

# IGNITION COIL

## CAPACITIVE DISCHARGE IGNITION

### Diameter 20mm or greater



An on-plug coil for use with Capacitive Discharge Ignition (CDI). Design and manufacture is in-house, so we can make the coil to suit your specific application. The information given here is for a typical coil. Many of the parameters can be tailored to a particular installation.

Please contact our technical consultancy service to discuss your requirements.

#### Electrical

Typical measurements at 25°C (except where stated otherwise)

- Primary DC resistance 800 to 1000mohm
- Primary inductance 252 to 332μH

The following measurements are made with a power unit consisting of a 0.33μF capacitor, charged to 460V (35mJ) supplying the coil with a peak primary current of 35A. The coil is mounted in an aluminium block to simulate a cylinder head.

- Secondary high voltage (fired off-load\*) 26kV typ
- Secondary energy discharged into 2nF load 20mJ typ
- Burn time of open spark > 50μs (burn threshold 100V, at atmospheric pressure)

#### Cable and Connection Definition

- 22AWG un-screened cable
- Any cable length is available on request
- Various automotive and military standard connectors are available

#### Connection

Red wire	Pin A	Pin 1	Primary Switched
Green wire	Pin B	Pin 2	Primary Non
White wire	Pin C	Pin 3	Switched
			Secondary return

Connect the primary so that "Primary Switched" is negative with respect to "Primary Non Switched" during discharge. The spark plug centre electrode discharge will be negative with respect to ground. The "Secondary Return" allows an ECU to measure the secondary current to confirm proper operation.

\* Firing the coil off load should be avoided as it can cause cumulative damage by electrical breakdown

#### Application

- Capacitive discharge ignition systems

#### Mechanical

- Polyester body
- Minimum diameter 20mm
- Minimum length from top of coil to top of spark plug 80mm  
The body can be made longer and/or wider to suit a specific installation
- HT connection plunger travel 3mm  
A fixed HT contact can be provided
- Axial clamping force 35 to 45N
- Weight less than 130g (including 1000mm cable)
- Elastomer boot for strain relief to the coil body
- Fluoro silicone boot or O rings to seal spark plug

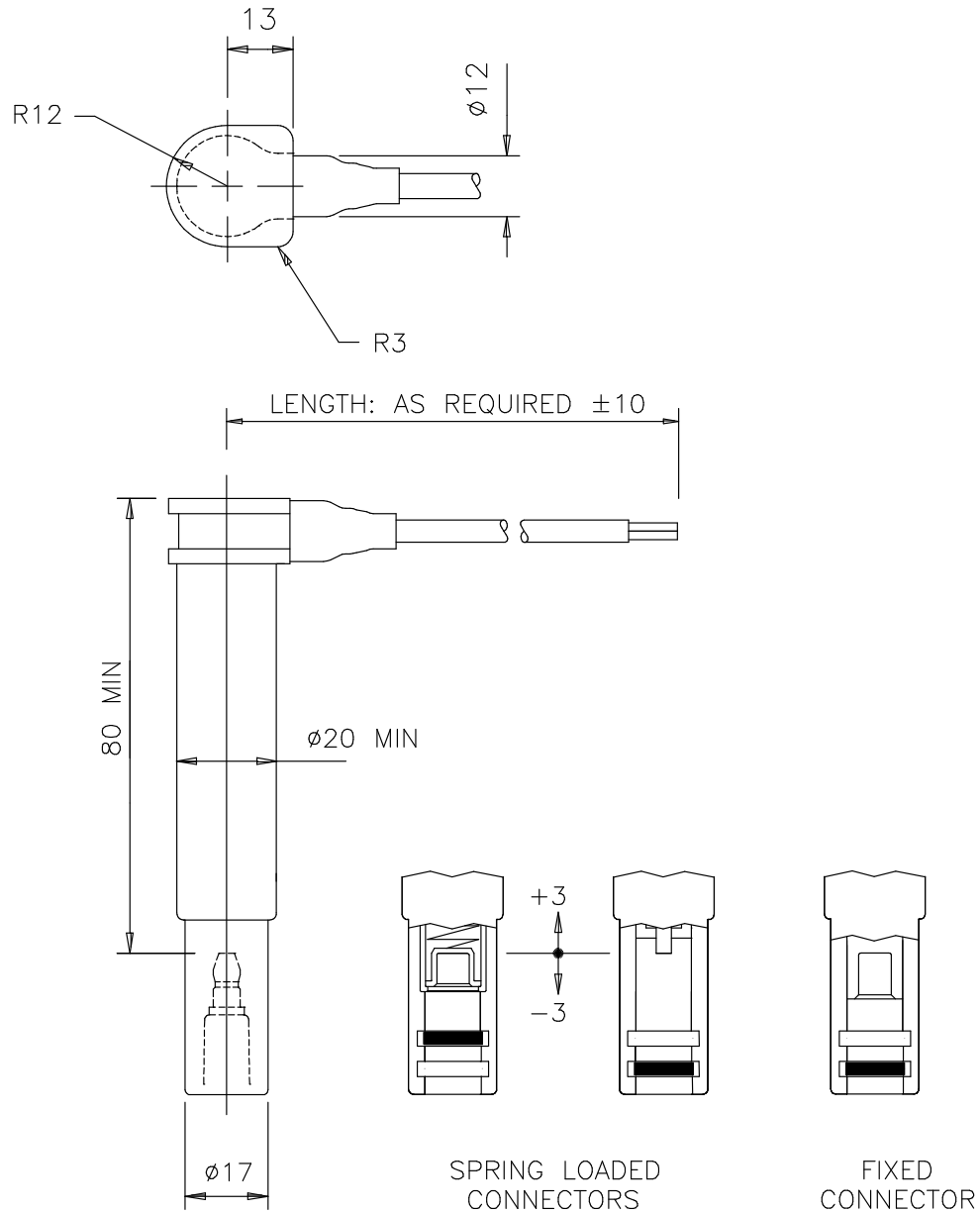
#### Environmental

- Resistant to standard motorsport fluids
- Operating temperature 0 to +150°C
- Maximum temperature +180°C for 10mins (coil not firing)
- Viton jacketed cable
- Vibration 50 to 2500Hz @ 40g 8hrs per axis

# IGNITION COIL

## CAPACITIVE DISCHARGE IGNITION

### Diameter 20mm or greater



This drawing is typical and generic.  
 As each coil design is application specific, no order codes are shown.  
 Please contact our technical consultancy service to discuss your requirements.

27/9/04