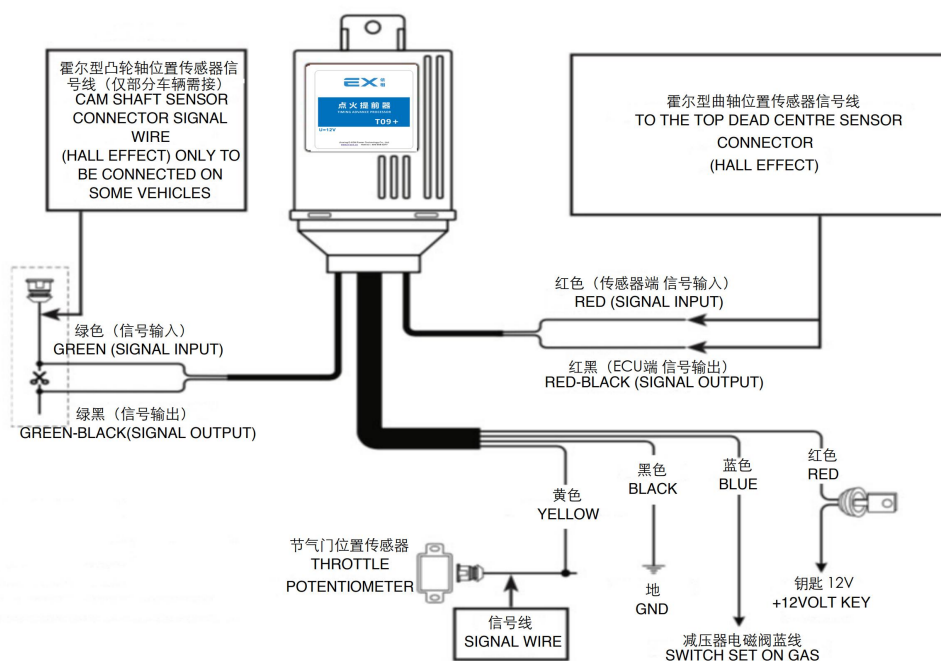# Instruction Manual

T09+ Timing advance processors

FEATURES

Timing advance processors are electronic control units that change the original spark advance of the engine when it runs on CNG or LPG, thus optimising the engine's operation with these fuels. Timing advance processors let the degrees of spark advance supplied to be selected and to exclude spark advance when idling. They also reset the original degrees of spark advance when running on petrol. Timing advance processors come with an emergency connector that cuts it out should any problem due to the timing advance processor arise, thus allowing the vehicle to operate regularly. T09+ is suitable for hall effect CKP.
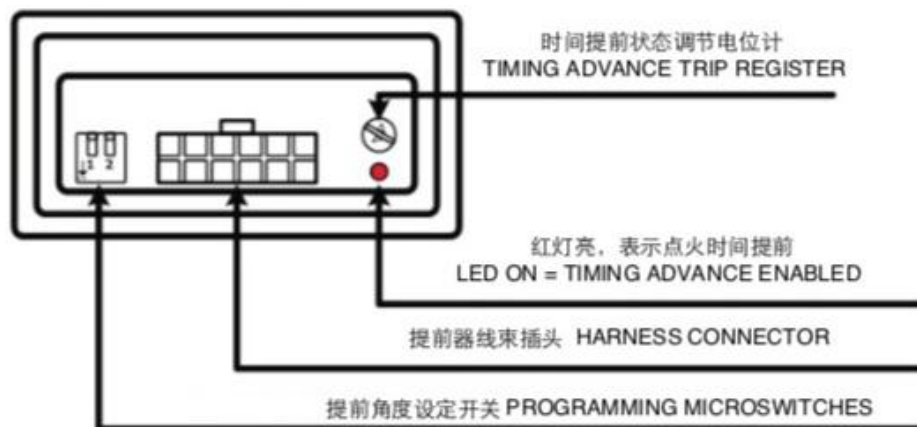
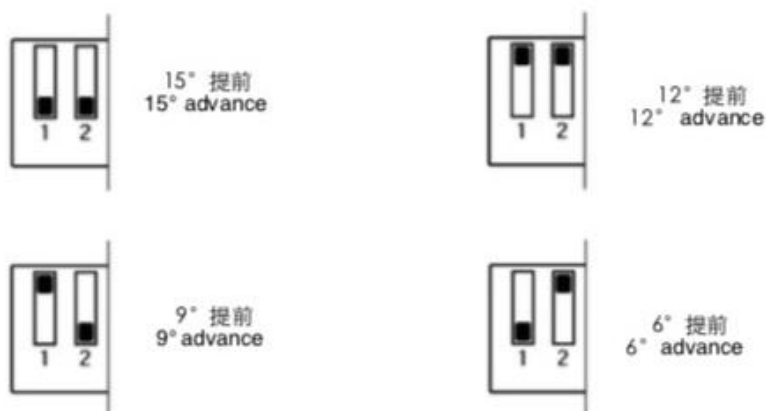## CONNECTION DIAGRAM

T09+ 单凸轮轴位置传感器系统接线图
INSTALLATION OF HALL EFFECT TDC SENSOR AND 1 HALL PHASE SENSORS

TIMING ADVANCE ADJUSTMENT

时间提前状态调节电位计
TIMING ADVANCE TRIP REGISTER

红灯亮，表示点火时间提前
LED ON = TIMING ADVANCE ENABLED

提前器线束插头 HARNESS CONNECTOR

提前角度设定开关 PROGRAMMING MICROSWITCHES

提前角度设定说明
TIMING ADVANCE DEGREES PROGRAMMING

15° 提前
15° advance

12° 提前
12° advance

9° 提前
9° advance

6° 提前
6° advance

How and when to disable the timing advance during deceleration and when idling

On some vehicles it is convenient to disable the timing advance during deceleration and when idling to avoid jumps or irregular function.On the other hand, the timing advance is required immediately during acceleration to improve performance, consumption and to minimise the risk of backfiring. With the timing advance processor, the timing advance can be enabled or disabled automatically connecting the yellow wire on the timing advance processor to the throttle

potentiometer.

NOTE: do not carry out the timing advance enabling calibration procedure if the yellow wire is not connected.

The throttle potentiometer signal is not always the same; therefore, the trip point needs to be calibrated.Adjustment is carried out during GAS function by acting on the timing advance trip register as follows:

1) Ensure the register is turned completely clockwise.
2) While the vehicle is idling, turn the register anticlockwise until the RED LED switches off (timing advance disabled).
3) With this adjustment, during acceleration, the RED LED on the timing advance processor lights up and then switches off when the accelerator is released.
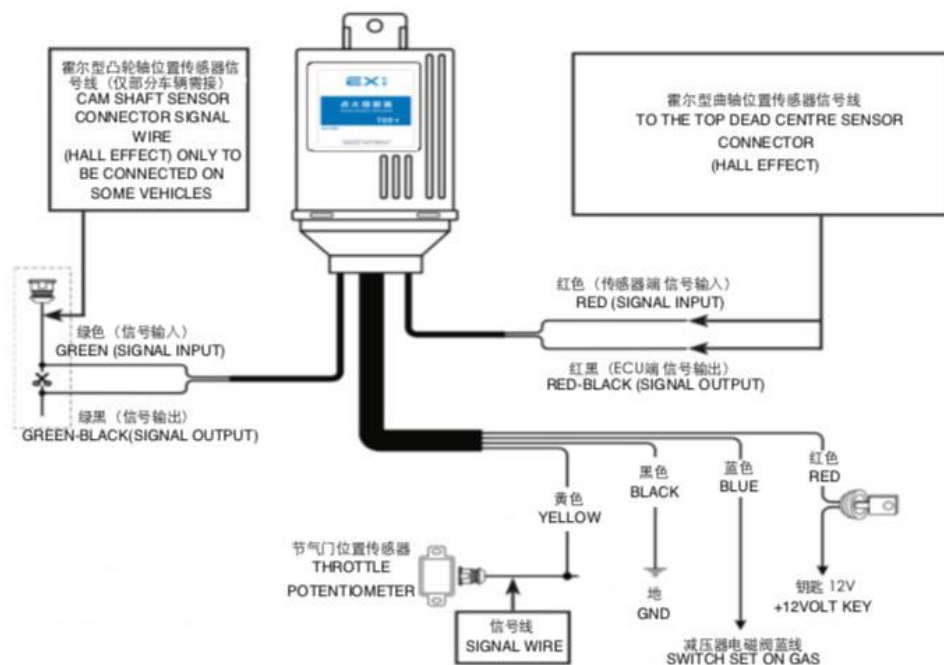
INSTALLATION

Install vertically away from possible water leaks.Install away from excessive heat sources (e.g. exhaust manifolds). Install away from the ignition coils and route the wiring harness away from high voltage wires.Make good electrical connections without using cable clamps. Do not open the timing advance processor casing for any reason whatsoever, especially when the engine is running or the panel is switched on.
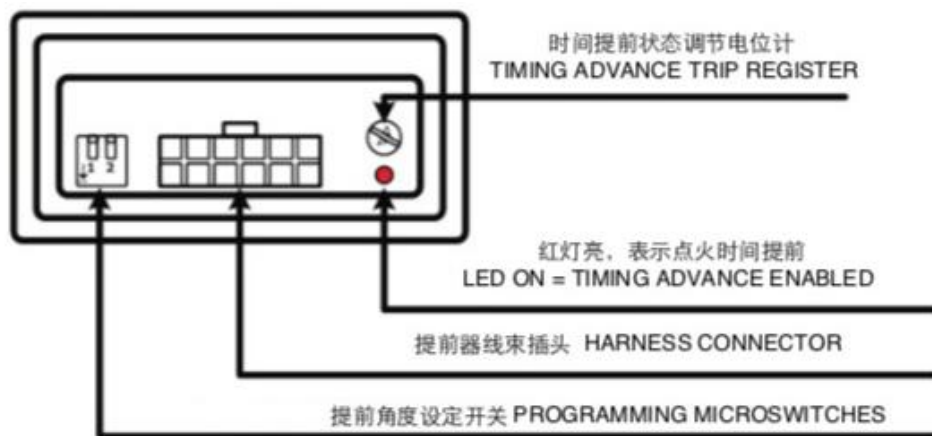
产品特性

点火时间提前处理器是当发动机在 CNG 或 LPG 状态运行时，使发动机原来的点火时间提前，优化燃料在发动机中燃烧的热效率的一种电控装置。点火时间提前处理器可以选择提供的时间提前的角度，并在怠速时不进行点火时间提前。当使用汽油时，会恢复到原车点火时间提前的角度。点火时间提前处理器提供了一个应急连接器，当点火提前器有问题时，请将提前控制器去掉，连接上应急连接器，使车辆正常运行。T09+适用于霍尔效应的曲轴位置传感器类型车辆。
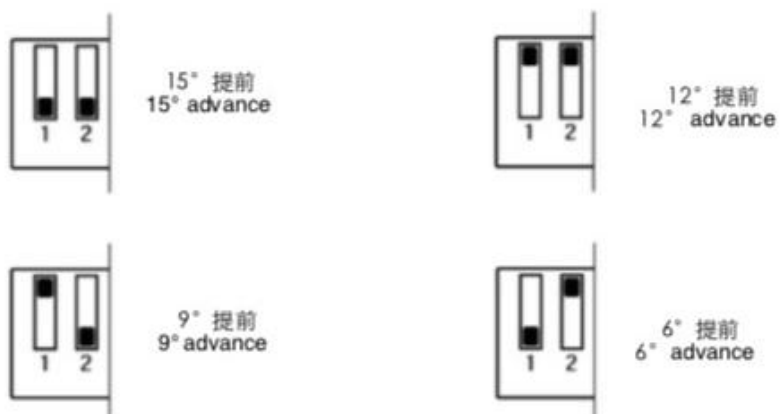
接线图

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怠速状态的点火时间设定

在某些车辆上，为了避免发动机怠速抖动或者转速不稳，所以要禁用点火提前。另一方面，为了改善发动机动力，防止回火等，又必须要在加速过程中及时进入点火提前。所以可以使用将黄色线连接在节气门位置传感器信号线上来设定提前器的工作状态。如果黄色线不连接点火提前器将一直工作。

节气门位置的信号并不总是一样的，因此，需要校准时间提前点。在车辆燃气工作时，通过对电位器进行调整来校准，如下所示：

1）确保电位计顺时针转动；

2）车辆怠速运转时，逆时针转动电位计，直到红色 LED 熄灭（点火提前禁用）；

3）在加速过程中，让点火提前器上的红色 LED 亮起来，然后在停止加速时关闭。

安装使用

垂直安装，远离易漏水位置，远离发动机排气歧管等热源。安装远离点火线圈并将线束布置在远离高压导线的地方。不要打开处理器外壳，以免造成损坏。