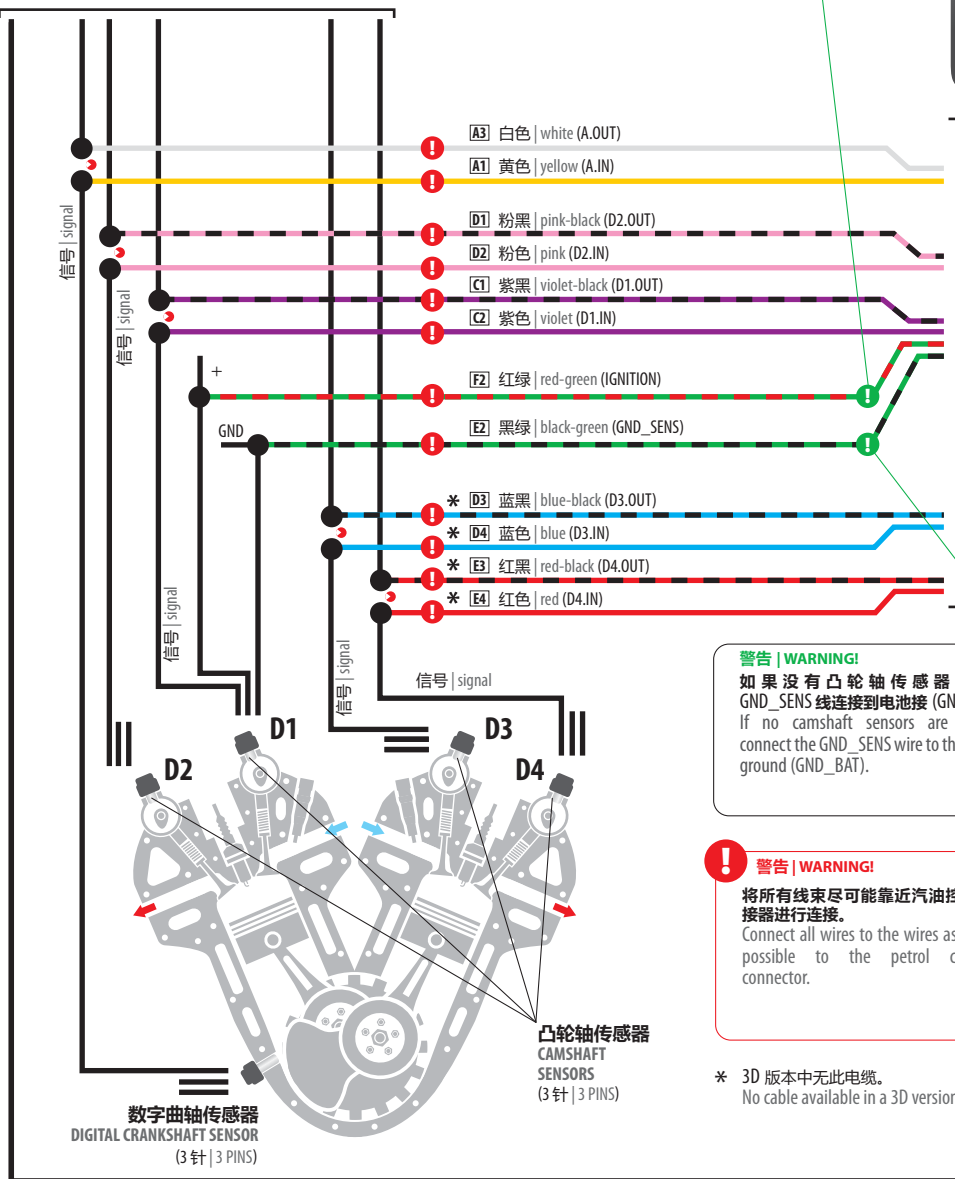


	A	B	C	D	E	F	G	H
1	A.IN	RX	D1.OUT	D2.OUT	-	-	-	-
2	-	TX	D1.IN	D2.IN	GND_SENS	IGNITION	GND_BAT	-
3	A.OUT	GND_INT	-	D3.OUT	D4.OUT	-	TAPO_ACTIVE	MAP
4	-	+12V_INT	-	D3.IN	D4.IN	-	-	+12V_BAT

**警告 | WARNING!**

如果缺少传感器或传感器未通电, IGNITION 信号 (点火后) 必须在打开钥匙后出现, 并在关闭钥匙后立即消失。在发动机启动时不能消失。
In case lack of sensor or lack of power to the sensor, the IGNITION signal (after ignition) must appear after turn on the key and disappear immediately after turn off. Can not disappear while starts the engine.



连接图

TECHNICAL DIAGRAM



TAPO2

5D

点火提前角控制器
IGNITION TIMING VARIATORDIGITAL 5D 版本
5D DIGITAL VERSION

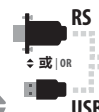
支持数字曲轴传感器和
四个数字传感器
SUPPORT FOR DIGITAL CRANKSHAFT SENSOR
AND FOUR DIGITAL SENSORS

警告 | WARNING!

将 TAPO_ACTIVE 线 (蓝红) 连接到燃气控制器的 12VOUT2 (黄紫)。如果燃气控制器中没有 12VOUT 输出, 则将 TAPO_ACTIVE 线 (蓝红) 连接到燃气电磁阀线 (红蓝)。
TAPO_ACTIVE cable (blue-red) connect to 12VOUT2 (yellow-violet) of the gas controller. If there is no 12VOUT output in the gas controller, connect the TAPO_ACTIVE wire (blue-red) to the gas valve wire (red-blue).

对于混合动力汽车, TAPO_ACTIVE 线 (蓝红) 必须始终连接到燃气控制器的 12VOUT2 (黄紫)。
For hybrid cars the TAPO_ACTIVE cable (blue-red) ALWAYS connect to 12VOUT2 (yellow-violet) of the gas controller.

- B3 1. 黑色 | black (GND_INT)
- B2 2. 绿色 | green (TX)
- B7 3. 黄色 | yellow (RX)
- B4 4. 红色 | red (+12V_INT)

**警告 | WARNING!**

如果没有凸轮轴传感器, 请将 GND_SENS 线连接到电池接 (GND_BAT).
If no camshaft sensors are present, connect the GND_SENS wire to the battery ground (GND_BAT).

警告 | WARNING!

将所有线束尽可能靠近汽油控制器连接器进行连接。
Connect all wires to the wires as close as possible to the petrol controller connector.

* 3D 版本中无此电缆。
No cable available in a 3D version.

TPS



[TPS - 可选 | optional]

 = 切断点
cutting point燃气控制器
GAS ECU黄紫 | yellow-violet
12V OUT2燃气电磁阀
GAS VALVE

红绿 | red-green

IGNITION
+12V 点火后
+12V after ignition

- 5. 粉蓝 | pink-blue (Igas)
- 4. 黑色 | black (GND)
- 3. 红色 | red (+5V)
- 2. 蓝色 | blue (P)
- 1. 灰色 | grey (V)

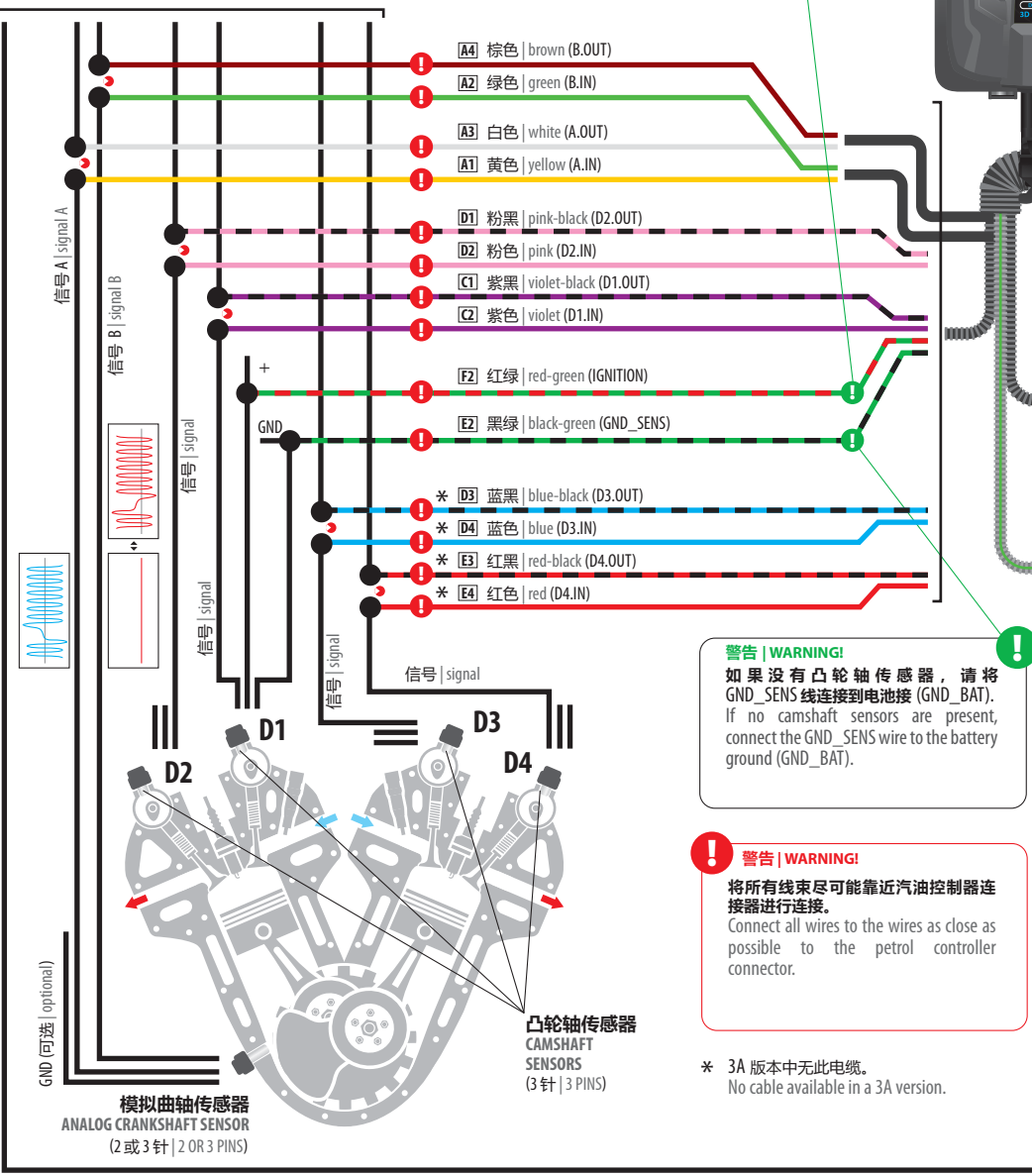
CCT6 ANALOG

	A	B	C	D	E	F	G	H
1	A.IN	RX	D1.OUT	D2.OUT	-	-	-	-
2	B.IN	TX	D1.IN	D2.IN	GND_SENS	IGNITION	GND_BAT	-
3	A.OUT	GND_INT	GND_SH	D3.OUT	D4.OUT	-	TAPO_ACTIVE	MAP
4	B.OUT	+12V_INT	GND_SH	D3.IN	D4.IN	-	-	+12V_BAT

**警告 | WARNING!**

如果缺少传感器或传感器未通电, IGNITION 信号(点火后)必须在打开钥匙后出现,并在关闭钥匙后立即消失。在发动机启动时不能消失。

In case lack of sensor or lack of power to the sensor, the IGNITION signal (after ignition) must appear after turn on the key and disappear immediately after turn off. Can not disappear while starts the engine.



连接图

TECHNICAL DIAGRAM



TAPO2

5A

点火提前角控制器

IGNITION TIMING VARIATOR

ANALOG 5A 版本
5A ANALOG VERSION

支持模拟曲轴传感器和
四个数字传感器
SUPPORT FOR ANALOG CRANKSHAFT SENSOR
AND FOUR DIGITAL SENSORS

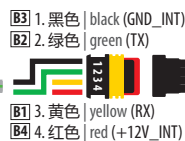
警告 | WARNING!

将 TAPO_ACTIVE 线 (蓝红) 连接到燃气控制器的 12VOUT2 (黄紫)。如果燃气控制器中没有 12VOUT 输出, 则将 TAPO_ACTIVE 线 (蓝红) 连接到燃气电磁阀线 (红蓝)。

TAPO_ACTIVE cable (blue-red) connect to 12VOUT2 (yellow-violet) of the gas controller. If there is no 12VOUT output in the gas controller, connect the TAPO_ACTIVE wire (blue-red) to the gas valve wire (red-blue).

对于混合动力汽车, TAPO_ACTIVE 线 (蓝红) 必须始终连接到燃气控制器的 12VOUT2 (黄紫)。

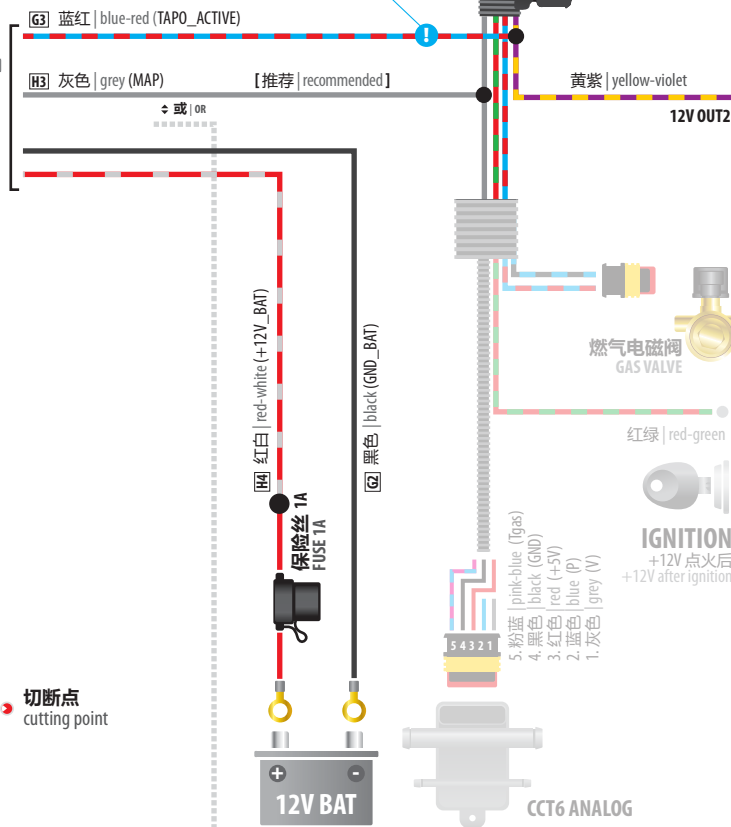
For hybrid cars the TAPO_ACTIVE cable (blue-red) ALWAYS connect to 12VOUT2 (yellow-violet) of the gas controller.



TPS



[TPS - 可选 | optional]

燃气控制器
GAS ECU = 切断点
cutting point**警告 | WARNING!**

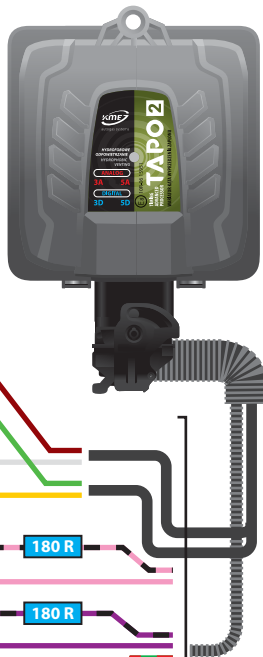
将所有线束尽可能靠近汽油控制器连接器进行连接。

Connect all wires to the wires as close as possible to the petrol controller connector.

* 3A 版本中无此电缆。
No cable available in a 3A version.

! TOYOTA, LEXUS – TAPO ANALOG
 请按图添加 180R 电阻。
 在程序中设置霍尔传感器电压: **4 V (Toyota, Lexus).**
 Add 180R resistors according to the diagram.
 In the program, set **Hall sensor voltage: 4 V (Toyota, Lexus).**

In the program, set **Hall sensor voltage: 4 V (Toyota, Lexus).**

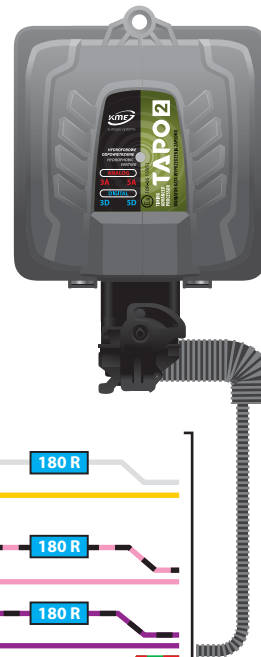


凸轮轴传感器
CAMSHAFT
SENSORS
(3 针 | 3 PINS)

! TOYOTA, LEXUS – TAPO DIGITAL

请按图添加 180R 电阻。
 在程序中设置霍尔传感器电压: **4 V (Toyota, Lexus).**
 Add 180R resistors according to the diagram.
 In the program, set **Hall sensor voltage: 4 V (Toyota, Lexus).**

In the program, set **Hall sensor voltage: 4 V (Toyota, Lexus).**



凸轮轴传感器
CAMSHAFT
SENSORS
(3 针 | 3 PINS)

TAPO2

点火提前角处理器
IGNITION TIMING VARIATOR

ANALOG 3A 5A
DIGITAL 3D 5D

KME TAPO2 点火提前器有 4 种版本可选

- **DIGITAL 5D** - 支持数字曲轴传感器和最多 4 个数字凸轮轴传感器
- **ANALOG 5A** - 支持感应式曲轴传感器和最多 4 个数字凸轮轴传感器
- **DIGITAL 3D** - 支持数字曲轴传感器和最多 2 个数字凸轮轴传感器
- **ANALOG 3A** - 支持感应式曲轴传感器和最多 2 个数字凸轮轴传感器

KME TAPO2 点火提前器是一种微处理器设备，专为使用 LPG 或 CNG 运行的最现代和较旧的汽油发动机而设计。
该提前器改变点火提前角，以提高燃油-空气混合气的燃烧效率并改善发动机性能。
由于 LPG 和 CNG 气体的辛烷值较高，且空气-气体混合物的燃烧时间较长，因此需要使用 KME TAPO2 点火提前器来调整点火系统。

功能

- 适用于：LPG 和 CNG
- 支持曲轴传感器和 2 个凸轮轴，并考虑了配气相位的变化
- 支持可变气门正时
- 自动扫描来自曲轴传感器和凸轮轴传感器的波形
- 支持曲轴传感器和最多 4 个凸轮轴传感器，并考虑到可变气门正时的变化
- 内置波形记录仪
- 针对最新发动机的智能改变点火提前角的创新方法
- 支持所有代系汽油发动机的汽车
- 专为具有直接喷射 (DI) 和双喷射 (DI+MPI) 的现代发动机开发的设备
- 内置机械继电器，确保在发生故障时能正常工作
- 所有传感器均具有电流隔离，确保设备稳定运行
- 3D 图谱或 2D 图谱

优势

- 降低燃料消耗：LPG 高达 10%，CNG 高达 15%
- 发动机功率增加：LPG 高达 6%，CNG 高达 15%
- 通过降低进气歧管回火风险，提高老一代燃气装置的运行

KME TAPO2 variator is available in 4 versions:

- **DIGITAL 5D** - supports a digital crankshaft sensor and up to 4 digital camshaft sensors
- **ANALOG 5A** - supports an inductive crankshaft sensor and up to 4 digital camshaft sensors
- **DIGITAL 3D** - supports a digital crankshaft sensor and up to 2 digital camshaft sensors
- **ANALOG 3A** - supports an inductive crankshaft sensor and up to 2 digital camshaft sensors

The KME TAPO2 variator is a microprocessor device designed for both the most modern and older gasoline engines operating on LPG or CNG. The variator **changes the ignition timing to increase the efficiency of combustion of the fuel-air mixture and improve engine efficiency.**

Due to the higher octane number of LPG and CNG gas and the longer combustion time of the air-gas mixture, there is a need to adapt the ignition system by using the KME TAPO2 variator.

FUNCTIONS

- Designed for: LPG and CNG
- Support for the crankshaft sensor and upto 4 camshafts, including phase change timing
- Support for variable valve timing
- Automatic scanning of the mileage from the shaft sensor and shafts timing
- Possibility to connect MAP (or TPS) signals to increase calibration possibilities
- Built-in waveform recorder
- Innovative method of intelligently changing the lead angle ignition for the latest engines
- Service for cars of all engine generations
- Device developed for modern direct-drive engines (DI) and combined (DI+MPI) fuel injection
- Built-in mechanical relays to ensure correct operation work in the event of a failure
- It has galvanic isolation for all sensors, which ensures stable operation of the device
- 3D map or 2D map

BENEFITS

- Reduction of fuel consumption: LPG up to 10%, CNG up to 15%
- Increase in engine power: LPG up to 6%, CNG up to 15%
- Increased operational safety of older gas installations generation by reducing the risk of explosions return lines in the collector

Firmware Tapo2_xD_xA_10xx_STANDARD - 安全性适用于大多数汽车。| For most cars.

Firmware Tapo2_xD_xA_20xx_EXTENDED - 窄曲轴脉冲。| The narrow crankshaft pulses.

Firmware Tapo2_3D_3A_30xx - 适用于 5.7HEMI 发动机。| For 5.7HEMI engines.

发动机 | Engine 5,7HEMI:

2003–2024 Ram Pickup
2004–2009, 2011–Present Dodge Durango
2005–2008 Dodge Magnum R/T
2005–2023 Chrysler 300C,
2010, 2012–2023 Chrysler 300S V8

2005–2022 Jeep Grand Cherokee
2006–2023 Dodge Charger R/T
2006–2010 Jeep Commander
2007–2009 Chrysler Aspen
2009–2023 Dodge Challenger R/T
2022–2023 Jeep Wagoneer



NISSAN, INFINITY 发动机/ENGINES:
VQ35DE (3498 cm³), C14DE (1386 cm³)

对于 VQ35DE (3498 cm³) 和 C14DE (1386 cm³) 发动机，需按图添加额外的 2kΩ 电阻。

For the VQ35DE (3498 cm³) and C14DE (1386 cm³) engines, additional 2kΩ resistors are required according to the diagram.

