



High Color • Wide Screen •  
User-Friendly HMI Products

# DOP-B07

No.18, Xinglong Rd.,  
Taoyuan City 33068, Taiwan

## Instruction Sheet

### 1 Preface

Thank you for purchasing DELTA's DOP-B series. This instruction sheet will be helpful in the installation, wiring and inspection of Delta HMI. Before using the product, please read this instruction sheet to ensure correct use. You should thoroughly understand all safety precautions before proceeding with the installation, wiring and operation. Place this instruction sheet in a safe location for future reference. Please observe the following precautions:

- Install the product in a clean and dry location free from corrosive and inflammable gases or liquids.
- Ensure that all wiring instructions and recommendations are followed.
- Ensure that HMI is correctly connected to a ground. The grounding method must comply with the electrical standard of the country (Please refer to NFPA 70: National Electrical Code, 2005 Ed.).
- Do not disassemble HMI, modify or remove wiring when power is applied to HMI.
- Do not touch the power supply during operation. Otherwise, it may cause electric shock.

If you have any questions during operation, please contact our local distributors or Delta sales representatives.

The content of this instruction sheet may be revised without prior notice. Please consult our distributors or download the most updated version at <http://www.delta.com.tw/ia>.

### 2 Pin Definition of Serial Communication

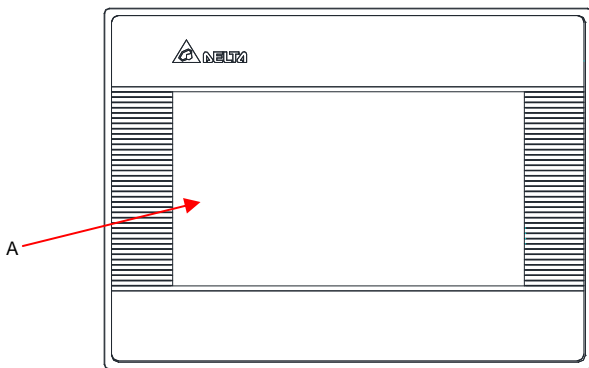
#### B07S410 COM Port

COM Port	Pin	MODE1	MODE2	MODE3
		RS-232	RS-422	RS-485
	1		TXD+	D+
	2	RXD		
	3	TXD		
	4		RXD+	
	5	GND	GND	GND
	6		TXD-	D-
	7	RTS		
	8	CTS		
	9		RXD-	

Note1: Blank = To avoid malfunction, it must be left unconnected.

### 3 Parts Names

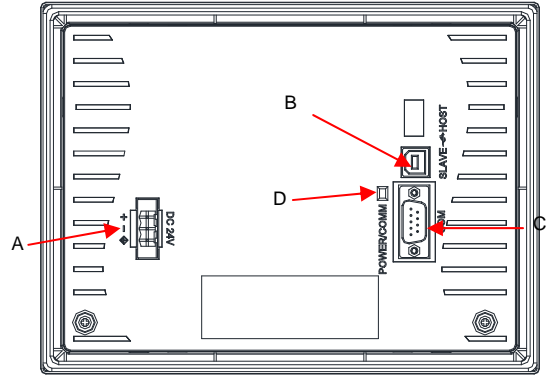
#### DOP-B07S410 (Front View)



A Touch Screen / Display

Please note DOP-B07S410 model has not system key, user could press at blank space for a while to enter system menu.

#### DOP-B07S410 (Rear View)

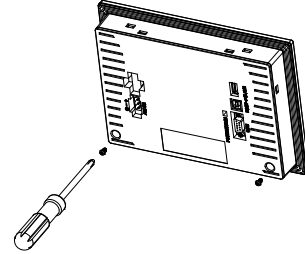


A	Power Input Terminal	B	USB Slave
C	COM	D	Power and Communication LED Light.

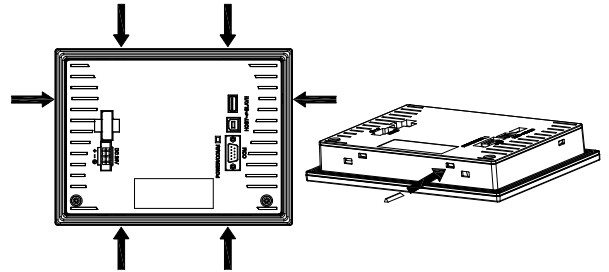
### 4 DOP-B07S410 Battery change notice

**Please do not use other company battery in DOP-B07S410. If users need to buy the battery, please look for Delta suppliers.**

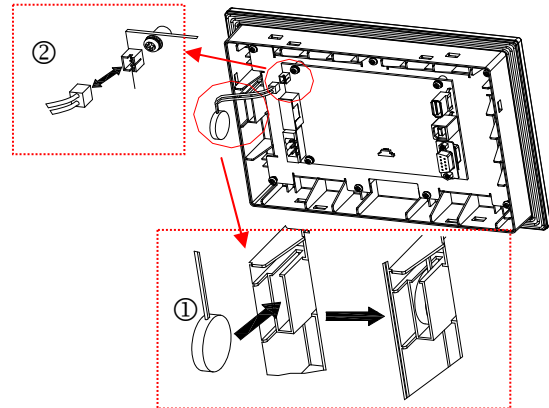
Step1. Please dismantle a screw of back cover.



Step2. Use the implement to dismantle the back cover with tenon-mortise like as arrow figures out.

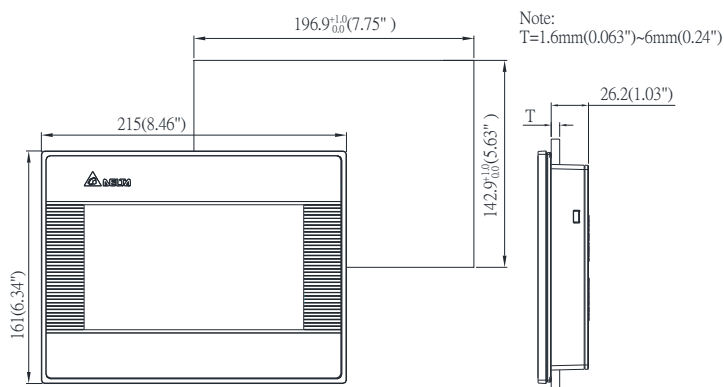


Step3. Please follow as below figure to change(①) and install the battery(②)



## 5 Dimensions

### DOP-B07S410



- 1) The half-life of backlight is defined as original luminance being reduced by 50% when the maximum driving current is supplied to HMI. The life of LED backlight shown here is an estimated value under 25 °C normal temperature and humidity conditions.
- 2) The value of the power consumption indicates the electrical power consumed by HMI only without connecting to any peripheral devices. In order to ensure the normal operation, it is recommended to use a power supply which the capacity is 1.5 ~2 times the value of the power consumption.
- 3) The content of this instruction sheet may be revised without prior notice. Please consult our distributors or download the most updated version at <http://www.delta.com.tw/ia>

## 6 Specifications

Model Name		DOP-B07S410
LCD MODULE	Display Type	7" TFT LCD (65536 colors)
	Resolution	800 x 480 pixels
	Backlight	LED Back Light (less than 20,000 hours half-life at 25°C) <sup>(Note 1)</sup>
	Display Size	154.08 x 85.92mm
Operation System		Delta Real Time OS
MCU		32-bit RISC Micro-controller
NOR Flash ROM		Flash ROM 4 MB ( OS System: 2MB / User Application: 2MB )
SDRAM		64Mbytes
Backup Memory		32Kbytes
Buzzer		Multi-Tone Frequency ( 2K ~ 4K Hz ) / 85dB
USB		1 USB Slave Ver 2.0
Serial COM Port	COM1	RS-232 (supports hardware flow control) / RS-422 / RS-485
Perpetual Calendar (RTC)		Built-in
Cooling Method		Natural air circulation
Safety Approval		CE
Waterproof Degree		IP65
Operation Voltage <sup>(Note2)</sup>		DC +24V ( -10% ~ +15% ) (please use isolated power supply)
Voltage Endurance		AC500V for 1 minute (between charging (DC24V terminal) and FG terminals)
Power Consumption <sup>(Note 2)</sup>		3.5W
Backup Battery		3V lithium battery CR2032 x 1
Backup Battery Life		It depends on the temperature used and the conditions of usage, about 3 years or more at 25°C.
Operation Temperature		0°C ~ 50°C
Storage Temperature		-20°C ~ +60°C
Ambient Humidity		10% ~ 90% RH [0 ~ 40°C], 10% ~ 55% RH [41 ~ 50°C] Pollution Degree 2
Vibration		IEC 61131-2 compliant 5Hz ≤ f < 8.3Hz = Continuous: 3.5mm, 8.3Hz ≤ f ≤ 150Hz = Continuous: 1.0g
Shock		IEC 60068-2-27 compliant 15g peak for 11 ms duration, X, Y, Z directions for 6 times
Dimensions (W) x (H) x (D) mm		215 x 161 x 35.3
Panel Cutout (W) x (H) mm		196.9 x 142.9
Weight		Approx. 700g

### 1 Önsöz

DELTA'nın DOP-B serisi operatör panellerini seçtiğiniz için teşekkürler. Bu bilgi dokümanı Delta HMI kurulum, bağlantı, bakım ve kontrolünde kullanıcıya yardımcı olacaktır. Doğru kullanım için ürünü kullanmadan önce bu dokümanı mutlaka okuyunuz. Kurulum, bağlantı ve çalışma yapmadan önce güvenlik uyarılarını tamamen anladığınızdan emin olunuz. Bu dokümanı daha sonra da kullanmak için iyi muhafaza ediniz. Lütfen aşağıdaki güvenlik uyarılarına dikkat ediniz:

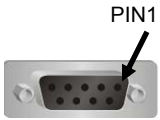
- Ürünün kurulumunu yanıcı gaz ve sıvılardan uzak, kuru ve temiz ortamlara yapınız.
- Bağlantıları yaparken tüm bağlantı kurallarının sağlandığından emin olunuz.
- HMI'nin toprak bağlantısının doğru yapıldığından emin olunuz. Topraklama metodunun ürünün kurulduğu ülke standartlarına uygun olduğuna emin olunuz (NFPA 70: National Electrical Code, 2005 Ed.).
- HMI enerjili iken kablo bağlantısı yapmayınız ya da sökmezsiniz.
- Çalışma sırasında enerji besleme terminallerine dokunmayınız. Aksi halde elektrik şoku olabilir.

Ürünün kullanımı ile ilgili sorularınız için, lütfen teknik servisimizle bağlantıya geçiniz.

Herhangi bir ihbara gerek kalmaksızın bu bilgi dokümanının içeriği değiştirilebilir. Güncellenmiş versiyonu elde etmek için teknik servise danışabilir veya internet adresinden indirebilirsiniz.

### 2 Seri Haberleşme Pin Açıklamaları

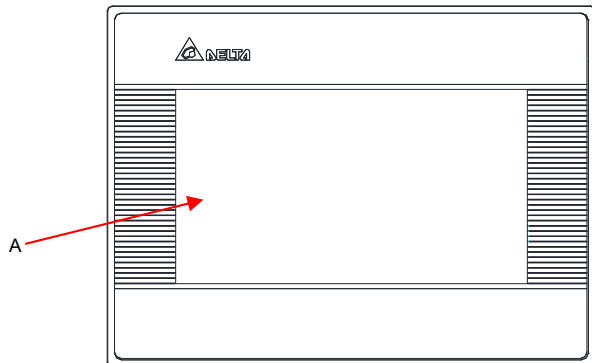
#### B07S410 COM Port

COM Port	Pin	MOD 1	MOD 2	MOD 3
		RS-232	RS-422	RS-485
	1		TXD+	D+
	2	RXD		
	3	TXD		
	4		RXD+	
	5	GND	GND	GND
	6		TXD-	D-
	7	RTS		
	8	CTS		
	9		RXD-	

Not1: Boş = Bağlantı Yapılmaz.

### 3 Parça İsimleri

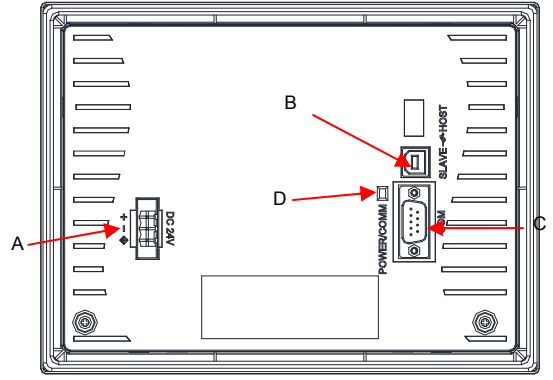
#### DOP-B07S410 (Ön Görünüm)



A Dokunmatik Ekran / Display

DOP-B07S410 modelinde sistem tuşu mevcut değildir. Kullanıcı, sistem menüsüne girmek için boş alana bir süre basılı tutması gerekir.

#### DOP-B07S410 (Arka Görünüm)

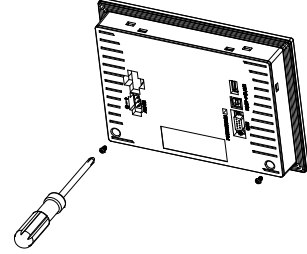


A	Power Giriş Terminali	B	USB Slave
C	COM	D	Güç ve Haberleşme LED Işık.

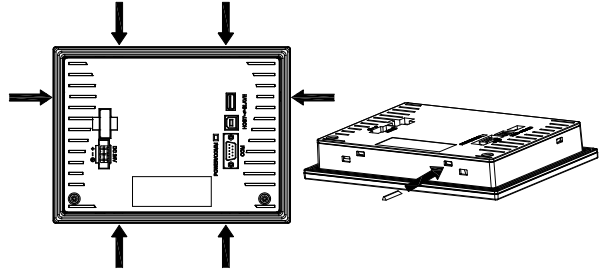
### 4 DOP-B07S410 Pil değiştirme bildirimi

Lütfen DOP-B07S410 için başka bir firmanın pilini kullanmayın. Eğer kullanıcıların pil satın alma ihtiyacı olursa Delta ürün tedarikçilerine başvurunuz.

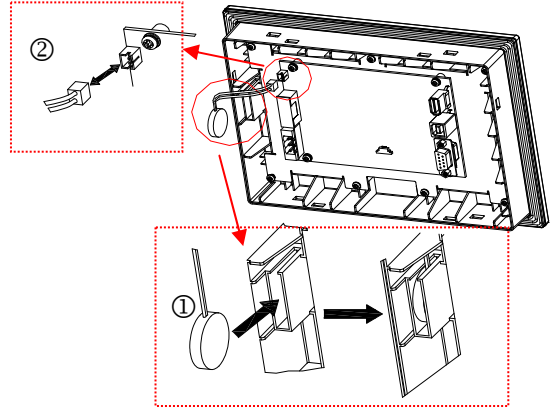
Adım1. Lütfen arka kapağın vidasını sökün.



Adım2. Delikli-tırnaklı geçme tipinde olan arka kapağı çıkarmak için şekil üzerinde oklarla gösterildiği gibi uygulayınız.

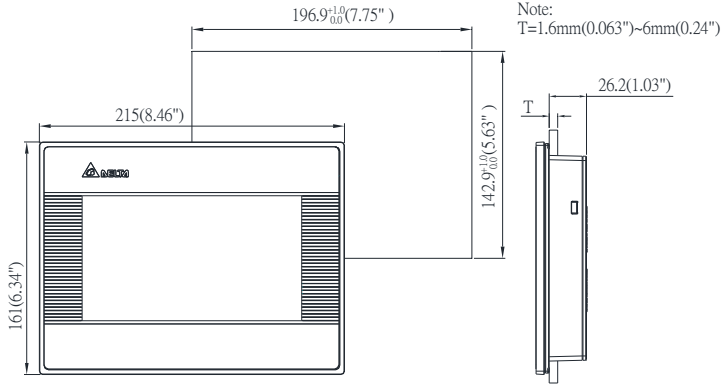


Adım3. Lütfen pil sökme(①) ve takma(②) işlemleri için aşağıdaki şekildeki gibi takip ediniz.



## 5 Ölçüler

### DOP-B07S410



## NOTE

- 1) Arka ışık yarım-ömrü, HMI maksimum akımla beslendiğinde orijinal aydınlatmanın %50 düşürüldüğü anlamına gelir. Yukarıda gösterilen arka ışık LED aydınlatma ömrü 25°C derecede normal sıcaklık ve rutubet ortamında tahmin edilen değerlerdir.
- 2) Güç tüketimi HMI ünitesinin hiç bir cihaza bağlı olmadan boş olarak tükettiği gücü gösterir. Normal çalışmada HMI'nın boş iken tükettiği gücün 1.5 veya 2 katı güç verebilen besleme kaynağı kullanılması tavsiye edilir.
- 3) Herhangi bir ihbar olmadan bu dokümanın içeriği değiştirilebilir. En son güncellenmiş halini firmamızdan talep edebilir yada aşağıdaki link adresinden indirebilirsiniz <http://www.delta.com.tw/ia>.

#### TÜRKİYE İTHALATÇI FIRMA

FABRİKA AYGITLARI SİSTEM TEKNOLOJİSİ BİLGİSAYAR YAZILIM VE ELEKTRONİK PAZARLAMA İTHALAT İHRACAT ANONİM ŞİRKETİ  
FAST Plaza Küçükbakkalköy Mh. Dereyolu Sk. No:4  
ATAŞEHİR / İSTANBUL  
T: +(90) 216 574 94 34 F: +(90) 216 574 16 60  
E: satis@fastttd.net W: www.fastttd.net

#### Üretici Firma Delta Electronics, Inc.

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Taoyuan County 33370,  
Taiwan  
TEL: 886-3-362-6301  
FAX: 886-3-362-7267

China  
1538 Jiangxing East Road,  
Wujiang Economic Development Zone  
Wujiang City, Jiang Su Province,  
People's Republic of China (Post code: 215200)  
TEL: 86-512-6349-3008  
FAX: 86-769-6340-7280

## 6 Özellikler

Model Adı		DOP-B07S410
LCD MODULE	Display Tipi	7" TFT LCD(65536 renk)
	Çözünürlük	800 x 480 pixels
	Aydınlatma	LED Aydınlatma (25°C yarım ömürde 20,000 saatten az) (Note 1)
	Display Ölçü	154.08 x 85.92mm
İşletim Sistemi	Delta Real Time OS	
MCU	32-bit RISC Micro-controller	
NOR Flash ROM	Flash ROM 4 MB ( OS System: 2MB / User Application: 2MB )	
SDRAM	64Mbytes	
Backup Memory	32Kbytes	
Buzzer	Multi-Tone Frequency ( 2K ~ 4K Hz ) / 85dB	
USB	1 USB Slave Ver 2.0	
Seri COM Port	COM1 RS-232(donanım akış denetimi(flow control) / RS-422 / RS-485	
Gerçek Zaman Saati (RTC)	Dahili	
Soğutma Metodu	Doğal Hava Sirkülasyonu	
Güvenlik Onayı	CE	
Su Geçirmezlik Derecesi	IP65	
Çalışma Voltajı (Note2)	DC +24V ( -10% ~ +15% ) ( Lütfen izoleli güç kaynağı kullanınız)	
Dayanma Voltajı	1 dakika için AC500V (DC24V besleme terminalleri ve FG terminalleri arasında)	
Güç Tüketimi (Note 2)	3.5W	
Backup Pili	3V lityum pil CR2032 x 1	
Backup Pil Ömrü	Kullanım koşulları ve ortam sıcaklığına bağlı olarak 25°C'de yaklaşık 3 yıl veya üzeri.	
Çalışma Sıcaklığı	0°C ~ 50°C	
Saklama Sıcaklığı	-20°C ~ +60°C	
Rutubet Oranı	10% ~ 90% RH [0 ~ 40°C], 10% ~ 55% RH [41 ~ 50°C] Kirlenme Derecesi 2	
Titreşim	IEC 61131-2 uyumlu 5Hz ≤ f < 8.3Hz = Sürekli: 3.5mm, 8.3Hz ≤ f ≤ 150Hz = Sürekli: 1.0g	
Şok	IEC 60068-2-27 uyumlu 11ms süresince 15g pik, X, Y, Z yönünde 6 defa	
Ölçüler (W) x (H) x (D) mm	215 x 161 x 35.3	
Panel Kesim Ölçüsü (W) x (H) mm	196.9 x 142.9	
Ağırlık	Yaklaşık 700g	



高彩·寬螢幕·友好人機介面

# DOP-B07

No.18, Xinglong Rd.,  
Taoyuan City 33068, Taiwan

## 安裝說明

### 1 一般注意事項

感謝您使用本產品，本人機界面安裝說明書提供 DOP-B 系列人機界面的相關資訊。在使用之前，請您仔細詳讀本說明書以確保使用上的正確。此外，請妥善將其放置在明顯的地點以便隨時查閱。下列事項在您尚未讀完本說明書前，請務必遵守：

- 安裝的環境必須沒有水氣、腐蝕性氣體及可燃性氣體。
- 接線時，請依接線圖說明施工。
- 接地工程必須確實實施，接地時須遵照國家現行相關電工法規的規定施行（請參考 NFPA 70: National Electrical Code, 2005 Ed.）。
- 在通電時，請勿拆解人機界面或更改配線。
- 在通電運作時，請勿接觸電源處，以免觸電。

如果您在使用上仍有問題，請諮詢經銷商或者本公司客服中心。由於產品精益求精，當內容規格有所修正時，請諮詢代理商或至台達網站

(<http://www.delta.com.tw/ia/>) 下載最新版本。

### 2 通訊腳位定義

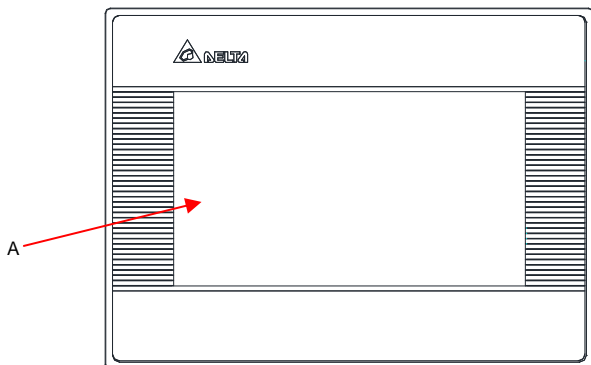
#### B07S410 COM 定義

COM Port 示意圖	腳位	MODE1	MODE2	MODE3
		RS-232	RS-422	RS-485
	1		TXD+	D+
	2	RXD		
	3	TXD		
	4		RXD+	
	5	GND	GND	GND
	6		TXD-	D-
	7	RTS		
	8	CTS		
	9		RXD-	

註 1：空白 = 不需連接

### 3 各部位說明

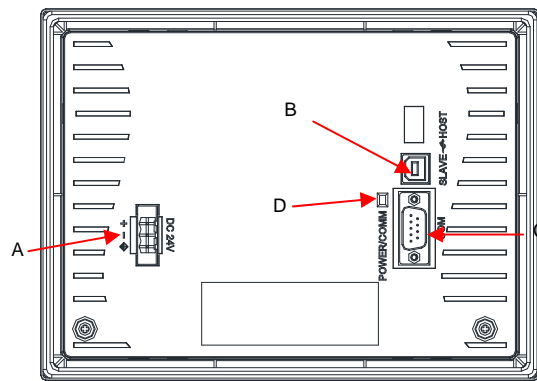
#### DOP-B07S410(正面)



A 操作 / 顯示區域

註：長按螢幕無元件區域 3 秒以上，聽到嗶聲後按下左上角大約 4-5 秒，即可進入系統畫面

#### DOP-B07S410 (背面)

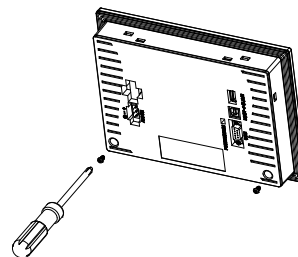


A	電源輸入端子	B	USB Slave
C	COM	D	電源/通訊指示燈

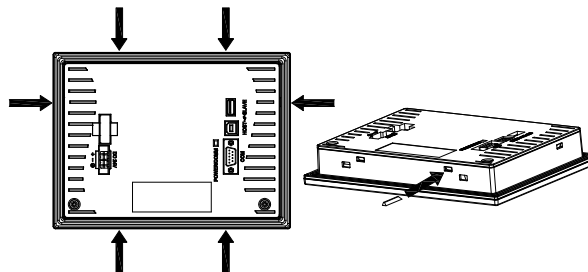
### 4 DOP-B07S410 電池更換注意事項

**DOP-B07S410 請勿使用非台達原廠的電池，如有需要請諮詢原購買的供應商**

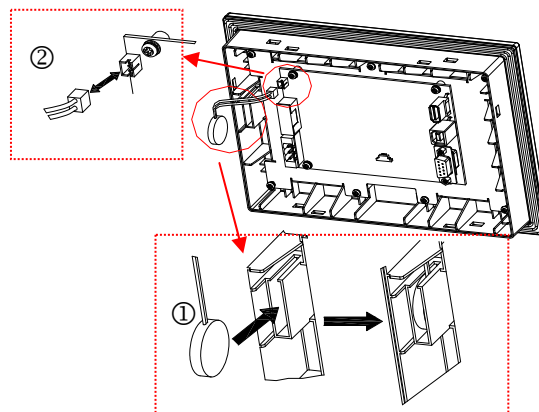
步驟一：卸載後蓋螺絲



步驟二：利用工具拆除外殼結合卡榫(箭頭處)

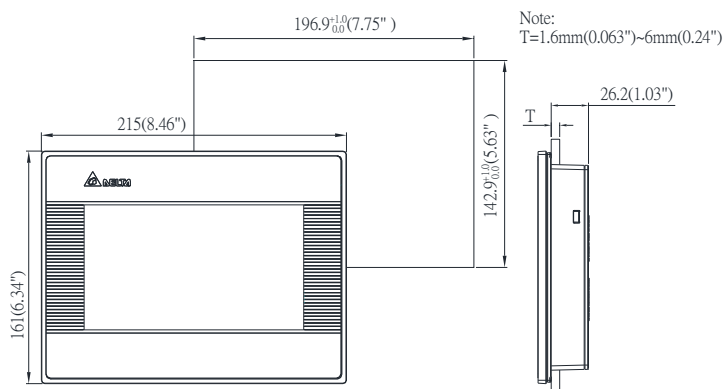


步驟三：依照下圖標示更換(1)並安裝電池(2)



## 5 開孔尺寸

### DOP-B07S410



## 6 硬體規格

型號		DOP-B07S410
顯示器	面板種類	7" TFT LCD ( 65535 色 )
	解析度	800 x 480 pixels
	背光燈	LED Back Light ( 常溫 25°C 下半衰期 > 2 萬小時 ) (Note 1)
	顯示範圍	154.08 x 85.92mm
作業系統		Delta Real Time OS
中央處理器		32-bit RISC Micro-controller
記憶體 ROM		Flash ROM 4 MB ( OS System: 2MB / User Application: 2MB )
內部記憶體		64Mbytes
斷電保持記憶體		32Kbytes
蜂鳴器		Multi-Tone Frequency ( 2K ~ 4K Hz ) / 85dB
USB		1 USB Slave Ver 2.0
串列通訊口	COM1	RS-232(支援流量控制) / RS-422 / RS-485
萬年曆		內建
冷卻方式		自然冷卻
安規認證		CE
面板防水等級		IP65
工作電壓 (Note 2)		DC +24V ( -10% ~ +15% ) ( 請使用隔離式電源供應器 )
絕緣耐力		DC24V 端子與 FG 端子間 : AC500V, 1 分鐘
消耗功率 (Note 2)		3.5W
記憶體備份電池		3V 鋰電池 CR2032 × 1
備份電池壽命		依使用環境溫度及使用條件而不同，常溫 25°C 下壽命約三年以上
操作溫度		0°C ~ 50°C
儲存溫度		-20°C ~ +60°C
工作環境		10% ~ 90% RH【0 ~ 40°C】· 10% ~ 55% RH【41 ~ 50°C】· 污染等級 2
耐震動		IEC61131-2 規定連續震動 5Hz~8.3Hz 3.5mm, 8.3Hz~150Hz 1G
耐衝擊		IEC60068-2-27 規定耐衝擊 11ms, 15G Peak, X, Y, Z 方向 各 6 次

尺寸 ( W )x( H )x( D ) mm	215 x 161 x 35.3
開孔尺寸 ( W ) x ( H ) mm	196.9 x 142.9
重量	約 700g

### NOTE

- 1) 背光模組半衰期的定義：最大驅動電流下，背光亮度衰退到最大亮度的一半時，即為半衰期。所標示的壽命時間為 25°C 常溫常濕工作環境下的預估值。
- 2) 消耗功率為無外接周邊設備時，人機本體所消耗的功率。建議選用的電源供應器容量為標示消耗功率的 1.5~2 倍，以確保人機工作正常。
- 3) 本人機界面安裝手冊內所記載的規格若有變更，本公司恕不另行通知。當內容規格有所修正時，請諮詢代理商或至台達網站

<http://www.delta.com.tw/ia/>。



高彩·宽屏幕·友好人机界面

# DOP-B07

No.18, Xinglong Rd.,  
Taoyuan City 33068, Taiwan

## 安装说明

### 1 一般注意事项

感谢您使用本产品，本人机界面安装说明书提供 DOP-B 系列人机界面的相关资讯。在使用之前，请您仔细阅读本说明书以确保使用上的正确。此外，请妥善将其放置在明显的地点以便随时查阅。下列事项在您尚未读完本说明书前，请务必遵守：

- 安装的环境必须没有水气、腐蚀性气体及可燃性气体。
- 接线时，请依接线图说明施工。
- 接地工程必须确实实施，接地时须遵照国家现行相关电工法规的规定施行（请参考 NFPA 70: National Electrical Code, 2005 Ed.）。
- 在通电时，请勿拆解人机界面或更改配线。
- 在通电运作时，请勿接触电源处，以免触电。

如果您在使用上仍有问题，请咨询经销商或者本公司客服中心。由于产品精益求精，当内容规格有所修正时，请咨询代理商或至台达网站

( <http://www.delta.com.tw/ia/> ) 下载最新版本。

### 2 通讯脚位定义

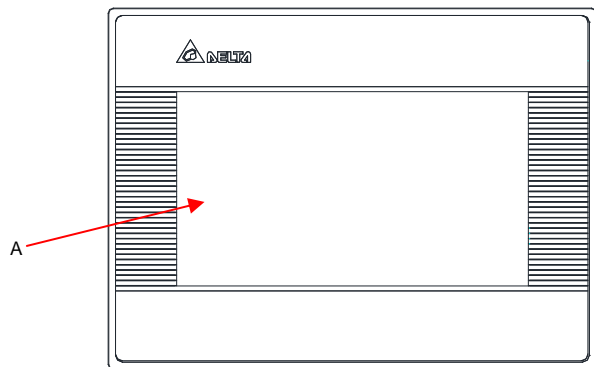
#### B07S410 COM 定义

COM Port 示意图	脚位	MODE1	MODE2	MODE3
		RS-232	RS-422	RS-485
	1		TXD+	D+
	2	RXD		
	3	TXD		
	4		RXD+	
	5	GND	GND	GND
	6		TXD-	D-
	7	RTS		
	8	CTS		
	9		RXD-	

注 1：空白 = 不需连接

### 3 各部位说明

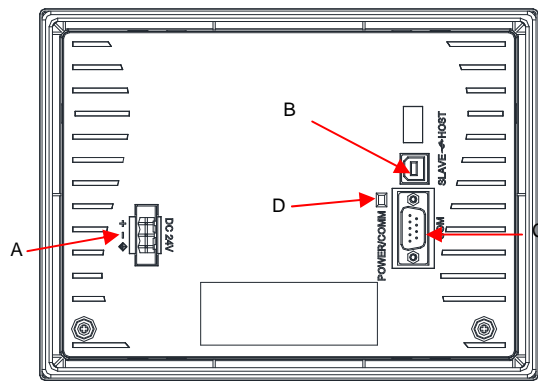
#### DOP-B07S410(正面)



A 操作 / 显示区域

注：长按屏幕无元件区域 3 秒以上，聽到嗶聲後按下左上角大約 4-5 秒，即可进入系统画面

#### DOP-B07S410 (背面)

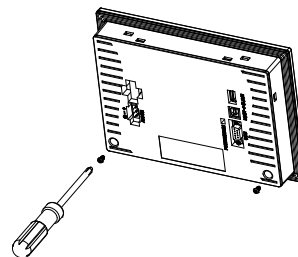


A	电源输入端子	B	USB Slave
C	COM	D	电源/通讯指示灯

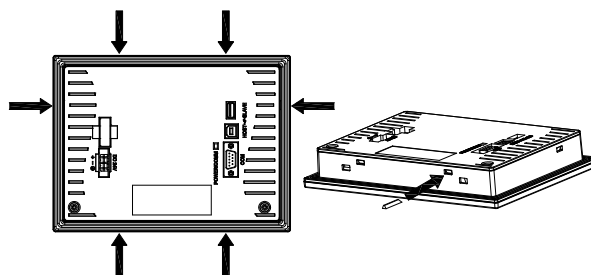
### 4 DOP-B07S410 電池更換注意事項

**DOP-B07S410 请勿使用非台达原厂的电池，如有需要请咨询原购买的供货商**

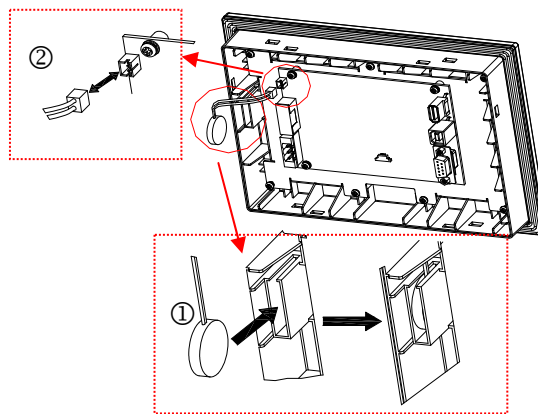
步骤一：卸除后盖螺丝



步骤二：利用工具拆除外壳结合卡榫(箭头处)

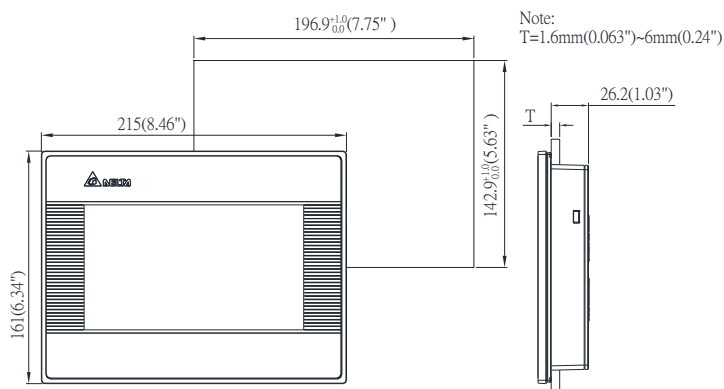


步骤三：依照下图标示更换(1)并安装电池(2)



## 5 开孔尺寸

### DOP-B07S410



尺寸 ( W )x( H )x( D ) mm	215 x 161 x 35.3
开孔尺寸 ( W ) x ( H ) mm	196.9 x 142.9
重量	约 700g

### NOTE

- 1) 背光模组半衰期的定义:最大驱动电流下,背光亮度衰退到最大亮度的一半时,即为半衰期。所标示的寿命时间为 25°C 常温常湿工作环境下的预估值。
- 2) 消耗功率为无外接周边设备时,人机本体所消耗的功率。建议选用的电源供应器容量为标示消耗功率的 1.5~2 倍,以确保人机工作正常。
- 3) 本人机界面安装手册内所记载的规格若有变更,本公司恕不另行通知。当内容规格有所修正时,请咨询代理商或至台达网站

<http://www.delta.com.tw/ia/>。

## 6 硬件规格

型号		DOP-B07S410
显示器	面板种类	7" TFT LCD ( 65535 色 )
	分辨率	800 x 480 pixels
	背光灯	LED Back Light ( 常温 25°C 下半衰期>2 万小时 ) (Note 1)
	显示范围	154.08 x 85.92mm
作业系统		Delta Real Time OS
中央处理器		32-bit RISC Micro-controller
存储器 ROM		Flash ROM 4 MB ( OS System: 2MB / User Application: 2MB )
内部存储器		64Mbytes
断电保持存储器		32Kbytes
蜂鸣器		Multi-Tone Frequency ( 2K ~ 4K Hz ) / 85dB
USB		1 USB Slave Ver 2.0
串行通讯口	COM1	RS-232(支持流量控制) / RS-422 / RS-485
万年历		内建
冷却方式		自然冷却
安规认证		CE
面板防水等级		IP65
工作电压 (Note2)		DC +24V ( -10% ~ +15% ) ( 请使用屏蔽式电源供应器 )
绝缘耐力		DC24V 端子与 FG 端子间: AC500V, 1 分钟
消耗功率 (Note 2)		3.5W
存储器备份电池		3V 锂电池 CR2032 × 1
备份电池寿命		依使用环境温度及使用条件而不同, 常温 25°C 下寿命约三年以上
操作温度		0°C ~ 50°C
储存温度		-20°C ~ +60°C
工作环境		10% ~ 90% RH【0 ~ 40°C】·10% ~ 55% RH【41 ~ 50°C】· 污染等级 2
耐震动		IEC61131-2 规定连续震动 5Hz~8.3Hz 3.5mm, 8.3Hz~150Hz 1G
耐冲击		IEC60068-2-27 规定耐冲击 11ms, 15G Peak, X, Y, Z 方向 各 6 次