Combo 2.5KW DCDC Converter 6.6KW OBC Bidirectional
Model No. ATCDB66662252

Q & A

Items	Questions	Answer
1.	逆變器 (Inverter) 和充電 (Charging) 功能是否可以同時執行，還是它們是互斥的？ Can the inverter and charging functionalities be performed simultaneously, or are they mutually exclusive?	它們是互斥的 (Mutually Exclusive)，無法同時運作。 They are mutually exclusive. Cannot run at the same time.
2.	關於紅、綠、藍三色指示燈，它們是如何啟動的，又依賴哪些參數或訊號？ [Pin 腳: 1B (紅燈), 2F (藍燈), 3F (綠燈), 4H (指示燈地線)] Regarding the green, red, and blue indicators, how are they activated, and what parameters or signals do they depend on? [Pin details: 1B (Indicator Red), 2F (Indicator Blue), 3F (Indicator Green), 4H (Indicator Ground)]	指示燈的邏輯（例如：綠燈=喚醒, 紅燈=充電中）通常由 OBC 韌體預先定義。 但本模組 預設韌體並未啟用這些燈號邏輯。如果客戶需要啟用或自定義燈號邏輯，這將需要額外的韌體客製化，我們會視情況調整報價。 The indicator light logic (e.g., green = wake-up, red = charging) is usually predefined by the OBC firmware." But the default V0 firmware for this module does not have this indicator logic enabled. If custom logic or activation is required, it would necessitate a firmware customization, and we would adjust the quotation accordingly.
3.	關於 E-Lock (電子鎖) 功能，是否有我們應注意的軟體依賴性？以及它有哪些潛在的故障模式？ Are there any software dependencies related to the E-Lock feature that we should be aware of and are there any potential failure modes for the same?	OBC 將會透過 CAN 總線發送狀態訊息給 VCU，顯示「上鎖完成」、「解鎖完成」或「上鎖/解鎖失敗」（後者即為故障模式）。 The OBC will send a status message to the VCU via the CAN bus, indicating either 'Lock completed,' 'Unlock completed,' or 'Lock/Unlock failed' (the latter representing the failure mode).
4.	可否分享關於 CP 和 PP 訊號的詳細資訊，例如觸發點或閾值？ Could you please share the following details regarding the CP (Control Pilot) and PP (Proximity Pilot) signals - setpoints or thresholds?	建議將 CP/PP 訊號交由 VCU 處理。 如果 CP/PP 訊號是交由 OBC 處理，那麼 6V 是閾值並開始充電。 We recommend processing the CP/PP signals via the VCU. If the CP/PP signals are processed by the OBC, then 6V is the threshold and charging will start.
5.	請確認 PP 訊號值與電流的對應關係是否遵循 IEC 61851 標準？ Please confirm if these PP values and current mappings follow IEC 61851 standards?	建議將 PP 訊號交由 VCU 處理。 如果是交由 OBC 處理（OBC-**centric** 架構），那麼是的，它會遵循 IEC 61851-1 標準。 We recommend processing the PP signal via the VCU. If processed by the OBC (OBC-centric architecture), then yes, it follows the IEC 61851-1 standard.
6.	我們的 VCU 會自己處理 CP/PP，所以 OBC 上的 CP/PP 腳位 (3A/3B) 是否可以不連接 (unconnected)？ We have a separate controller (VCU) handling the CP and PP lines — would it be acceptable to leave the corresponding pins (3A/3B) unconnected?	是的，可以。 (3A/3B)可定義為NC (No Connect)。 CP/PP 訊號可由VCU來處理 Yes, this is acceptable. Pins (3A/3B) can be defined as NC (No Connect). The CP/PP signals can be handled by the VCU

7.	逆變器模式 (Inverter Mode) 的對內及對外的輸出各為多少？ What are the internal and external output ratings for the Inverter Mode?	這兩個數值對應模組上兩種不同的 V2L 輸出路徑，均位於 AC 輸入接頭上： 1. 車內放電 (10A Max): 指的是輔助 AC 輸出 (Pin 1 & 2)，用於為車內的低功率 AC 插座供電。 2. 車外放電 (27A): 指的是高功率 V2L 輸出，透過主要的 AC 充電 Pin 腳 (Pin 3 & 4) 傳遞。 These two values correspond to two different V2L (Vehicle-to-Load) output paths on the AC input connector: 1. Discharge inside vehicle (10A Max): Refers to the auxiliary AC output (Pins 1 & 2), designed to power low-power AC outlets inside the car. 2. Discharge outside the vehicle (27A): Refers to the high-power V2L output via the main AC charging pins (Pins 3 & 4).
8.	此設備內建了哪些主要的保護功能？ What are the main protection features built into this device?	本模組 (OBC & DCDC) 內建了多重保護機制，包含： 輸入過電壓/欠電壓保護 輸出過電壓/欠電壓保護 輸出過電流保護 輸出 short circuit protection 過熱保護 (自動降額或關斷) 通訊異常警告 詳細的保護觸發點與恢復點可參考規格書。DTC 碼清單將於下訂單後連同通訊協議一併提供。 This module (OBC & DCDC) has multiple built-in protection mechanisms, including: Input Over/Under Voltage Protection Output Over/Under Voltage Protection Output Over Current Protection Output Short Circuit Protection Over Temperature Protection (Derating or Shutdown) Communication Failure Warning Detailed trigger/recovery points are in the product spec sheet. The detailed DTC list will be provided with the CAN protocol after an order is placed.
9.	安裝時是否需要遵循任何特定的安裝說明或指南？ Are there any specific mounting instructions or guidelines that need to be followed for installation?	冷卻： 本模組需要水冷 (Liquid cooling)。機械圖： 購買產品後，將提供標示詳細安裝孔位的圖紙。 扭力： 低壓 DC 輸出 (LV Output +) 的 M8 螺栓，安裝扭力要求為 14–18 N·m。 防護： 產品防護等級為 IP67。安裝時請確保所有連接器均已正確密封。 Cooling: This module requires liquid cooling. Mechanical Drawings: Drawings with detailed mounting hole positions will be provided after purchase. Torque: For the LV DC output (LV Output +) M8 bolts, the required installation torque is 14–18 N·m. Protection: The product's protection rating is IP67. Ensure all connectors are properly sealed during installation.
10.	我們的系統使用 1kΩ PTC 溫度感測器，但你們的系統似乎是 10kΩ NTC。是否相容？ Our application uses a 1kΩ PTC sensor, but your system seems configured for a 10kΩ NTC. Are they compatible?	此溫度感測保護功能由 VCU 控制，OBC 上的對應腳位並未使用。 This temperature sensing protection function is controlled by the VCU, and the corresponding pin on the OBC is not used.

11.	DC-DC 轉換器的電壓輸出為 9-16V，但 CAN MATRIX 似乎只提供了啟用 DC-DC 的控制參數。我們需要 DC-DC 輸出電壓為 13.5V，請問這是否可行？ The DC-DC Converter output is 9-16V, but the CAN MATRIX only seems to show an ON/OFF control. We need our DC-DC output voltage at 13.5V. Is this possible?	一般預設出廠值為 14V，如有非 14V 的要求，下訂單的承認書必須書寫清楚系統需求的參數，我們會依據此承認書調整。 The default factory setting is 14 V. If a value other than 14 V is required, the system parameter specifications must be clearly stated in the order approval sheet, and we will make adjustments accordingly based on that document.
12.	我們能否將高壓電纜（逆變器與充電輸入 AC 電纜）直接短接到充電口？因為我們需要在充電口具備逆變器功能，而不需要在車艙內使用。 Can we short the HV cables Inverter and Charge input AC cables to the charge port as we need the inverter functionality at the charge port and not required inside the cabin of the vehicle.	根據我們的規格 (如 Q6 所述)，模組上有兩組獨立的 V2L 輸出電路： Pin 1 & 2 (輔助輸出)： 專為車內低功率 (10A) 負載設計。 Pin 3 & 4 (主輸出)： 專為車外高功率 (27A) V2L 負載設計（也用於 AC 充電）。 嚴格禁止將這兩組輸出 (Pin 1&2) 與 (Pin 3&4) 並聯或短接在一起。這樣做會導致模組內部電路損壞。 正確的接線方式是： 如果您不需要車內放電功能，請將 Pin 1 和 Pin 2 保持未連接 (NC)。 您只需要將 Pin 3 和 Pin 4 連接到您的充電口，即可實現您需要的 (27A) V2L 功能。 According to our specifications (as stated in Q6), the module provides two independent V2L output circuits: Pin 1 & 2 (Auxiliary Output): Designed for in‑cabin low‑power loads (10A). Pin 3 & 4 (Main Output): Designed for external high‑power V2L loads (27A), also used for AC charging. It is strictly prohibited to connect or short Pin 1 & 2 with Pin 3 & 4 in parallel. Doing so will cause damage to the internal circuitry of the module. Correct wiring method: If in‑cabin discharge functionality is not required, leave Pin 1 and Pin 2 unconnected (NC). You only need to connect Pin 3 and Pin 4 to your charge port to achieve the required (27A) V2L functionality.
	冷卻方式為何 What the cooling method is?	為了確保 OBC 的最佳性能與使用壽命，冷卻系統應滿足以下要求： 冷卻方式： 液冷 (Liquid cooling)，但由OEM自行決定。 建議水和乙二醇混合比例50%：50%。但由OEM自行決定 入口溫度： 60°C To ensure the optimal performance and lifespan of the OBC, the cooling system must meet the following requirements: Cooling method: Liquid cooling Coolant type: recommended to use Ethylene glycol and water 1:1. However, the final determination shall be made by the OEM. Nozzle Inlet temperature: 60°C