INSTALLATION
MANUAL
FOR

ACL 3200

FLARE STACK / INCINERATOR
IGNITION SYSTEMS

WARNING
This manual must be read in its entirety before installation of these systems. Installation must be performed by a qualified technician and must adhere to the standards set by the local regulatory authorities. ACL is not responsible for the misuse or incorrect application of these products.
ACL 3200 FLARE STACK/INCINERATOR IGNITION SYSTEM
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Description

The ACL 3200 controller is a flare stack/incinerator control system that provides control for both high energy sparking ignitors, and high voltage sparking ignition systems.

These systems can incorporate a continuous pilot as well as a continuous or intermittent ignition. All systems are fully retractable.

Application

The ACL 3200 controller is configurable for both our Pilot Ignition System (PI) and our high Energy Sparking System (HE).

The ACL 3200 Pilot Ignition (PI) System is a continuous pilot which uses a high voltage sparker to light the pilot. The pilot is then monitored by a thermocouple. This thermocouple is used for alarming purposes or to turn off the sparking when the pilot is lit.

The ACL 3200 High Energy (HE) system is a continuous sparking system that uses a high energy excitor. There is no pilot required as this unit will continually spark at a user defined interval set by an onboard timer.
ACL 3200 FLARE STACK/INCINERATOR IGNITION SYSTEM

Controller Features

- CSA approved
- Provides control logic for both PI and HE ignition systems
- 10-30 volt DC operation
- Low power consumption for solar operation
- Weatherproof enclosure
- No programming necessary
- Onboard adjustable timer for on/off settings
- Onboard scaled thermocouple adjustments
- Fail safe alarm output for both HE and PI systems

PI & HE System Features

<table>
<thead>
<tr>
<th>Pilot Ignitor (PI)</th>
<th>High Energy Spark (HE)</th>
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<tr>
<td>Continuous gas pilot</td>
<td>Continuous spark ignition</td>
</tr>
<tr>
<td>Air/Fuel mixer</td>
<td>Alarm provided by electronic sensing of spark integrity</td>
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<tr>
<td>Automatic and relight</td>
<td>Ignitor sparks in extremely wet conditions</td>
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<tr>
<td>Alarm provided by thermocouple sensing</td>
<td>No gas required</td>
</tr>
<tr>
<td>Fully retractable</td>
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<tr>
<td>Stainless Steel construction</td>
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</tr>
<tr>
<td>1400lb winch and 5/32 SST aircraft hoisting cable</td>
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THEORY OF OPERATION

The controller is designed to work with both the High Energy sparker HE or the Pilot Ignition PI setup. Depending upon the application, the HE uses a high energy pulse that delivers a spark capable of lighting under water and is used primarily when there is no fuel gas available for a pilot and is required to work in severe conditions. The PI system uses a pilot and high voltage spark to light the pilot and then monitor the pilot with a thermocouple. When the pilot reached the set temperature the system stops sparking. If the pilot blows out, the thermocouple cools below the set point. The alarm trips and the pilot starts sparking until pilot is lit and back up to temperature. Alarm then clears.

POWER CONNECTIONS

12-24 VDC. Wire according to drawings on pages 4 & 5

IGNITOR OUTPUT

Supplies power to the ignition module mounted on the trolley system. The ignition module can be either a high energy excitor or a high voltage ignition module. This output supplies 12 volts DC to the excitor or ignition module.

THERMOCOUPLE INPUT

This input is used with the PI set up. It is used for an alarm to indicate whether there is any flame present or not.

HE INPUT

This input is used with the high energy excitor set up. It is there to indicate whether the ignitor is functioning properly or not.

ALARM OUTPUT

This output provides status on whether the controller is working properly or not. This output uses a set of dry contacts. These contacts change state when there is a power outage, flame out or high energy excitor failure.
ACL 3200 FLARE STACK/INCINERATOR IGNITION SYSTEM

ACL 3200 PI Wiring Diagram

ACL PI Ignition Box

Mounted on Trolley

Ignition Module

+ -

To ignition high voltage lead

Type K Thermocouple

+ -

PLU or RTU for status

ACL 3200 PI

1 2

3 4

5 6

7

8 9 10

11 12 13

10-30 VDC Supply

Temp Control
Adjust temp setting for alarm PI only

Timer Off
Adjusts off time for ignition interval

Timer On
Adjusts on time for ignition interval

HE Control
This setting to be below the on interval to sense if spark exists. Provides alarm status if spark is not present.
ACL HE Ignition Box

ACL 3200 HE Wiring Diagram

ACL HE Ignition Box

Mounted on Trolley

To ignition high voltage lead

ACL 3200 HE

For PI only
TEMP CONTROL
TIMER OFF
TIMER ON

Off/On Selector Switch

For HE alarm sensitivity only

Type K Thermocouple

HE IN

For HE alarm sensitivity only

To Ignitor

Alarm Status (dry contacts)

PLU or RTU for status

1
2
3
4
5
6
7
8
9
10
11
12
13

10-30 VDC Supply

Note: Jumper removed from factory to enable alarm function

Temp Control
Adjust temp setting for alarm PI only

Timer Off
Adjusts off time for ignition interval

Timer On
Adjusts on time for ignition interval

HE Control
This setting to be below the on interval to sense if spark exists. Provides alarm status if spark is not present.
Limited Warranty

Seller warrants that the product hereby purchased is, upon delivery, free from defects in material and workmanship and that any product which is found to be defective in such workmanship or material will be repaired or replaced by Seller for a period of one year from purchase date. Warranty of such items do not include shipping, installation or set-up.

Liability Statement

ACL Manufacturing Inc. Shall not be liable for any special, indirect, consequential or other damages of a like general nature, including, without limitation, loss of profits or production, or loss of expenses of any nature incurred by the buyer or any third party.