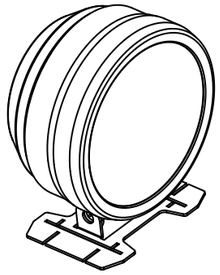


VAITRIX motor

SAFE ECO SPORT PLUG & PLAY

PRECISION GEN2

⚠ Route wires away from the ignition and radio signal frequency interference since this could cause the gauges to malfunction.

⚠ Wireless devices and mobile phones that emits electric waves should not close to or touch the product and harness. It may influence the performance of the gauges.

⚠ Make sure the waterproof processing is done when diverging or splitting wires in the engine compartment.

⚠ Use a dried soft cloth for cleanliness. Do not use cleaners except for neutral detergents.

⚠ Do not to install the product in a way that interferes with safety equipment, for instance seat belt and air bag systems or vehicle operation devices, for example engine controls, steering wheel and braking systems. Interference with the normal operation of the vehicle can result in unpredictable accidents or fires.

⚠ When the negative battery terminal is removed, vehicle's interior equipment, for instance clocks and audio components with internal memory, may lose their memory data. Hence, follow up the operation manual of interior equipment to reset data after the completion of the installation of the product.

⚠ Under no circumstances will VAITRIX be liable to the customers for any damages or losses of genuine parts for customers' vehicle while installing.

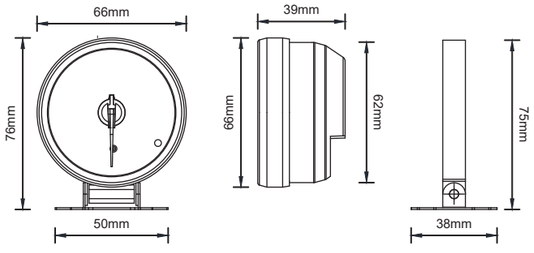
⚠ Under no circumstances will VAITRIX be liable to customers for any damages arising out of the use or the inability to use the product, even if VAITRIX has been advised of the possibility of such damages.

⚠ The product adopts high luminance LEDs. When several gauges are lined up, there might be subtle color difference in the LED production tolerance, but it is not malfunction whereas it is normal.

Features

1.The gauge is operated by far- infrared remote controller.
2.Hairline finish face with high definition scale and high brightness pointer creates clear and precise reading.
3.High transparent glass with low reflection creates 99% of visibility and reduces the reflection to 4%.
4.The advanced illumination LEDs backlight offers 6 levels of lighting modes for visual comfort. High-sensitivity light sensor can automatically adjust the brightness of faceplate illumination based on ambient lighting.
5.Stepper motor drives the gauge pointer to a particular angle instantaneously.
6.Microcontroller with silent stepper mode in 3540 segments drives the gauge pointer over a 270° sweep, providing accurate data to the driver.
7.Self-diagnosis function detects disconnection of sensors, short circuits and communication errors. When it goes into warning mode, the pointer and the backlight will flash alternately.
8.The warning value can be set. When the warning red LED light comes on, the buzzer will sound. (The sound can be switched on/off by pressing the button.)
9.Peak value will be held in memory automatically. Driver can obtain the data promptly and recall the highest reading
10.CNC racing gauge with metal bezel and ABS lightweight body. The gauge operates individually without control unit and the metal clamps make it easy to assemble.

SPECIFICATION LIST

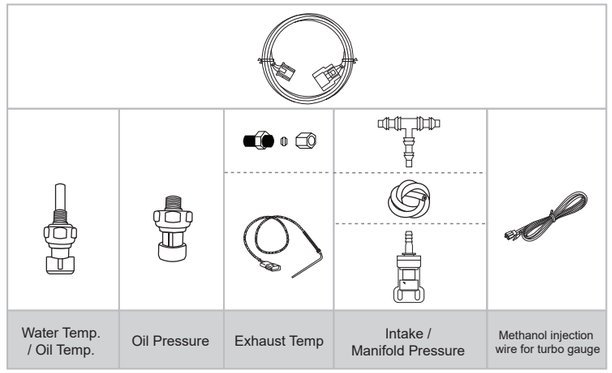


Main unit size	66x76x39 mm
Main unit weight	104.8g
Power consumption	<200mA Standby <10mA
Ambient temperature	-20°C~80°C

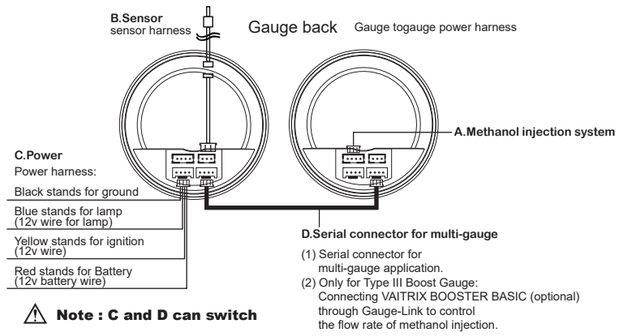
Components In The Box

Gauge	x1
Double Sided Sticky Pads	x2
Instruction Manual	x1
Sensor Harness	x1
Bolt & Beam ring & Mounting Bracket	x1

Optional Components



Gauge Wiring Harness Diagram



⚠ **Note : C and D can switch**

REMOTE CONTROLLER OPERATION MANUAL

Functional buttons	
Warning	Peak
Up (+)	Down (-)
Brightness	Enter
Initial methanol injection	Full methanol injection
	Power

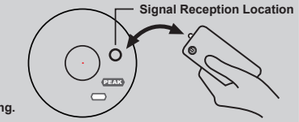
GAUGE MODEL	
WT- Water temperature	BO- Booster
OT- Oil temperature	VO- Votage
EGT- Exhaust temperature	IT- Intake air temperature
OP- Oil pressure	TT- Transmission temperature
	FP- Fuel pressure temperature

Steps to connect:

1.Select gauge model first, the pointer of selected gauge will sweep back to zero and flash, then it will enter the setting mode.
(In this status, if there is no action within 30 seconds, it will be required to connect again.
2.The functional buttons will be activated only when the gauge enters the setting mode.
3.Exit setting mode of connection by pressing the ENTER button, or select another gauge model to continue setting up.
4.Under setting mode, press and hold the BO button or EGT button to enter sensor adjustment mode.
(This function is only available for exhaust temperature and turbo gauge)

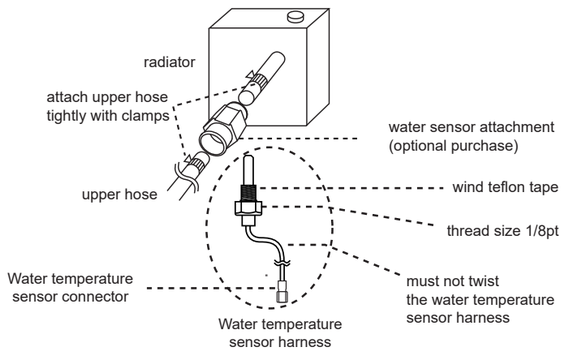
⚠ **Attention**

Remote control operation requires alignment at a 75-degree angle for switching.



Operation manual	Illustration
BO EGT Calibration to zero (Turbo / EGT) 1.Please confirm the car is in ignition status. 2.Choose gauge type. 3.Press and hold on the gauge type botton. (Warning light and Peak light flashing alternately.) 4.Press up and down botton to adjust the value to zero. Then, press ENTER button 2 times to compete setting.	Alternating flashing Press ENTER button 2 times to compete setting.
POWER: POWER Button: Press to start operation or stop operation. OFF: Press POWER button to turn gauge off under setting mode. ON: Select and press the GAUGE MODEL under OFF mode to enter the setting mode, and the pointer will start flashing. After that, press POWER button to turn gauge on.	Needle sweeps around… …while panel flashes
BRIGHTNESS SETTING: (Warning light and Peak light will flash alternately) Adjust the brightness by selecting UP and DOWN buttons (1-2-3 steps) and then press ENTER button to complete setting.	Alternating flashing
INITIAL METHANOL INJECTION SETTING: (Only methanol injection turbo gauge is available) (PEAK light will flash at lower speed). Press UP and DOWN buttons to adjust the pressure of initial injection and then press ENTER button to complete setting. The highest value must be less than the injection value of full power.	Slow blinking
FULL METHANOL INJECTION SETTING: (Only methanol injection turbo gauge is available) (PEAK light will flash at higher speed). Press UP and DOWN buttons to adjust the pressure of full power injection and then press ENTER button to complete setting. The lowest value must be higher than the value of initial injection	Quick blinking
PEAK VALUE SETTING: (PEAK light will come on) Press PEAK button and the recorded peak value will be displayed. Press PEAK button again, the gauge will return to the setting mode and the peak value will be kept. If ENTER button is being pressed, the recorded PEAK value will be deleted and the gauge will return to the setting mode.	Peak value Permanent light Press ENTER button to clear peak value record
WARNING VALUE SETTING: Note: Select the gauge first before setting warnings. (Red WARNING light will come on). Adjust WARNING value by pressing UP and DOWN buttons.After setting, the gauge will buzz when the vehicle reaches above or under the setting value.	Permanent light

The Installation Of Water Temperature Sensor



⚠ Notice:

• Do not twist the sensor harness during installation to avoid damage or wire breakage.

• Coolant may spill during installation. Refill coolant and bleed air from the radiator to prevent overheating.

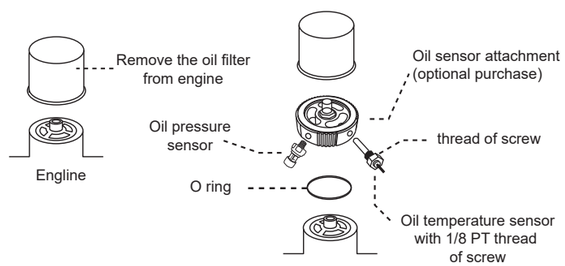
• To prevent leaks, wrap the sensor threads with Teflon tape, secure clamps tightly, and check for leaks before driving.

• Fix the waterproof connector to the vehicle body, and avoid bending the sensor cable near the sensor.

• The sensor thread size is 1/8PT. Use a 1/8PT sensor attachment.

• Fully tighten the sensor into the attachment before connecting the harness.

The Installation Of Oil Temperature Sensor And Oil Pressure Sensor



⚠ Notice:

• Do not twist or bend the sensor harness to avoid damage.

• Refill lubricant if spilled during installation to prevent overheating.

• Use Teflon tape on sensor threads and check for leaks before driving.

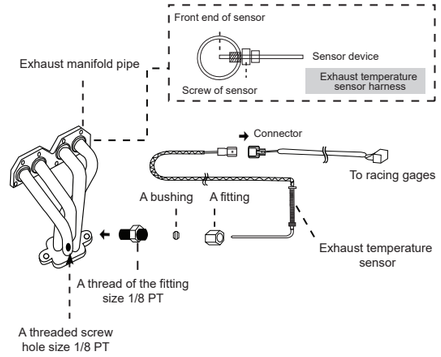
• Do not install the sensor near the oil sump or on a pressure switch.

• Fix the waterproof connector to the vehicle and keep the harness straight.

• Use 1/8PT sensor attachment.

• Tighten sensors securely before connecting the harness.

The Installation of Exhaust Temperature Sensor



1.Drill a 1/8PT threaded hole in the exhaust manifold. (If the wall is too thin, weld a nipple fitting instead.)

2.Tighten the threaded fitting securely into the hole.

3.Insert the sensor through the fitting and bushing.

4.Make sure the sensor tip is centered inside the pipe.

5.Fully tighten the fitting to secure the sensor.

⚠ Notice:

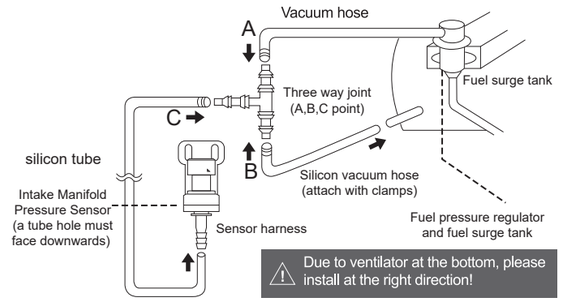
• Do not install the exhaust temperature sensor while the engine is hot to avoid injury.

• When drilling the exhaust manifold, make sure no metal shavings remain inside. Debris may damage the engine, exhaust, or turbine.

• Drill a threaded hole sized 1/8PT, and use a 1/8PT fitting.

• Fully tighten the sensor before connecting it to the harness.

The Installation Of Intake Manifold Pressure Sensor (Sensor Installation Varies From Vehicle To Vehicle)



1.Keep the silicon vacuum hose connected to the sensor as short as possible. Mount the sensor securely with bolts in a location away from excessive heat or vibration.

2.Connect to the intake pressure between the fuel surge tank and the fuel pressure regulator:

(1) Disconnect the vacuum hose from the fuel surge tank side (lower pressure oscillation), and connect it to point A or B on the 3-way joint.

(2) Cut the provided silicon hose to the needed length and connect the fuel surge tank to point A or B.

(3) Use the silicon hose to connect the sensor to point C on the 3-way joint.

⚠ Notice:

• Use silicone vacuum hoses rated over 400kPa for 3.0 bar boost. Inadequate hoses may burst or cause engine damage.

• Secure vacuum hoses with hose clamps or tie-wraps to prevent air leaks or disconnection, which can harm the engine.

• If the gauge shows incorrect boost pressure, turn off the engine immediately and check all connections and hoses for leaks or errors.

• Install the sensor with the vacuum hose port facing downward.

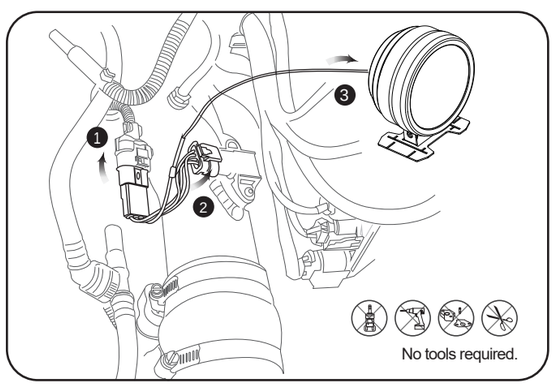
• For vehicles with a solenoid valve between the surge tank and fuel pressure regulator, place a 3-way joint closer to the surge tank.

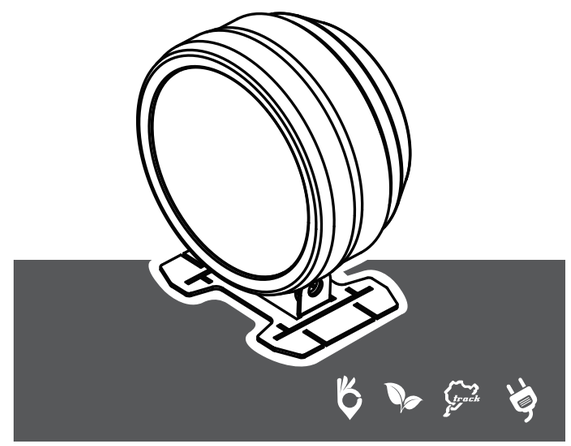
• This product may not fit all vehicles. Please consult your retailer or distributor for compatibility.

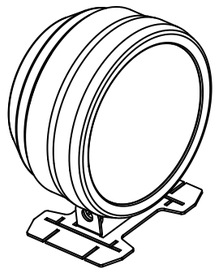
⚠ Troubleshooting ⚠

Q: Why is the gauge display flickering or unstable?	A : Check if the sensor connector is loose. A bad connection can cause brightness issues.
Q: What should I check when arranging or connecting the harness?	A : Don't pull the harness too tightly. Make sure connectors are fully locked to prevent poor contact or disconnection.
Q: What to note when wiring SMART BOOST PIGGYBICK ECOand gauges?	A : Connect signal wires to the vehicle first, then to the external module to avoid interference.
Q: Why does the connection mode time out?	A : It exits if there's no operation within 30 seconds. Please re-enter pairing mode.
Q：What should I note when testing the harness?	A : Test with a loose (temporary) connection first. Do not route through the firewall to avoid wire damage from pulling.
Q: How do I enter the sensor calibration mode?	A : Press the matching gauge button on the remote first to enter sensor calibration mode.
Q：How should I wire power and ground correctly?	A : 1.Red wire → constant power 2.Yellow wire → ignition power 3.If both red and yellow wires go to ignition → no memory, resets every time 4.If both go to constant power → can't shut down, drains battery 5.Black wire → bare metal ground 6.Blue wire → usually not used

Plug&Play Boost Gauge Installation Guide







VAITRIX MOTOR

SAFE ECO SPORT PLUG & PLAY

賽車型儀錶

⚠ 請將線路遠離點火和無線電訊號頻率幹擾，因為這可能導致故障。

⚠ 發射電波的無線設備和手機不應靠近或+觸及產品和線束。它可能會影響產品的性能。

⚠ 請確保在引擎室中的電線撥線或分接時進行防水處理。

⚠ 請使用乾燥的軟布清潔。 除中性洗滌劑外，請勿使用任何清潔劑。

⚠ 安裝產品時請小心不要妨礙安全設備，例如安全帶和氣囊系統或車輛操作裝置，例如引擎控制，方向盤和煞車系統。 幹擾車輛的正常運作可能導致不可預測的事故或火災。

⚠ 當卸下電池負極端子時，車輛內部設備（例如具有內部記憶體的時鐘和音響組件）可能會遺失其記憶體資料。因此，產品安裝完成後，請對室內設備依操作手冊進行復位。

⚠ 在任何情況下，VAITRIX不會為商品安裝造成客戶車輛的原廠零件損壞或損失負責。

⚠ 在任何情況下，VAITRIX不會因使用或無法使用產品而導致的任何損害對客戶負責，即使VAITRIX已被告知可能發生此類損害。

⚠ 本產品採用高亮度LED。
當幾個儀錶排列時，LED的生產公差可能會有微妙的色差，但並不是故障，這是正常的現象。

產品特點

1.使用遠紅外線遙控器操作與控制儀錶。

2.髮絲紋質感搭配高解析度刻度與高亮度指針，清楚顯示精確指示。

3.採高透光低反射鍍膜玻璃，相當耐磨耐熱，且提高能見度度達99%並反射降至4%以下，變頻電壓恆定亮度，整體視覺辨識度提升。

4.使用高亮度LED，背光具備6段調光級距，高敏感度感光組件偵測環境光源，自動調整螢幕亮度，提升駕駛觀看舒適度。

5.使用磁力線圈馬達，提高性能驅動指針即時反應速度。

6.超精確微控制器搭配高解析靜音磁力線圈步進馬達3540段，指針具270°的轉向角，精準真實提供車輛感知器數值資訊。

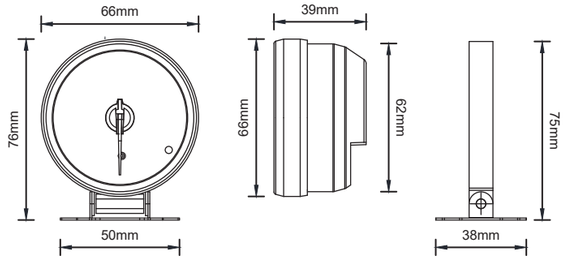
7.診斷功能隨時偵測感知器斷線、短路及通訊錯誤，當進入警告模式，指針與儀錶背光將互動閃爍。

8.可設定警告值。 紅色LED亮起時警告，儀錶發出蜂鳴聲（聲音可透過按鍵關閉）。

9.即時取得數據，並自動記錄最高峰值。 可以調閱歷史高峰值。

10.CNC製程儀錶金屬邊框及ABS輕巧機身，金屬束環便利靈活組裝，不需控制盒，完全獨立運作。

產品規格表

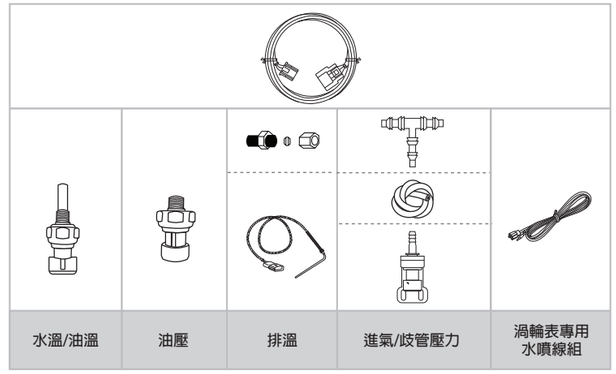


主產品尺寸	66x76x39 mm
主產品重量	104.8g
耗電量	<200mA 待機 <10mA
環境溫度	-20° C~80° C

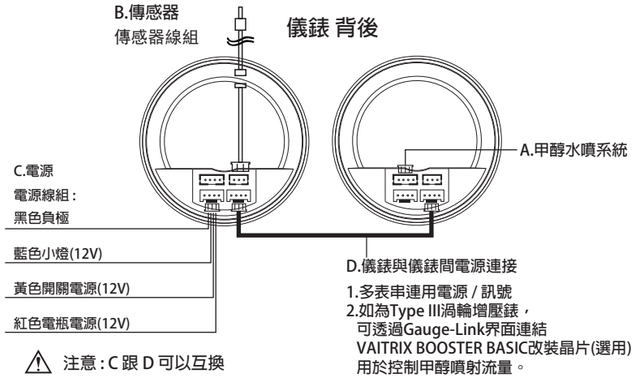
產品內容物

- 儀錶.....x1
- 雙面膠.....x2
- 說明書.....x1
- 感測器連接線.....x1
- 螺栓和束環和儀錶支架.....x1

選購配件



儀錶線組圖示



⚠ 注意：C 跟 D 可以互換

遙控器使用說明

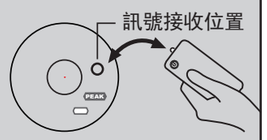
功能鍵	
警示值設定	電源
調整數據(+)	最高值
亮度設定	調整數據(-)
甲醇噴射初噴	確定
	甲醇噴射全噴

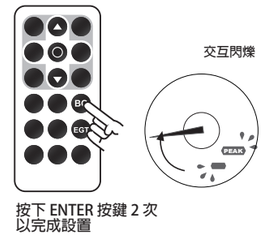
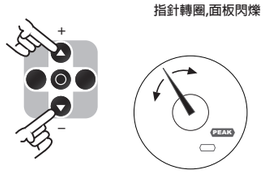
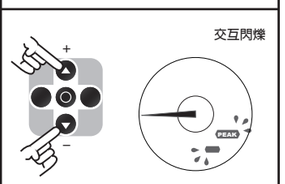
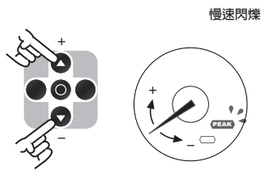
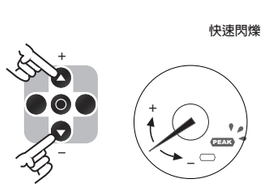
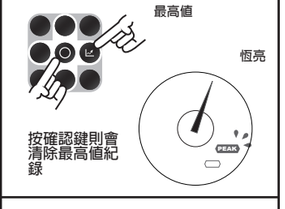
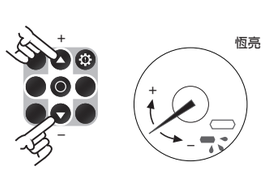
錶款鍵	
WT-水溫	VO-電壓
OT-油溫	IT-進氣溫度
EGT-排溫	TT-變速箱溫度
OP-油壓	FP-燃油壓力

遙控器操作說明

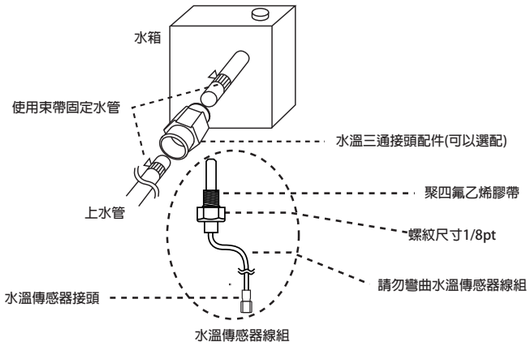
連線步驟
1. 選擇儀錶，選定後表會歸零並指針閃爍，此為進入設定模式，此狀態30秒內沒動作，需重新設定。
2. 當選定進入設定模式，功能鍵才會有作用。
3. 離開設定模式，按確認鍵或其它儀錶按鍵離開設定。
4. 連接狀態下長按渦輪或排溫錶種按鍵能夠進入感知器數值矯正設定，僅支援渦輪或排溫錶。

⚠ 注意
遙控器操作需要對準
75度角的位置以進行切換。



操作說明	圖示
BO EGT 歸零校準 (渦輪 / 排氣溫度) 1.請確認車輛處於點火狀態。 2.選擇儀錶類型。 3.按住儀錶類型按鈕 (警示燈和峰值燈交替閃爍) 4.按上下按鈕調整數值為零。 然後，按下 ENTER 按鈕 2 次以完成設置。	 按下 ENTER 按鍵 2 次 以完成設置
電源：控制儀錶的開機與關機。 關機：於連機模式下按電源按鈕將儀表關機。 開機：於關機模式下，選擇按下儀錶種類按鍵，進入連機模式，指針閃爍，此時按下電源按鍵為開機，按其他表種按鍵為離開維持關機。	
亮度設定： WARN燈和PEAK燈互動閃爍 以上下鍵設定亮度段數1-2-3段， 按確定鍵完成設定	
甲醇噴射初噴設定： （僅支援甲醇噴射渦輪錶） PEAK燈跟指針會慢速閃爍 以上下鍵調整設定初始噴射的壓力， 最高數值不能超過定全功率噴射數值。 按確定鍵完成設定	
甲醇噴射全噴設定： （僅支援甲醇噴射渦輪錶） PEAK燈跟指針會快速閃爍 以上下鍵調整設定全功率噴射的壓力， 最低數值不能低過初始噴射數值。 按確定鍵完成設定	
最高值顯示： PEAK燈會恆亮 按下會在表面顯示紀錄最高值， 於顯示最高數值時：按一下PEAK會回到設定模式，並保持最高值紀錄。 若按確認鍵則會清除最高值紀錄後回到設定模式。	
警示值設定 注意:請先選擇錶款後，再進行警示值設定 紅色警示燈閃爍 以上下鍵調整到警示值數值確認後，儀表於車輛運行高過或低過此數值會發出警示聲與警示紅燈。	

水溫傳感器安裝說明



⚠ 注意：

• 安裝感測器時，請勿將感測器主體附近的導線彎曲。

• 安裝時冷卻液可能流失，請補充冷卻液並排出水箱內空氣，否則可能導致引擎過熱。

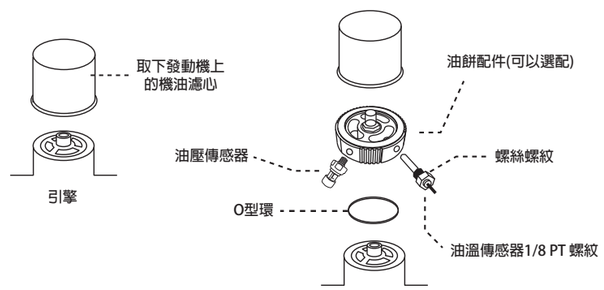
• 為防止感測器漏水，請用鐵氟龍膠帶包覆螺紋，並以束環固定水溫三通與上水管。行車前請檢查是否有洩漏。

• 為防止感知器電線損壞，請將防水連接器線束固定在車身上，勿將感知器電線彎曲固定在感知器上。

• 水溫感測器的螺紋尺寸為1/8PT。 請使用尺寸為1 / 8PT的傳感器附件。

• 將感測器完全旋緊到水溫三通中，然後再連接到感測器線束。

油溫傳感器與油壓傳感器安裝說明



⚠ 注意：

• 勿扭轉感測器線束，安裝時請避免扭曲線束，以免造成內部斷裂。

• 安裝過程可能導致機油流失，請檢查並補充潤滑油，以防引擎過熱。

• 請用特氟龍膠帶包覆螺紋，並確認油餅與 O 型圈密合，以防漏油造成火災或引擎損壞。

• 請勿將感測器安裝於油底殼附近或壓力開關上，以免因壓力過高造成損壞。

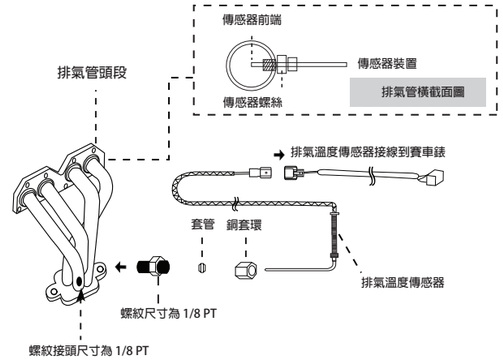
• 為避免損壞電線，請將防水連接器線束固定在車身上，勿直接彎折或固定在感測器上。

• 油溫感測器為 1/8PT 螺紋，請使用對應附件，將感測器確實鎖入油餅後再連接線束。

⚠ 問題排解 ⚠

Q ： 錶頭亮度忽明忽暗是什麼原因？	A ： 檢查 Sensor 接頭是否鬆脫，可能影響亮度穩定。
Q ： 整理或對接線組時需要注意什麼？	A ： 請勿將線組拉得太緊，並確認接頭卡榫扣好以免接觸不良或損壞脫落。
Q ： 安裝外掛與儀錶時接線要注意什麼？	A ： 訊號線應先接原車，再接外掛，避免干擾或攔截。
Q ： 連線模式為什麼會自動中斷？	A ： 30秒內未操作會自動退出，需重新連線。
Q：測試線組時有什麼注意事項？	A ： 測試前請先空接，勿先穿過防火牆，避免拉扯損壞線材。
Q：如何進入感測器數值矯正設定？	A ： 請先選擇遙控器上的錶款按鍵，才能進入感測器數值矯正設定
Q：電源與接地線應如何正確接線？	A ： 1. 紅線接永久電；黃線接開關電 2. 若紅、黃線都接開關電—不會記憶及歸零 3. 若紅、黃線都接永久電—不會關機，持續吃電 4. 黑線必須接無烤漆的金屬處 5. 藍線通常不需對接

排氣溫度傳感器安裝說明



1.請精準地在排氣管頭段鑽一個1 / 8PT螺紋孔。（如果管壁厚度不足，請焊接）。

2.將螺紋接頭完全旋緊到排氣管頭段孔洞。

3.將感測器穿過接頭和套管。

4.將感測器插入螺紋接頭，並將其定位在排氣管頭段管道的中心。

5.完全擰緊接頭

⚠ 注意：

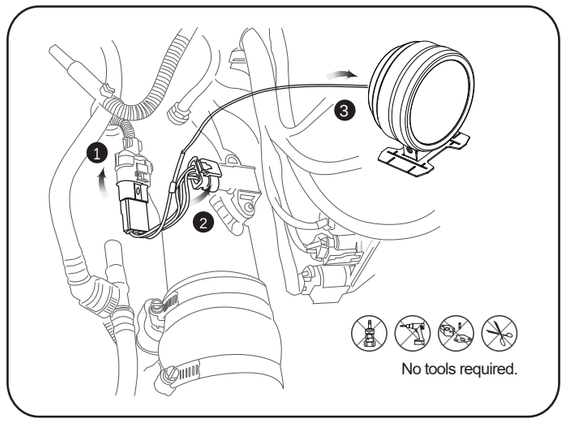
• 為防止燒燙意外，請勿在引擎相當熱時安裝排氣溫度感測器。

• 在排氣管頭段管上鑽一個螺紋孔時，確保排氣管頭段或渦輪沒有孔洞。鑽孔可能導致發動機，排氣管或渦輪機損壞。

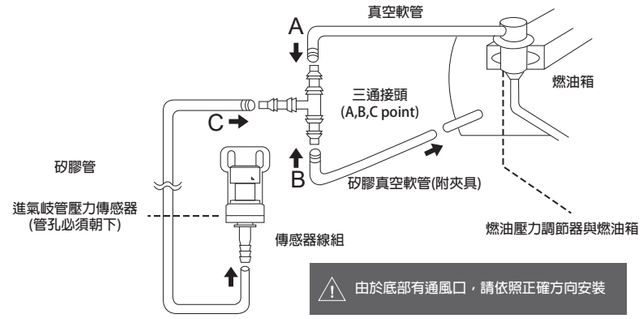
• 配件的螺紋尺寸為1/8PT。 請鑽一個1 / 8PT螺紋孔。

• 將排氣溫度感知器完全旋緊到感知器附件中，然後將其連接到感測器線組

直插式渦輪錶安裝說明



進氣歧管壓力傳感器安裝說明（感知器安裝因A車輛而異）



1.感測器連接的矽膠真空軟管應盡量縮短，並將感測器固定於引擎室內遠離高溫與震動的位置。

2. 在燃油調壓箱與燃油壓力之間可以取得進氣壓力。

(1) 從壓力較小的燃油箱側拆下真空軟管，並將其連接到三通接頭 (A或B點）。

(2) 透過包裝盒中包含的矽膠真空軟管切割所需的長度。將燃油調壓箱與三通接頭連接（A點或B點）

(3) 使用矽膠真空軟管將傳感器連接到三通接頭（C 點）。

⚠ 注意

請使用可承受至少 400kPa（約 3.0bar）壓力的耐高壓矽膠真空軟管。使用不當可能導致真空軟管爆裂或引擎損壞。

為防止真空軟管脫落或漏氣，請使用軟管夾或紮線帶固定。鬆脫或漏氣可能導致引擎異常或損壞。

若儀錶顯示進氣壓力異常，請立即熄火停車，避免引擎損壞。

請確認所有連接是否正確，包含線束穩固、真空軟管密合無漏氣，以及接頭位置無誤。

建議將真空三通安裝於靠近燃油調壓箱處，避免靠近電磁閥，以確保穩定訊號。