

# POWERLIGHT®

## 12Vdc IGNITER

# Beckett®

### INSTALLATION INSTRUCTIONS

#### Application Information:

- This igniter is designed for use with 12 VDC oil burners. See Table 1 for application.
- It is rated for continuous duty and can be used with intermittent or interrupted ignition primary controls.
- The Beckett oil 12 VDC igniter is designed to mount in the same manner as other igniters.
- This igniter can be adapted to multiple base plates to accommodate Beckett ADC & SDC burners.

#### CAUTION

- **Do not use this igniter beyond its design specifications. Improper operation and igniter failure may result.**

#### Specifications:

**Input Voltage:** 10.8 - 16 VDC

**Output Voltage:** 20 kV peak

**Output Current:** 25 mA RMS

**Input Current:** 2.5A Maximum

**Ambient Operating Temperature:** -40° to +150° F

**Storage Temperature:** -40° to +150° F

**Moisture:** 5% to 95% Relative Humidity, Condensing

#### WARNING

#### Electrical Shock Hazard

**Electrical shock can cause severe personal injury or death.**

- Disconnect all electrical power to the burner before servicing. More than one disconnect switch may be in the supply circuit.
- Installation and service must only be performed by a qualified service technician.
- Remove all jewelry, such as rings and watches, before servicing.
- Provide ground wiring to the burner, metal control enclosures, and accessories. (This may also be required to aid proper control system operation.)

Table 1 - Complete Igniter Base Plate Assemblies

Igniter	Description	Replaces
5270001U	Beckett ADC 12 Vdc	5218301U
5270002U	Beckett SDC 12 Vdc	5218303U
5270003U	Wayne MSRDC	5218305U
5270004U	Wayne E	5218307U
5270005U	Igniter only	5218309U

#### Installation Instructions:

(If base plate is already installed, skip to step number 8.)

1. Locate the igniter input leads.
2. Install the 32302 igniter gasket, if required, and route the leads through the appropriate base plate lead exit hole. Make sure these leads are not being crushed.
3. Mount the igniter flush to base plate with the mounting screws supplied.
4. Note: Use (4) #6 x 7/16" Phillips head screws when using the bottom mounting holes. Use (2) #10 x 5/16" hex head thread-forming, paint-scraping screws if using the two top mounting holes.
5. Tighten all screws securely.
6. Install the barrier and base plate gaskets for Beckett Model ADC only.
7. Use gaskets for other burner models as required by the manufacturer.
8. Mount the assembled unit to the burner using the screws supplied.
9. Use paint-scraping screws for all burners (2 at the hinge and 2 for non-hinged base plates). Tighten these screws securely to provide effective grounding to burner housing.
10. Verify the burner is properly connected to the negative battery terminal.
11. Install the cad cell if applicable. Carefully route the igniter input and cad cell leads to prevent them from being pinched during closing of the igniter at the hinge.
12. Intermittent Duty Ignition - Without Primary Control:
  - Carefully follow the equipment manufacturer's wiring instructions and diagrams. Connect the Black lead to 12 VDC circuit Ground (-) Negative.
  - Connect the Blue-White wire to 12 VDC circuit (+) Positive, in parallel with the burner motor.
  - If used, connect the Yellow leads from the igniter to the Yellow Cad Cell leads with the wire nuts.

Continued on Reverse ►

**(Instructions Continued)**

13. Wiring Igniter to GeniSys 12 VDC Primary Control:
  - Carefully follow the control or equipment manufacturer's wiring instructions and diagrams.
  - Fasten cad cell leads to control CAD CELL spade terminals.
  - Attach the Black lead with insulated flag terminal to the primary control GND (IGN) spade terminal Negative.
  - Combine the Blue-White striped and any jumper wires and attach to the insulated flag terminal to the primary control IGNITER spade terminal.

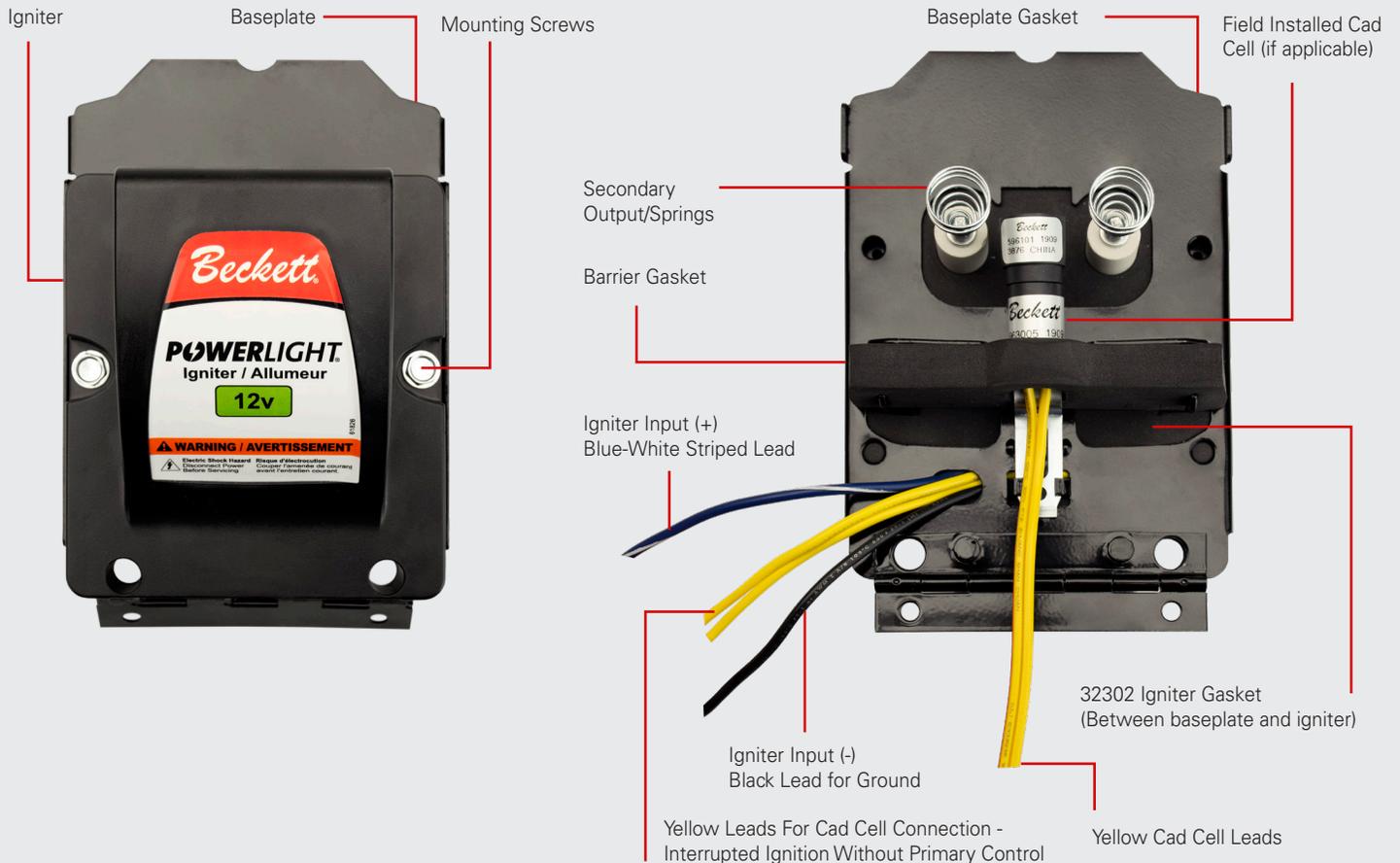
14. The Yellow leads from the igniter will **NOT** be used and should be wire nuted **INDIVIDUALLY** and placed in the housing wiring compartment. **DO NOT TIE THE YELLOW LEADS TOGETHER.**
15. Verify the igniter secondary output/spring terminals are correctly arranged to make good electrical contact with the oil burner electrodes.
16. Close the igniter. Install and securely tighten the two front base plate retaining screws (4 screws, if no hinge).
17. Reconnect electric power to the burner circuit.
18. Verify with instruments that the burner is adjusted to the manufacturer's recommended settings.
19. Cycle the burner several times to verify prompt and smooth ignition. Verify proper operating and limit control operation before leaving.

**Table 2 - Igniter Base Plate Bill of Materials**

Part No.	Burner Models	Baseplate Gasket	Baseplate	Igniter Gasket	Barrier Gasket
5270001U	Beckett ADC 12 Vdc	31520	51780BK	32302	32301*
5270002U	Beckett SDC 12 Vdc	n/a	51855BK	32302	n/a
5270003U	Wayne 'M' Models for 12 Vdc	n/a	51899BK	n/a	n/a
5270004U	Wayne 'E' Models for 12 Vdc	n/a	21847	n/a	n/a
5270005U	Igniter Only	n/a	n/a	n/a	n/a

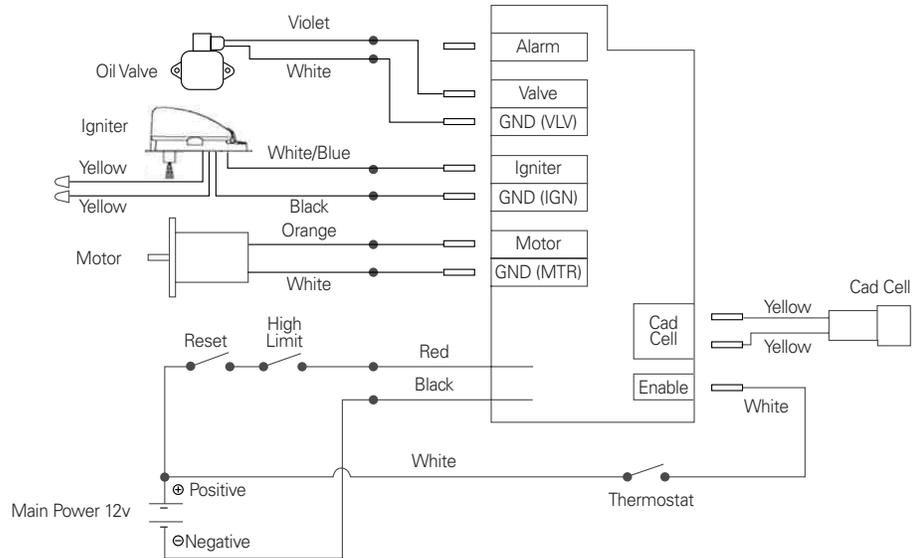
\* 32301 Barrier Gasket is used only on Beckett Model ADC.

Figure 1 - Igniter Assembly Components (5270001U shown. Other models will have different baseplates and terminals.)

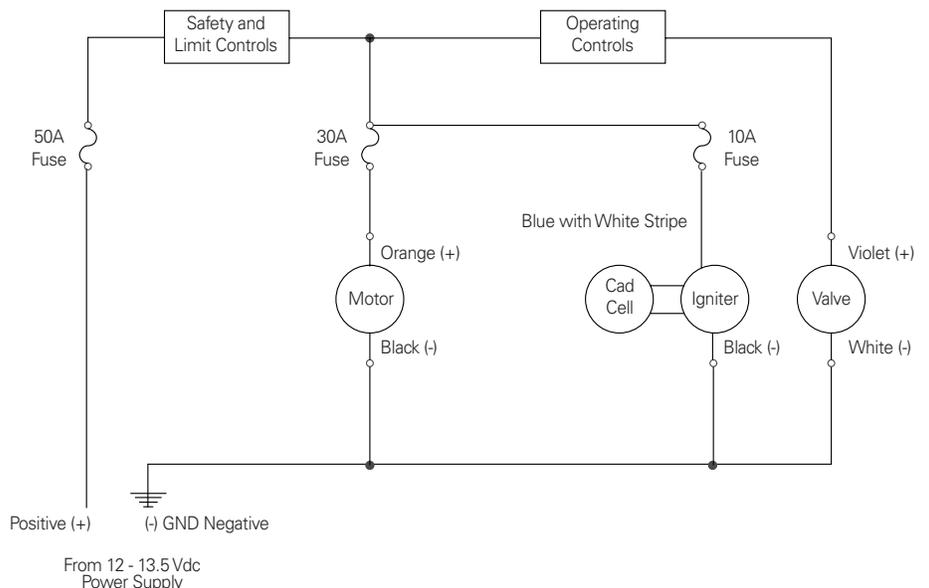


## 7556 Primary Control

1. Wires are to be sized to prevent a voltage drop between the battery and the burner with the burner running at full load.
2. Fuse Sizes (inside control) 30 Amp. = Motor. 10 Amp = Igniter, Control, Valve, & Alarm.
3. Hard-wire burner ground to battery. Do NOT use chassis ground system.
4. Input power to the control's +12 Volt wire shall be provided from a fused service switch, rated at 50 amps or less.
5. Motor-off delay on a 7556P will be disabled if the safety and operating limits interrupt power to the control's red +12 Volt wire.
6. Do not wire power directly to the burner motor. Always wire the motor to the primary control "motor" terminals. If instant burner heat is required by the application, purchase or program a control with a long motor-off delay time, which will ensure instant heat if a new call for heat is received within the motor-off delay time.
7. Igniter Yellow leads are capped and not used. Bundle with the other leads in the wiring box with a cable tie. **DO NOT TIE THE YELLOW LEADS TOGETHER.**
8. The igniter Blue-White striped leads is combined with the jumper and attached to the primary control igniter spade terminal.



## Intermittent Ignition - Without Burner Primary Control



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