

LT 300 Ignition Control System

Low Tension Gas/Electric Ignition with Flame Surveillance

The Igniter Control System has been designed to offer Maximum Reliability and Flexibility. It uses only one Low Tension cable to transmit the spark and also receive the 'Flame On' signal

Features

- 100% Discrimination between Main and Pilot Flames
- Low Voltage from Ignition Control Unit to Igniter
- Analogue Flame Signal Readout
- Available for use in Zone 1 Hazardous Areas
BASEEFA Certificate No: EX86B1263U
Code EExd IIB T6
- Short Circuit Fault Detection and Indication System

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The Igniter Control System was designed to be used with a single electrode Gas-Air mix Igniter Rod. The Igniter Coil is mounted at the rear end of the Igniter Rod, and connections are via a 3-way plug and socket. The Igniter Coil is fed from a pulse generator, which is switched by a Thyristor. This pulsed 140VDC supply is applied to the Low Tension winding of the Coil, which in turn generates the high-tension spark.

Operation

Signals required from Control System

1. 12–24VDC signal for 2 seconds (Initiate Spark)
2. Command to open Gas Valve (Timed Process)

During the 'Spark On' period the ionisation detector rejects any signals from the spark generated, this is taken care of by the capacitor network, thus a 'Flame present'



Igniter Control Unit

detection signal can only take place once the spark has been removed and a flame on signal from the electrode has been detected.

The flame on signal is achieved by 'Ionisation'. When a gas flame is established, this permits a positive flow of ions between the electrode and the Igniter head. This gives a variable forward resistance. The Igniter Control System has a set resistance threshold and when this threshold is reached, the relay in the control system is energised indicated by LED Flame On. This change is displayed on a 0–10V analogue signal strength meter, which is incorporated into the control system to indicate when the Gas-Air mix is correct.

Gas-Air Pre Mix Igniter

This Igniter, of the Gas-Air Mix design, produces a very hard stable gas flame and will light the main fuel under all conditions of combustion airflow.

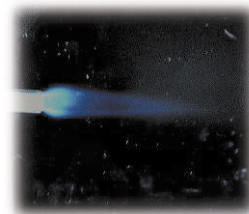
It is possible to totally discriminate between the Igniter gas flame, and main flame by incorporating our Gas Flame Ionisation detection system.

One stainless steel flexible hose is connected to the Igniter for the supply of the Gas-Air mixture.

The system is connected to a local Ignition plate, which provides all the necessary services.

Hazardous Area Applications

The above system can be supplied for use in hazardous area up to Zone 1, EExd IIB T6.



Igniter Flame



Igniter

Specifications

Flame Off Response Time 1 Second Fixed

Output 1

Flame On. 2 Relay Changeover Contacts
Rated 230VAC 1 Amp.

Output 2

140VDC Pulse to Igniter Coil

Operating Temperature 0–85°C

Protection Category IP65

Input 1
Spark Initiation 12–24VDC

Input 2
Spark Initiation Normally Open Contact

Power Requirements
115VAC/230VAC 50/60Hz
20VA +10%–20%

Weight
1Kg (Standard System)
40Kg (Zone 1 System)