



Heating Fenwal® Ignition Controls

UNI-LINE® PRODUCT KNOWLEDGE



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Subjects We Will Cover In This Session

- Ignition Control Applications
- Uni-Line® Ignition Control Offering
- Fenwal® Series
 - Direct Spark
 - Intermittent Pilot
 - Hot Surface
- Manufacturer Analysis
- Contact Information
- Where to Find Information
- Q&A

Applications

- Ignition controls monitor and control fire
- Used in automatic gas controlled applications except stove tops
 - Typically used in unsupervised applications
 - Furnaces
 - Recreational Vehicles with HVAC systems
 - Radiant Wall Heaters
 - Space Heaters in Garages
- Ignition controls found in other applications besides HVAC include:
 - Commercial Cooking
 - Pool Heaters
 - Laundry

Uni-Line[®] Ignition Control Offering

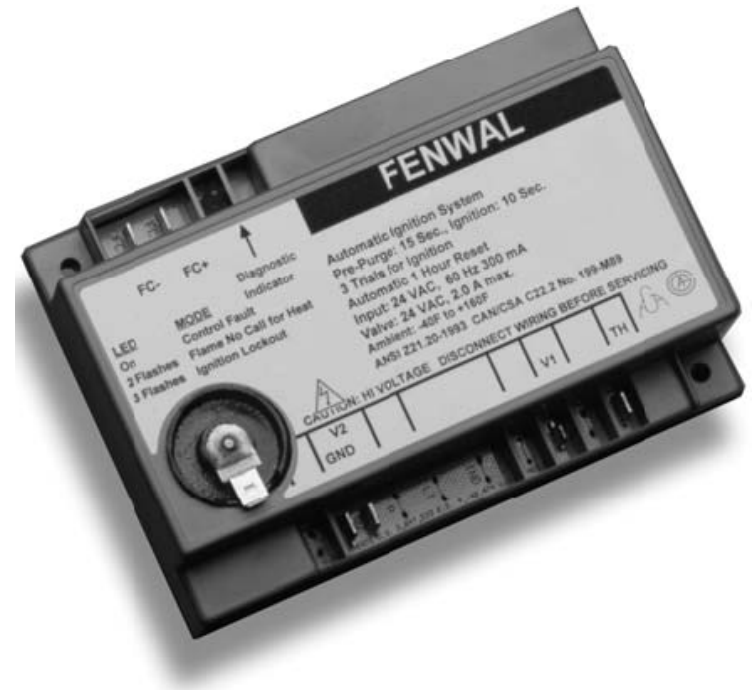
Igniter Type	Robertshaw [®]	RAM	Fenwal [®]
Direct Spark			
12 VDC			35-53
24 VAC	780-501	790-300	35-60 & 61
120 VAC		790-001	35-70 & 71
240 VAC		790-200	
Hot Surface			
24 VAC	780-910	790-015	35-65 & 66
120 VAC	780-785		
Intermittent Pilot			
24 VAC	780-845	790-500	35-63
120 VAC		790-400	

- Timings are critical for replacement applications
- See Uni-Line catalog pages 128-132 for more Fenwal[®] parts

Fenwal Uni-Line® Products

FENWAL®

- Direct Spark
 - 35-53 Series, 12VDC
 - 35-72 Series, 120VAC
 - Lockout reset with Thermostat
 - Multi-pin connector and Remote
 - 35-61 Series, 24VAC, Local Sensing
 - Combustion Blower Relay
 - Results in lower costs on blower
- Intermittent Pilot
 - 35-63 Series, 24VAC
- Hot Surface
 - 35-65 Series, 24VAC
 - 35-66 Series, 24VAC
 - Combustion Blower Relay



Fenwal® Product Line Comparison

Series	Supply Voltage	Attributes
35-53	12 VDC	RV applications
35-60	24 VAC	Direct Spark
35-61	24 VAC	Direct Spark with Blower Relay*
35-63	24 VAC	Intermittent Pilot
35-65	24 VAC	Hot Surface with 120/240 control voltage for ignitor
35-66	24 VAC	Hot Surface with 120/240 control voltage with Blower Relay*
35-70	120 VAC	Direct Spark
35-72	120 VAC	Direct Spark smaller and potted

* Relay used to control combustion fan blower and reduce energy costs

Top 5 Fenwal® Sold In Uni-Line®

No.	Uni-Line Part Number	Description	Details
1	35-605606-223	24V Direct Spark	Remote, 3 ignition trials, 30 second purge and 7 second ignition time
2	35-655800-003	24V Hot Surface	40 second ignitor heat-up, local and remote, 1 ignition tries before lockout, 0 second purge and 7 ignition trials
3	35-655801-013	24V Hot Surface	40 second ignitor heat-up, local and remote, 1 ignition tries before lockout, 15 second purge and 7 ignition trials
4	35-615908-223	24V Direct Spark with Combustion Blower Relay	Remote, 3 ignition tries before lockout, 30 second purge and 7 ignition trials
5	35-605601-003	24V Direct Spark	Remote, 1 ignition trials, 0 second purge and 7 second ignition time

Ignition Control Manufacturers

- Johnson Controls
 - Out of Business
- White Rogers
 - 50D50-842 Series
- ICM Controls
 - ICM200 Series
- Channel Products Inc.
 - Limited line
- Honeywell Module
 - S8610U Series
 - S9200U Hot Surface
- Uni-Line® Total Solution
 - Fenwal®
 - RAM (Commercial Laundry)
 - Robertshaw®



Ignition Controls – Manufacturer Comparison

Features	Fenwal®	ICM	Johnson Controls®	Channel	Honeywell®	White-Rodgers®
Family Model or SKU	35 Series	ICM290 ICM283	Not in Business	TBD	S8610U / S9200U	50D-50-842
Breadth of Line	✓	✗	✗	✗	✗ (no 12 Volts)	✗
12VDC Supply Voltage	✓	✗	✗	✓	✗	✗
Diagnostic LED's	✓	✓	✗	✗	✓	✓
Flame sensor pin outs for easy measurements	✓	✗	✗	✗	✗	✗
Control Voltage option for 120/240 VAC for ignitors	✓	✗	✗	✗	✗	✗
Potted or encapsulated	✓	✗	✗	✓	✓	✗
Combustion Blower Relay	✓	✓	✗	✗	✓	✓

Poll Question

Which of the following is not a Fenwal® product feature?

- A. LED Diagnostics
- B. Variable flame output
- C. Flame current test points
- D. Microprocessor based timing

Website Tools: www.Uni-Line.com

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When You Have Uni-Line® Questions

Telephone:

Technical Service 1-800-445-8299

Technical Service Fax 1-630-260-7294

Customer Service 1-800-304-6563

Customer Service Fax 1-800-426-0804

Website:

Uni-Line® Catalog Website: www.Uni-Line.com

Cross Reference Website: www.uni-line.com/templates/xrefsearch.aspx

General Information Websites for:

Robertshaw®, Paragon®, Eliwell™, Ranco®, and Publication Zone®

www.InvensysControls.com

www.RobertshawTstats.com

www.ToolBox.InvensysControls.com



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