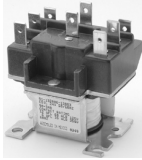


Relays & Transformers

2 Pole Switching Relays

90-340 Thru 90-342 WR/RBM Type 91

A Two Pole Double Throw Semi-Enclosed Relay



90-340 Fits Fan Control Centers 90-112, 90-113, 90-118E and 90-119

FEATURES

- Easy to install.
- Suited for use in vending machines, appliances, heating and air conditioning applications and general purpose switching.

Mfg Part No	Coil Voltage (50/60 Hz)	Terminals 1-2-3	Terminals 4-5-6	Coil Data			
				DC Res.	MA	Nom. VA	Inrush VA
90-340	24	Power	Power	17.5	334	9.5	22
90-341	115/120	Power	Power	420	66	9.5	22
90-342	208/240	Power	Power	1600	38	9.5	22

2 Pole Definite Purpose Contactors

90-244 Thru 90-249 WR/RBM Type 122

Designed for Air Conditioning and Heating Equipment



FEATURES

- Low VA coil for cooler operation and increased life.
- Quiet operation.
- Universal style mounting bracket fits existing mounting holes.
- Double break contacts ensure positive make and break.
- Screw terminals or pressure connectors and double 1/4" quick connects provided on all models for easy installation.

Mfg Part No	Amperage	Voltage AC	DC Res. (ohms)	Current (MA)	Nominal (VA)	Max Inrush (VA)
90-244	30	24	11	250	6	32
90-245	30	120	224	50	6	32
90-246	30	208/240	997	25	6	32
90-247	40	24	11	250	6	32
90-248	40	120	224	50	6	32
90-249	40	208/240	997	25	6	32

Enclosed Fan Relays

90-290Q Thru 90-295Q WR/RBM Type 84

Used for Switching Single or Two Speed Fan Motors, Solenoids, Relays, Resistive Loads and General Purpose Switching



FEATURES

- Compact, totally enclosed design.
- For heating and cooling applications and general switching.
- Quiet, reliable and economical.

Mfg Part No	Type	Voltage AC (50/60 Hz)	DC Res. (ohms)	Current (MA)	Nominal Sealed (VA)	Inrush (MA)
90-290Q	SPNO	24	90	125	3	4
90-291Q	SPNO	120	2000	25	3	4
90-292Q	SPNO	240	7000	12.5	3	4
90-293Q	SPDT	24	90	125	3	4
90-294Q	SPDT	120	2000	25	3	4
90-295Q	SPDT	240	7000	12.5	3	4

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Relays & Transformers

White
Rodgers

Heavy-Duty Enclosed Fan Relays

90-360 Thru 90-486 WR/RBM Type 184

Heavy-Duty General Purpose Relay Operates in Any Position



FEATURES

- Compact, totally enclosed design.
- For heating and cooling applications and general switching.
- Quiet, reliable and economical.

Mfg Part No	Type	Voltage AC (50/60 Hz)	DC Res. (ohms)	Current (MA)	Nominal Sealed (VA)	Inrush (VA)
90-360	SPNO	24	77	125	3	4
90-362	SPNO	120	2000	25	3	4
90-364	SPNO	240	6050	12.5	3	4
90-466	SPNO	277	10300	10.8	3	4
90-370	SPDT	24	77	125	3	4
90-372	SPDT	120	2000	25	3	4
90-374	SPDT	240	6050	12.5	3	4
90-476	SPDT	277	10300	10.8	3	4
90-380	SPNO/SPNC	24	77	125	3	4
90-382	SPNO/SPNC	120	2000	25	3	4
90-384	SPNO/SPNC	240	6050	12.5	3	4
90-486	SPNO/SPNC	277	10300	10.8	3	4

Switching Relays

90-101 Thru 90-105 RBM Type 129000

Replaces RBM91256



Incorporates All Type 128000 Features Except Operating Coils Which are Designed for Standard Commercial Voltages. Features Screw or Quick Connect Terminals and a Variety Of Mountings

REPLACEMENT RELAY CONTAINS:

1. A single pole normally open (SPNO) relay or one pole normally open and one pole normally closed (1 NO - 1 NC) relay.
2. Terminal screws, 5/16 x 8-32 Binding Head (See Note A).
3. Auxiliary side bracket (See Note B).
4. Instruction sheet.

NOTE A: All replacement relays furnished with screw terminals only.

NOTE B: Substitute side mounting bracket by attaching with screws, holding bracket mounted on replacement relay. When replacing Steveco relay having special bracket, remove bracket from replaced relay.

Mfg Part No	Contacts			Coil Voltage (60 Hz)	DC Res.	Coil Data		
	Form	Rating	Coil Voltage (60 Hz)			MA	Nom. VA	Inrush VA
90-101	1 N.O. 1 N.C.	Power	115	761	33	4	8	
90-103	1 N.O. 1 N.C.	Power	208/230	3316	17	4	8	
90-105	1 N.O. 1 N.C.	Power	24	45.7	167	4	8	

90-109 and 90-110 RBM Type 129000

A "lock-out" relay is used in some air conditioning systems to provide manual reset protection with automatic reset overloads, high or low pressure cut-out controls, etc.

Mfg Part No	Contacts			Coil Voltage (60 Hz)	DC Res.	Coil Data		
	Form	Rating	Coil Voltage (60 Hz)			MA	Nom. VA	Inrush VA
90-109	SPNC	Pilot	24	45.7	167	4	8	
90-110	SPNC	Pilot	208/230	3316	17	4	8	

90-123 Thru 90-124 RBM Type 129000AR Add-A-Relay Enclosed Switchign



Base with a bushing, locknuts and position locking plate to mount this relay in standard electric box with 1/2" "knock out". Relay has double break silver alloy contacts and is completely enclosed. Operates in any position

Mfg Part No	Coil Voltage (60 Hz)	Coil Data				
		DC Res.	MA	Nom. VA	Inrush VA	
90-123	24	45.7	167	4	8	
90-124	120	761	33	4	8	

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

Hydronic Controls

White
Rodgers

Surface (Strap-On) Types

Attach Directly to Surface of Pipe. Types for use as High Limit, Reverse Acting or SPDT Switching Action Control.



FEATURES

- Sensing element has twice the contact area of competitive models.
- Hydraulic action element can be mounted in any position — no leveling required.
- Dustproof steel case.
- Special screw terminals with "ears" securely hold solid and stranded wires.
- Includes pipe strap and mounting screws.

Mfg Part No	Range (F)	Differential (F)	Switch Action	Full Electrical Rating	Motor Rating (Full Load)		Valves and Relays	
					120 VAC	240 VAC	24 VAC	0.3-12v DC
1127-2	100 to 240	Fixed, 10	SPDT	HH	7.4A	3.7A	2.9A	-
1127-9	60 to 200	Fixed, 15	SPDT	HH	7.4A	3.7A	2.9A	-
11B02-1	100 to 240	Fixed, 10	Open on Rise	HTV	10.0A	6.0A	6.0A	1.0A

Refrigeration Temperature Controls

Refrigeration Temperature Control

Provide Positive Control of Refrigeration Applications Where Remote Control is Desired



FEATURES

- Hydraulic action element.
- Dustproof steel case with top and bottom knockouts.
- Temperature dial graduated in °F and °C and can be adjusted through cover.
- High electrical ratings allow operation of most equipment without use of relays or motor starters.
- Type 1609-90 — For use in zoning systems where all thermostats control a common compressor & a separate solenoid refrigerant valve in each zone.

Mfg Part No	Range (F)	Differential (F)	Capillary Length (ft)	Bulb Size (in)	Switch Action	Full Electrical Rating	Motor Rating (Full Load)	
							120 VAC	240 VAC
241-2	+20 to +90	Adj. 3 to 20	8	6-3/4 x 3/8	Close on Rise	FGH	16.0A	8.0A
1609-90	-20 to +50	Adj. 3 to 25	8	5-1/4 x 3/8	Close on Rise	HH2C	7.4A	3.7A
1609-100	-50 to +50	Adj. 4 to 35	10	6-3/8 x 3/8	Close on Rise	FGH	16.0A	8.0A
1609-101	-30 to +90	Adj. 3.5 to 40	5	5-1/4 x 3/8	Close on Rise	FGH	16.0A	8.0A
1609-103	-30 to +90	Adj. 3.5 to 40	10	5-1/4 x 3/8	Close on Rise	FGH	16.0A	8.0A
1609-104	-30 to +90	Adj. 3.5 to 40	20	5-1/4 x 3/8	Close on Rise	FGH	16.0A	8.0A
1609-105	-30 to +90	Adj. 3.5 to 40	5	5-1/4 x 3/8	Close on Rise	FGH	16.0A	8.0A
1687-9	-30 to +90	Adj. 4.5 to 40	8	5-1/4 x 3/8	SPDT	SPDT	7.4A	3.7A

Ice Bank Control

Controls Compressor to Maintain an Ice Bank of Desired Thickness. Excellent for use on Refrigerated Cabinets Where an Ice Bank is Built as a Means of Storing Refrigeration



FEATURES

- Specially designed element controls ice bank thickness to within 1/16".
- Thickness of ice determined by location of sensing element to evaporator coil.
- Control stops compressor when ice bank completely covers sensing element and starts compressor when ice bank begins to melt.
- Dustproof steel case with top and bottom knockouts.
- Two mounting straps included.
- Hydraulic action element — No leveling required.

Mfg Part No	Differential	Capillary Length (ft)	Bulb Size (in)	Full Electrical Rating	Motor Rating (Full Load)	
					120 VAC	240 VAC
16A35-3	1/16" ice	7	5 x 1/2	FG	14.0A	7.0A

WHITE-RODGERS

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Refrigeration Temperature Controls

Refrigeration Temperature Controls for Walk In Boxes

Designed for use in Garages, Factories, Warehouses and Similar Commercial and Industrial Installations



FEATURES

- Dust, moisture and vermin resistant heavy metal case.
- Handles inductive and non-inductive loads.
- No leveling required — Mounts in any position.
- Quick response to temperature changes.
- Nickel plated element.

Mfg Part No	Range (F)	Differential	Switch Action	Full Electrical Rating	Motor Rating (Full Load)	
					120 VAC	240 VAC
201-8	20 to 90	Adj 3 to 20	Close on Rise	FGH	16.0A	8.0A
201-20	-30 to 90	Adj 3 to 20	Close on Rise	FGH	16.0A	8.0A

Thermostats

White
Rodgers

80 Series Thermostats



Residential and light commercial – single stage, multi-stage and heat pump applications. 80 series thermostats are packed with premium features. No other thermostat series offers more value for the money

FEATURES

- Choice of battery powered, dual power or hardwired models.
- Fossil fuel or electric heat compatible.
- 60% larger LCD with backlight.
- Permanent program retention during power loss.
- Configuration menu allows keypad selection of options.
- Selectable Celsius or Fahrenheit temperature display.
- Selectable Energy Management Recovery (1F80-240/1F80-241/1F80-361/ 1 F81-261/1F82-261).
- Meets Energy Star specifications – all programmable models, except 1F80-224.
- Configurable to non-programmable 1F80-0471.
- 80 Series Blue fits vertical or horizontal junction box.

Mfg Part No	Stages Heat/Cool by System			Program Options	Periods/Day Options	Terminals
	Single Stage	Multi-Stage	Heat Pump			
1F82-261	-	-	2/1	5+1+1	4	R, C, Y, W2, G, B/O, L, E
1F80-361	1/1	-	1/1	5+1+1	4	RC, RH, C, W, Y, G, O, B

Furnace

White
Rodgers

Hot Surface Ignition Controls

Non-Integrated Furnace Control

Universal 50E47-843 Non-Integrated HSI Ignition Module



The universal 50e47-843 replaces all White-Rodgers 50e47 modules and virtually all competitive silicon carbide, non-integrated modules. Includes a complete module cross reference and program keys for fast and accurate replacement

FEATURES

- Program keys for multiple timing selections.
- Tri-colored LED indicator for diagnostics.
- Direct and indirect flame sense compatible.
- Universal design for maximum versatility.

SPECIFICATIONS

Dimensions	4.13"W x 4.13"H x 1.5"D
Electrical rating	Input 18 to 30 VAC, 25 VAC nominal, Max. input current @ 25 VAC; .250mA @ 28 VAC
Relay load settings	Valve relay: 1.5 amps @ 28 VAC, 50/60 Hz, .6 pf Ignitor relay: 1.52A, 120 VAC, 50/60 Hz resistive
Operating temperature	-40° to +175°F (-40° to +80°C)
Humidity range	95% RH (non-condensing) max.
Mounting	Surface mount or 4" x 4" junction box
Applications	For use with all gases
Flame current requirements	Min. current to insure flame: 2 µADC Min. current for non-detection: 0.2 µADC Max. allowable leakage resistance: 100 M Ohms

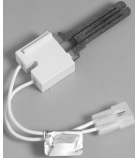
Mfg Part No	Description
50E47-843	Universal Non-Integrated HSI Ignition Module

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

Hot Surface Ignition Controls

Silicon Carbide

Silicon Carbide Hot Surface Ignitor



Highly reliable ignition source.

FEATURES

- Multiple mounting styles.
- Works with 15, 17 or 45 second HSI systems.

SPECIFICATIONS

Electrical Rating 1 20 VAC, 60 Hz
Agency A.G.A. and C.G.A. design certified

Mfg Part No	Lead Length (in)	Lead Insulation Temp Rating (C)	Electrical Connection
767A-356	6	250	Receptacle with 0.093" Male Pins
767A-357	5.25	250	Receptacle with 0.093" Male Pins
767A-361	5.25	250	Receptacle with 0.093" Male Pins
767A-365	5.688	250	1/4" Female Spade Terminals

Flame Sensor for Hot Surface Ignition Systems



Flame sensors can be mounted remotely on multiple burner or adjacent to ignitor on other applications.

FEATURES

- High quality Alumina ceramic insulator.
- High temperature Kanthal flame rod material that can withstand 1800°F.
- Teflon insulated (250°C rating) lead wire.
- Single screw, plated steel mounting bracket.

SPECIFICATIONS

Agency A.G.A. and C.G.A. design certified

Mfg Part No	Lead Length (in)	Electrical Connection	Description
760-401	30	1/4" Female Spade Terminal	
760-802	30	1/4" Female Spade Terminal	Exact replacement for OEM model

Spark Ignition

Pilot Relite controls 5059 and 5059A

Generates Spark Until a Pilot Flame is Sensed



FEATURES

- Generates spark pulse until flame is sensed through spark electrode.
- Begins sparking immediately if flame extinguishes.
- Rugged solid state module design.
- Available in 24 and 120 volt input.
- Spark plug or spike output configurations available.

SPECIFICATIONS

Agency AGA design certified and CGA certified

Mfg Part No	Input Voltage (VAC)	Electrical Rating (Amps)	Description
5059-23	24	0.03	Spark plug and 1/4" spade connectors
5059-134	24	0.03	Spike connector
5059A-21	120	0.04	Spark plug and 1/4" spade connectors
5059-25	24	0.03	Spark plug and 1/4" spade connectors

Ignition Electrode Assemblies



Use type 760-56 to replace cycle-pilot® ignition electrodes and cable assemblies.

Mfg Part No	Description
760-56	24" lead with slip on bracket. Also includes perforated mounting strap for varying applications.
760-310	Same as 760-56 except with universal mounting bracket

WHITE-RODGERS

WHITE-RODGERS

Furnace

White
Rodgers

Gas Burner controls

Mercury Flame Sensors

For Proving Pilot Flame and Controlling Main Valve in Cycle Pilot Applications

FEATURES

- Bulb styles are designed to fit with various OEM applications.
- See Cross Reference to OEM control type numbers on next page.
- Adapter fittings to allow use of these mercury flame sensors with competitive burners

SPECIFICATIONS

Agency A.G.A. design certified and C.G.A. certified
Maximum temperature 1 450°F at bulb tip

Mfg Part No	Element Length (in)	Panel Type	Bulb Style	Description
3049-64	48	D	#19	Replaces bulb styles #9 and #13
3049-115	48	D	#20	Replaces bulb styles #17 or #18
3098-134	48	E	#19	Replaces bulb styles #9 and #13
3098-156	48	E	#20	Replaces bulb styles #17 or #18



WHITE-RODGERS



Flame Sensors

Mfg Part No	Type Gas	Terminations	Cap Length (in)	Comments
3046-5	Natural	Screw	48	Recycling
30A46-5	Natural	Plug-in	48	Recycling

Dual Purpose Air Switch

Responds to Positive, Negative or Differential Air Pressure

FEATURES

- Design eliminates "fluttering" or malfunction due to shock or vibration normally encountered with "sail switches."
- Wide operating range.
- Furnished with one 12" piece 1/4" O.D. flexible tubing, nuts and ferrules.
- Can be mounted in any position except upside down.
- Enclosed diaphragm.

SPECIFICATIONS

Ambient Temperature . - 40 to + 180°F
Maximum Pressure 1/2 PSI
Agency U.L. listed and C.S.A. certified 1/2 HP @ 125 VAC

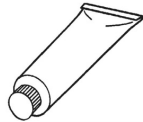


Mfg Part No	Adjustable Operating Range	Switch Action	Resistive (Non-Inductive)			
			120 VAC	240 VAC	277 VAC	125-277 VAC
770-1	0.05 to 12.0 WC	SPDT	15.0A	15.0A	15.0A	300 VA

Parts & Accessories

Oil Controls

Heat Transfer Compound



Mfg Part No	Description
F145-0163	Heat transfer compound

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