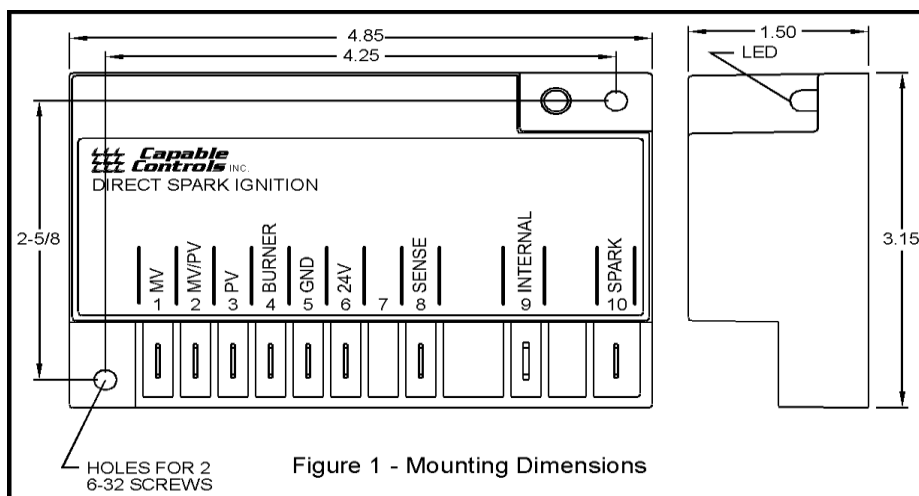


ORDERING INSTRUCTIONS
2xxxx UNIVERSAL DIRECT SPARK IGNITION CONTROL

The 2xxxx Universal Direct Spark Ignition Control is a microprocessor based ignition control. The microprocessor provides reliable software control of all timings and drives a diagnostic led. It is designed for direct burner supervision and can be used with all gases. It provides ignition sequence, flame monitoring, and safety shutout for heating appliances using direct spark ignition. The control replaces many existing direct spark ignition controls with flame rectification made by various manufacturers.

Three hardware configurations are available to match the application. Retry time (none, 5 min, 60 min), pre-purge time (1 to 45 sec) and trial time (5 to 90 sec) are factory programmed. The standard values can be matched to almost any existing control.

Voltage	24VAC 50/60 Hz
Main valve	2A maximum
Operating current	0.2A
Wiring connections	1/4" male spade
Environmental:	-40 to +170 degrees F (-40 to +77 C)
Flame failure response time:	1 second maximum
Minimum flame current required:	0.15 microamperes
Type of gas:	Natural, LP, or manufactured
Recommended Spark Gap:	0.2 inches maximum, use noise suppression wire only



Mounting and wiring

The 2xxxx control is not position sensitive. It may be mounted in any position with #6 sheet metal or machine screws. Mounting holes are on 4 - 1/4 by 2 - 5/8 centers. See figure 1 below. Power must be provided from a properly sized 24 volt class 2 transformer. All wiring must be done in accordance with both local and national electrical code. All wiring and initial operation must be performed by a qualified service technician.

The high voltage spark cable should be of the noise suppression type rated for at least 15kV and must not be in continuous contact with a metal surface. If separate flame sense probe is used, the sense wire must be separated from the high voltage wire by a minimum of 1/4".

Selecting Model Number

The model number consists of 2 followed by 4 option digits in a 2abcd format.

The first option digit (a) selects one of three hardware configurations available. Models differ in number of terminals provided but function identically. Units with damper plug are supplied with shorting plug for use if vent damper is not actually connected. Universal sense units are supplied with a jumper for internal flame sense.

27bcd = internal sense (1 rod)

28bcd = external sense (2 rod)

29bcd = universal sense (1 or 2 rod jumper selected)

The second option digit (b) selects the factory set retry time.

There are 3 options: none, 5 minutes or 60 minutes.

2a0cd = none lockout after one trial time

2a1cd = 5 minutes continuous retry

2a2cd = 60 minutes continuous retry

The third option digit (c) selects the factory set pre-purge time.

There are 5 options: 1, 10, 15, 30 or 45 seconds.

2ab0d = no pre-purge (1 second max.)

2ab1d = 10 second pre-purge

2ab2d = 15 second pre-purge

2ab3d = 30 second pre-purge

2ab4d = 45 second pre-purge

The last option digit (d) selects the factory set trial time.

There are 8 options: 5, 10, 15, 20, 25, 30, 60 or 90 seconds.

2abc1 = 5 second trial time

2abc2 = 10 second trial time

2abc3 = 15 second trial time

2abc4 = 20 second trial time

2abc5 = 25 second trial time

2abc6 = 30 second trial time

2abc7 = 60 second trial time

2abc8 = 90 second trial time

Some Examples

Model 27008 = internal sense, no retry, 1 sec pre-purge, 90 sec trial time

Model 28034 = external sense, no retry, 30 sec pre-purge, 20 sec trial time

Model 29117 = universal sense, 5 min retry, 10 sec pre-purge, 60 sec trial time

