



High Color • Wide Screen •  
User-Friendly HMI Products

# DOP-B07

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

## B07S(E)411/B07S411K / B07S401K 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

#### DOP-B07S(E)411 / DOP-B07S411K / DOP-B07S401K COM1 Port

| COM Port | PIN | MODE1  |
|----------|-----|--------|
|          |     | RS-232 |
|          | 1   |        |
|          | 2   | RXD    |
|          | 3   | TXD    |
|          | 4   |        |
|          | 5   | GND    |
|          | 6   |        |
|          | 7   | RTS    |
|          | 8   | CTS    |
|          | 9   |        |

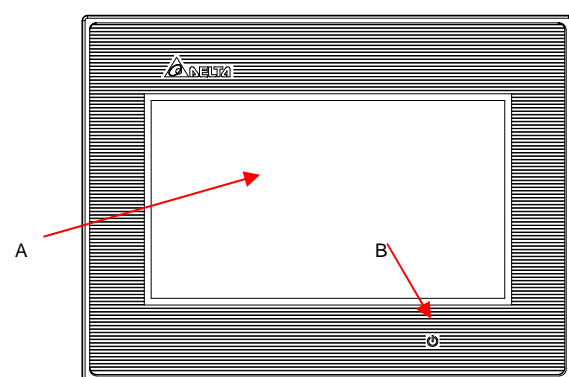
#### DOP-B07S(E)411 / DOP-B07S411K // DOP-B07S401K COM2 Port

| COM Port | PIN | MODE1  |        | MODE2  |        | MODE3  |        |
|----------|-----|--------|--------|--------|--------|--------|--------|
|          |     | COM2   | COM3   | COM2   | COM3   | COM2   | COM3   |
|          |     | RS-232 | RS-485 | RS-485 | RS-485 | RS-232 | RS-422 |
|          | 1   |        |        | D+     |        |        | TXD+   |
|          | 2   | RXD    |        |        |        |        | RXD    |
|          | 3   | TXD    |        |        |        |        | TXD    |
|          | 4   |        | D+     |        | D+     |        | RXD+   |
|          | 5   | GND    |        | GND    |        | GND    |        |
|          | 6   |        | D-     |        |        |        | TXD-   |
|          | 7   |        |        |        |        |        |        |
|          | 8   |        |        |        |        |        |        |
|          | 9   |        | D-     |        | D-     |        | RXD-   |

Note1: Blank = No Connection.

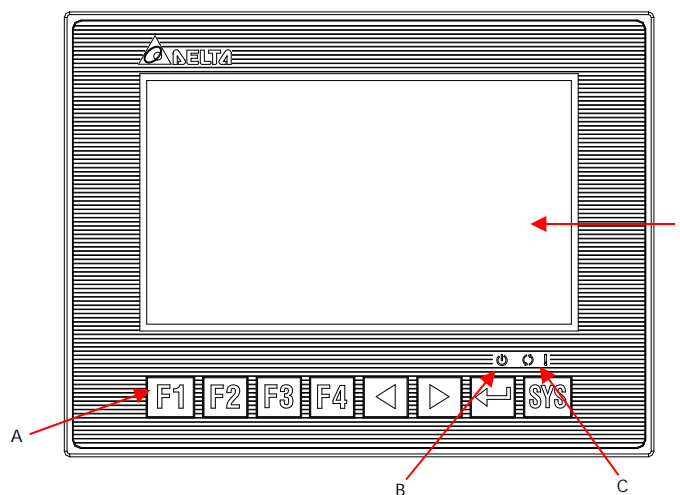
### (3) Parts Names

#### DOP-B07S(E)411 (Front View)



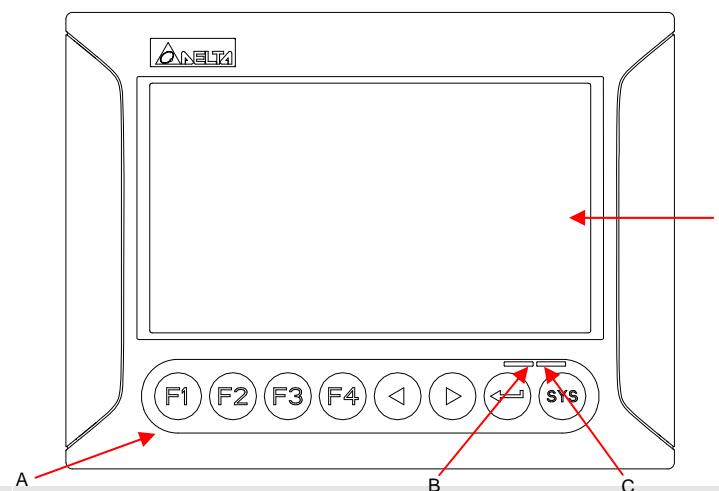
|   |                        |   |                     |
|---|------------------------|---|---------------------|
| A | Touch Screen / Display | B | Power LED Indicator |
|---|------------------------|---|---------------------|

#### DOP-B07S411K (Front View)



| User-defined Function Keys / System Keys  |  |
|---|--|
| A   | User-defined Function Keys: F1, F2, F3, F4<br>System Keys: <, >, ←, →, SYS   |
| B   | : Power LED Indicator<br>Lights in green when HMI works normally.  |
| C   | : Operation LED Indicator (Blue) <sup>(Note1)</sup><br>The operation LED indicator blinks in blue when either the communication is carried out or the data is accessing (please refer to the "Note1" below for explanation). |
| D   | : Alarm LED Indicator (Red)<br>The alarm LED indicator blinks in red when one of the alarms is on.   |
| D   | Touch Screen / Display   |
| <b>NOTE</b><br>1. The definition of the operation LED indicator (Blue) can be determined by the users freely. |  |

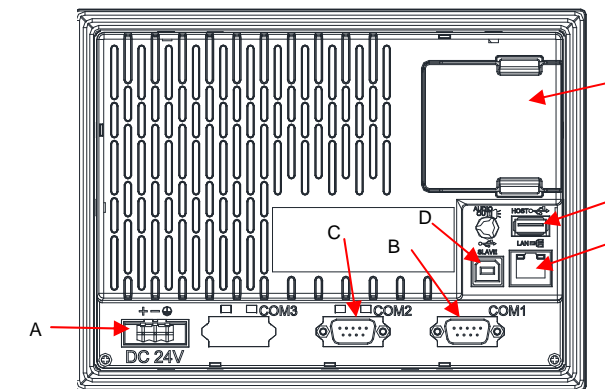
#### DOP-B07S401K (Front View)



| User-defined Function Keys / System Keys |   |
|--|---|
| A  | User-defined Function Keys: F1, F2, F3, F4<br>System Keys: <, >, ←, →, SYS  |
| B  | Power LED Indicator (Green)<br>Lights in green when HMI works normally.   |
| C  | Left side: Operation LED Indicator (Blue) <sup>(Note1)</sup><br>The operation LED indicator blinks in blue when either the communication is carried out or the data is accessing (please refer to the "Note1" below for explanation). |

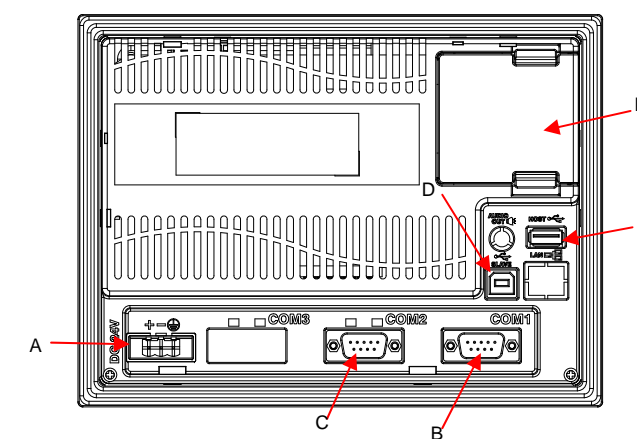
|   |  |
|---|--|
|   | Right side: Alarm LED Indicator (Red)<br>The alarm LED indicator blinks in red when one of the alarms is on. |
| D   | Touch Screen / Display   |
| <b>NOTE</b><br>1. The definition of the operation LED indicator (Blue) can be determined by the users freely. |  |

#### DOP-B07S(E)411 (Rear View)



|                         |                          |   |              |
|-------------------------|--------------------------|---|--------------|
| A                       | Power Input Terminal     | B | COM1         |
| C                       | COM2                     | D | USB Slave    |
| E                       | USB Host                 | F | Battery Case |
| G                       | Ethernet Interface (LAN) |   |              |
| Note: DOP-B07E411 only. |                          |   |              |

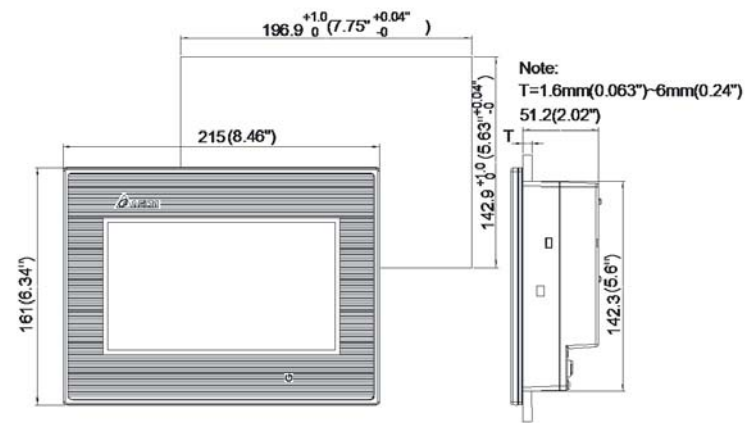
#### DOP-B07S411K / DOP-B07S401K (Rear View)



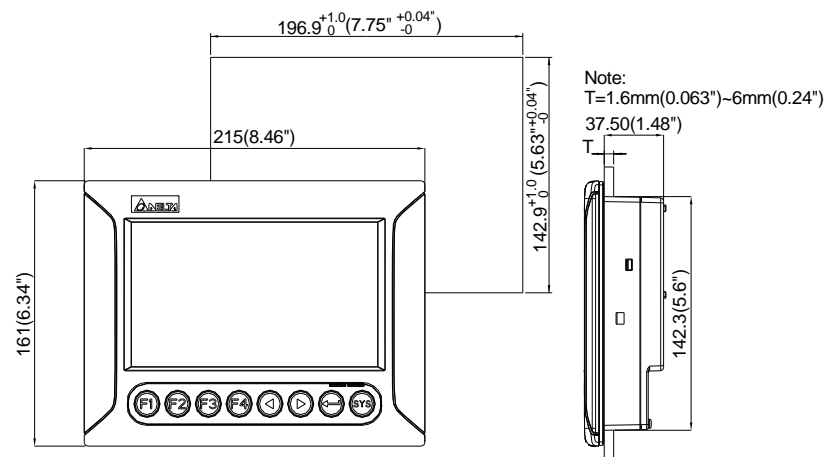
|   |                      |   |              |
|---|----------------------|---|--------------|
| A | Power Input Terminal | B | COM1         |
| C | COM2                 | D | USB Slave    |
| E | USB Host             | F | Battery Case |

## (4) Dimensions

DOP-B07S(E)411 / DOP-B07S411K



DOP-B07S401K



| MODEL                                 | DOP-B07S411   | DOP-B07E411 | DOP-B07S411K | DOP-B07S401K |
|---------------------------------------|---|-------------|--------------|--------------|
| Voltage Endurance                     | AC500V for 1 minute (between charging (DC24V terminal) and FG terminals)                        |             |              |              |
| Power Consumption <sup>(Note 2)</sup> | 4.0W  |             |              |              |
| 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]<br>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 50  |             |              |              |
| Panel Cutout (W) x (H) mm             | 196.9 x 142.9   |             |              |              |
| Weight                                | Approx. 820g  |             | Approx. 840g |              |



### NOTE

- 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>.

## (5) Specifications

| MODEL                                | DOP-B07S411   | DOP-B07E411  | DOP-B07S411K | DOP-B07S401K |
|--------------------------------------|---|--|--------------|--------------|
| LCD MODULE                           | Display Type  | 7" TFT LCD (65535 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 128 MB<br>(OS System: 30MB / Backup: 16MB / User Application: 82MB) |  |              |              |
| SDRAM                                | 64Mbytes  |  |              |              |
| Backup Memory                        | 16Mbytes  |  |              |              |
| Buzzer                               | Multi-Tone Frequency ( 2K ~ 4K Hz ) / 85dB                                    |  |              |              |
| Ethernet Interface                   | N/A   | IEEE 802.3,<br>IEEE 802.3u<br>10/100 Mbps<br>auto-sensing (has<br>built-in isolated<br>power circuit <sup>(Note 2)</sup> ) | N/A          |              |
| USB                                  | 1 USB Slave Ver 2.0<br>1 USB Host Ver 1.1                                     |  |              |              |
| Serial COM Port                      | COM1  | RS-232(supports hardware flow control)   |              |              |
|                                      | COM2  | RS-232 / RS-485  |              |              |
|                                      | COM3  | RS-422 / RS-485  |              |              |
| Function Key                         | N/A   | User defined key x 4 +<br>System key x 4   |              |              |
| Perpetual Calendar (RTC)             | Built-in  |  |              |              |
| Cooling Method                       | Natural air circulation   |  |              |              |
| Safety Approval                      | CE / UL   |  |              |              |
| Waterproof Degree                    | IP65  |  |              |              |
| Operation Voltage <sup>(Note2)</sup> | DC +24V ( -10% ~ +15% ) (please use isolated power supply)                    |  |              |              |



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Yüksek Renk • Geniş Ekran • Kullanımı  
Kolay HMI Ürünleri

DOP-B07

No.18, Xinglong Rd., Taoyuan City 33068,  
TaiwanB07S(E)411/B07S411K / B07S401K  
Bilgi Dökümanı

### (1) Önsöz

DELTA'nın DOP-B serisi operatör panellerini seçtiğiniz için teşekkürler. Bu bilgi dökümanı Delta HMI kurulum, bağlantı, bakım ve kontrolünde kullanıcıya yardımcı olacaktır. Doğru kullanım için ürünü kullanmadan önce bu dökümanı mutlaka okuyunuz. Kurulum, bağlantı ve çalışma yapmadan önce güvenlik uyarılarını tamamen anladığınızdan emin olunuz. Bu dökümanı 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'nın 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 sökmeyiniz.
- Çalışma sırasında enerji besleme terminallerine dokunmayınız. Aksi halde elektrik şoku olabilir.

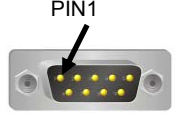
Ürünün kullanımı ile ilgili sorularınız için, lütfen teknik servisimizle bağlantıya geçiniz.

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

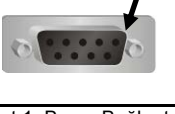
<http://www.delta.com.tw/ia>

### (2) Seri Haberleşme Pin Açıklamaları

DOP-B07S(E)411 / DOP-B07S411K / DOP-B07S401K COM1 Port

| COM Port   | PIN | MOD 1  |
|--|-----|--------|
|  | 1   | RS-232 |
|  | 2   | RXD    |
|  | 3   | TXD    |
|  | 4   |        |
|  | 5   | GND    |
|  | 6   |        |
|  | 7   | RTS    |
|  | 8   | CTS    |
|  | 9   |        |

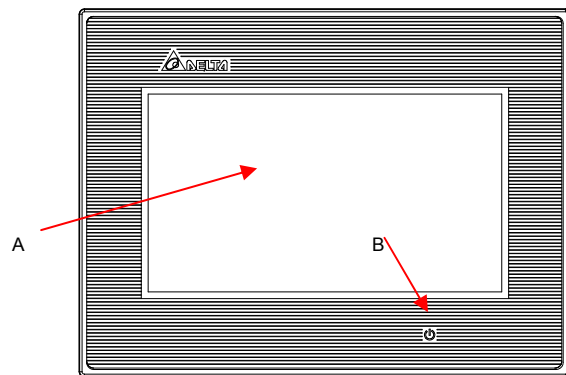
DOP-B07S(E)411 / DOP-B07S411K / DOP-B07S401K COM2 Port

| COM Port   | PIN | MODE1 |      | MODE2 |      | MODE3 |      |
|--|-----|-------|------|-------|------|-------|------|
|  |     | COM2  | COM3 | COM2  | COM3 | COM2  | COM3 |
|  | 1   |       |      | D+    |      |       | TXD+ |
|  | 2   | RXD   |      |       |      |       | RXD  |
|  | 3   | TXD   |      |       |      |       | TXD  |
|  | 4   |       | D+   |       | D+   |       | RXD+ |
|  | 5   | GND   |      | GND   |      | GND   |      |
|  | 6   |       |      | D-    |      |       | TXD- |
|  | 7   |       |      |       |      |       |      |
|  | 8   |       |      |       |      |       |      |
|  | 9   |       | D-   |       | D-   |       | RXD- |

Not 1: Boş = Bağlantı Yapılmaz.

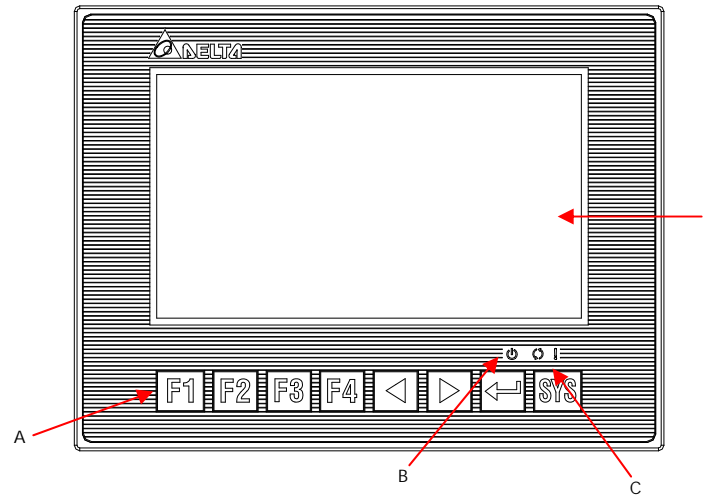
### (3) Parça İsimleri

DOP-B07S(E)411 (Ön Görünüm)



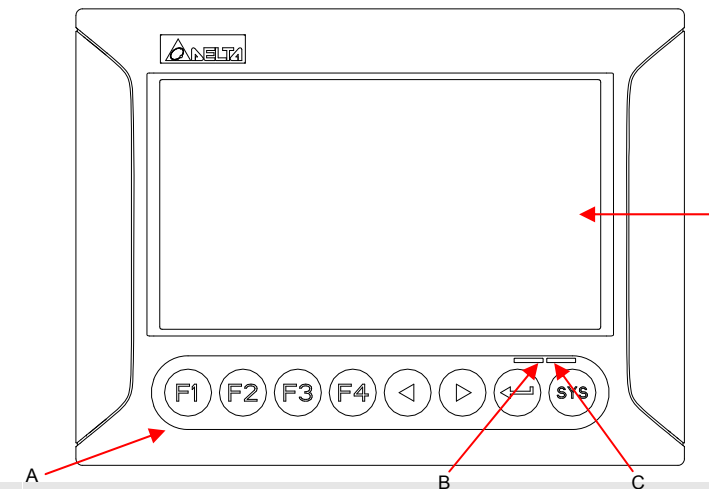
A Dokunmatik Ekran / Display B Power LED İndikatör

DOP-B07S411K (Ön Görünüm)



|   |  |
|---|--|
|   | Kullanıcı-tanımlı Fonksiyon Tuşları / Sistem Tuşları   |
| A | Kullanıcı-tanımlı Fonksiyon Tuşları: F1, F2, F3, F4<br>Sistem Tuşları: <, >, +, SYS  |
| B |  : Power LED İndikator<br>HMI normal çalıştığında yeşil yanar.  |
|   |  : Çalışma LED İndikator (Mavi) <sup>(Not 1)</sup><br>Haberleşme sağlandığı zaman veya data iletişimi sırasında çalışma LED'i mavi flash yapar .                      |
| C | (Lütfen aşağıdaki Not 1'i inceleyiniz).<br> : Sağ kenar: Alarm LED İndikator (Kırmızı)<br>Herhangi bir alarm aktif olduğunda Alarm LED indikator kırmızı flash yapar. |
| D | Touch Screen / Display   |
|   | <b>NOTE</b><br>1. Çalışma LED indikatörü (mavi) tanımlaması kullanıcı tarafından belirlenebilir.   |

DOP-B07S401K (Ön Görünüm)



|   |   |
|---|---|
|   | Kullanıcı-tanımlı Fonksiyon Tuşları / Sistem Tuşları  |
| A | Kullanıcı-tanımlı Fonksiyon Tuşları: F1, F2, F3, F4<br>Sistem Tuşları: <, >, +, SYS   |
| B | Power LED İndikator (Yeşil)<br>HMI normal çalıştığında yeşil yanar.   |
| C | Sol kenar: Çalışma LED İndikator (Mavi) <sup>(Not1)</sup><br>Haberleşme sağlandığı zaman veya data iletişimi sırasında çalışma LED'i mavi flash yapar . (Lütfen aşağıdaki Not 1'i inceleyiniz).<br>Sağ kenar: Alarm LED İndikator (Kırmızı) |

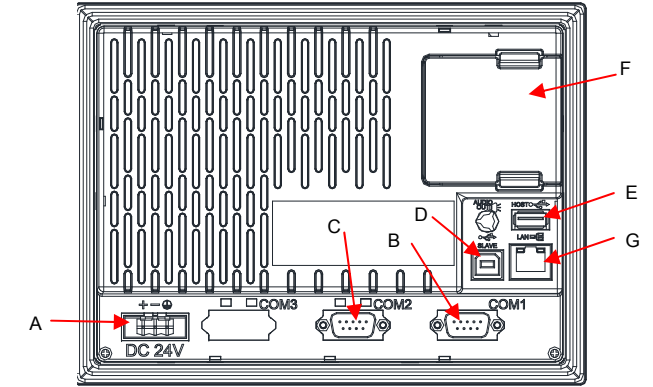
Herhangi bir alarm aktif olduğunda Alarm LED indikator kırmızı flash yapar.

D Touch Screen / Display

**NOTE**

1. Çalışma LED indikatörü (mavi) tanımlaması kullanıcı tarafından belirlenebilir.

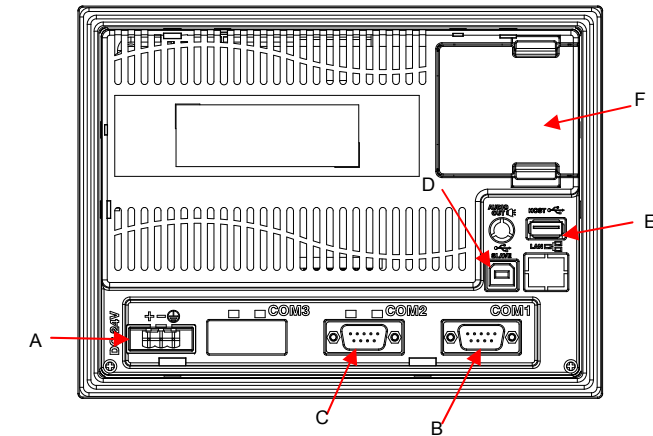
DOP-B07S(E)411 (Arka Görünüm)



|   |                          |   |            |
|---|--------------------------|---|------------|
| A | Power Giriş Terminali    | B | COM1       |
| C | COM2                     | D | USB Slave  |
| E | USB Host                 | F | Pil Kapağı |
| G | Ethernet Arabirimi (LAN) |   |            |

Not: Sadece DOP-B07E411.

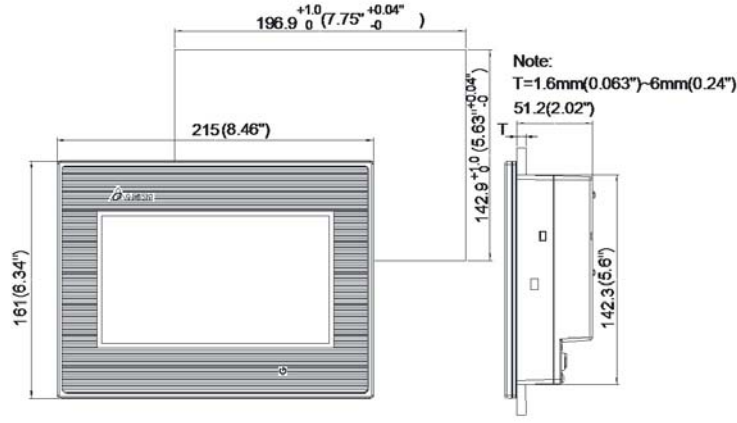
DOP-B07S411K / DOP-B07S401K (Arka Görünüm)



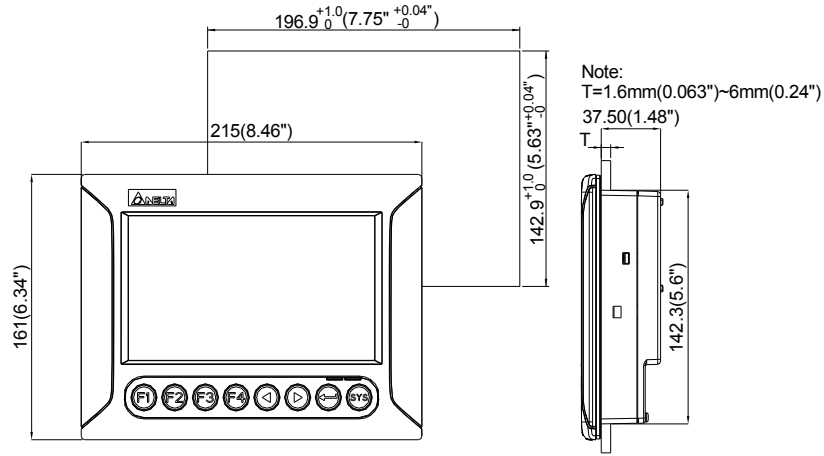
|   |                       |   |            |
|---|-----------------------|---|------------|
| A | Power Giriş Terminali | B | COM1       |
| C | COM2                  | D | USB Slave  |
| E | USB Host              | F | Pil Kapağı |

## (4) Ölçüler

DOP-B07S(E)411 / DOP-B07S411K



DOP-B07S401K



## (5) Özellikler

| MODEL                   | DOP-B07S411   | DOP-B07E411   | DOP-B07S411K | DOP-B07S401K |
|-------------------------|---|---|--------------|--------------|
| LCD MODÜL               | Display Tipi  | 7" TFT LCD (65535 renk)   |              |              |
|                         | Çözünürlük  | 800 x 480 piksel  |              |              |
|                         | Aydınlatma  | LED Aydınlatma (25°C yarım ömürde 20,000 saatden az) (Not 1)  |              |              |
|                         | Display Ölçü  | 154.08 x 85.92mm  |              |              |
| İşletim Sistemi         | Delta Real Time OS  |   |              |              |
| MCU                     | 32-bit RISC Micro-işlemci   |   |              |              |
| NOR Flash ROM           | Flash ROM 128 MB<br>(OS Sistem: 30MB / Backup: 16MB / Kullanıcı Uygulama: 82MB) |   |              |              |
| SDRAM                   | 64Mbyte   |   |              |              |
| Backup Memory           | 16Mbyte   |   |              |              |
| Buzzer                  | Multi-Ton Frekans ( 2K ~ 4K Hz ) / 85dB   |   |              |              |
| Ethernet Arabirimi      | N/A   | IEEE 802.3,<br>IEEE 802.3u<br>10/100 Mbps<br>otomatik algılamalı<br>(dahili izoleli güç<br>devresi mevcut<br>(Not 2)) | N/A          |              |
| USB                     | 1 USB Slave Ver 2.0<br>1 USB Host Ver 1.1                                       |   |              |              |
| Seri<br>COM<br>Port     | COM1  | RS-232(donanım flow (akış) kontrol destekler)   |              |              |
|                         | COM2  | RS-232/RS-485   |              |              |
|                         | COM3  | RS-422/RS-485   |              |              |
| Fonksiyon Tuşu          | N/A   | 4 adet kullanıcı tanımlı tuş +<br>4 adet sistem tuşu  |              |              |
| Gerçek Zaman Saati(RTC) | Dahili  |   |              |              |
| Soğutma Metodu          | Doğal hava sirkülasyonu   |   |              |              |
| Güvenlik Onayı          | CE / UL   |   |              |              |

| MODEL                              | DOP-B07S411   | DOP-B07E411 | DOP-B07S411K  | DOP-B07S401K |
|------------------------------------|---|-------------|---------------|--------------|
| Su Geçirmezlik Derecesi            | IP65  |             |               |              |
| Çalışma Voltajı (Not2)             | DC +24V ( -10% ~ +15% ) (lütfen izoleli güç kaynağı kullanınız)                           |             |               |              |
| Dayanma Voltajı                    | 1 dakika için AC500V (DC24V besleme terminaleri ve FG terminaleri arasında)               |             |               |              |
| Güç Tüketimi (Not 2)               | 4.0W  |             |               |              |
| Backup Pili                        | 3V lityum pil CR2032 × 1  |             |               |              |
| Backup Pili 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]<br>Kirlenme Derecesi 2                  |             |               |              |
| Titreşim                           | IEC 61131-2 uyumlu 5Hz ≤ f < 8.3Hz = Sürekli: 3.5mm,<br>8.3Hz ≤ f ≤ 150Hz = Sürekli: 1.0g |             |               |              |
| Şok                                | IEC 60068-2-27 uyumlu 11ms süresince 15g pik,<br>X, Y, Z yönünde 6 defa                   |             |               |              |
| Ölçüler<br>(W) x (H) x (D) mm      | 215 x 161 x 50  |             |               |              |
| Panel Kesim Ölçüsü<br>(W) x (H) mm | 196.9 x 142.9   |             |               |              |
| Ağırlık                            | Yaklaşık 820g   |             | Yaklaşık 840g |              |

## NOTE

- Arka ışık yarım-ömrü, HMI maksimum akımla beslendiğinde orijinal aydınlatmanın %50 düşürüldüğü anlamına gelir. Yukarıda gösterilen arka ışık LED aydınlatma ömrü 25°C 'de derecede normal sıcaklık ve rutubet ortamında tahmin edilen değerlerdir.
- Güç tüketimi HMI ünitesinin hiç bir cihaza bağlı olmadan boş olarak tükettiği gücü gösterir. Normal çalışmada HMI'nın boşken tükettiği gücün 1.5 veya 2 katı güç verebilen besleme kaynağı kullanılması tavsiye edilir.
- Herhangi bir ihbar olmadan bu dökümanın 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  
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TEL: 86-512-6340-3008  
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高彩・寬螢幕・友善人機介面

# DOP-B07

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

## B07S(E)411 / B07S411K / B07S401K 安裝說明

### (1) 一般注意事項

感謝您使用本產品。本人機介面安裝說明書提供 DOP-B 系列人機介面的相關資訊。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之規定施行（請參考 NFPA 70: National Electrical Code, 2005 Ed.）。
- 在通電時，請勿拆解人機介面或更改配線。
- 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，請洽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，請洽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

#### DOP-B07S(E)411 / DOP-B07S411K / DOP-B07S401K COM1 定義

| COM Port 示意圖 | 腳位 | MODE1  |
|--------------|----|--------|
|              | 1  | RS-232 |
|              | 2  | RXD    |
|              | 3  | TXD    |
|              | 4  |        |
|              | 5  | GND    |
|              | 6  |        |
|              | 7  | RTS    |
|              | 8  | CTS    |
|              | 9  |        |

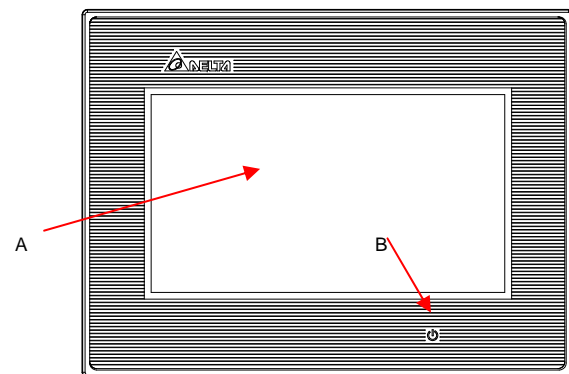
#### DOP-B07S(E)411 / DOP-B07S411K / DOP-B07S401K COM2 定義

| COM Port 示意圖 | 腳位 | MODE1  |        | MODE2  |        | MODE3  |        |
|--------------|----|--------|--------|--------|--------|--------|--------|
|              |    | COM2   | COM3   | COM2   | COM3   | COM2   | COM3   |
|              |    | RS-232 | RS-485 | RS-485 | RS-485 | RS-232 | RS-422 |
|              | 1  |        |        | D+     |        | RXD    | TXD+   |
|              | 2  | RXD    |        |        |        | TXD    |        |
|              | 3  | TXD    |        |        |        |        |        |
|              | 4  |        | D+     |        | D+     |        | RXD+   |
|              | 5  | GND    |        | GND    |        | GND    |        |
|              | 6  |        |        | D-     |        |        | TXD-   |
|              | 7  |        |        |        |        |        |        |
|              | 8  |        |        |        |        |        |        |
|              | 9  |        | D-     |        | D-     |        | RXD-   |

註 1：空白 = 不需連接

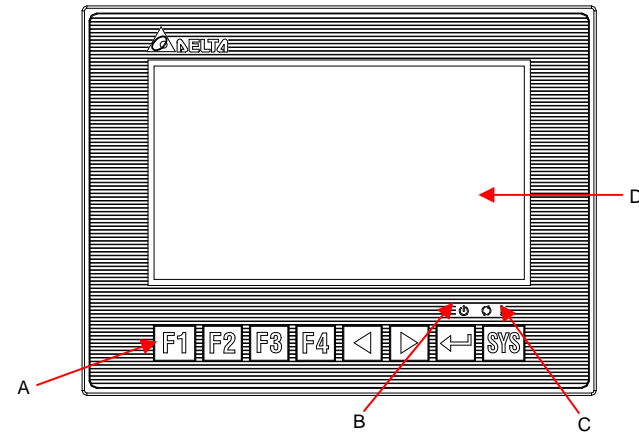
### (3) 各部位說明

#### DOP-B07S(E)411(正面)



|   |           |   |       |
|---|-----------|---|-------|
| A | 操作 / 顯示區域 | B | 電源指示燈 |
|---|-----------|---|-------|

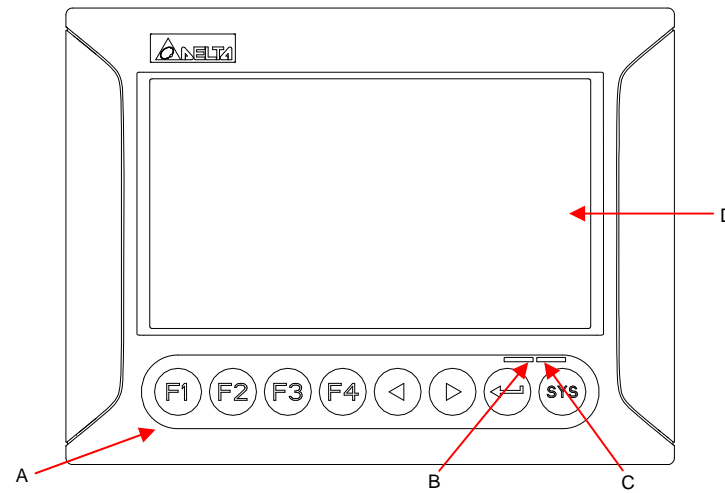
#### DOP-B07S411K(正面)



|   |                         |   |
|---|-------------------------|---|
| A | 自訂功能鍵 / 系統鍵             | 自訂功能鍵：F1, F2, F3, F4<br>系統鍵：<, >, ←, →, SYS |
| B | 電源指示燈 ( )               | 綠燈亮：正常運作                                    |
| C | 動作指示燈 ( ) / 警報指示燈 ( ! ) | 藍燈閃爍：通訊中 / 資料存取中 (註)<br>紅燈閃爍：警報發生中          |
| D | 操作/顯示區域                 |   |

註：藍色燈號顯示定義可由使用者自行設定

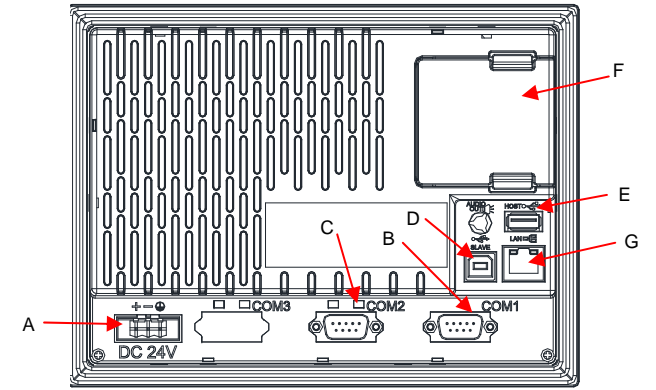
#### DOP-B07S401K (正面)



|   |                         |   |
|---|-------------------------|---|
| A | 自訂功能鍵 / 系統鍵             | 自訂功能鍵：F1, F2, F3, F4<br>系統鍵：<, >, ←, →, SYS |
| B | 電源指示燈 (綠色)              | 綠燈亮：正常運作                                    |
| C | 動作指示燈 (藍色) / 警報指示燈 (紅色) | 藍燈閃爍：通訊中 / 資料存取中 (註)<br>紅燈閃爍：警報發生中          |
| D | 操作/顯示區域                 |   |

註：藍色燈號顯示定義可由使用者自行設定

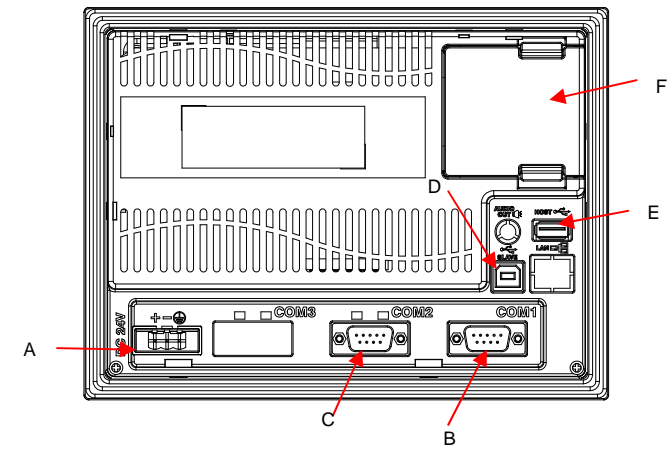
#### DOP-B07S(E)411 (背面)



|   |           |   |           |
|---|-----------|---|-----------|
| A | 電源輸入端子    | B | COM1      |
| C | COM2      | D | USB Slave |
| E | USB Host  | F | 電池外蓋      |
| G | 網路埠 (LAN) |   |           |

註：只針對 DOP-B07E411

#### DOP-B07S411K / DOP-B07S401K (背面)

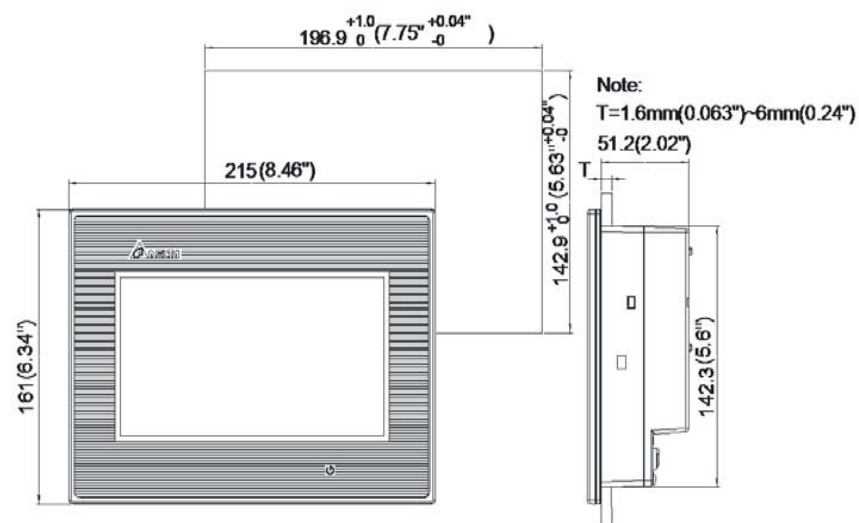


|   |          |   |           |
|---|----------|---|-----------|
| A | 電源輸入端子   | B | COM1      |
| C | COM2     | D | USB Slave |
| E | USB Host | F | 電池外蓋      |

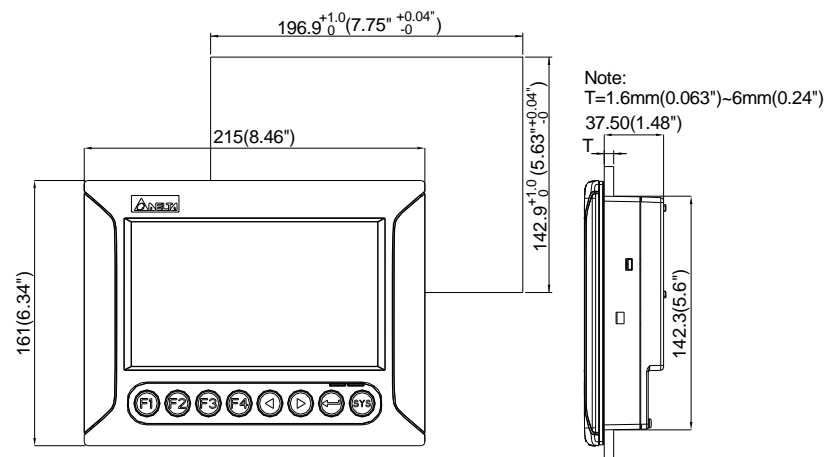


#### (4) 開孔尺寸

##### DOP-B07S(E)411 / DOP-B07S411K



##### DOP-B07S401K



#### (5) 硬體規格

| 型號        | DOP-B07S411   | DOP-B07E411  | DOP-B07S411K | DOP-B07S401K |
|-----------|---|--|--------------|--------------|
| 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 128 MB<br>(OS System: 30MB / Backup: 16MB / User Application: 82MB) |  |              |              |
| 內部記憶體     | 64Mbytes  |  |              |              |
| 斷電保持內部記憶體 | 16Mbytes  |  |              |              |
| 蜂鳴器       | Multi-Tone Frequency ( 2K ~ 4K Hz ) / 85dB                                    |  |              |              |
| 網路介面      | N/A   | IEEE 802.3,<br>IEEE 802.3u<br>10/100 Mbps 自動偵測 ( 內建隔離電路 (Note 2) ) | N/A          |              |
| USB       | 1 USB Slave Ver 2.0<br>1 USB Host Ver 1.1                                     |  |              |              |

|                               |   |                    |  |
|-------------------------------|---|--------------------|--|
| 串列通訊埠                         | COM1  | RS-232(支援流量控制)     |  |
|                               | COM2  | RS-232 / RS-485    |  |
|                               | COM3  | RS-422 / RS-485    |  |
| 輔助鍵                           | N/A   | 使用者定義鍵 x4 + 系統鍵 x4 |  |
| 萬年曆                           | 內建  |                    |  |
| 冷卻方式                          | 自然冷卻  |                    |  |
| 安規認證                          | CE / UL   |                    |  |
| 面板防水等級                        | IP65  |                    |  |
| 工作電壓 (Note2)                  | 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)                 | 4.0W  |                    |  |
| 記憶體備份電池                       | 3V 鋰電池 CR2032 x 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<br>( W )x( H )x( D )<br>mm | 215 x 161 x 50  |                    |  |
| 開孔尺寸<br>( W ) x ( H ) mm      | 196.9 x 142.9   |                    |  |
| 重量                            | 約 820g  | 約 840g             |  |

#### 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。所標示之壽命時間為 25°C 常溫常濕工作環境下之預估值。
- 2) 消耗功率為無外接週邊設備時，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之 1.5~2 倍，以確保人機工作正常。
- 3) 本人機介面安裝手冊內所記載之規格若有變更，本公司恕不另行通知。當內容規格有所修正時，請洽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

## B07S(E)411 / B07S411K / B07S401K 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信息。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

#### DOP-B07S(E)411 / DOP-B07S411K / DOP-B07S401K COM1 定义

| COM Port 示意图 | 脚位 | MODE1  |
|--------------|----|--------|
|              |    | RS-232 |
|              | 1  |        |
|              | 2  | RXD    |
|              | 3  | TXD    |
|              | 4  |        |
|              | 5  | GND    |
|              | 6  |        |
|              | 7  | RTS    |
|              | 8  | CTS    |
|              | 9  |        |

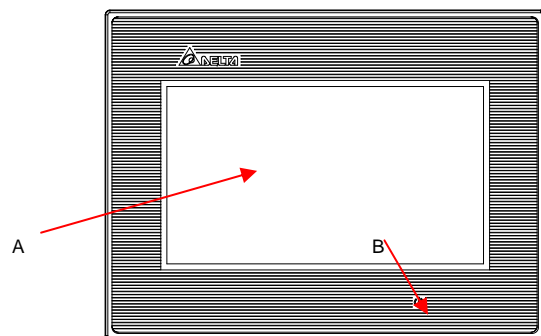
#### DOP-B07S(E)411 / DOP-B07S411K // DOP-B07S401K COM2 定义

| COM Port 示意图 | 脚位 | MODE1  |        | MODE2  |        | MODE3  |        |
|--------------|----|--------|--------|--------|--------|--------|--------|
|              |    | COM2   | COM3   | COM2   | COM3   | COM2   | COM3   |
|              |    | RS-232 | RS-485 | RS-485 | RS-485 | RS-232 | RS-422 |
|              | 1  |        |        | D+     |        |        | TXD+   |
|              | 2  | RXD    |        |        |        |        | RXD    |
|              | 3  | TXD    |        |        |        |        | TXD    |
|              | 4  |        | D+     |        | D+     |        | RXD+   |
|              | 5  | GND    |        | GND    |        | GND    |        |
|              | 6  |        |        | D-     |        |        | TXD-   |
|              | 7  |        |        |        |        |        |        |
|              | 8  |        |        |        |        |        |        |
|              | 9  |        | D-     |        | D-     |        | RXD-   |

注1：空白 = 不需连接

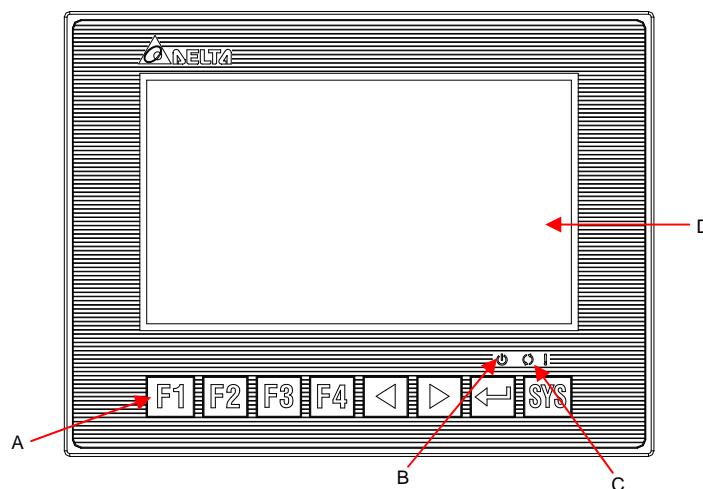
### (3) 各部位说明

#### DOP-B07S(E)411(正面)



A 操作 / 显示区域 B 电源指示灯

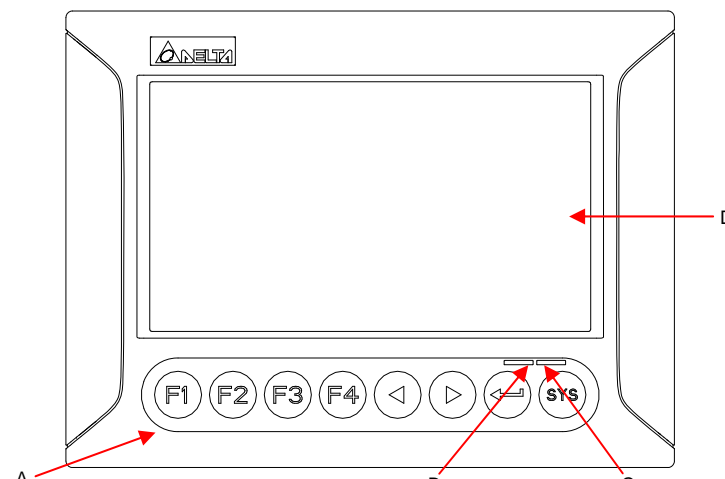
#### DOP-B07S411K (正面)



|   |                         |  |
|---|-------------------------|--|
| A | 自订功能键 / 系统键             | 自订功能键：F1, F2, F3, F4<br>系统键：<, >, +/-, SYS |
| B | 电源指示灯 ( )               | 绿灯亮：正常运作                                   |
| C | 动作指示灯 ( ) / 警报指示灯 ( ! ) | 蓝灯闪烁：通讯中 / 数据存取中 (注)<br>红灯闪烁：警报发生中         |
| D | 操作/显示区域                 |  |

注：蓝色灯号显示定义可由使用者自行设定

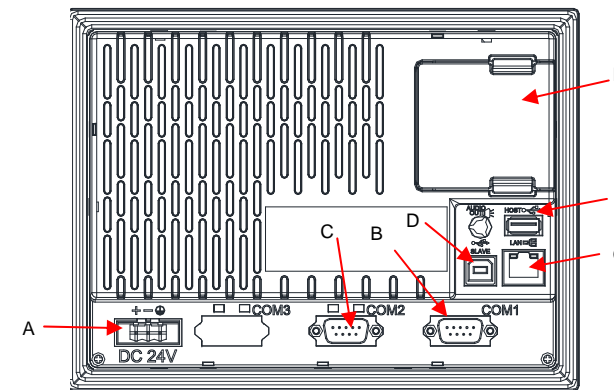
#### DOP-B07S401K (正面)



|   |                         |  |
|---|-------------------------|--|
| A | 自订功能键 / 系统键             | 自订功能键：F1, F2, F3, F4<br>系统键：<, >, +/-, SYS |
| B | 电源指示灯 (绿色)              | 绿灯亮：正常运作                                   |
| C | 动作指示灯 (蓝色) / 警报指示灯 (红色) | 蓝灯闪烁：通讯中 / 数据存取中 (注)<br>红灯闪烁：警报发生中         |
| D | 操作/显示区域                 |  |

注：蓝色灯号显示定义可由使用者自行设定

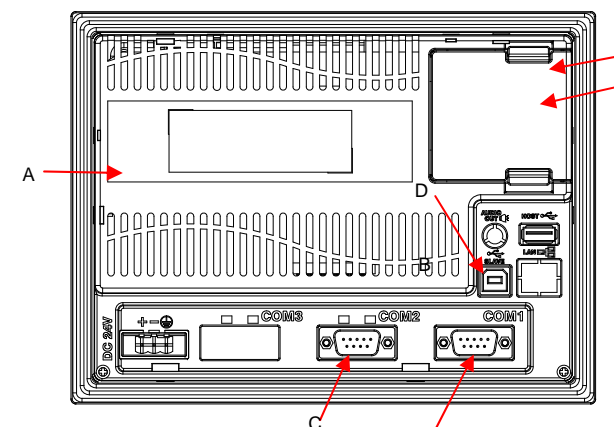
#### DOP-B07S(E)411 (背面)



|   |           |   |           |
|---|-----------|---|-----------|
| A | 电源输入端子    | B | COM1      |
| C | COM2      | D | USB Slave |
| E | USB Host  | F | 电池外盖      |
| G | 网络口 (LAN) |   |           |

注：只针对 DOP-B07E411

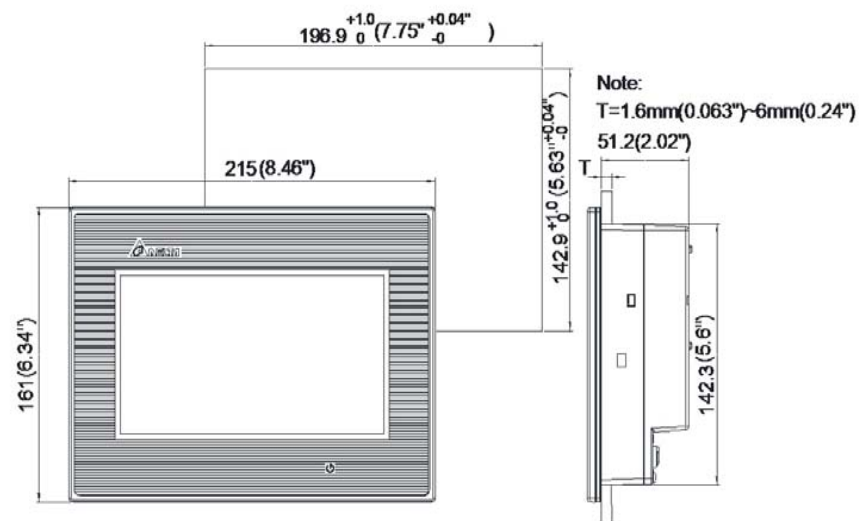
#### DOP-B07S411K / DOP-B07S401K (背面)



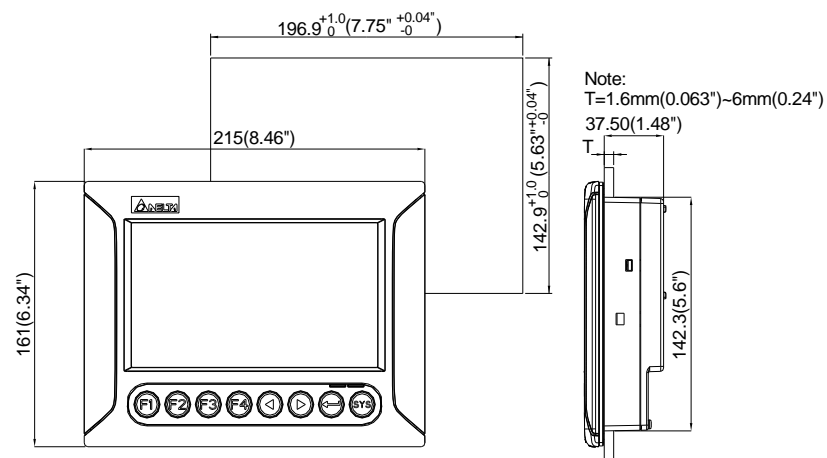
|   |          |   |           |
|---|----------|---|-----------|
| A | 电源输入端子   | B | COM1      |
| C | COM2     | D | USB Slave |
| E | USB Host | F | 电池外盖      |

#### (4) 开孔尺寸

DOP-B07S(E)411 / DOP-B07S411K



DOP-B07S401K



#### (5) 硬件规格

| 型号        | DOP-B07S411   | DOP-B07E411  | DOP-B07S411K | DOP-B07S401K |
|-----------|---|--|--------------|--------------|
| 显示器       | 面板种类  | 7" TFT LCD ( 65535 色 )   |              |              |
|           | 解析度   | 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 128 MB<br>(OS System: 30MB / Backup: 16MB / User Application: 82MB) |  |              |              |
| 内部存储器     | 64Mbytes  |  |              |              |
| 断电保持内部存储器 | 16Mbytes  |  |              |              |
| 蜂鸣器       | Multi-Tone Frequency ( 2K ~ 4K Hz ) / 85dB                                    |  |              |              |
| 网络界面      | N/A   | IEEE 802.3,<br>IEEE 802.3u<br>10/100 Mbps 自动<br>侦测 ( 内建屏蔽电<br>路 (Note 2) ) | N/A          |              |
| USB       | 1 USB Slave Ver 2.0<br>1 USB Host Ver 1.1                                     |  |              |              |

|                               |   |                    |  |
|-------------------------------|---|--------------------|--|
| 串行通讯口                         | COM1  | RS-232(支持流量控制)     |  |
|                               | COM2  | RS-232 / RS-485    |  |
|                               | COM3  | RS-422 / RS-485    |  |
| 辅助键                           | N/A   | 使用者定义键 x4 + 系统键 x4 |  |
| 万年历                           | 内建  |                    |  |
| 冷却方式                          | 自然冷却  |                    |  |
| 安规认证                          | CE / UL   |                    |  |
| 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)                 | 4.0W  |                    |  |
| 存储器备份电池                       | 3V 锂电池 CR2032 x 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             |                    |  |
| 尺寸<br>( W )x( H )x( D )<br>mm | 215 x 161 x 50  |                    |  |
| 开孔尺寸<br>( W ) x ( H ) mm      | 196.9 x 142.9   |                    |  |
| 重量                            | 约 820g  | 约 840g             |  |

#### NOTE

- 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。
- 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。
- 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>。