy installation makes them the contractor's control of choice.

- 30 minute resolution (up to 48 pins) for ON/OFF time events allows 48 ON/OFF events per day.
- Time intervals can be set from 30 minutes to 23-1/2 hours.
- Manual override lever temporarily reverses switch operation without affecting set schedule.
- Non-metallic units are designed to withstand the elements.
- Robust, sealed synchronous motor is durable and reliable.
- P101R mechanism can be placed in competitor enclosures.
- Two sets of trippers supplied.
- Skip-A-Day feature allows maximum programming flexibility.
- Hasp for padlock or seal heightens security.
- Wiring terminals 10-16 AWG wire.
- Agency recognition UL and CSA listed

Operating temperature: -40 to 180 F

Humidity range: 0% to 95% Relative Humidity, non-condensing

Frequency: 60 Hz

Switch rating per pole: 40 amp resistive, 40 amp Tungsten, 1000VA  
Power consumption: 3 watts

Mfg Part No	Voltage	Switch Type	HP Rating	Enclosure Material/Type	Dimensions (WxHxD) [in]
P101-00	120	SPST	2	Metal (indoor)/NEMA 1	4-1/8x8-1/2x2-1/4
P104-71	208-277	DPST	5	Metal (indoor)/NEMA 1	4-1/8x8-1/2x2-1/4

**24-Hour Timers**



**4000 Series**



Paragon's 4000 Series is the 24-hour time control to serve applications requiring 90 minute minimum on or off time with a maximum of seven ON/OFF events per day. Available in NEMA 3R non-metallic enclosure, NEMA 3 metal enclosure or NEMA 1 steel enclosure, the series is designed to meet the needs of any application.

- Up to 7 on/off events can be scheduled per day.
- Time increments can be set from 90 minutes to 22-1/2 hours.
- Manual override lever temporarily changes schedule without disturbing set program.
- Fast, easy, low-cost installation saves contractors time and money.
- Wiping contact blades maintain a consistent contact surface.
- Skip-a-day feature allows maximum programming flexibility.
- Clutched clock dial allows immediate testing of the load's on/off status.
- Positive, heavy-duty switching is ensured by 40 amp rating per pole with a switch slider bar.
- Robust, sealed synchronous motor is more durable and reliable.
- Leaves load on during days scheduled to be skipped for the 4008-20S only.
- Agency recognition UL and CSA listed.

Wiring terminals: 10-16 AWG wire

Frequency: 60 Hz

Power consumption: 3 watts

Comments: amp ratings listed in ordering chart are resistive

Mfg Part No	Switch Type	Switch Ratings	Hp NO, NC	Amp NO, NC	Voltage	Enclosure Material/Type
4001-00	SPST	E	2	50	120	Metal (indoor)/NEMA 1
4001-00-RT	SPST	E	2	50	120	Metal (indoor)/NEMA 1
4002-71	SPST	E	2	40	208-277	Metal (indoor)/NEMA 1
4003-00	DPST	E	2	40	120	Metal (indoor)/NEMA 1
4003-00-RT	DPST	E	2	40	120	Metal (indoor)/NEMA 1
4004-71	DPST	E	2	40	208-277	Metal (indoor)/NEMA 1
4003-00S	DPST	E	2	40	120	Metal (indoor)/NEMA 1
4004-06S	DPST	E	2	40	24	Metal (indoor)/NEMA 1
4004-71S	DPST	E	2	40	208-277	Metal (indoor)/NEMA 1
4005-00S	SPST	E	2	40	120	Metal (indoor)/NEMA 1
4006-71S	SPST	E	2	40	208-277	Metal (indoor)/NEMA 1
4007-06S	SPST	E	2	40	24	Metal (indoor)/NEMA 1
4008-20S	DPST	E	2	40	208-277	Metal (indoor)/NEMA 1
4011-00	SPST	E	2	40	120	Metal (indoor/outdoor)/NEMA 3
4011-00P	SPST	E	2	40	120	Non-metallic (indoor/outdoor)/NEMA 3R
4011-00PC-RT	SPST	E	2	40	120	Non-metallic w/ clear view cover (indoor/outdoor)/NEMA 3R
4013-00	DPST	E	2	40	120	Metal (indoor/outdoor) NEMA 3
4013-00P	DPST	E	2	40	120	Non-metallic (indoor/outdoor)/NEMA 3R
4014-71	DPST	E	2	40	208-277	Metal (indoor/outdoor) NEMA 3
4013-00S	DPST	E	2	40	120	Metal (indoor/outdoor) NEMA 3
4014-71S	DPST	E	2	40	120	Metal (indoor/outdoor) NEMA 3

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## Industrial Process Controls



### JW Series



Paragon's JW Series are cycle repeater controls that will repeat the selected time cycles as long as power is applied. These controls are most often found in agricultural and industrial applications. Easily installed, they are available in NEMA 3R or NEMA 1 enclosures to meet the requirements of any environment, no matter how rugged.

- ON time adjustable from 2% to 90% of full-scale dial for a wide range of ON/OFF combinations.
- User can easily adjust set ON/OFF percentage.
- Time intervals can be set from several seconds to 60 minutes in 5-minute, 10-minute, 30-minute, and 60-minute increments.
- 4 dial ranges with varied timing options for diverse applications.
- Duty cycling capable when used with our 4000 series.
- 120-Volt version is UL and CSA listed, means quality and durability are built into every time control.

Frequency: 60 Hz

Power consumption: 3 watts

Mfg Part No	Voltage	Graduation	Range	Enclosure Material/Type	Dimensions (WxHxD) [in]
JW60-00	120	60 seconds	60 minutes	Metal (indoor)/NEMA 1	3-1/2x5-1/8x2-7/8
JW60-20	208-240	60 seconds	60 minutes	Metal (indoor)/NEMA 1	3-1/2x5-1/8x2-7/8

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### Our partnerships benefit you!

Meier Supply is proud to be affiliated with the Key Wholesalers Group Association, a premier customer-focused wholesale distribution network serving the Refrigeration and HVAC industries.

- **Key Wholesalers Group Association consists of 22 of the finest refrigeration wholesalers in the HVAC business**
- **Collaborating with this nationwide network of suppliers gives us greater buying power to provide YOU the best combination of competitive pricing, quality products and technical support**

Meier Supply Company is also a proud member of CGNA (Controls Group of North America). Members and vendor partners of CGNA gain a distinct advantage allowing them to sell more, team up and dominate their markets.

- **CGNA has over 140 warehouses in North America**
- **A combined inventory of over \$60 million**
- **More than 200,000 items in stock**
- **Purchasing power of over half a billion dollars**

Our memberships in CGNA and Key Wholesalers Group Association are just two examples of the many ways that our partnerships with industry colleagues benefit YOU. We believe in the power of teamwork! We show it by passing the benefits on to our customers with competitive pricing, value-added service, quality products and exceptional support.

Albany, NY	518-489-0010	Rochester, NY	585-482-3876	Allentown, PA	610-437-9818	Scranton, PA	570-346-1565
Binghamton, NY	607-724-2451	Syracuse, NY	315-475-3131	Altoona, PA	814-941-7617	Stroudsburg, PA	570-424-5724
Buffalo, NY	716-853-1291	Utica, NY	315-732-4077	Erie, PA	814-459-4559	Wilkes-Barre, PA	570-824-8779
Middletown, NY	845-733-5666			Harrisburg, PA	717-558-0828	Williamsport, PA	570-323-4606