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36C Series



36C SERIES STANDING PILOT SNAP OPEN, STEP OPEN, HSI, DSI, AND INTERMITTENT IGNITION GAS VALVES

A Wide Range of Replacement Valves for the Professional Installer

SPECIFICATIONS

Electrical Rating	0.23 amps
Ambient Operating Range	-40 to +175°F (-40 to 79°C)
Maximum Pressure Rating	1/2 PSI (14.0" W.C.)
Pilot Gas Connection	1/4" compression fitting
Pressure Tap	1/8" N.P.T.

Pipe Size	1" Pressure Drop Capacity		Rated Range of Regulation	
	BTU/HR		BTU/HR	
	STD. NAT GAS 1000 BTU/CU. FT.	LP GAS 2500 BTU/CU. FT.	STD. NAT GAS 1000 BTU/CU. FT.	LP GAS 2500 BTU/CU. FT.
1/2 X 3/8	100,000	162,000	15,000-100,000	15,000-162,000
1/2 X 1/2	230,000	372,600	30,000-290,000	30,000-469,000
1/2 X 3/4	230,000	372,600	30,000-290,000	30,000-469,000
3/4 X 3/4	280,000	453,600	50,000-400,000	50,000-648,000

PARTS AND ACCESSORIES

See end of this section for parts and accessories

SNAP OPEN, SINGLE FUNCTION, STANDING PILOT GAS VALVES

Model Number	Typical App.	Coil Voltage	Gas Type	Pipe Size	Opening Characteristic	Regulator Setting	Regulator Adjustment Range	Convertible Nat. / LP	LP Conversion Kit Included	Line Interrupter	Flow Direction	Reducer Bushing Kit	Inlet Pressure Tap	Side Taps	Internal Wiring See Figure ①
36C01-405	Snap Open	24VAC	Natural or LP	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	No	Str. Thru	Yes	No	No	1
36C01A-405	Snap Open	120VAC	Natural or LP	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	No	Str. Thru	Yes	No	No	3
36C03-300	Standing Pilot	24VAC	Natural or LP	1/2 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	Yes	Str. Thru	Yes	No	No	1
36C03-333	Standing Pilot	24VAC	Natural or LP	1/2 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	Yes	Str. Thru	Yes	No	Yes	1
36C03-400	Standing Pilot	24VAC	Natural or LP	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	Yes	Str. Thru	Yes	No	No	1
U 36C03-433	Standing Pilot	24VAC	Natural or LP	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	Yes	Str. Thru	Yes	Yes	Yes	1
36C03A-410	Standing Pilot	120VAC	Natural or LP	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	Yes	Str. Thru	Yes	No	No	3
36C03U-333	Standing Pilot	750mV	Natural or LP	1/2 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	Yes	Str. Thru	Yes	Yes	Yes	2
U 36C03U-433	Standing Pilot	750mV	Natural or LP	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	Yes	Str. Thru	Yes	Yes	Yes	2
36C04U-438	Standing Pilot	750mV	Natural or LP	3/4 x 3/4	Step Open 0.7"	0.7 / 3.5"	2.5"-5.0"	No	No	Yes	Str. Thru	Yes	No	No	2
36C53-418	Standing Pilot	24VAC	Natural or LP	3/4 x 3/4	Slow Open	3.5"	2.5"-5.0"	Yes	No	Yes	Str. Thru	Yes	No	No	1
* 36C03-258	Standing Pilot	24VAC	Natural or LP	1/2 x 1/2	Fast Open	3.5"	2.5"-5.0"	No	No	Yes	Str. Thru	No	Yes	No	1

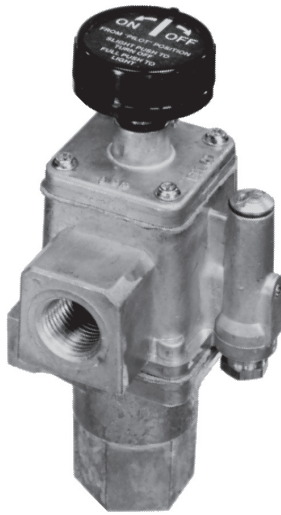
HSI/DSI VALVES, INTERMITTANT IGNITION

36C74-913	Step Open	24VAC	Natural	3/4 x 3/4	Step	0.9"/3.5"	2.5"-5.0"	No	No	No	Str. Thru	Yes	Yes	No	5
36C94-303	Intermittent Ignition Systems	24VAC	Natural or LP	1/2 x 3/4	Delay Slow	3.5"	2.5"-5.0" 7.0"-12.0"	Yes	Yes	No	Str. Thru	No	Yes	No	15

① Wiring diagrams – see pages 172-175

* Indicates Canadian Model Number

U = Universal



764-702

**764 SERIES THERMOCOUPLE OPERATED
GAS PILOT SAFETY/GAS FIREPLACE VALVES**

In Line Appliance Control with 100% Shut Off

FEATURES / SPECIFICATIONS / PART AND ACCESSORIES

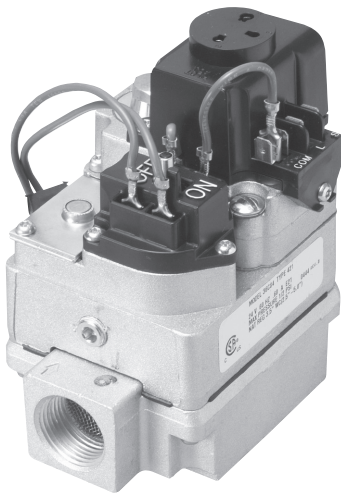
- Redesigned to include 100 PSI protection, inlet screen and inlet pipe stop.
- Optional rear inlet tapped and plugged.
- May be mounted horizontal, vertical and 90° from horizontal (multipoise).

Electrical Rating	20 to 30 mV (Thermocouple)
Regulator Adjustment Range	Non-regulated
Maximum Pressure Rating	1/2 PSI (14.0" W.C.)
Ambient Operating Range	-40 to 250°F
Swing Radius	2.5"
Agency	C.S.A. approved

- F42-0895 — Replacement knob

Model Number	Coil Voltage	Inlet-Outlet Size	Capacity A.G.A. Standard Gas ①	Electrical Connections
764-702	20 to 30 mV	3/8" x 3/8"	132,000	Thermocouple
764-742	20 to 30 mV	1/2" x 1/2"	142,000	Thermocouple

① See page 221 for capacities of other gases



36C84-912

36C CYCLE PILOT GAS VALVES

With Redundant Pilot Solenoid Main Gas Regulator, Integral Gas Pressure Switch and Electrical Connection on the Gas Valve for Mercury Flame Sensor Connection

SPECIFICATIONS

Electrical Rating	0.6 amps
End to End Dimensions	3 ⁵ / ₁₆ "
Ambient Operating Range	-40 to +175°F (-40 to 79°C)
Maximum Pressure Rating	1/2 PSI (14.0" W.C.)
Agency	C.S.A. approved

Pipe Size	1" Pressure Drop Capacity		Rated Range of Regulation	
	BTU/HR		BTU/HR	
	STD. NAT GAS 1000 BTU/CU. FT.	LP GAS 2500 BTU/CU. FT.	STD. NAT GAS 1000 BTU/CU. FT.	LP GAS 2500 BTU/CU. FT.
1/2 X 3/8	100,000	162,000	15,000-100,000	15,000-162,000
1/2 X 1/2	230,000	372,600	30,000-290,000	30,000-469,000
1/2 X 3/4	230,000	372,600	30,000-290,000	30,000-469,000
3/4 X 3/4	280,000	453,600	50,000-400,000	50,000-648,000

PARTS AND ACCESSORIES See end of this section for parts and accessories



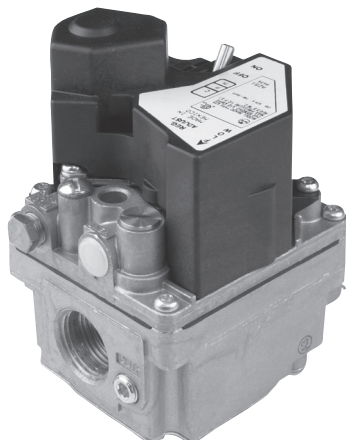
TECHNICAL HELP

Wiring Diagrams See pages 172-175

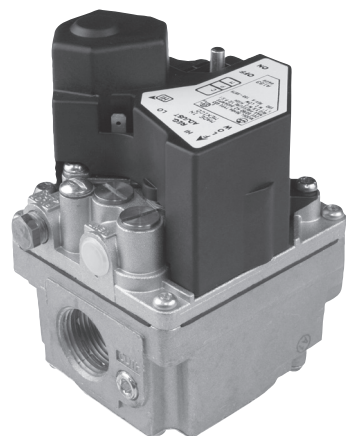
Model Number	Coil Voltage	Gas Type	Pipe Size	Opening Characteristic	Regulator Setting	Regulator Adjustment Range	Convertible Nat. / LP	LP Conversion Kit Included	Line Interrupter	Flow Direction	Reducer Bushing Kit	Inlet Pressure Tap	Side Taps	Internal Wiring See Figure ①
36C84-912	24 VAC	Nat./LP	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	No	Str. Thru	Yes	Yes	No	7
36C84-913	24 VAC	Nat./LP	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	No	Str. Thru	Yes	Yes	No	12
36C84-921	24 VAC	Nat./LP	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	No	Str. Thru	Yes	Yes	No	7
36C84-923	24 VAC	Nat./LP	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	No	No	No	Str. Thru	No	Yes	No	14
36C84-926	24 VAC	Natural	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	No	No	No	Str. Thru	Yes	No	No	4
36C84-945	24 VAC	Nat./LP	3/4 x 3/4	Fast Open	3.5"	2.5"-5.0"	Yes	Yes	No	Str. Thru	Yes	Yes	No	8
36C94-906	24 VAC	Natural	3/4 x 3/4	Slow Open	3.5"	2.5"-5.0"	No	No	No	Str. Thru	Yes	No	No	7
36C94-907	24 VAC	Nat./LP	3/4 x 3/4	Slow Open	3.5"	2.5"-5.0"	Yes	Yes	No	Str. Thru	Yes	No	No	4

① Wiring diagrams – see pages 172-175

NOTE: -9XX series replaces -4XX series. Knob replaced with an ON-OFF switch.



36H32-423



36H64-463

36H SERIES GAS VALVES

Combination Multi-function Controls for a Wide Range of Applications. The 36H Combination Gas Control Valve is a Versatile Multifunction Control Designed to Meet the Requirements for Use with Intermittent Ignition Systems (Direct Ignition, Proven Pilot, HSI). 36H is Our Highest Capacity Combination Gas Valve

FEATURES

- Adjustable regulator.
- Quiet operation redundant design.
- Inlet/outlet screens.
- Tamper resistant screws.

SPECIFICATIONS

Electrical Rating (36H) 0.41 amps (Single stage)
 0.54 amps (Two-stage)
 Ambient Temp. -40° to 175°F (-40° to 79°C)
 Pressure Rating 1/2 PSI (14.0" W.C.)
 Voltage 24 VAC
 Frequency 50/60 Hz

Pipe Size (36 H)	1" PD Capacity		Rated Range of Regulation		Valve Stages	Regulator Adjustment Range
	BTU/HR		BTU/HR			
	Std. Gas .64 Sp. Gr. (1000 BTU/CU FT)	LP Gas 1.53 Sp. Gr. (2500 BTU/CU FT)	Gas .64 Sp. Gr. (1000 BTU/CU FT)	Gas 1.53 Sp. Gr. (2500 BTU/CU FT)		Nat. Gas
3/4" x 3/4"	300,000	486,000	50,000 to 400,000	81,000 to 648,000	Single	2.5" to 5.0"
1/2" x 3/4"	230,000	372,600	50,000 to 300,000	80,000 to 500,000	Two-Stage	1.0"-3.5" Low 2.5"-5.0" High
1/2" x 1/2"	170,000	275,500	40,000 to 240,000	40,000 to 400,000		

PARTS AND ACCESSORIES See end of this section for parts and accessories



TECHNICAL HELP

Wiring Diagram. See page 177

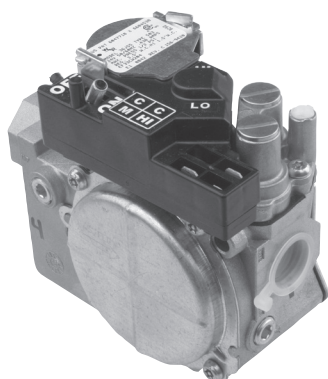
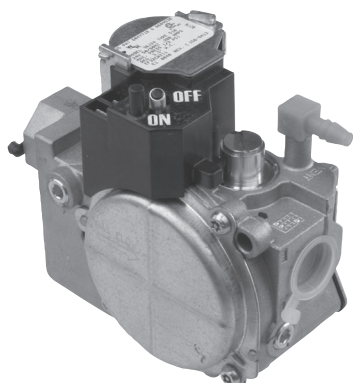
NEW U

Model Number	Voltage	Type of Gas	Pipe Size	Opening Characteristic	Stages	HSI/DSI	Proven Pilot	Standing Pilot	Intermittent Pilot	Convertible Nat/LP Kit Included	Reducer Bushing Kit	Inlet & Outlet Pressure Tap	Side Taps
36H32-214	24 Volt	Nat./LP	1/2 x 1/2	Fast	1	Yes	Yes	No	Yes	Yes	No	Yes*	No
36H32-304	24 Volt	Nat./LP	1/2 x 3/4	Fast	1	Yes	Yes	No	Yes	Yes	Yes	Yes*	No
36H32-423	24 Volt	Nat./LP	3/4 x 3/4	Fast	1	Yes	Yes	No	Yes	Yes	Yes	Yes*	No
36H33-412	24 VAC	Nat./LP	3/4 x 3/4	Slow	1	Yes	Yes	No	Yes	Yes	Yes	Yes*	No
36H64-463	24 VAC	Nat./LP	3/4 x 3/4	Fast	2	Yes	Yes	No	Yes	Yes	Yes	Yes*	No
36H65-401	24 VAC	Nat./LP	3/4 x 3/4	Slow	2	Yes	Yes	No	Yes	Yes	Yes	Yes*	No

U = Universal

* To measure outlet pressure on valves, loosen outlet pressure tap screw one quarter turn and put manometerhose over the top of the outlet pressure tap.

Wiring diagrams – see page 177



36G, 36J SERIES GAS VALVES

The 36G, 36J is a Combination Gas Control Valve Designed for Use with Non-Piloted Intermittent Ignition Systems. The Control is Designed to Meet Today's Maximum Capacity, Smaller Size and High Efficiency Gas Systems

FEATURES

- Inlet and outlet screens.
- Quiet redundant.
- Built-in pressure tap.
- Quick-connect terminals (1/4").

SPECIFICATIONS

Ambient Temperature	-40 to 175°F
Maximum Pressure Rating	1/2" PSI (14.0" W.C.)
Capacity (1" P.D.)	Natural 140,000 Btu/Hr. L.P. 226,800 Btu/Hr.
Electrical Rating	Single stage 24V, 50 / 60Hz at .3A Two stage at .43A
Swing Radius	2.75"
Mounting	Any position
Agency	C.S.A. approved

36J Series

Valve (Stages)	Pipe Size	1" Pressure Drop Capacity		Range of Regulation			
		BTU/HR		BTU/HR		Adjustment Range (Nat. IN. W.C.)	Adjustment Range (L.P. IN. W.C.)
		Std. Gas .64 Sp. Gr. (1000 BTU/CU. FT.)	LP Gas 1.53 Sp. Gr. (2500 BTU/FT.)	Std Gas .64 Sp. Gr. (1000 BTU/CU. FT.)	LP Gas 1.53 Sp. Gr. (2500 BTU/FT.)		
Single	1/2" x 1/2" NPT	140,000 BTU/HR	226,800 BTU/HR	40,000-210,000	60,000-340,000	2.5"-5.0"	7.0"-12.0"
Two	1/2" x 1/2" NPT	140,000 BTU/HR	226,800 BTU/HR	20,000 Low-210,000 High	32,000 Low-340,000 High	1.0"-4.0" Low 2.0"-5.0" High	4.0"-10.0" Low 6.0"-12.0" High
Modulating	1/2" x 1/2" NPT	140,000 BTU/HR	226,800 BTU/HR	20,000 - 210,000	32,600 - 340,000	0.40"-4.0"	1.3"-11.5"

PARTS AND ACCESSORIES See end of this section for parts and accessories



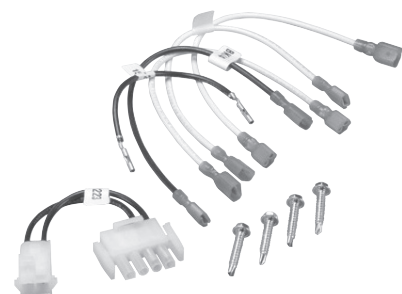
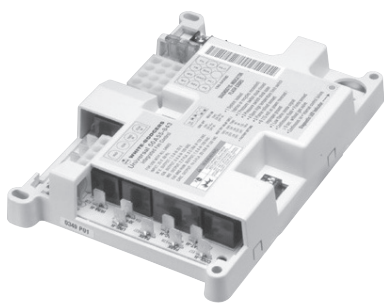
TECHNICAL HELP

Wiring Diagrams See page 178

Model Number	Coil Voltage	Gas Type	Pipe Size	Opening Characteristic	Regulator Setting	Regulator Adjustment Range	Convertible Nat. / LP	LP Conversion Kit Included	Flow Direction	Reducer Bushing Kit	Filter Screen	Inlet Pressure Tap	Outlet Pressure Tap	Internal Wiring See Figure ①
36G22-254	24 VAC	Natural or LP	1/2 x 1/2	Fast Opening Single Stage	3.5"	Nat. 2.5" - 5.0" L.P. 7.0" - 12.0"	Yes	No**	Str. Thru	No	Yes	Yes	Yes*	1
36J22-214	24 VAC	Natural or LP	1/2 x 1/2	Fast Opening Single Stage	3.5"	Nat. 2.5" - 5.0" L.P. 7.0" - 12.0"	Yes	Yes	Str. Thru	Yes	Yes	Yes	Yes	1
36J24-214	24 VAC	Natural or LP	1/2 x 1/2	Slow Opening Single Stage	3.5"	Nat. 2.5" - 5.0" L.P. 7.0" - 12.0"	Yes	Yes	Str. Thru	Yes	Yes	Yes	Yes	1
36J54-214	24 VAC	Natural or LP	1/2 x 1/2	Two-Stage Fast Opening	LO 1.5" HI 3.5"	Nat. 2.5" - 5.0" L.P. 6.0" - 12.0"	Yes	Yes	Str. Thru	Yes	Yes	Yes	Yes*	2
36J55-214	24 VAC	Natural or LP	1/2 x 1/2	Two-Stage Slow Opening	3.5"	Nat. 2.5" - 5.0" L.P. 6.0" - 12.0"	Yes	Yes	Str. Thru	Yes	Yes	Yes	Yes*	2
36J24-614	24 VAC	Natural or LP	1/2 x 1/2	Single Stage Slow Opening	3.5"	Nat. 2.5" - 5.0" L.P. 7.0" - 12.0"	Yes	Yes	90° Bottom Outlet	No	Yes	Yes	Yes*	2
36J55-614	24 VAC	Natural or LP	1/2 x 1/2	Two-Stage Slow Opening	3.5"	Nat. 2.5" - 5.0" L.P. 6.0" - 12.0"	Yes	Yes	90° Bottom Outlet	No	Yes	Yes	Yes*	2

* To measure outlet pressure on valves, loosen outlet pressure tap screw one quarter turn and put manometer hose over the top of the outlet pressure tap.
 ** Use F92-0659 to convert to regulated L.P. gas
 ① Wiring diagrams – see page 178

HEATING



**50A55-843 UNIVERSAL SILICON CARBIDE IGNITION
INTEGRATED HSI FURNACE CONTROL KIT**

Controls Gas Valve, Ignitor, Blower, Inducer, Humidifier and Air Cleaner.
Replaces Most Trane, York, ICP and Amana White-Rodgers Models

FEATURES

- Includes flash code diagnostics.
- Replaces 50A50 and 50A55 controls (consult Integrated Silicon Carbide Module Reference Chart below).
- Fused to protect low voltage system transformers.
- Includes mounting hole template.
- Adjustable blower relay.

SPECIFICATIONS

Input Voltage	25 VAC 50 / 60 Hz
Maximum Input Current @ 25 VAC . . .	0.45 amp
Valve Relay	1.5 amp @ 25 VAC 50 / 60 Hz 0.6 pf
Ignitor Relay	6.0 amp @ 120 VAC 50 / 60 Hz (resistive)
Inducer Relay	2.2 FLA – 3.5 LRA @ 120 VAC
Circulator Relay	14.5 FLA – 25.0 LRA @ 120 VAC
Operating Temperature Range	-40 to +175°F (-40 to +79°C)
Humidity Range	5% to 93% relative humidity (non-condensing)



TECHNICAL HELP

Wiring / configuration / troubleshooting see pages 183–184

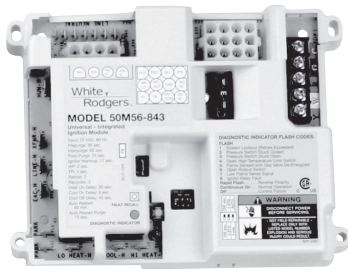
Model Number	Pre-Purge	Delay Heat		Delay Cool		Auto Reset
		ON	OFF	ON	OFF	
50A55-843	30 sec.	30 / 45	60 / 90 / 120 / 180	5	45 / 90	60 minutes

CROSS REFERENCE

50A55-843 Replaces:

031-00662-000	117284	50A50-131	50A50-405	50A55-843	D340035P01
031-00662-700	12L4201	50A50-142	50A50-406	52537074000	D340774P01
03101250000	1380686	50A50-143	50A50-408	52537077000	D341122P01
031-01250-000	1380698	50A50-205	50A50-438	56L8501	D341235P01
031-01250-700	1380699	50A50-206	50A50-471	75671	D341235P02
031-01266-000	14028	50A50-207	50A50-472	75672	D341235P03
031-01266-700	14029	50A50-208	50A50-473	78712	L38-798
031-01284-000	14030	50A50-209	50A50-474	8068142	L38-799
084141	14031	50A50-210	50A50-475	8068561	L38-800
1010806	194300330001	50A50-215	50A50-571	8068563	L38-801
102077-02	30757	50A50-216	50A55-143	83388	PCBBF117
102077-03	350486	50A50-229	50A55-241	99958174	X13120666010
10207704	3XA75	50A50-230	50A55-245	99958175	X13130436-01
102077-04	4DG53	50A50-240	50A55-250	CNT02789	X13130436010
10207706	4DG54	50A50-241	50A55-285	CNT02891	X13130436-02
102077-06	4DG55	50A50-245	50A55-286	CNT03799	X13130436-04
102077-09	4DG56	50A50-285	50A55-288	CNT1684	X13130436040
10207710	50A50-110	50A50-286	50A55-3797	CNT1686	X13640678040
102077-10	50A50-111	50A50-288	50A55-438	CNT1687	X13650597010
10207714	50A50-112	50A50-295	50A55-474	D330927P01	X4459
102077-14	50A50-113	50A50-296	50A55-476	D330930P01	X445901
10207719	50A50-130	50A50-298	50A55-571	D330934P01	

NOTE: Can also be replaced by 50M56U-843



50M56U-843

- Includes:
- Module
 - Wiring Harness
 - HotRod Ignitor Kit



**50M56U-843 UNIVERSAL INTEGRATED
HSI FURNACE CONTROL KIT**

Replaces Virtually All White-Rodgers and Competitive Single Stage Carbide and Nitride HSI Systems with 80V or 120V Ignitors.
Replaces More Models than Honeywell S9200U1000

FEATURES

- 3 Fan Speeds – cool, low heat & high heat speeds.
- Universal HotRod nitride ignitor kit – 21D64-2.
- 9 quick-select/quick-connect wiring harnesses.
- Red LED diagnostic flash codes with stored fault recall.
- Low voltage fuse protection, 3A replaceable automotive type.
- Humidifier & Electronic Air Cleaner connections (optional).

SPECIFICATIONS

Electrical Rating:
 Input Voltage 25 VAC 50/60 Hz
 Max. Input Current 25 VAC: 0.45 amp
 Gas Valve Relays 1.5 amp @ 25 VAC 50/60 Hz
 Inducer Relay 2.2 FLA–3.5 LRA @ 120 VAC
 Circulator Relay 14.5 FLA–25.0 LRA @ 120 VAC
 Ignitor Relay 6.0 amp @ 120 VAC 50/60 Hz (resistive)
 Flame Current Requirements:
 Minimum current to insure flame detection 1 µA DC*
 Maximum current for non-detection 0.1 µA DC*
 Maximum allowable leakage resistance 100 M ohms
 *Measured with a DC microammeter in the flame probe lead
 Operating Temperature Range -40° to 176°F (-40° to 80°C)
 Flame Failure Response Time 2.0 sec

PARTS AND ACCESSORIES See end of this section for parts and accessories

TECHNICAL HELP

Wiring Diagram. See pages 190–192

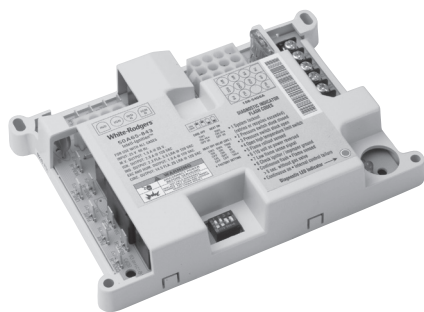
Model Number	Pre-Purge	Ignitor Warm-Up	Retries	Heat Delay to Fan ON	Heat Delay to Fan OFF	Cool Delay to Fan ON	Cool Delay to Fan OFF	Automatic Reset Time
50M56U-843	30	17	2	30	100/150	6	45	60 minutes

CROSS REFERENCE

Consult online Cross Reference for other suggested replacements for this item.

HEATING

HEATING



50A65-843

50A65-843 UNIVERSAL NITRIDE IGNITION INTEGRATED HSI FURNACE CONTROL

Controls Gas Valve, Ignitor, Blower, Inducer, Humidifier and Air Cleaner. Replaces OEM, Trane, York, ICP and Amana Models

FEATURES

- Includes diagnostic indicator flash codes.
- Replaces 50A65-120, -143, -288, -474, -475 controls (consult Integrated Nitride Module Reference Chart below).
- Replaceable 3A fuse.
- 60 minute auto reset.
- Single channel flame sense.

SPECIFICATIONS

Input Voltage	25 VAC 50 / 60 Hz
Maximum Input Current @ 25 VAC	0.45 amp
Valve Relay	1.5 amp @ 25 VAC 50 / 60 Hz 0.6 pf
Ignitor Relay	6.0 amp @ 120 VAC 50 / 60 Hz (resistive)
Inducer Relay	2.2 FLA – 3.5 LRA @ 120 VAC
Circulator Relay	14.5 FLA – 25.0 LRA @ 120 VAC
Electronic Air Cleaner and Humidifier	1 A @ 120 VAC
Operating Temperature Range	-40 to +175°F (-40 to +79°C)
Humidity Range	5% to 93% relative humidity (non-condensing)



TECHNICAL HELP

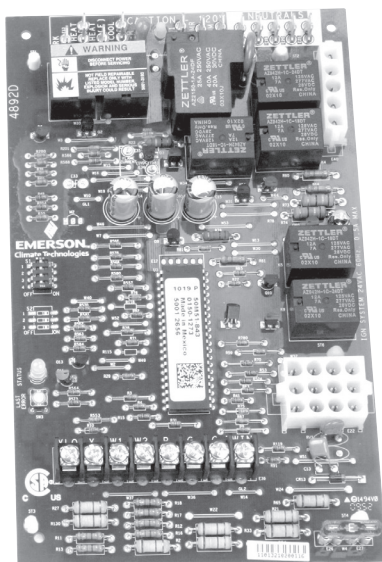
Wiring and configuration see pages 185–186

Model Number	Pre-Purge	Delay Heat		Delay Cool		Auto Reset
		ON	OFF	ON	OFF	
50A65-843	30 sec.	30 / 45	60 / 90 / 120 / 180	5	45 / 90	60 minutes

CROSS REFERENCE

50A65-843 Replaces:

10207717	50A65-5165
102077-17	50A65-843
10M93	56L84
10M9301	56L8401
12L69	CNT03076
12L6901	CNT03742
32M88	CNT03798
32M8801	CNT05164
350836	CNT05165
4DG57	D341213P01
50A65-120	D341396P01
50A65-121	D341396P03
50A65-143	D341396P04
50A65-288	D341396P05
50A65-474	PCBBF118S
50A65-475	X13120667010
50A65-476	



21M51U-843 Kit

- Includes:
- Module
 - HotRod Ignitor Kit



21M51U-843 UNIVERSAL INTEGRATED HSI FURNACE CONTROL KIT

Replaces White-Rodgers 50M51-242 and 50M61-XXX's Two-Stage HSI Systems with 80V or 120V Ignitors

FEATURES

- 120 VAC 3-speed PSC (Permanent Split Capacitor) circulator output, two-speed inducer output, two-stage gas valve output.
- Pushbutton fault history retrieval.
- Furnace status LED – tri-color (green, red and amber).
- Heat fan off delay (dipswitch selectable), fan on delay for cooling.
- Auto second stage delay (dipswitch selectable).
- 120 VAC humidifier output/120 VAC electronic air cleaner output.

SPECIFICATIONS

Electrical Rating:
 Input Voltage 24 VAC, 60 Hz (Class II transformer required)
 Nom. Input Current @ 24 VAC 530 mA + MV
 Relay Load Ratings:
 Gas Valve Relays 1.5 amps @ 24 VAC, 60 Hz
 Inducer Relays 2.2 FLA – 3.5 LRA @ 120 VAC
 Circulator Relays 14.5 FLA – 25.0 LRA @ 120 VAC
 Humidifier Load 1.0 amp max. @ 120 VAC
 Electronic Air Cleaner Load 1.0 amp max. @ 120 VAC
 Ignitor Relay 4.0 amps max. @ 132 VAC, 60 Hz
 Flame Current Requirements:
 Minimum current to insure flame detection 0.3 µA DC*
 Maximum current for non-detection 0.1 µA DC*
 Maximum allowable leakage resistance 100 M ohms
 *Measured with a DC microammeter in the flame probe lead
 Operating Temperature Range -40° to 175°F (-40 to 80°C)
 Humidity Range 5% to 93% relative humidity (non-condensing)
 Flame Failure Response Time 2.0 sec. max. @ 60Hz

TECHNICAL HELP

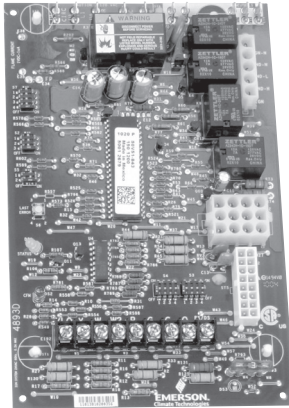
Wiring Diagram/Operation See pages 179–180

Model Number	Pre-Purge	Ignitor Warm-Up	Retries	Heat Delay to Fan ON	Heat Delay to Fan OFF	Cool Delay to Fan ON	Cool Delay to Fan OFF	Automatic Reset Time
21M51U-843	15	17	2	45	90/120/150/180	5	60	60 minutes

CROSS REFERENCE

21M51U-843 Replaces:

18M3401	50M61-495
20300001	50M61-843
20300003	83L9301
21M51U-843	CNT03077
46M9901	CNT6424
50M51-242	D344301P01
50M51-495	PCBBF120S
50M61-120	PCBBF125
50M61-288	X13650839010
50M61-289	



**21V51U-843 UNIVERSAL INTEGRATED
HSI FURNACE CONTROL KIT**

Replaces White-Rodgers 50V51-XXX's and 50V61-XXX's
Two-Stage HSI Systems with 80V or 120V Ignitors

FEATURES

- 16-pin variable speed circulator output for ECM (Electronically Commutated Motor), dipswitch selectable for OEM applications two-speed inducer output, two-stage gas valve output.
- Pushbutton fault history retrieval.
- Furnace status LED – tri-color (green, red and amber).
- Heat fan off delay (dipswitch selectable), fan on delay for cooling.
- Auto second stage delay (dipswitch selectable).
- 120 VAC humidifier output/120 VAC electronic air cleaner output.

SPECIFICATIONS

Electrical Rating:

Input Voltage 24 VAC, 60 Hz (Class II transformer required)
Nom. Input Current @ 24 VAC 595 mA + MV

Relay Load Ratings:

Gas Valve Relays 1.5 amps @ 24 VAC, 60 Hz
Inducer Relays 2.2 FLA – 3.5 LRA @ 120 VAC
Humidifier Load 1.0 amp max. @ 120 VAC
Electronic Air Cleaner Load 1.0 amp max. @ 120 VAC
Ignitor Relay 4.0 amps max. @ 132 VAC, 60 Hz

Flame Current Requirements:

Minimum current to insure flame detection 0.3 µA DC*
Maximum current for non-detection 0.1 µA DC*

Maximum allowable leakage resistance 100 M ohms

*Measured with a DC microammeter in the flame probe lead

Operating Temperature Range -40° to 175°F (-40 to 80°C)
Humidity Range 5% to 93% relative humidity (non-condensing)
Flame Failure Response Time 2.0 sec. max. @ 60Hz



21V51U-843

- Includes:
- Module
 - HotRod Ignitor Kit
 - Wiring Harness



TECHNICAL HELP

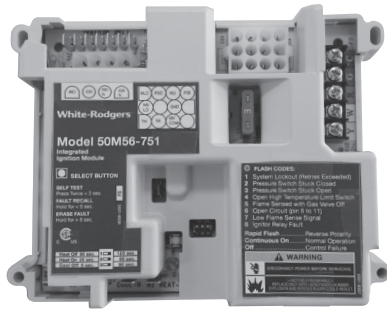
Wiring Diagram/Operation See pages 181–182

Model Number	Pre-Purge	Ignitor Warm-Up	Retries	Heat Delay to Fan ON	Heat Delay to Fan OFF	Cool Delay to Fan ON	Cool Delay to Fan OFF	Automatic Reset Time
21V51U-843	15	17	2	45	90/120/150/180	5	60	60 minutes

CROSS REFERENCE

21V51U-843 Replaces:

18M9901	21V51U-843	50V51-507	21V51U-843	CNT 04018	21V51U-843
20300002	21V51U-843	50V61-120	21V51U-843	CNT 04352	21V51U-843
20300004	21V51U-843	50V61-143	21V51U-843	CNT03078	21V51U-843
20300006	21V51U-843	50V61-288	21V51U-843	D156245P01	21V51U-843
20300006S	21V51U-843	50V61-289	21V51U-843	D34142P01	21V51U-843
21V51U-843	21V51U-843	50V61-480	21V51U-843	PCB00106	21V51U-843
49M5901	21V51U-843	50V61-486	21V51U-843	PCB00106S	21V51U-843
50V51-243	21V51U-843	50V61-507	21V51U-843	PCBBF106	21V51U-843
50V51-288	21V51U-843	B1809925	21V51U-843	PCBBF106S	21V51U-843
50V51-289	21V51U-843	B1809927	21V51U-843	PCBBF107S	21V51U-843
50V51-290	21V51U-843	B1809927S	21V51U-843	X13650840010	21V51U-843



50M56U-751



Wiring adapters included for old style block and new style in-line harnesses

50M56U-751 CARRIER SINGLE STAGE INTEGRATED HSI FURNACE CONTROL KIT

Replaces White-Rodgers 50M56-751 and Virtually All Carrier Single Stage HSI Controls with 120V Ignitors. Controls Gas Valve, Ignitor, Blower, Inducer, Humidifier (Both 120V & 24V), and Air Cleaner

FEATURES

- System Diagnostic LED with fault recall.
- Fused to protect low voltage system transformers.
- Low-speed continuous fan option.
- Self-test installation routine.

SPECIFICATIONS

Operating Temperature -40 to 176°F (-40 to 80°C)
 Humidity Range 5% to 93% RH (non-condensing)
 Mounting Surface mount multipoise

Electrical Ratings @ 77°F (25°C)
 Input Voltage 25 VAC 50 / 60 Hz
 Maximum Input Current @ 25 VAC 0.45 amp

Relay Load Ratings
 Valve Relay 1.5 amp @ 25 VAC 50 / 60 Hz 0.6 pf
 Ignitor Relay 6.0 amp @ 120 VAC 50 / 60 Hz (resistive)
 Inducer Relay 2.2 FLA-3.5 LRA @ 120 VAC
 Circulator Relay 14.5 FLA-25.0 LRA @ 120 VAC

Flame Current Requirements
 Minimum current to insure flame detection 1 uA DC*
 Maximum current for non-detection 0.10 uA DC*
 Maximum allowable leakage resistance 100 M ohms
 *Measured with DC microammeter in the flame probe lead

Timing Spec (@ 60 Hz) maximum
 Flame establishing time 0.8 sec
 Flame failure response time 2.0 seconds

NOTE: At 50 Hz, all timing specifications should be increased by 20%.

Model Number	Pre-Purge Time	Heat Delay-To-Fan-On	Heat Delay-To-Fan-Off	Cool Delay-To-Fan-On	Cool Delay-To-Fan-Off	Post Purge
NEW 50M56U-751	30 sec	25 / 60	90 / 120	2	5 / 90	25 sec

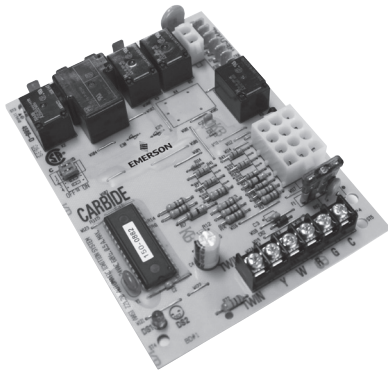
CROSS REFERENCE

50M56U-751 Replaces:

Carrier	White-Rodgers
325878-751	50M56-751
HK42FZ004	
HK42FZ007	
HK42FZ008	
HK42FZ009	ICM
HK42FZ011	ICM282A
HK42FZ013	
HK42FZ016	
HK42FZ034	

HEATING

HEATING



50A55-743

50A55-743 GOODMAN SILICON CARBIDE SINGLE STAGE INTEGRATED HSI FURNACE CONTROL

Controls Gas Valve, Ignitor, Blower, Inducer, Humidifier (Both 120V & 24V Input), and Air Cleaner. Replaces OEM Goodman and White-Rodgers Models

FEATURES

- Includes flash code diagnostics.
- Twinning connection.
- Fused to protect low voltage system transformer

SPECIFICATIONS

Operating Temperature	-40 to 176°F
Humidity Range	5% to 93% RH (non-condensing)
Mounting	Snap in standoffs
Electrical Ratings @ 77°F (25°C)	
Input Voltage	25 VAC 50 / 60 Hz
Maximum Input Current @ 30 VAC	0.45 amp
Relay Load Ratings	
Valve Relay	1.5 amp @ 25 VAC 50 / 60 Hz 0.6 pf
Ignitor Relay	6.0 amp @ 120 VAC 50 / 60 Hz
Inducer Relay	2.2 FLA-3.5 LRA @ 120 VAC
Circulator Relay	14.5 FLA-25.0 LRA @ 120 VAC
Flame Current Requirements	
Minimum current to insure flame detection	1 uA DC
Maximum current for non-detection	0.10 uA DC
Maximum allowable leakage resistance	100 M ohms
Timing Spec (@ 60 Hz)	maximum
Flame establishing time	0.8 sec
Flame failure response time	2.0 seconds

NOTE: At 50 Hz, all timing specifications should be increased by 20%.

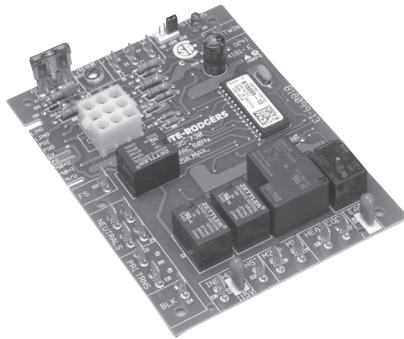
Model Number	Pre-Purge Time	Heat Delay On	Heat Delay Off Sec.	Cool Delay On Sec.	Cool Delay Off Sec.	Post Purge
50A55-743	15 seconds	30	90 / 120 / 150 / 180	5	45	15 sec

CROSS REFERENCE

50A55-743 Replaces:

0130F00005	PCBBF110
0130F00005S	PCBBF110S
50A55-289	PCBBF112
50T55-289	PCBBF112S
B1809926	PCBBF123
B1809926S	PCBBF123S

NOTE: Can also use Universal Kit 50M56U-843



50T35-743

**50T35-743 GOODMAN SILICON CARBIDE
INTEGRATED HSI FURNACE CONTROL**

Controls Gas Valve, Ignitor, Two-Speed Blower Motor, Inducer, Humidifier (Both 120v & 24v Input), and Air Cleaner. Replaces OEM Goodman, UTEC and TI Models

FEATURES

- Includes flash code diagnostics.
- Twinning.
- Includes mounting hole template.
- Fused to protect low voltage system transformers.
- Adjustable blower relay.
- 90+ furnace option.

SPECIFICATIONS

Operating Temperature	-40 to 176°F
Humidity Range	95% RH (non-condensing)
Mounting	Plastic standoffs
Electrical Ratings @ 77°F (25°C)	
Input Voltage	20-30 VAC RMS 50 / 60 Hz
Maximum Input Current @ 30 VAC	0.35 amp
Relay Load Ratings	
Valve Relay	1.5 amp @ 30 VAC 50 / 60 Hz 0.6 pf
Ignitor Relay	5.0 amp @ 120 VAC 50 / 60 Hz
Inducer Relay	4.0 FLA-8.0 LRA @ 120 VAC
Circulator Relay	14.5 FLA-25.0 LRA @ 120 VAC
Flame Current Requirements	
Minimum current to insure flame detection	75 uA DC
Maximum current for non-detection	0.10 uA DC
Maximum allowable leakage resistance	100 M ohms
Timing Spec @ 60 Hz	
Flame establishing time	n/a
Flame failure response time	2.0 seconds maximum

NOTE: At 50 Hz, all timing specifications should be increased by 20%.

Model Number	Pre-Purge Time	Heat Delay On	Heat Delay Off Sec.	Cool Delay On Sec.	Cool Delay Off Sec.	Post Purge
50T35-743	15 seconds	30	90 / 120 / 150	5	60	25 sec (29 w/ 90+)

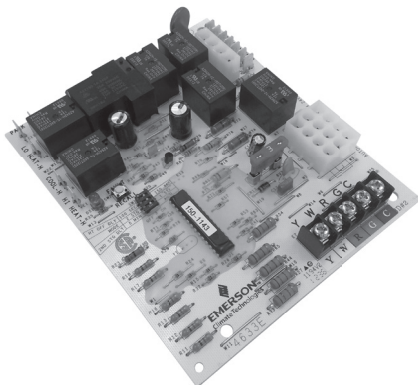
CROSS REFERENCE

50T35-743 Replaces:

Goodman	White-Rodgers
B18099-06	50T35-730
B18099-08	50T35-730-1
B18099-10	
B18099-13	
B18099-13S	
CNT04664	

HEATING

HEATING



50M56-743

**50M56-743 GOODMAN NITRIDE IGNITION
MULTI-SPEED INTEGRATED HSI FURNACE CONTROL**

Controls Gas Valve, Ignitor, Blower, Inducer and Air Cleaner.
Replaces OEM Goodman and White-Rodgers Models

FEATURES

- System diagnostic LED with fault recall.
- Multi-speed circulator.
- One or two-stage gas valve.

SPECIFICATIONS

Operating Temperature -40 to 176°F
Humidity Range 5% to 93% RH (non-condensing)
Mounting Snap in standoffs

Electrical Ratings @ 77°F (25°C)

Input Voltage 25 VAC 50 / 60 Hz
Maximum Input Current @ 30 VAC 0.45 amp

Relay Load Ratings

Valve Relay 1.5 amp @ 25 VAC 50 / 60 Hz 0.6 pf
Ignitor Relay 6.0 amp @ 120 VAC 50 / 60 Hz
Inducer Relay 2.2 FLA-3.5 LRA @ 120 VAC
Circulator Relay 14.5 FLA-25.0 LRA @ 120 VAC

Flame Current Requirements

Minimum current to insure flame detection 1 uA DC
Maximum current for non-detection 0.10 uA DC
Maximum allowable leakage resistance 100 M ohms

Timing Spec (@ 60 Hz)

Flame establishing time maximum
Flame failure response time 0.8 sec
Flame failure response time 2.0 seconds

NOTE: At 50 Hz, all timing specifications should be increased by 20%.

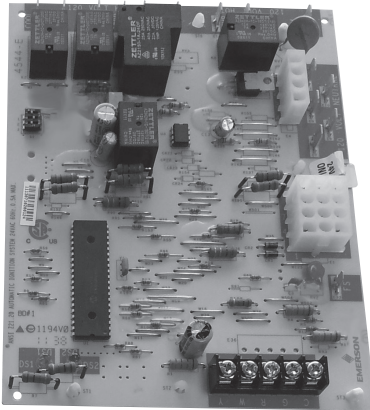
Model Number	Pre-Purge Time	Heat Delay On	Heat Delay Off Sec.	Cool Delay On Sec.	Cool Delay Off Sec.	Post Purge
50M56-743	30 seconds	30	100 / 150	6	45	25 sec

CROSS REFERENCE

50M56-743 Replaces:

Goodman		White-Rodgers
0130F00006	PCBBF122	50M56-289
0130F00006S	PCBBF122S	
PCB00109	PCBBF132	
PCBBF109	PCBBF132S	
PCBBF109S		

NOTE: Can also use Universal Kit 50M56U-843



50A66-743

**50A66-743 LENNOX NITRIDE IGNITION
INTEGRATED HSI FURNACE CONTROL**

Controls Gas Valve, Ignitor, Blower, Inducer, Humidifier and Air Cleaner

FEATURES

- Includes diagnostic indicator flash codes.
- 3 fan speeds.
- Remote flame sense.
- Humidifier and electronic air cleaner connections (optional).

SPECIFICATIONS

Input Voltage 25 VAC 50 / 60 Hz
 Maximum Input Current @ 25 VAC . . . 0.45 amp
 Valve Relay 1.5 amp @ 25 VAC 50 / 60 Hz 0.6 pf
 Ignitor Relay 2.0 amp @ 120 VAC 50 / 60 Hz (resistive)
 Inducer Relay 2.2 FLA – 3.5 LRA @ 120 VAC
 Circulator Relay 14.5 FLA – 25.0 LRA @ 120 VAC
 Operating Temperature Range -40 to +175°F (-40 to +79°C)
 Humidity Range 5% to 93% relative humidity (non-condensing)

Model Number	Pre-Purge	Delay Heat		Delay Cool		Auto Reset
		ON	OFF	ON	OFF	
50A66-743	15	45	60 / 90 / 120 / 180	2	2/45	60 minutes

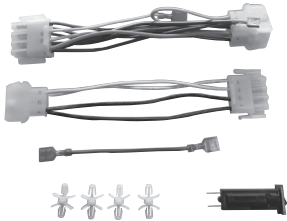
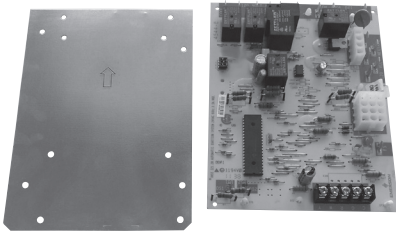
CROSS REFERENCE

50A66-743 Replaces:

Lennox		White-Rodgers
100925-01	30W25	50A66-122
100925-02	30W2501	50A66-123
100925-03	69M08	
17W92	69M0801	
17W9201	69M15	
23W51	69M1501	
23W5101		

HEATING

HEATING



21D83M-843

**21D83M-843 LENNOX NITRIDE IGNITION
INTEGRATED HSI FURNACE CONTROL KIT**

Controls Gas Valve, Ignitor, Blower, Inducer, Humidifier and Air Cleaner

FEATURES

- Includes diagnostic indicator flash codes.
- 3 fan speeds.
- Remote flame sense.
- Humidifier and electronic air cleaner connections (optional).

SPECIFICATIONS

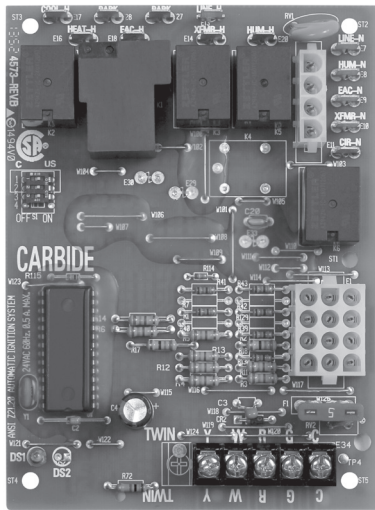
Input Voltage	25 VAC 50 / 60 Hz
Maximum Input Current @ 25 VAC	0.45 amp
Valve Relay	1.5 amp @ 25 VAC 50 / 60 Hz 0.6 pf
Ignitor Relay	2.0 amp @ 120 VAC 50 / 60 Hz (resistive)
Inducer Relay	2.2 FLA – 3.5 LRA @ 120 VAC
Circulator Relay	14.5 FLA – 25.0 LRA @ 120 VAC
Operating Temperature Range	-40 to +175°F (-40 to +79°C)
Humidity Range	5% to 93% relative humidity (non-condensing)

Model Number	Pre-Purge	Delay Heat		Delay Cool		Auto Reset
		ON	OFF	ON	OFF	
21D83M-843	15	45	60 / 90 / 120 / 180	2	2/45	60 minutes

CROSS REFERENCE

21D83M-843 Replaces:

Lennox		White-Rodgers
100925-01	56L8301	50A62-120
100925-02	56L84	50A62-121
100925-03	56L8401	50A62-820
10M93	63K89	50A66-122
124110	63K8901	50A66-123
17W92	65867	50A66-743
17W9201	69M08	50A66-843
23W51	69M0801	
23W5101	69M15	
24L85	69M1501	
24L8501	83M00	
30W25	83M001	
30W2501	97L48	
32M88	97L4801	
56L83	L39-564	



50A55-3797

50A55-3797 TRANE SINGLE STAGE 120V IGNITION INTEGRATED HSI FURNACE CONTROL

Controls Gas Valve, Ignitor, Blower, Inducer, Humidifier (120V), and Air Cleaner. Replaces OEM Trane and White-Rodgers Models

FEATURES

- Includes flash code diagnostics.
- Fused to protect low voltage system transformers.

SPECIFICATIONS

Operating Temperature -40 to 176°F
 Humidity Range 5% to 93% RH (non-condensing)
 Mounting Snap in standoffs

Electrical Ratings @ 77°F (25°C)

Input Voltage 25 VAC 50 / 60 Hz
 Maximum Input Current @ 30 VAC 0.45 amp

Relay Load Ratings

Valve Relay 1.5 amp @ 25 VAC 50 / 60 Hz 0.6 pf
 Ignitor Relay 6.0 amp @ 120 VAC 50 / 60 Hz
 Inducer Relay 2.2 FLA-3.5 LRA @ 120 VAC
 Circulator Relay 14.5 FLA-25.0 LRA @ 120 VAC

Flame Current Requirements

Minimum current to insure flame detection 1 uA DC
 Maximum current for non-detection 0.10 uA DC
 Maximum allowable leakage resistance 100 M ohms

Timing Spec (@ 60 Hz)

Flame establishing time maximum
 0.8 sec
 Flame failure response time 2.0 seconds

NOTE: At 50 Hz, all timing specifications should be increased by 20%.

Model Number	Pre-Purge Time	Heat Delay-To-Fan-On	Heat Delay-To-Fan-Off	Cool Delay-To-Fan-On	Cool Delay-To-Fan-Off	Post Purge
NEW 50A55-3797	0 sec	45	60 / 100 / 140 / 180	2	0 / 180	5 sec

CROSS REFERENCE

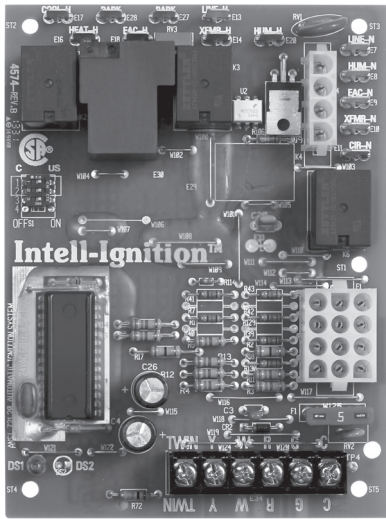
50A55-3797 Replaces:

Trane	White-Rodgers
CNT02789	50A55-474
CNT02891	50A55-476
CNT03799	50A55-571
D341122P01	
D341235P01	
D341235P03	

NOTE: Can also use Universal Kit 50M56U-843

HEATING

HEATING



50A55-5165

50A65-5165 TRANE SINGLE STAGE 80V IGNITION INTEGRATED HSI FURNACE CONTROL

Controls Gas Valve, Ignitor, Blower, Inducer, Humidifier (120V), and Air Cleaner. Replaces OEM Trane and White-Rodgers Models

FEATURES

- Includes flash code diagnostics.
- Twinning connection.
- Fused to protect low voltage system transformers.

SPECIFICATIONS

Operating Temperature -40 to 176°F
 Humidity Range 5% to 93% RH (non-condensing)
 Mounting Snap in standoffs

Electrical Ratings @ 77°F (25°C)

Input Voltage 25 VAC 50 / 60 Hz
 Maximum Input Current @ 30 VAC 0.45 amp

Relay Load Ratings

Valve Relay 1.5 amp @ 25 VAC 50 / 60 Hz 0.6 pf
 Ignitor Relay 2.0 amp @ 120 VAC 50 / 60 Hz
 Inducer Relay 2.2 FLA-3.5 LRA @ 120 VAC
 Circulator Relay 14.5 FLA-25.0 LRA @ 120 VAC

Flame Current Requirements

Minimum current to insure flame detection 1 uA DC
 Maximum current for non-detection 0.10 uA DC
 Maximum allowable leakage resistance 100 M ohms

Timing Spec (@ 60 Hz)

Flame establishing time 0.8 sec
 Flame failure response time 2.0 seconds

NOTE: At 50 Hz, all timing specifications should be increased by 20%.

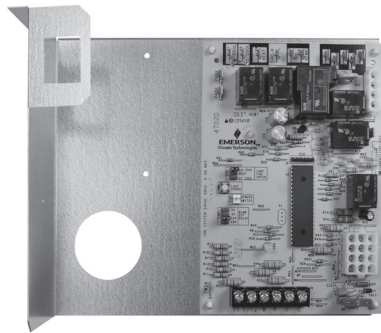
Model Number	Pre-Purge Time	Heat Delay-To-Fan-On	Heat Delay-To-Fan-Off	Cool Delay-To-Fan-On	Cool Delay-To-Fan-Off	Post Purge
NEW 50A65-5165	0 sec	45	60 / 100 / 140 / 180	2	0 / 80	5 sec

CROSS REFERENCE

50A55-5165 Replaces:

Trane	White-Rodgers
CNT03076	50A65-474
CNT03798	50A65-475
CNT05164	50A65-476
CNT05165	
D341213P01	
D341396P01	
D341396P03	
D341396P04	
D341396P05	

NOTE: Can also use Universal Kit 50M56U-843



50A56-956

**50A56-956 YORK SINGLE STAGE INTEGRATED
HSI FURNACE CONTROL KIT**

Controls Gas Valve, Ignitor, Blower, Inducer, Humidifier (120V), and Air Cleaner. Replaces OEM York and White-Rodgers Models

FEATURES

- System Diagnostics LED with fault recall.
- Twinning connection.
- Fused to protect low voltage system transformers.
- Selectable continuous fan speed.
- Third fan speed.
- Two-stage cooling Y2 input.

SPECIFICATIONS

Operating Temperature -40 to 176°F
 Humidity Range 5% to 93% RH (non-condensing)
 Mounting Snap in standoffs

Electrical Ratings @ 77°F (25°C)
 Input Voltage 25 VAC 50 / 60 Hz
 Maximum Input Current @ 30 VAC 0.45 amp

Relay Load Ratings
 Valve Relay 1.5 amp @ 25 VAC 50 / 60 Hz 0.6 pf
 Ignitor Relay 6.0 amp @ 120 VAC 50 / 60 Hz
 Inducer Relay 2.2 FLA-3.5 LRA @ 120 VAC
 Circulator Relay 14.5 FLA-25.0 LRA @ 120 VAC

Flame Current Requirements
 Minimum current to insure flame detection 1 uA DC
 Maximum current for non-detection 0.10 uA DC
 Maximum allowable leakage resistance 100 M ohms

Timing Spec (@ 60 Hz) maximum
 Flame establishing time 0.8 sec
 Flame failure response time 2.0 seconds

NOTE: At 50 Hz, all timing specifications should be increased by 20%.

Model Number	Pre-Purge Time	Heat Delay-To-Fan-On	Heat Delay-To-Fan-Off	Cool Delay-To-Fan-On	Cool Delay-To-Fan-Off	Post Purge
NEW 50A56-956	0 sec	30	60 / 90 / 120 / 180	0	60	15 sec

CROSS REFERENCE

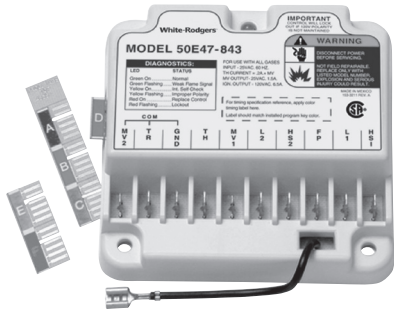
50A56-956 Replaces:

York		White-Rodgers
265901	S1-03101284000	50A56-242
265902	S1-03101933000	50A56-243
S1-03100662000	S1-03101972000	ICM
S1-03101250000	S1-03101973000	ICM2808
S1-03101266000	S1-03109167000	(PCB Only)
S1-03101267000	S1-33102956000	
S1-03101267001	S1-33103010000	

NOTE: Can also use Universal Kit 50M56U-843

HEATING

HEATING



50E47-843

**50E47-843 UNIVERSAL SILICON CARBIDE IGNITION
NON-INTEGRATED HSI IGNITION MODULE KIT**

Replaces White-Rodgers 50E47 Modules and Many 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
 Agency A.G.A. and C.G.A. design certified



TECHNICAL HELP

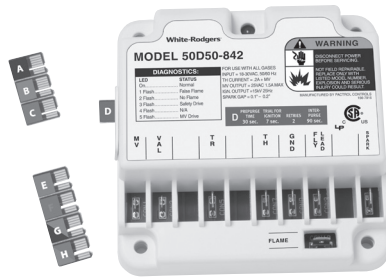
Wiring operation and troubleshooting. See pages 187–188

Model Number	PROGRAM KEY (COLOR)	TRIAL FOR IGNITION	RETRIES	PREPURGE	IGNITOR WARMUP
50E47-843	A (blue)	4 Sec.	0	30 Sec.	45 Sec.
	B (red)	4 Sec.	2	30 Sec.	45 Sec.
	C (green)	7 Sec.	0	30 Sec.	45 Sec.
	D (violet)	7 Sec.	2	30 Sec.	45 Sec.
	E (orange)	4 Sec.	2	30 Sec.	17 Sec.
	F (yellow)	7 Sec.	2	30 Sec.	17 Sec.

CROSS REFERENCE

50E47-843 Replaces:

025-25436-000	50D47-161	50E47-130	50F47-160	995395	HS780-17PL-304A	HS780-34PL-306A	S89C1087
02525436700	50D47-170	50E47-140	50F47-40	99796380	HS780-17PL-306A	HS780-34PL-308A	S89C1103
025-25436-700	50D47-20	50E47-150	50F47-60	99905232	HS780-17PL-308A	HS780-34PR-106A	S89D1002
1001346	50D47-260	50E47-160	50G47-1	C6411102	HS780-17PR-104A	HS780-34PR-108A	S89G1005
120-08027	50D47-270	50E47-161	50G47-130	CNT1316	HS780-17PR-108A	HS780-34PR-304A	S89G1013
1300-4928	50D47-40	50E47-170	50G47-140	CNT1690	HS780-17PR-306A	HS780-34PR-306A	S89G1021
1380694	50D47-50	50E47-20	50G47-150	CNT1691	HS780-34NL-106A	HS780-34PR-308A	S89G1047
2076-0184	50D47-60	50E47-260	50G47-160	HS780-17NL-104A	HS780-34NL-108A	S890C1007	S89H1003
2525436700	50D47-70	50E47-30	50G47-40	HS780-17NL-106A	HS780-34NL-304A	S890D1006	S89H1011
350760	50D47-905	50E47-40	50G47-60	HS780-17NL-108A	HS780-34NL-306A	S890G1003	S89H1029
3591-1306	50D47-915	50E47-50	780-780	HS780-17NL-304A	HS780-34NL-308A	S890G1011	S89J1008
3XA74	50D47-925	50E47-560	780-783	HS780-17NL-306A	HS780-34NL-312A	S890G1029	X13130193-04
4CZ50	50D47-935	50E47-60	780-784	HS780-17NL-308A	HS780-34NR-104A	S890G1037	X13130437-01
4E954	50D47-945	50E47-70	780-785	HS780-17NR-104A	HS780-34NR-106A	S890H1002	X13130437010
4E955	50D47-955	50E47-841	780-786	HS780-17NR-106A	HS780-34NR-304A	S890H1010	X13130437020
4E956	50D47-965	50E47-843	780-787	HS780-17NR-108A	HS780-34NR-306A	S890H1028	X13130437-03
50D47-1	50D47-975	50E47-851	780-788	HS780-17NR-304A	HS780-34NR-308A	S8910U	X13130437030
50D47-101	50E47-1	50E47-860	780-789	HS780-17NR-306A	HS780-34NR-312A	S8910U1000	X13130437040
50D47-120	50E47-10	50E47-861	780-790	HS780-17NR-308A	HS780-34PL-104A	S89C1004	X13130437060
50D47-140	50E47-101	50E47-870	780-910	HS780-17NR-312A	HS780-34PL-106A	S89C1012	X13130437080
50D47-150	50E47-110	50F47-101	832-002	HS780-17PL-106A	HS780-34PL-108A	S89C1046	X324601
50D47-160	50E47-120	50F47-140	832-005	HS780-17PL-108A	HS780-34PL-304A	S89C1079	



50D50-842



50D50-842 UNIVERSAL DIRECT SPARK IGNITION CONTROL KIT FOR ALL GASES

Microprocessor Based Gas Ignition Control for Heating Appliance Using Either Natural or LP Gas. Proof of Flames is Accomplished. The Unit is Designed as a Direct Spark Ignition Source

FEATURES

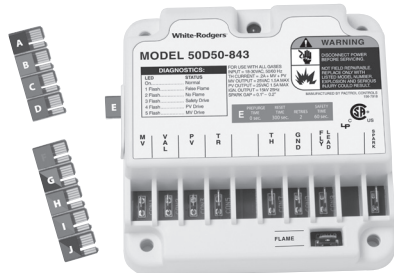
- Color LED indicator for diagnostics.
- 1/4" and 3/16" quick connect terminals.
- Program keys.
- Damper interface.

SPECIFICATIONS

Electrical Ratings Input 18-30 VAC, 25 VAC nominal
 Maximum Input Current @ 25 VAC 0.2A + MV @ 25°C
 Ambient Operating Range -40° to +175°F
 Flame Establishment Time8 sec
 Mounting Multipoise
 Agency Approvals CSA USA / CANADA

50D50-842 CONFIGURATION OPTIONS (All Times in Seconds)

Model Number	Key	Trial for Ignition	Prepurge	Retries	Interpurge
50D50-842	A	4	0	2	90 sec.
	B	4	30	2	90 sec.
	C	7	0	2	90 sec.
	D	7	30	2	90 sec.
	E	7	0	0	N/A
	F	7	30	0	N/A
	G	11	0	0	N/A
	H	11	30	0	N/A



50D50-843



50D50-843 UNIVERSAL PROVEN PILOT SPARK CONTROL KIT FOR ALL GASES

Microprocessor Based Gas Ignition and Primary Safety Control Designed for Interrupted Spark and Burner Supervision of All Gases Used in Gas Fired Appliance Applications

FEATURES

- Field service replacement for most Honeywell, Robertshaw, Johnson Controls and UTEC Intermittent Pilot Ignition Controls.
- Provides ignition, proof of ignition and precise timing.
- Works with single rod or dual rod remote sensor.
- Color LED indicator for diagnostics.

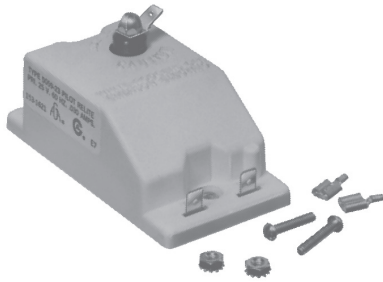
SPECIFICATIONS

Electrical Ratings Input 18-30 VAC, 25 VAC nominal
 Maximum Input Current @ 25 VAC 0.2A + MV + PV @ 25°C
 Flame Out Recognition Time 8 seconds
 Ambient Operating Range -40° to +176°F (-40° to +80°C)
 Dimensions 4.13" L x 4.13" W x 1.5" H
 Agency Approvals CSA USA/CANADA

50D50-843 CONFIGURATION OPTIONS (All Times in Seconds)

Model Number	Key	Reset Time	Prepurge	Retries	Safety Time
50D50-843	A	300	0	Continuous	90
	B	300	30	Continuous	90
	C	300	0	Continuous	30
	D	300	30	Continuous	30
	E	300	0	2	60
	F	300	30	2	60
	G	300	0	Continuous	15
	H	N/A	30	N/A	Continuous
	I	300	0	Continuous	4
	J	300	30	Continuous	4

HEATING



**5059-23
Pilot Relite Control**

5059 SERIES PILOT RELITE CONTROLS

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.
- Spark plug or spike output configurations available.

SPECIFICATIONS

Agency C.S.A. approved

Number Model	Input Voltage	Electrical Rating	Description
5059-23	24 VAC	0.03 amps	Spark plug and 1/4" spade connectors
5059-134	24 VAC	0.03 amps	Spike connector



760-56

760-56 IGNITION ELECTRODE ASSEMBLIES

Use Type 760-56 to Replace Cycle-Pilot® Ignition Electrodes and Cable Assemblies

Number Model	Description
760-56	24" lead with slip on bracket. Also includes perforated mounting strap for varying applications



**760-401
Flame Sensor**

760 SERIES FLAME SENSORS FOR HSI

Flame Sensors can be Mounted Remotely on Multiple Burners

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 C.S.A approved

Model Number	Lead Length	Electrical Connection
760-401	30"	1/4" female spade terminal
760-802 ①	30"	1/4" female spade terminal

① Exact replacement for O.E.M. model



21D64-2



21D64-5PK

21D64 SERIES HOTROD UNIVERSAL NITRIDE IGNITOR UPGRADE KIT

120V Nitride Upgrade Kit for Conversion of Silicon Carbide
(Flat or Spiral)

FEATURES

- Robust Ignitor Design – for longer life and fewer callbacks – 5 year warranty
- Nitride Ignitor with 15.5" leads
- “Universal” mounting bracket and screw and ceramic wire nuts

SPECIFICATIONS

Input Voltage 102-132 VAC, 60 Hz
 Max. Load Current 3.0 A @ 132 VAC, 25°C
 Timing Rating 17 sec. minimum
 Load Insulation Temp. Rating 250°C

Model Number	Lead Length	Description
21D64-2	15.5"	Kit includes nitride ignitor, universal mounting bracket and connection harness
21D64-5PK	15.5"	HotRod 5-pack contains 5 single pack ignitor kits

HEATING

768A SERIES NITRIDE IGNITORS

OEM Replacement for Nitride Ignitors



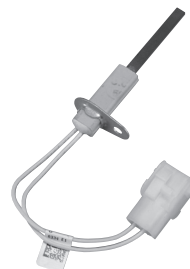
768A-815



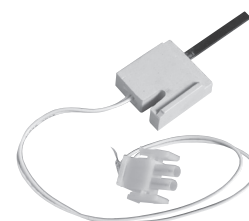
768A-842



768A-844



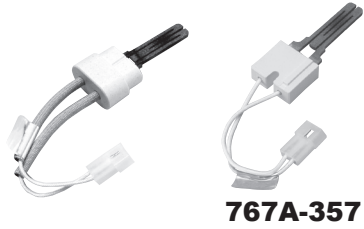
768A-843



768A-845

Model Number	Terminal Type	Replace OEM Models	
768A-815	2 terminal AMP receptacle, .083 female sockets	Trane	A341947P01
			768A-015
			A341990P01
768A-842	2 terminal AMP receptacle, .093 female sockets	Amana	11111701
			768A-2
			768A-842
768A-843	2 terminal AMP receptacle, .084 female sockets	Thermo Products	380650
			768A-843
			768A-843
768A-844	2 terminal AMP receptacle, .084 female sockets	Lennox Industries	41K5601
			768A-4
		Rheem	62-24134-02
768A-845	2 terminal AMP receptacle, .084 female sockets	Trane	768A-5
			768A-845
			IGN00104
			X13130524010

New!



767A-356

767A-357

**767A SERIES
SILICON CARBIDE HOT SURFACE IGNITORS**

Highly Reliable Ignition Source

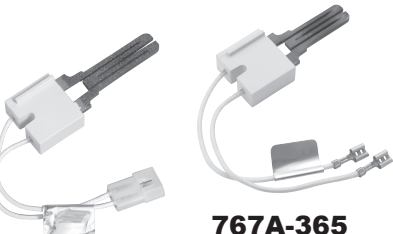
FEATURES

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

SPECIFICATIONS

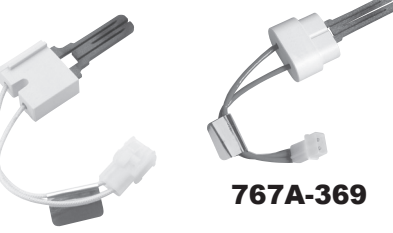
Electrical Rating 120 VAC, 60 Hz
Agency C.S.A. approved

Model Number	Lead Length	Lead Insulation Temp. Rating	Electrical Connection	Ceramic Insulator & Electrical Connections (See Fig.)
767A-356	6"	200°C	Receptacle with .093" Male Pins	A
767A-357	5.25"	200°C	Receptacle with .093" Male Pins	B
767A-361	5.25"	200°C	Receptacle with .093" Male Pins	C
767A-365	5.688"	200°C	1/4" Female Spade Terminals	D
767A-366	5.313"	200°C	AMP 1-480699-0 Electrical Conn. Receptacle with .093" Male Pins	E
767A-369	5.5"	200°C	Molex Internally Keyed Connector with .093" Male Pins	F
767A-370	5.25"	200°C	Receptacle with .093" Male Pins	G
767A-371	19.125"	200°C	Stripped Ends	H
767A-372	5.25"	200°C	Molex Side Lock Connector with .092" Male Pins	I
767A-373	5.25"	200°C	Receptacle with .093" Male Pins	J
767A-374	11"	200°C	Stripped Ends	K
767A-375	1.375"	200°C	1/4" Female Spade Terminals	L
767A-376	4.5"	200°C	Molex Front Lock Connector with .092" Male Pins	M
767A-377	4.5"	200°C	Molex Front Lock Connector with .092" Male Pins	N
767A-378	5.125"	200°C	Electrical Connector matches AMANA #20165702	O
767A-379	7.5"	200°C	Electrical Connector matches YORK #025-33421-000	P
767A-380	6.125"	200°C	Electrical Connector matches ARMSTRONG #44744-2	Q
767A-381	7.5"	200°C	Electrical Connector matches YORK #473-20937-001	P
767A-382	5.25"	200°C	Receptacle with .093" Male Pins	G
767A-383	5.25"	200°C	Molex Side Lock Connector with .092" Male Pins	I
767A-384	5.25"	200°C	Receptacle with .093" Male Pins	J



767A-361

767A-365



767A-366

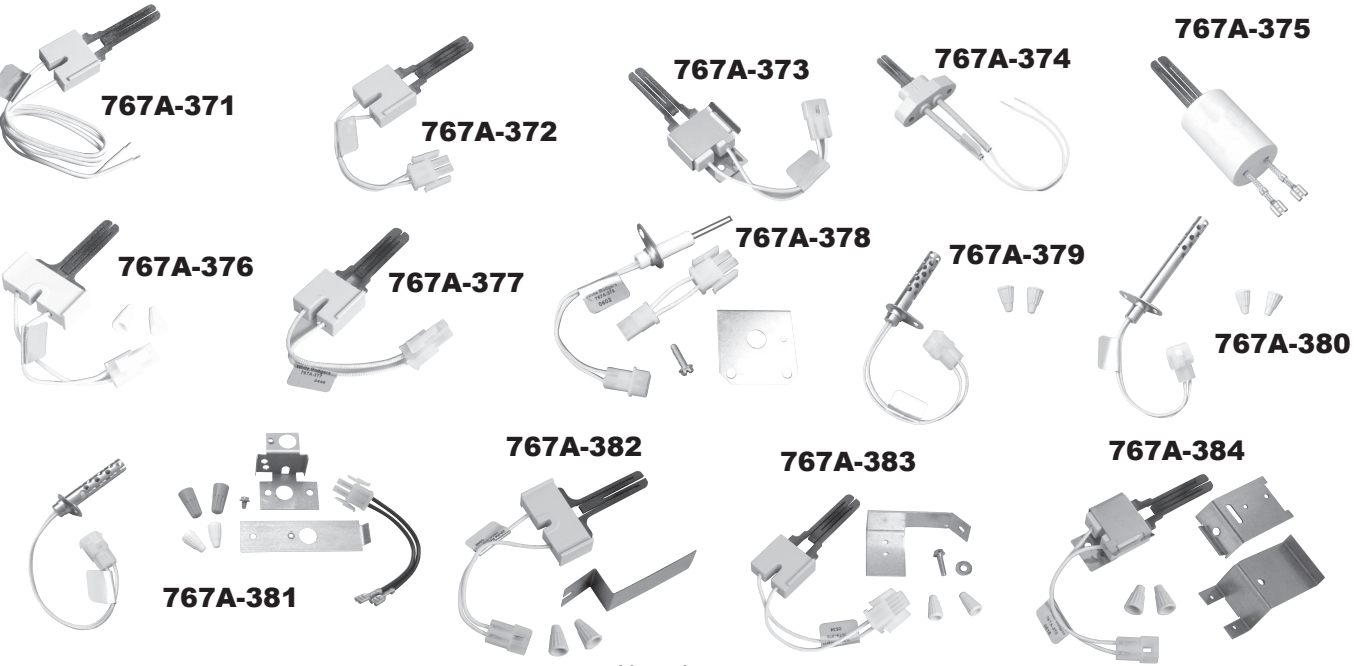
767A-369

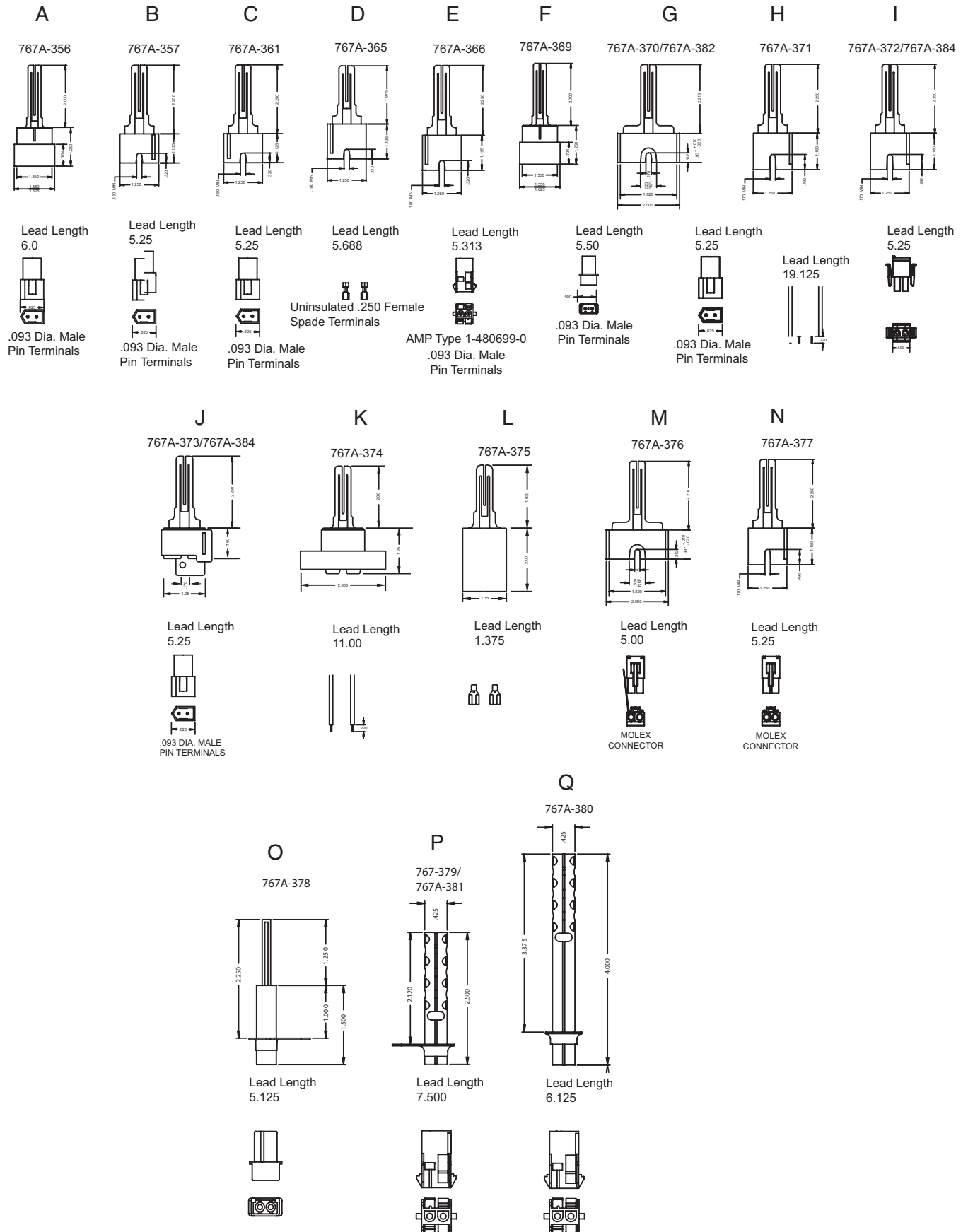


767A-370

TECHNICAL HELP

Dimension drawings see next page





HEATING

HEATING



H06E / F SERIES UNIVERSAL REPLACEMENT THERMOCOUPLES

Specially Designed for Universal Replacement.
Thermocouples are Priced Individually, Order Only in Multiples of 10

FEATURES

- Stainless steel element construction for prolonged thermocouple life.
- Each kit individually enclosed in plastic.
- Universal adapter fittings included with each kit for replacing thermocouple in most types of pilot burners.
- Visible instructions for quick, easy installation.
- Available in a variety of 10-packs in desired thermocouple lengths.
- Standard thermocouple 11 / 32" double lead thread.
- Replaces Honeywell Q34A, Johnson K19, Robershaw 1980 and White-Rodgers H06E.



H06E

THERMOCOUPLES

Model Number Standard ①	Description
H06E-18	18" thermocouple
H06E-24	18" thermocouple
H06E-30	30" thermocouple
H06E-36	36" thermocouple
H06E-48	48" thermocouple

① Hot junction maximum temperature rating: 1450°F

JUNCTION BOX THERMOCOUPLE WITH ENERGY CUT-OFF (ECO)

Model Number	Description
H06F-36	36" Coiled Thermocouple



G01A-332



G01A-501

750 MILLIVOLT POWER GENERATORS

Provides Power for 750 Millivolt Self-Generation Control Systems

FEATURES

- For replacement of similar screw-in type generators now in field or for use with type E31-12 pilot burner.
- G01A-332 has 36 inch armored cable leads with split-spade terminals.
- PG9 adapter included with each G01A-332. PG9 adapter also offered individually.
- 101934F32 / 101934R32 designed for use with PG9.

750 MV

Model Number	MV Output	Length	Fiberglass Cable Leads	Armored Cable Leads	PG9 Adapter	Clip	Connector Type
101934R32	750	32	X				R Bushing
G01A-332	750	36		X	X	X	F Spade Terminal
G01A-502	750	36		X		X	F Spade Terminal
G01A-512	750	36	X		X	X	F Spade Terminal
G01A-132	750	36		X	X	X	F Spade Terminal

750 MV

Model Number	MV Output	Length	Fiberglass Cable Leads	Connector Type
101934F32	750	32	X	F Spade Terminal
G01A-501	750	36	X	F Spade Terminal

PG9 PILOT GENERATORS

Provides a Pilot Flame for Igniting Gas Burners while Generating Millivolt Output to Operate Gas Valves and Relays



PG9A41JT20

FEATURES

- Single blue flame burner for quiet operation and maximum flame stability.
- “Snorkel” primary air path incinerates dust eliminating linting problems.
- All models provided with orifice base fittings for Natural and LP.
- Flame ring surrounding generator ensures high output and extended generator life.
- High temperature stainless steel generator cover.

SPECIFICATIONS

Output Voltage 750 millivolts nominal, open circuit
 Agency IAS certified

Model Number	Head Type	Porting	Orifice
PG9A27JTL22 ①	Channel Type	90° right & 90° left, 3/4" head width	.022
PG9A41JTL20 ①	Cobra	90° left	.020
PG9A42JTL20 ①	Cobra	90° right	.020

① Universal replacement includes extra base fitting for LP gas application (less ferrule and nut)

✻ Indicates Canadian Model Number: call 1-800-305-6953 to order



3046-5

3046-5 MERCURY FLAME SENSOR

Prevent Gas Flow to Main Burner if Pilot Flame is Not Burning or is Insufficient to Properly Ignite Main Burner

FEATURES

- Sensor combines a rugged Snap-Action switch and powerful mercury actuated thermal element.
- May be used with natural, manufactured or mixed gases and with LP gases where means are provided for obtaining automatic pilot gas shut-off.
- Switch may be conveniently mounted in any position.
- Cover is easily removed, making switch terminals readily accessible.
- No button to depress – Sensor is recycling type which requires relighting or possible restoration of proper gas pressure to return to operation.

SPECIFICATIONS

Timing Contacts close approximately 60 seconds after pilot is ignited; open approximately 40 seconds after flame is extinguished

Agency U.L. recognized and C.S.A. approved

Dimension 2³/₄" H x 2¹/₁₆" W x 1⁷/₈" D

Model Number	Element Length	Electrical Rating		
		120 VAC	240 VAC	30 VAC
3046-5	48"	125 VA	125 VA	90 VA



30A46-5

**30A46 SERIES
PLUG-IN TYPE MERCURY FLAME SENSORS**

Designed for Use with White-Rodgers Diaphragm, "Cushioned Power" or "Silent Knight" Gas Valves Having Plug-In Receptacle

FEATURES

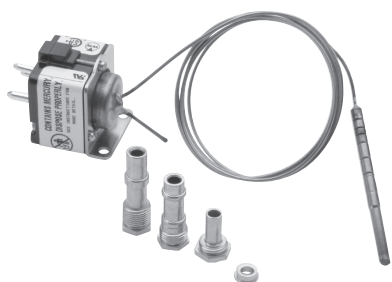
- Plug-in feature requires no additional electrical connections or mounting devices.
- Sensor combines a rugged Snap-Action SPDT switch and powerful mercury actuated thermal element.
- May be used with natural, manufactured or mixed gases and with LP gases where means are provided for obtaining automatic pilot gas shut-off.
- No button to depress – Sensors are recycling type which require relighting or possible restoration of proper gas pressure to return to operation.
- The SPDT switch can energize ignitor circuit to relight pilot (as with roof top units).

SPECIFICATIONS

Timing Contacts close approximately 60 seconds after pilot is ignited; open approximately 40 seconds after flame is extinguished

Agency C.S.A. approved

Model Number	Element Length	Electrical Rating			
		120 VAC	240 VAC	30 VAC	
30A46-5	48"	125 VA	125 VA	90 VA	stud mount element
30A46-105	12"	125 VA	125 VA	90 VA	sleeve over element, no stud mount



3098-134

3049 / 3098 SERIES 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 are packed with controls identified with ①.

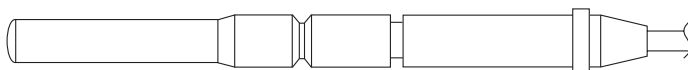
SPECIFICATIONS

Agency C.S.A. approved
 Maximum temperature 1450°F at bulb tip

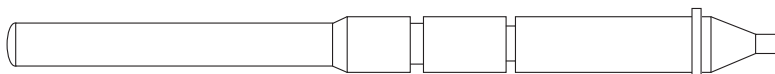
Model Number	Element Length	Panel Type	Bulb Style	Description
3049-115 ①	48"	D	#20	Replaces bulb styles #17 or #18
3098-134 ①	48"	E	#19	Replaces bulb styles #9 or #13
3098-156 ①	48"	E	#20	Replaces bulb styles #17 or #18

① Includes adapter fittings.

CONTRACTOR TIP: Mercury flame sensors can only be replaced by cross referencing the original mercury flame sensor model number. They can not be replaced by gas valve model number. See next page.



Bulb Style #9



Bulb Style #13



Bulb Style #17



Bulb Style #18



Bulb Style #19

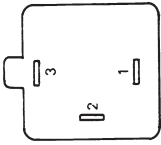


Bulb Style #20

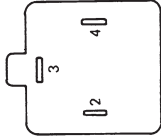
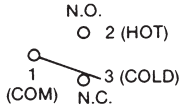
MERCURY FLAME SENSOR CROSS REFERENCE

White-Rodgers™

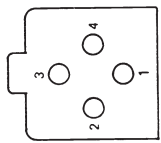
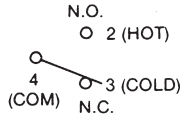
TERMINAL PANELS CONFIGURATIONS



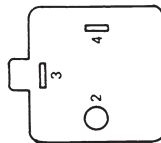
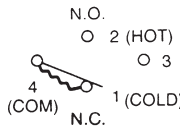
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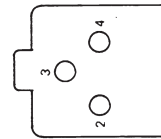
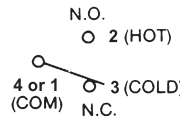
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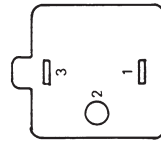
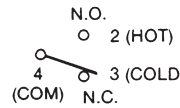
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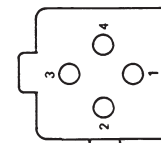
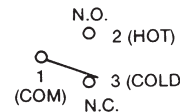
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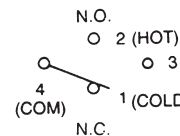
E



F



G



TYPES WITH SPADE TERMINALS

O.E.M. Number	Original Capillary Length	Original Panel Types ^②	Suggested Replacement
3049-1	30 or 48"	A	None
3049-3	26"	A	None
3049-4	33"	A	None
3049-5	48"	B	None
3049-6	12"	B	None
3049-7	24"	B	None
3049-11	24"	B	None ①
3049-15	33"	A	None
3049-18	30 or 33"	D	None
3049-20	42"	B	None ①
3049-29	20"	B	None
3049-31	12"	B	None
3049-32	12"	B	None
3049-33	24"	B	None
3049-36	48"	B	None
3049-37	30"	B	None
3049-41	24 or 48"	B	None
3049-49	42"	B	None
3049-52	30"	B, D	3049-115
3049-54	30"	B	3049-115
3049-55	30"	A, D	3049-115
3049-58	30"	B	None

O.E.M. Number	Original Capillary Length	Original Panel Types ^②	Suggested Replacement
3049-59	30"	B	None ①
3049-61	24"	B	None
3049-62	18"	B	None ①
3049-64	48"	D	None
3049-66	30"	B	3049-115
3049-68	30"	B	3049-115
3049-70	30"	B	None ①
3049-71	30"	B	None
3049-72	30"	E	None ①
3049-101	24"	B	None ①
3049-105	42"	B	3049-115
3049-106	24"	D	3049-115
3049-107	12"	B, D	3049-115
3049-111	24"	B, D	3049-115
3049-112	18"	B, D	3049-115
3049-114	30"	D	3049-115
3049-115	48"	D	3049-115
3049-119	24"	B	3049-115
3049-120	30"	B	3049-115
3049-121	18 or 42"	B	3049-115
3049-537	30"	B	None ①
3049-561	24"	B	None ①

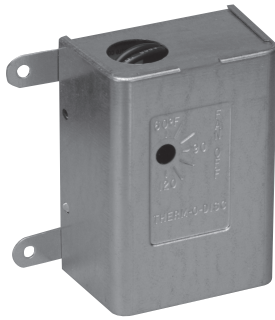
PLUG-IN TYPES

O.E.M. Number	Original Capillary Length	Original Panel Types ^②	Suggested Replacement Type Number
3094-102	30"	C ③	None
3094-111	30"	C ③	None ①
3094-118	48"	C ③	None
3094-122	30"	C ③	None ①
3094-123	30"	G	None
3094-127	48"	C ③	None
3094-131	22"	C ③	None ①
3098-111	30"	E	3098-134
3098-117	24"	E	None ①
3098-120	30"	E	None ①
3098-122	30"	E	3098-156
3098-126	30"	E	3098-156
3098-127	24"	E	3098-156
3098-130	24"	E	3098-156
3098-131	30"	E	3098-156
3098-134	48"	E	3098-134
3098-135	48"	E	None ①
3098-136	30"	E	3098-134
3098-137	12"	E	None ①
3098-139	36"	E	None ①

O.E.M. Number	Original Capillary Length	Original Panel Types ^②	Suggested Replacement Type Number
3098-141	48"	E	3098-134
3098-142	30"	E	3098-156
3098-143	36"	E	3098-156
3098-147	18"	E	3098-134
3098-148	48"	E	None ①
3098-149	24 or 42"	E	3098-156
3098-151	26 or 33"	E	None ①
3098-153	24"	E	3098-156
3098-156	48"	E	3098-156
3098-161	24 or 30"	E	3098-134
3098-165	48"	E	3098-134
3098-168	48"	E	3098-156
3098-169	27"	E	3098-134
3098-171	30 or 42"	E	3098-156
3094-174	36"	E	3098-156
3098-175	18"	E	3098-156
3098-177	24"	E	None ①
3098-178	30"	E	None ①
3098-182	24 or 42"	E	3098-156
3098-183	12"	E	None ①
3098-184	42"	E	3098-134
3098-522	30"	E	None
3098-536	30"	E	None ①

- ① Consult the O.E.M. for replacement or retrofit.
- ② Suggested replacement type may have different panel configuration. Some controls experienced modification. Determine proper wiring with the aid of panel diagrams A through G.
- ③ Note: Panel type C featured an Electrical Quick Shut-Off Resistor (see diagram)

CONTRACTOR TIP: Mercury flame sensors can only be replaced by cross referencing the original mercury flame sensor model number. They can not be replaced by gas valve model number.



775-1

775-1 ATTIC FAN CONTROL

Ideal for Replacement of Similar Type Controls

FEATURES

- For use where space is limited.
- Small bimetal sensing element.
- Snap-Action switch.
- Fan control has adjustable range with direct reading temperature dial.

SPECIFICATIONS

Dimensions for 775. 2.8" H x 3.59" W x 2.02" D

Model Number	Description	Range	Differential	Switch Action	Motor Rating – Full Load		Pilot Duty
					120 VAC	240 VAC	
775-1	Attic Fan Control with Thermal Limiter	60 to 120°F ① (15 to 49°C)	Fixed 10°F (6°C)	Close on Rise	9.0 A	—	—

① Thermal limiter opens at 183°F (84°C)



230-22

230-22 TEMPERATURE CONTROL FOR HEATING

Provide Regulation of Duct Temperatures in Conjunction with Air Handling Units or Control of Circulator for Indoor-Outdoor Regulation from a Remote Point

FEATURES

- Hydraulic action element – Unaffected by vibration.
- Switch case mounts in any position – No leveling required. Includes bulb mounting clip.
- High electrical rating permits operation of most equipment without use of relays or motor starters.
- Dustproof steel case – Dial visible and can be adjusted through cover. Case has knockouts on top and bottom.
- Temperature dial graduated in °F and °C.

SPECIFICATIONS

Dimensions. 5³/₄" H x 2⁵/₁₆" W x 2⁹/₁₆" D

Finish Grey

Agency U.L. listed and C.S.A. approved

Model Number	Range	Differential	Capillary Length	Bulb Size	Switch Action	Full Electrical Rating	Motor Rating (Full Load)		Resistive (Non-inductive)	
							120 VAC	240 VAC	120 VAC	240 VAC
230-22 ①	20 to 120°F (-6 to +49°C)	Adj. 4 to 30°F (2.2 to 17°C)	8 ft.	6 ¹ / ₄ x ³ / ₈ "	Open on Rise	FG See page 222	14.0A	7.0A	25.0A	22.0A

① U.L. approved adjustable dial stop, factory set at 90°F maximum.



5D51-35

**5D51 SERIES
UNIVERSAL FAN AND LIMIT CONTROLS**

Single Element Type for Applications with Narrow Space Limitations. Regulates Fan or Blower Operation and Acts as High Limit Safety Control

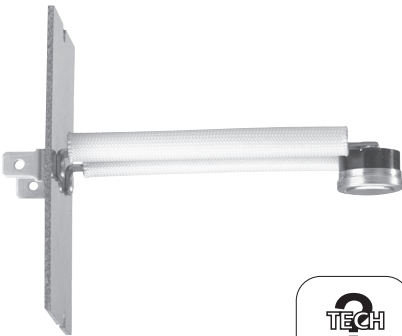
FEATURES

- Slotted mounting holes for easy installation.
- Long terminal screws for wiring — Junctions can be made on terminal block.
- Dial has individual pointers for fan cut-in and cut-out settings.
- Removable solid copper jumper between fan and limit switches.
- Summer fan switch for ventilation without changing control settings. Has same fan and limit switch mechanism.

SPECIFICATIONS

Agency U.L. recognized and C.S.A. approved
Dimensions 2.9"W x 4.3"H x 1.6"D

Model Number	Element Length	Description	Range	Differential	Switch Action	Full Electrical Rating	Motor Rating (Full Load)		Valves and Relays	
							120 VAC	240 VAC	24 VAC	0.3-12V DC
5D51-35	5"	Fan	50 to 265°F (10 to 129°C)	Adjustable 15°F minimum	Close on Rise	HT See page 222	14.0A	7.0A	5.6A	—
5D51-90	8"	Limit	100 to 300°F (38 to 149°C)	Fixed 25°F	Open on Rise	HTV See page 222	10.0A	6.0A	6.0A	1.0A
5D51-78	11"									



3L09 SERIES BOARD MOUNT LIMIT CONTROLS

1/2" Bimetal Disc with Ranges for Your System Needs

FEATURES

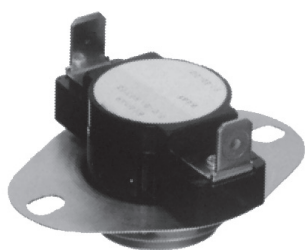
- Proven reliability in a compact, versatile, cost-effective design.
- Provides high-speed contact separation.
- OEM replacement for competitive models.

SPECIFICATIONS

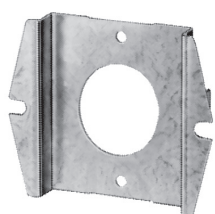
Dimension drawings and specifications See pages 194–196

Model Number	Figure (pages 194-196)	Construction (pages 194-196)	Opens/Closes (°F)	Length (in inches)	TOD Type	TOD Style
3L09-1	1		140/100	1.87	36T	612700
3L09-2	1		170/130	1.87	36T	612708
3L09-3	2	A	140/110	3.12	36T	612701
3L09-4	2	C	150/130	3.12	36T	612703
3L09-5	2	C	160/140	3.12	36T	612706
3L09-6	2	B	170/130	3.12	36T	612710
3L09-7	2	A	175/145	3.12	36T	612711
3L09-8	2	B	180/140	3.12	36T	612714
3L09-9	2	C	190/170	3.12	36T	612715
3L09-10	2	B	200/160	3.12	36T	612718
3L09-11	2	B	210/170	3.12	36T	612719
3L09-12	2	B	220/180	3.12	36T	612722
3L09-13	2	A	240/210	3.12	36T	612723
3L09-14	2	B	250/210	3.12	36T	612725

Model Number	Figure (pages 194-196)	Construction (pages 194-196)	Opens/Closes (°F)	Length (in inches)	TOD Type	TOD Style
3L09-15	2	A	260/230	3.12	36T	612727
3L09-16	3	A	150/130	3.12	36T	612704
3L09-17	3	A	250/225	3.12	36T	612726
3L09-18	3	B	155/125	7.12	36T	612705
3L09-19	3	B	175/145	7.12	36T	612712
3L09-20	3	B	240/210	7.12	36T	612724
3L09-22	4	A	160/140	3.12	36T	612707
3L09-23	4	A	170/150	3.12	36T	612709
3L09-24	4	B	190/170	3.12	36T	612716
3L09-25	4	B	200/180	3.12	36T	612717
3L09-26	5		180/160	1.87	36T	612713
3L09-27	5		220/200	1.87	36T	612721
3L09-28	6		210/180	3.12	36T	612720



3F01-140



F6-1798 (1 per pack)

3F01 SERIES SNAP DISC FAN CONTROLS

For Regulation of Fan or Blower Control

FEATURES

- Designed for quick on-job replacement.
- Easy to remember type numbers — “L” for Limit — “F” for Fan.
- Last three numbers indicate cut-out temperatures on limits and cut-in temperatures on fan controls.
- Mounting holes match standard 3/4” snap discs.
- Tab-to-screw terminal adapters furnished.

SPECIFICATIONS

Maximum ambient 350°F

ELECTRICAL RATINGS

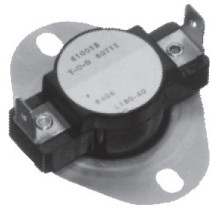
Model Number	Motor Rating (Full Load)		Resistive (Non-Inductive)		Pilot Duty
	120 VAC	240 VAC	120/240 VAC	277 VAC	120/240/277 VAC
3F01, 3F02	10.0A	5.0A	25.0A	21.6A	125 VA

PARTS AND ACCESSORIES

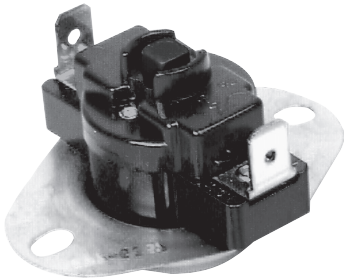
- F6-1798 Adapter plates (Order separately) — 1 per pack

FAN CONTROLS

Model Number	Fixed Temperature Settings		Switch Action	Therm-O-Disc	
	Cut-in	Cut-out		Style	Type
3F01-110	110°F (43°C)	90°F (32°C)	Close on Rise	60T12	610044
3F01-120	120°F (49°C)	110°F (43°C)	Close on Rise	60T12	610046
3F01-130	130°F (54°C)	115°F (46°C)	Close on Rise	60T12	610047
3F01-140	140°F (60°C)	120°F (49°C)	Close on Rise	60T12	610049
3F01-150	150°F (66°C)	130°F (54°C)	Close on Rise	60T12	610050
3F01-160	160°F (71°C)	140°F (60°C)	Close on Rise	60T12	610064
3F01-180	180°F (82°C)	160°F (71°C)	Close on Rise	60T12	610065
3F01-200	200°F (93°C)	180°F (82°C)	Close on Rise	60T12	610066
3F01-350	350°F (177°C)	320°F (160°C)	Close on Rise	60T12	610067



3L01-180



3L02-190



3L03-140

3L SERIES SNAP DISC FAN OR LIMIT CONTROLS

For Regulation of Fan, Blower or High Limit Safety Control

SPECIFICATIONS

ELECTRICAL RATINGS

Electrical Rating (AC) for Model Numbers	Motor Rating (Full Load)		Resistive (Non-Inductive)		Pilot Duty
	120 VAC	240 VAC	120/240 VAC	277 VAC	
3L01	10.0A	5.0A	25.0A	21.6A	125 VA
3L02	10.0A	5.0A	25.0A	21.6A	125 VA
3L03: 1 & 2 Close on Rise	5.8A	2.9A	—	—	125 VA
3L03: 1 & 3 Open on Rise	10.0A	5.0A	25.0A	21.6A	125 VA

Model Number	Fixed Temperature Settings		Switch Action	Therm-O-Disc	
	Cut-in	Cut-out		Style	Type
3L01-120	110°F (43°C)	120°F (49°C)	Open on Rise	60T11	610000
3L01-130*	115°F (46°C)	130°F (54°C)	Open on Rise	60T11	610002
3L01-140	100°F (38°C)	140°F (60°C)	Open on Rise	60T11	610006
3L01-150	110°F (43°C)	150°F (66°C)	Open on Rise	60T11	610009
3L01-165	125°F (52°C)	165°F (74°C)	Open on Rise	60T11	610069
3L01-170	130°F (54°C)	170°F (77°C)	Open on Rise	60T11	610012
3L01-180	140°F (60°C)	180°F (82°C)	Open on Rise	60T11	610013
3L01-190	150°F (66°C)	190°F (88°C)	Open on Rise	60T11	610015
3L01-200	160°F (71°C)	200°F (93°C)	Open on Rise	60T11	610016
3L01-230	190°F (88°C)	230°F (110°C)	Open on Rise	60T11	610021
3L01-250**	210°F (99°C)	250°F (121°C)	Open on Rise	60T11	610023
3L01-300*	250°F (121°C)	300°F (149°C)	Open on Rise	60T11	610026
3L01-350	310°F (154°C)	350°F (177°C)	Open on Rise	60T11	610068

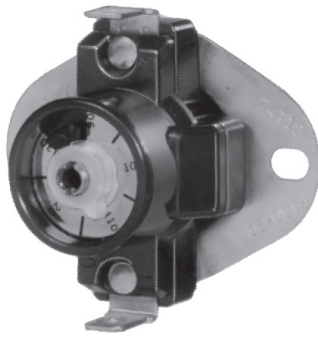
*3L01-130 and -300 terminals at 45° angle
 **3L01-250 terminals horizontal to bracket

LIMIT CONTROLS – MANUAL RESET

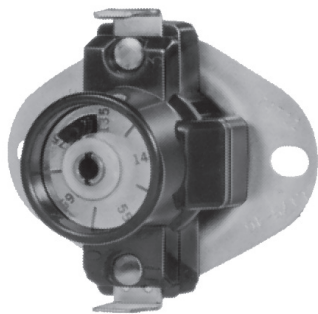
Model Number	Fixed Temperature Settings		Switch Action	Therm-O-Disc	
	Cut-in	Cut-out		Style	Type
3L02-160	Manual Reset	160°F (71°C)	Open on Rise	60T15	330534
3L02-170		170°F (77°C)	Open on Rise	60T15	330535
3L02-180		180°F (82°C)	Open on Rise	60T15	330536
3L02-190		190°F (88°C)	Open on Rise	60T15	330537
3L02-200		200°F (93°C)	Open on Rise	60T15	330538

SPDT CONTROLS

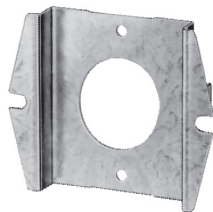
Model Number	Fixed Temperature Settings				Switch Action	Therm-O-Disc	
	Terminal 1 & 3		Terminal 1 & 2			Style	Type
	Cut-in	Cut-out	Cut-in	Cut-out			
3L03-140	140°F (60°C)	120°F (49°C)	190°F (88°C)	170°F (77°C)	SPDT	60T13	611015
3L03-190	190°F (88°C)	170°F (77°C)	140°F (60°C)	120°F (49°C)	SPDT	60T13	611014



3F05-1



3L05-1



F6-1798 (1 per pack)

**3F05 / 3L05 SERIES
ADJUSTABLE SNAP DISC FAN & LIMIT CONTROLS**

Adjustable Snap Disc Thermostat Allows You to Set the Temperature Set Point to Match Your Specific Needs which Simplifies Inventory

FEATURES

- 1/4" quick connect terminals are standard.
- Reduces inventory while providing coverage for a wide range of temperature applications.
- Replaces the majority of fixed disc thermostats now on heating equipment and various appliances.
- 2 adjustable fan control models replace 7 fixed snap disc models.
- 5 adjustable limit control models replace 10 fixed snap disc models.

SPECIFICATIONS

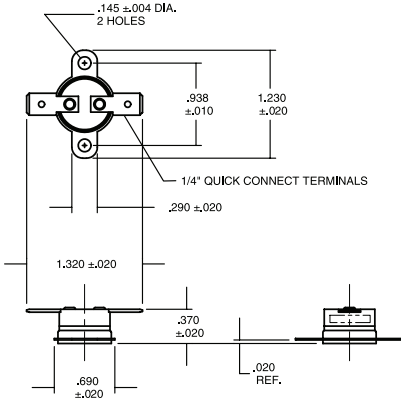
ELECTRICAL RATINGS

VAC	Resistive (Non-Inductive)	Motor Rating (Inductive)		Pilot Duty
		120 VAC	240	
		Full Load	Locked Rotor	
120	25.0A	14.0A	72.0A	125 VA
240	25.0A	10.0A	60.0A	125 VA

PARTS AND ACCESSORIES

- F6-1798 Adapter plates (Order separately) — 1 per pack

Model Number	Temperature Range	Differential	Switch Action	Function	Accessories	Therm-O-Disc	
						Style	Type
3F05-1	90 to 130°F	20°F	SPST	Fan Controls (Close on Rise)	Includes thermostat and tab-to-screw terminals	74T12	310708
3F05-2	140 to 180°F	20°F	SPST			74T12	310709
3L05-1	135 to 175°F	40°F	SPST	Limit Controls (Open on Rise)		74T11	310710
3L05-2	175 to 215°F	40°F	SPST			74T11	310711
3L05-3	210 to 250°F	40°F	SPST			74T11	310712
3L05-10	135 to 175°F	20°F	SPST			74T11	310724
3L05-13	250 to 290°F	40°F	SPST		74T11	310730	



**3L11 / 3F11 SERIES
1/2" BIMETAL DISC THERMOSTATS**
Bimetal Disc Thermostats for Appliance and HVAC

FEATURES

- Loose ring, stainless steel mounting brackets.
- 1/4" quick connect terminations.
- Automatic reset.
- Aluminum disc cup.

SPECIFICATIONS

Single pole, single throw
Available in either open or close on temperature rise
Electrical Ratings
Resistive 15A @ 120 VAC, 10A @ 240 VAC
Inductive 3.0FLA, 12.0LRA @ 120 VAC; 1.5FLA, 6.0LRA @ 240 VAC
Pilot Duty 125 VA
Dimensions Length (1.23"), case width (1.32"), height (.37")
Weight 0.2 oz.
Agency UL Recognized File #E19279
CSA Certified File Number LR77886/LR109556
VDE Lic. 118631

Model Number	Description	Temperature °F / °C	Differential °F / °C	Therm-O-Disc Type	Therm-O-Disc Style
3L11-60	Open on rise	55 to 65 (°F), 13 to 18 (°C)	20 (°F), 12 (°C)	36T21	10842
3L11-85	Open on rise	80 to 90 (°F), 27 to 32 (°C)	15 (°F), 8 (°C)	36T21	10843
3F11-100	Close on rise	93 to 107 (°F), 34 to 42 (°C)	30 (°F), 17 (°C)	36T22	10844
3L11-110	Open on rise	105 to 115 (°F), 41 to 46 (°C)	30 (°F), 17 (°C)	36T21	10845
3L11-120	Open on rise	115 to 125 (°F), 46 to 52 (°C)	30 (°F), 17 (°C)	36T21	10846
3F11-120	Close on rise	113 to 127 (°F), 45 to 53 (°C)	30 (°F), 17 (°C)	36T22	10847
3L11-140	Open on rise	135 to 145 (°F), 57 to 63 (°C)	30 (°F), 17 (°C)	36T21	10848
3F11-140	Close on rise	133 to 147 (°F), 56 to 64 (°C)	30 (°F), 17 (°C)	36T22	10849
3L11-150	Open on rise	145 to 155 (°F), 63 to 68 (°C)	30 (°F), 17 (°C)	36T21	10850
3L11-160	Open on rise	155 to 165 (°F), 68 to 74 (°C)	30 (°F), 17 (°C)	36T21	10851
3L11-170	Open on rise	165 to 175 (°F), 74 to 79 (°C)	30 (°F), 17 (°C)	36T21	10852
3F11-170	Close on rise	162 to 178 (°F), 72 to 81 (°C)	30 (°F), 17 (°C)	36T22	10853
3L11-175	Open on rise	170 to 180 (°F), 77 to 82 (°C)	15 (°F), 8 (°C)	36T21	10854
3L11-180	Open on rise	175 to 185 (°F), 79 to 85 (°C)	30 (°F), 17 (°C)	36T21	10855
3F11-180	Close on rise	172 to 188 (°F), 78 to 87 (°C)	30 (°F), 17 (°C)	36T22	10856
3L11-190	Open on rise	185 to 195 (°F), 85 to 91 (°C)	30 (°F), 17 (°C)	36T21	10857
3L11-210	Open on rise	204 to 216 (°F), 96 to 102 (°C)	30 (°F), 17 (°C)	36T21	10858
3L11-220	Open on rise	214 to 226 (°F), 101 to 108 (°C)	30 (°F), 17 (°C)	36T21	10859
3F11-225	Close on rise	217 to 232 (°F), 103 to 111 (°C)	30 (°F), 17 (°C)	36T22	10860
3L11-230	Open on rise	224 to 236 (°F), 107 to 113 (°C)	30 (°F), 17 (°C)	36T21	10861
3F11-240	Close on rise	229 to 251 (°F), 109 to 122 (°C)	100 (°F), 56 (°C)	36T22	10862
3L11-250	Open on rise	224 to 256 (°F), 118 to 124 (°C)	30 (°F), 17 (°C)	36T21	10863
3L11-325	Open on rise	315 to 335 (°F), 157 to 169 (°C)	50 (°F), 28 (°C)	36T21	10864



3L12 SERIES 1/2" DISC MANUAL RESET ROLLOUT LIMIT CONTROLS

Manual Reset Flame Rollout Limit Switches Designed for Safety in Gas Fired Furnaces, Unit Heater and Roof-Top Units

FEATURES

- Loose ring, stainless steel mounting brackets.
- 1/4" quick connect terminations. 90° orientation to mounting holes.
- Manual reset.
- Stainless steel disc cup (A1 disc cup for 3L12-301).

SPECIFICATIONS

Single pole, single throw
Open on temperature rise
Electrical Ratings

Resistive 15A @ 120 VAC, 10A @ 240 VAC
Inductive 3.0 FLA, 12.0 LRA @ 120 VAC; 1.5 FLA, 6.0LRA @ 240 VAC
Pilot Duty 125 VA

Dimensions

3L12-301 Length (1.18"), case width (.81"), height (.83")
Others Length (1.70"), case width (.81"), height (.83")

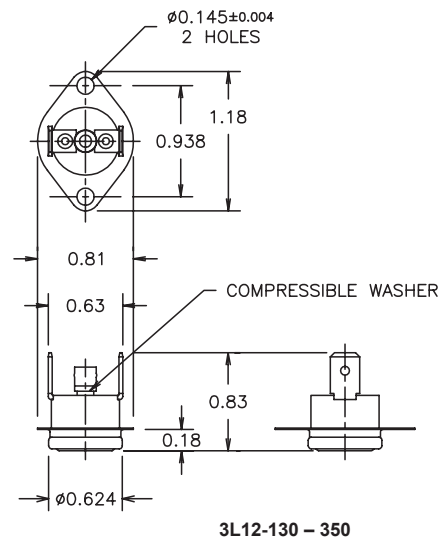
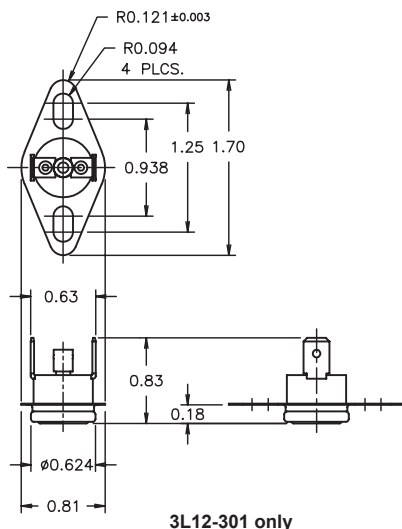
Weight 0.2 oz.

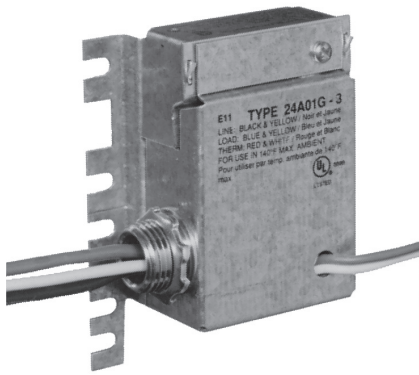
Agency UL Recognized File #E19279
CSA Certified File Number LR77886/LR109556
VDE Lic. 118631

NEW SERIES!

Model Number	Fixed Temperature Settings		Switch	Therm-O-Disc	
	Cut-in	Cut-out	Action	Style	Type
3L12-130	Manual Reset	130	Open on Rise	36TX16	611863
3L12-135		135	Open on Rise	36TX16	611864
3L12-220		220	Open on Rise	36TX16	611865
3L12-230		230	Open on Rise	36TX16	611866
3L12-240		240	Open on Rise	36TX16	611867
3L12-250		250	Open on Rise	36TX16	611868
3L12-260		260	Open on Rise	36TX16	611869
3L12-300		300	Open on Rise	36TX16	611870
3L12-350		350	Open on Rise	36TX16	611871
3L12-301*		300	Open on Rise	36TX16	611971

*Specifically designed for ICP part #1013102





24A01G-3

24A SERIES LEVEL-TEMP LOW VOLTAGE CONTROL SYSTEMS FOR ELECTRIC HEAT

Provides Silent Operation and Narrow Differential Control for Heating or Cooling Installations for Use with a 2-Wire 24 Volt Thermostat

FEATURES

- Level-Temp allows low voltage 2-wire thermostat to control line voltage loads such as baseboard heaters.
- Conduit hub or screw mounting.
- Ideal for all types of electrical heat.
- Non-critical mounting angle. Universal break-off mounting tabs.
- Dual Level-Temp capable of controlling two separate loads.

SPECIFICATIONS

Dimensions Models 24A01 / 05 1⁷/₈" H x 4¹/₂" W x 2⁷/₁₆" D
 Dimensions Model 24A06. 3¹³/₁₆" H x 4¹³/₁₆" W x 2¹/₈" D
 Dimensions Model 24A07. 1⁷/₈" H x 4⁹/₁₆" W x 1²⁹/₃₂" D

Single Level Temp

Switch Action SPST normally open
 Average Time Delay 45 seconds
 Lead length. 18 inches
 Ambient temperature range -20 to +140°F

Dual Level Temp

Switch Action Two independent: SPST normally open
 Average Time Delay 45 seconds
 Lead length. 18 inches
 Ambient temperature range -20 to +120°F
 Agency U.L. listed and C.S.A. approved. Design complies with U.L. 873 T.I.R.E. standard (Temperature Indicating & Regulating Equipment)



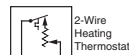
24A06G-1



TECHNICAL HELP

Wiring and Dimension Drawing, 24A01 / 24A05 . . . page 193

NOTE
 Use thermostat with a .4A fixed heater, or set adjustable heater in thermostat at .4 A.



SINGLE LEVEL TEMPS – Normally Open

Model Number	Input Voltage / Frequency	Thermostat Current	A.C. Resistive (Non-inductive)	A.C. Motor Rating (Inductive)	
				Full Load	Locked Rotor
24A01G-3	240 VAC / 60 Hz	0.2A	25A, 6000W, 240v	12A, 240v	72A, 240v
24A01Z-10	347 VAC / 60 Hz	0.2A	17A, 5900W, 347v	–	–
24A05A-1	120 VAC / 60 Hz	0.2A	25A, 3000W, 120v	16A, 120v	96A, 120v
24A05E-1	208 VAC / 60 Hz	0.2A	22A, 5200W, 208v	12A, 208v	72A, 208v

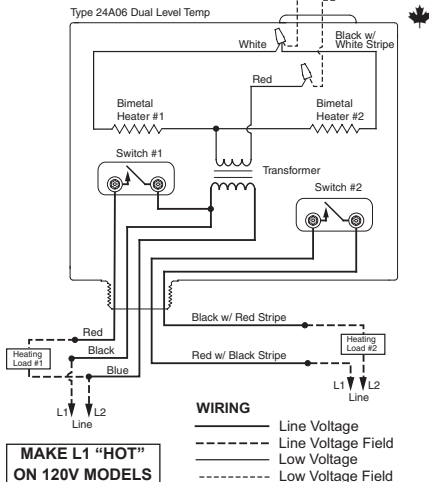
DUAL LEVEL TEMPS – Controls Two Independent Loads – Normally Open

Model Number	Input Voltage / Frequency	Thermostat Current	A.C. Resistive (Non-inductive)	A.C. Motor Rating (Inductive)	
				Full Load	Locked Rotor
24A06G-1	240 VAC / 60 Hz	0.2A per switch	25A, 6000W, 240v	12A, 240v	72A, 240v

① Electrical ratings apply to each switch load

NOTE: Delay approximately 30 seconds opening and 60 seconds closing

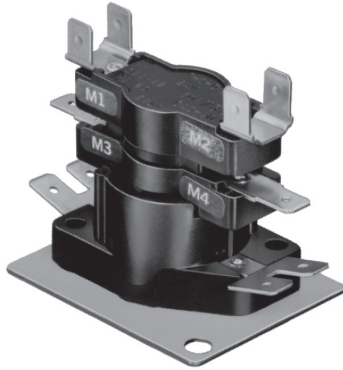
REPLACES HONEYWELL R841 SERIES



MAKE L1 "HOT" ON 120V MODELS

Using Two-wire Heating Thermostat to Operate Two Separate Heating Loads

Indicates Canadian Model Number: call 1-800-305-6953 to order



24A34-3

COMBINED LOAD RATING TABLE (ALL MODELS)

30A @ 240 VAC – TOTAL,
 23A Non-Inductive + 7 FLA / 42 LRA Inductive,
 ON Time: Elapsed time to make contacts after heater is energized (min. to max.)
 OFF Time: Elapsed time to break contacts after heater is de-energized (min. to max.)

TABLE NOTES:

- ① M1-M2 and M3-M4 are always first switches to turn ON and last to turn OFF. All other switches are random ON and random OFF
- ② 24A34-14 Switch contacts designated F₁ - F₂ instead of M₁ - M₂
- ③ 24A34-28 is 2 pole double throw
- ◆ These contacts switch simultaneously

NOTE: Underwriters Laboratories requires a fan interlock circuit to insure the blower remains operating whenever more than one sequencer is used. The fan interlock should be the M₁ / M₂ contacts of the second or third sequencer.

All M₁ / M₂ contacts are wired to the blower motor so that any sequencer that is energized will keep the blower ON.

24A34 SERIES ELECTRIC HEAT SEQUENCERS

Direct Replacement for Most Fan / Heat Sequencing Functions.
 Terminal Markings are Equivalent to Competitive Types

FEATURES

- Replaces Honeywell, MARS, TOD, GEMLINE, Klixon (Texas Instruments).
- 24V input control.
- Multi-poise mounting.
- Any contacts (except M1 & M2) can be used as auxiliary contacts.
- Double quick-connect terminals for combination loads.

SPECIFICATIONS

Ambient Temperature Rating -50 to +165°F
 Agency U.L. component recognized

ELECTRICAL RATINGS – SINGLE LOAD CONTACT RATINGS (ALL MODELS)

VAC	Resistive (Non-Inductive)		Motor Ratings (Inductive)		Pilot Duty
	Watts	Amps	Full Load	Locked Rotor	
120	3000	25.0	14.0A	72.0A	125 VA
240	6000	25.0	7.0A	42.0A	125 VA
480	6000	12.5	–	–	480 VA

Model Number	Timings	Switches	Timings – ON					Timings – OFF				
			M1-M2	M3-M4	M5-M6	M7-M8	M9-M10	M1-M2	M3-M4	M5-M6	M7-M8	M9-M10
24A34-1	1	1	1-20	–	–	–	–	40-110	–	–	–	–
24A34-2	1	1	–	–	30-90	–	–	–	–	1-30	–	–
24A34-3 ①	1	2	1-20 ◆	1-20	–	–	–	40-110 ◆	40-110	–	–	–
24A34-4	1	2	–	–	30-90 ◆	30-90	–	–	–	1-30 ◆	1-30	–
24A34-5 ①	2	3	1-110 ◆	1-110	1-110	–	–	1-110 ◆	1-110	1-110	–	–
24A34-6 ①	2	4	1-110 ◆	1-110	1-110 ◆	1-110	–	1-110 ◆	1-110	1-110 ◆	1-110	–
24A34-14 ①②	4	5	1-160 ◆	1-160	1-160	1-160	1-160	1-160 ◆	1-160	1-160	1-160	1-160
24A34-21	1	1	1-20	–	–	–	–	1-50	–	–	–	–
24A34-22	1	1	15-45	–	–	–	–	1-30	–	–	–	–
24A34-23	1	1	25-55	–	–	–	–	15-45	–	–	–	–
24A34-24	1	1	30-75	–	–	–	–	1-40	–	–	–	–
24A34-25	1	1	40-90	–	–	–	–	1-30	–	–	–	–
24A34-26	2	2	1-20	30-90	–	–	–	40-90	1-30	–	–	–
24A34-27	2	2	1-160	1-160	–	–	–	1-160	1-160	–	–	–
24A34-28 ③	2	2	1-160	1-160	–	–	–	1-160	1-160	–	–	–
24A34-29	1	1	15-35	–	–	–	–	25-55	–	–	–	–
24A34-36	2	2	1-20	30-45	–	–	–	45-110	1-30	–	–	–
24A34-37	1	1	1-110	–	–	–	–	1-110	–	–	–	–

24A34-15 HEAT PUMP CONTROL

FEATURES

- Used in heat pump air handler applications.
- Provides a delay off to the blower motor in cooling mode.
- Single pole double throw.

Model Number	Timings	Switches	Timings	
			ON 1-3	OFF 1-3
24A34-15	1	1	1-60	75-95

ELECTRICAL RATINGS – NORMALLY OPEN CONTACTS 1-3

VAC	Resistive (Non-Inductive)		Motor Ratings (Inductive)		Pilot Duty
	Watts	Amps	Full Load	Locked Rotor	
120	3000	25.0	14.0A	72.0A	125 VA
240	6000	25.0	7.0A	42.0A	125 VA

ELECTRICAL RATINGS – NORMALLY CLOSED CONTACTS 1-2

VAC	Resistive (Non-Inductive)		Pilot Duty
	Watts	Amps	
120	1200	10.0	125 VA
240	1200	5.0	125 VA

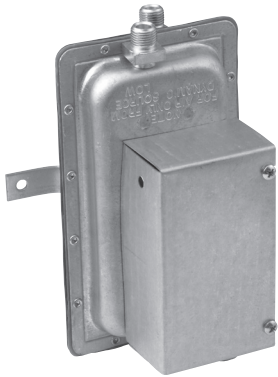
◆ Indicates Canadian Model Number: call 1-800-305-6953 to order

HEATING

DUAL PURPOSE AIR SWITCH

White-Rodgers™

HEATING



770-1

770 SERIES DUAL PURPOSE AIR SWITCH

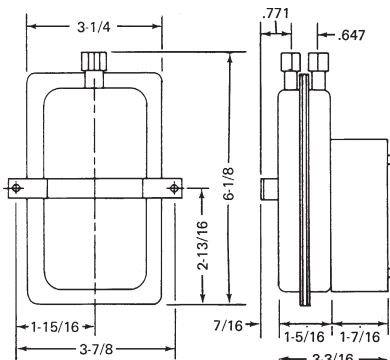
Responds to Positive, Negative or Differential Air Pressure

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. approved
 1/2 HP @ 125 VAC





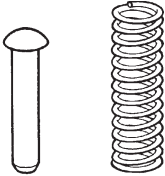
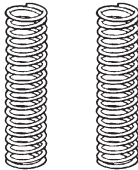
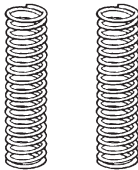

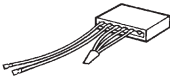
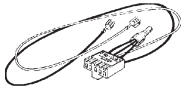
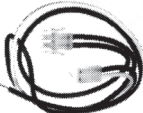
Model Number	Adjustable Operating Range	Switch Action	Electrical Ratings			
			Resistive (Non-Inductive)			
			120 VAC	240 VAC	277 VAC	125-277 VAC
770-1	0.05 to 12.0 W.C.	SPDT	15.0A	15.0A	15.0A	300 VA
770-3	0.05 to 12.0 W.C.	SPDT	15.0A	15.0A	15.0A	300 VA

AIR SWITCH APPLICATIONS

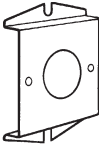
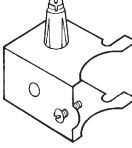
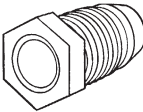

LEGEND			
N Negative Pressure	D Pressure Differential		POWER HUMIDIFIERS Switch permits unit to operate whenever there is proper air movement.
P Positive Pressure			PROCESS DRYING Switch monitors negative pressure to stop conveyor or process and provides alarm signal on fan failure. Ideal for bulk chemicals, food processing, grain drying.
			REFRIGERATION EQUIPMENT Switch responds to pressure drop across refrigeration coils to signal alarm condition or automatically initiate or terminate defrost cycle.
			DUCT STRIP HEATERS Switch proves air movement across heaters by positive pressure to prevent burn-out on insufficient air flow.

✦ Indicates Canadian Model Number: call 1-800-305-6953 to order


COMBINATION GAS MANIFOLD VALVES – 3600 SERIES

Item Number	Model Number	Description
	F92-0656	L.P. to natural gas conversion kit for 36C, 36D, 36E, 36F and 36G gas valves with regulation range of 2.5 to 5" W.C.
	F92-0659	Natural to regulated L.P. gas conversion kit for 36C, 36D, 36E, 36F and 36G gas valves with regulation range of 7.5 to 12.0" W.C.
	F92-0737	Natural to unregulated L.P. gas conversion kit for 36C gas valves.
	F92-1008	NEW -natural to regulated L.P. gas conversion kit for use on two stage 36G, H, J valves. Regulation range 4.0" to 10.0" W.C. low fire, 6.0" to 12.0" W.C. high fire.
	F92-1011	NEW -regulated L.P. to natural gas conversion kit for use on two stage 36G, H, J valves. Regulation range 1.0" to 4.0" W.C. low fire, 2.0" to 5.0" W.C. high fire.
 JUMPER	F92-1021	Natural to L.P., gas conversion kit for 36J27 Series Modulating gas valves.
	F115-0064	36" replacement harness assembly for connection of 5059-23 to 36C84-426 in the 21D18-3 Cycle-Pilot® retrofit kit.
	F115-0087	36" replacement harness assembly for connection of 5059-23 to 36E86-302 in the 21D18-14 Cycle-Pilot® retrofit kit.
	F115-0100	Harness assembly for HSI systems with 36E gas valves; connects the 767A ignitor with the 50E47 or the 50F47 ignition module.

FAN OR LIMITS — 300 SERIES

Item Number	Model Number	Description
	F6-1798	Mounting adapter for 3F01 / 3L01 / 3L02 / 3F02 / 3L03 / 3F05 / 3L05 series controls.
	F6-1794	Bracket for Bryant pilots when retrofitting with Cycle-Pilot®.
	F69-0727	1/4" brass compression fitting for pilot line connections.
 3/32" Hex Wrench 5/16" Hose Connector	F92-1003	Adapter kit for the 36G / 36J gas valves. Kit includes: connector (5/16" to 1/4" hose barb), tube (5/16" O.D.) and hex wrench (3/32").

764 KNOB

Item Number	Model Number	Description
	F42-0895	Replacement Knob for 764 series valve.