

SYNETEK CONTROLS INC.

DS3-W: INSTALLATION INSTRUCTIONS



Synetek Controls Inc. model DS3-W replaces the following 24VAC Direct Spark Ignition controls in commercial laundry dryers. The Model DS3-W is designed for simple installation and long lasting operation by eliminating most nuisance lockouts and providing simple diagnostic indication of failure.

CISELL MANUFACTURING

GA-00765-0 INCLUDING (P), K590 Kit, TU-13409

INTERNATIONAL DRYER CO.

GA-00765-0, GA-712 INCLUDING (A)

RAM ELECTRONICS

CDS-3, RAM-3

DS1-W Kit Contents	Tools and Materials Required	DS1140CrC Rev. A Specifications			
1 - DS1140CrC Control	DS1-W Kit and Installation	Input Voltage:	24VAC, 60Hz	Ignition Trials:	3 Trials
1 - DS3-W Installation Instructions	Instructions		(+10% to -15%)	Ignition Trial Time:	10 sec.
4 - Mounting Screws	Slotted Screwdriver or 1/4" Nut	Current Draw:	.2A flame sense	Prepurge:	5 sec.
1 - Crimp-on High-Voltage Terminal	Driver		modes	Interpurge:	5 sec.
1 - HA3W Rev. A Harness	5/32" Drill Bit	Lockout:	.35A ignition mode		
	Drill Motor		Reset by power		
	Wire Strippers	Temp Range:	interruption of 5 sec.		
	Crimping Pliers		-40F to +175F		

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PRE-INSTALLATION INSTRUCTIONS

IMPORTANT

Installation should only be attempted by persons trained and qualified to service and repair commercial laundry dryer ignition controls and equipment.

- 1 Read carefully through the DS3-W Installation Instructions before attempting installation.
- 2 Be certain dryer is operating correctly except for failed ignition control. Repair malfunctioning items as required. Installation of the DS3-W will only correct malfunctions created by a failed ignition control.
- 3 Inspect the burner and burner compartment for soot, cracks and corrosion. Clean, repair or replace as necessary.
- 4 Inspect the electrode for cracks in the ceramic insulator, burns on the electrode rod and damage to the high voltage lead. Repair or replace as necessary.

NOTE: Spark gap must be 3/16" to 1/4"

INSTALLATION PROCEDURE

WARNING

Property Damage, Injury or Death can result from replacing an ignition control not listed in these instructions.

IMPORTANT

Turn OFF gas and electrical power before beginning the Installation Procedure.

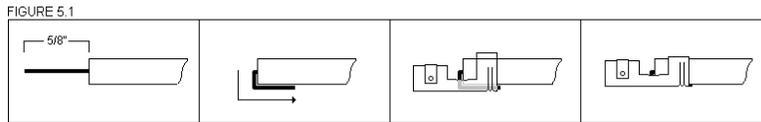
- 1 Locate the ignition control to be replaced and verify that the model number of the control is listed in these instructions.
- 2 Remove the mounting hardware from the control to be replaced and set the control aside, leaving all wire leads connected.
- 3 Mount the new Model DS1140CrC control module in place of the old control module using the Mounting Screws supplied in the DS3-W kit. If necessary, drill holes using Drill Motor and 5/32" Drill Bit.
- 4 Disconnect wiring from control being replaced and connect to the Model DS1140CrC per control specific wiring instructions in steps 4.1 – 4.2.
 - 4.1 Cissell TU-13409, International Dryer Co. GA-712(A)
 - A. Remove wire lead from Cissell/IDC control "TH, THS" (Thermostat) and connect to the black lead, 4, of the included harness HA3W. DS1140CrC pin 4 (24VAC Thermostat).
 - B. Remove wire lead from Cissell/IDC control "V1, MV" (Main Valve) and connect to the blue lead, 1, of the included harness HA3W. DS1140CrC pin 1 (Main Valve Hot).
 - C. Remove wire lead from Cissell/IDC control "V2, GND, MVR" (Ground/Main Valve Return) and connect to the white lead, 7, of the included harness HA3W. DS1140CrC pin 7 (24VAC Return/Main Valve Return).
 - D. Remove existing chassis ground wire lead, Cissell/IDC "V2, GND" (Ground/Main Valve Return), from the dryer ground point and connect the green lead of the included harness HA3W in the same position. DS1140CrC pin 2 (Burner Ground).
 - E. Remove wire lead from Cissell/IDC control "S1, SENSE" (Sensor) and set aside. Do not reconnect.

4.2 Cissell GA-00765-0, K590 Kit, International Dryer Co. GA-00765-0(P), RAM Electronics CDS-3, RAM-3

A. Remove keyed wiring connector from control being replaced and reconnect to DS1140CrC control. It is not necessary to use the harness include in the DS3-W kit.

- 5 Remove high voltage lead from the old control module and connect to the DS1140CrC high voltage terminal. If necessary, strip high voltage lead end and crimp on High-Voltage Lead Terminal supplied in DS3-W kit.

See *FIGURE 5.1* for step 5.



- 6 If you are satisfied that the previous steps are correct and complete, go to CHECK OUT SEQUENCE.

CHECK OUT SEQUENCE

NOTE: Leave gas supply turned OFF until prompted in step 3.

- 1 Turn ON power to the dryer (gas supply OFF) and start the dryer cycle. Observe the following:
 - 1.1 Green diagnostic LED is on.
 - 1.2 5-7 seconds after tumbler starts, the high voltage spark starts.
 - 1.3 Sparking continues for 10 seconds then pauses for 5 seconds and repeats this cycle an additional 2 times.
 - 1.4 Spark stops and DS1140CrC goes into lockout mode. Green diagnostic LED will flash 2 times.
- 2 Reset DS1140CrC lockout mode by opening dryer door until LED stops flashing. Close dryer door and observe sequence in step 1 again. If you are satisfied that the previous steps are correct and complete, continue to step 3.
- 3 Turn ON the gas supply to the dryer.

IMPORTANT

If you smell gas, immediately turn the gas supply OFF and repair to gas leak. DO NOT continue the CHECK OUT PROCEDURE until the gas leak has been repaired.

- 4 Start the dryer and observe the following:
 - 4.1 Green diagnostic LED is on.
 - 4.2 DS1140CrC starts the ignition spark in 5-7 seconds and flame is established within a few seconds.
 - 4.3 Spark stops after flame is established.
 - 4.4 Main burner flame shuts off after thermostat is satisfied and reignites when temperature drops.

TROUBLESHOOTING

Problem	Solution
<i>No ignition spark. LED is OFF.</i>	No power to the control. Be sure the accumulator has time on it, the door switch is closed and the thermostat is calling for heat. Check thermostat, airflow switch and high limit switch. Repair or replace a necessary.
<i>No main burner flame LED is flashing 2 times.</i>	Control is in safety lockout. Reset by opening door till dryer stops. Restart dryer.
<i>Main burner lights for 8 seconds or less then goes out. LED is flashing 2 times after 3 spark cycles.</i>	Controls is not sensing flame has been established. Check flame probe alignment, probe should be in the flame.
<i>Ignition sparks but does not light the burner. LED is flashing 2 time after 3 spark cycles.</i>	Check that the spark is arching across the spark gap. Check for cracks in the ceramic insulator of the electrode and for shorts from the high voltage lead the the chassis of the dryer. Repair or replace as necessary.
<i>High voltage lead or flame sensor lead is burnt at the connector.</i>	Check the lint screen, ducting, and fan. Clean, repair or replace as necessary. Check the airflow switch for correct operation. Repair or replace as necessary.

WARRANTY

Synetek Controls Inc. guarantees to the first retail purchaser that, should the control be defective within 24 months of manufacturing, due to manufacturing defects, Synetek Controls Inc. will repair or replace the defective control. Synetek Controls Inc. is not responsible for equipment down time, labor costs or any other expenses associated with the failure of our controls.

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