



**DOP-103WQ**  
**DOP-107WV**  
**DOP-110WS**

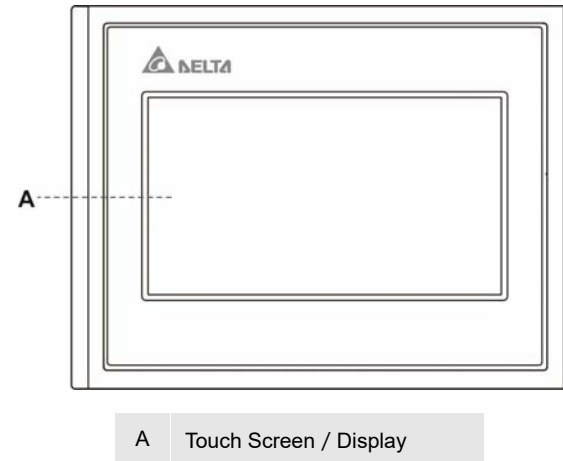
**DOP-107WV / DOP-110WS COM2 Port**

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	RTS				RTS	
	8	CTS				CTS	
	9		D-		D-		RXD-

Note 1: Blank means connection is not required.

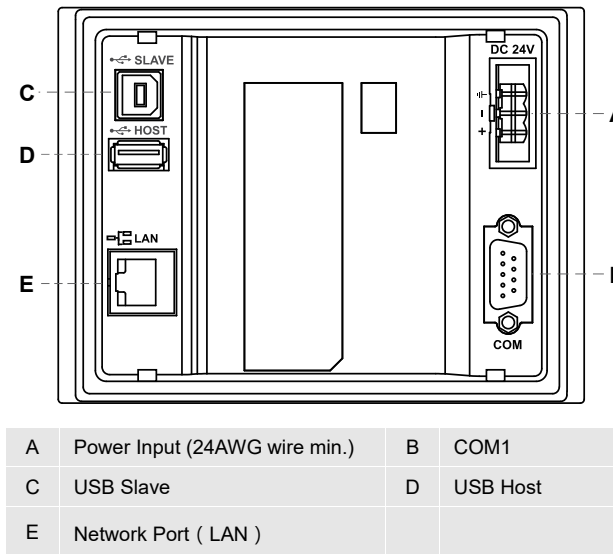
(3) Part names

**DOP-103WQ (Front view)**



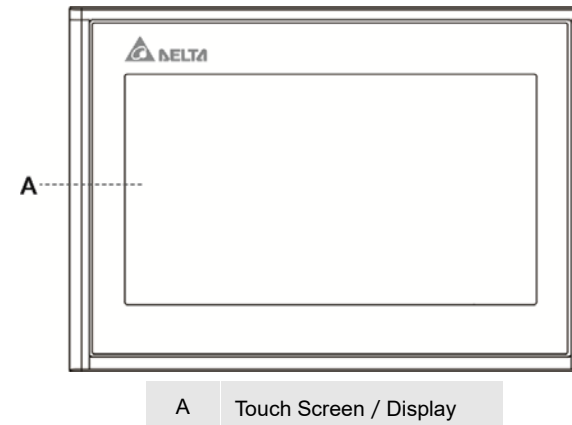
A Touch Screen / Display

**DOP-103WQ (Rear view)**



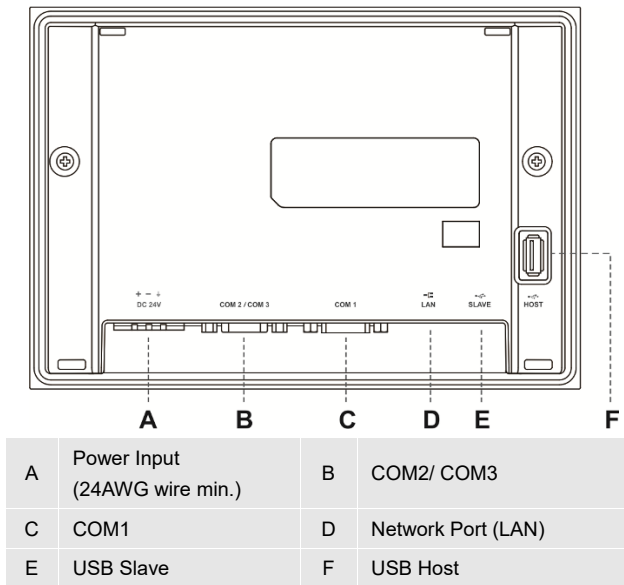
A	Power Input (24AWG wire min.)	B	COM1
C	USB Slave	D	USB Host
E	Network Port (LAN)		

**DOP-107WV (Front view)**



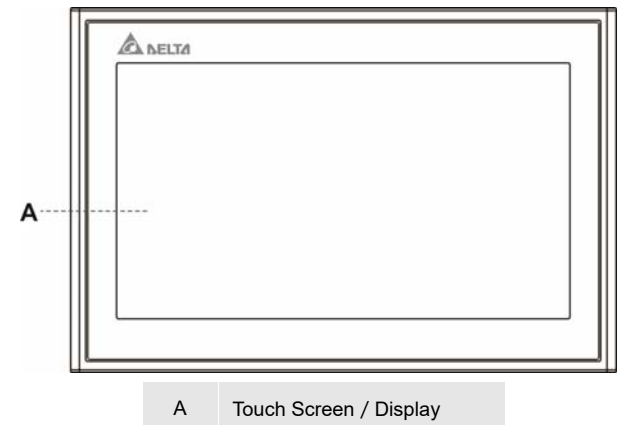
A Touch Screen / Display

**DOP-107WV (Rear view)**



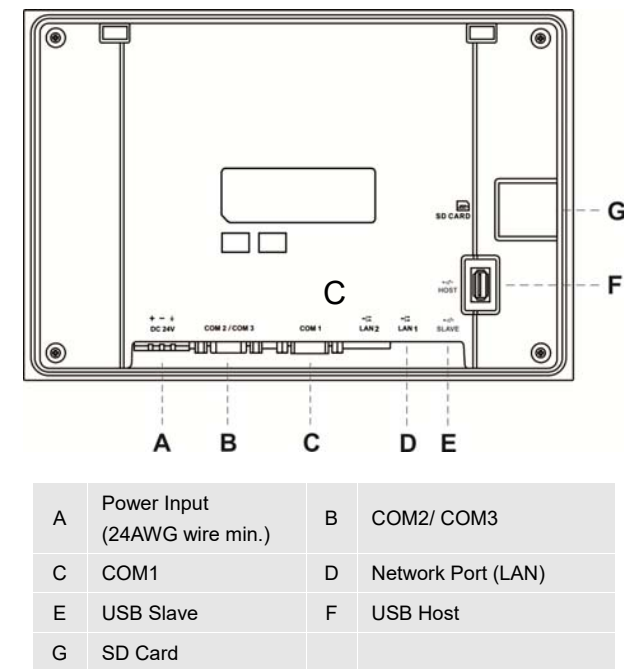
A	Power Input (24AWG wire min.)	B	COM2/ COM3
C	COM1	D	Network Port (LAN)
E	USB Slave	F	USB Host

**DOP-110WS (Front view)**



A Touch Screen / Display

**DOP-110WS (Rear view)**



A	Power Input (24AWG wire min.)	B	COM2/ COM3
C	COM1	D	Network Port (LAN)
E	USB Slave	F	USB Host
G	SD Card		

**DOP-103WQ COM Port**

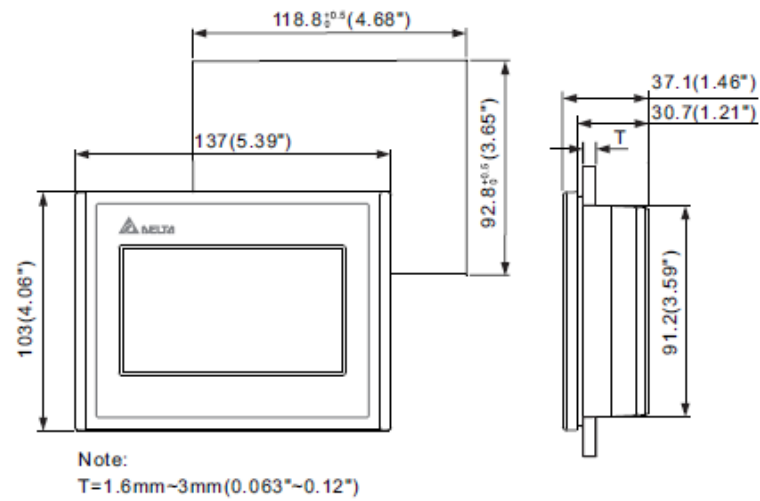
COM Port	Pin	MODE1		MODE2		MODE3	
		COM1	COM2	COM1	COM2	COM1	COM2
		RS-232	RS-485	RS-485	RS-485	RS-232	RS-422
	1			D+			TXD+
	2	RXD				RXD	
	3	TXD				TXD	
	4		D+		D+		RXD+
	5	GND		GND		GND	
	6			D-			TXD-
	7	RTS				RTS	
	8	CTS				CTS	
	9		D-		D-		RXD-

**DOP-107WV / DOP-110WS COM1 Port**

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

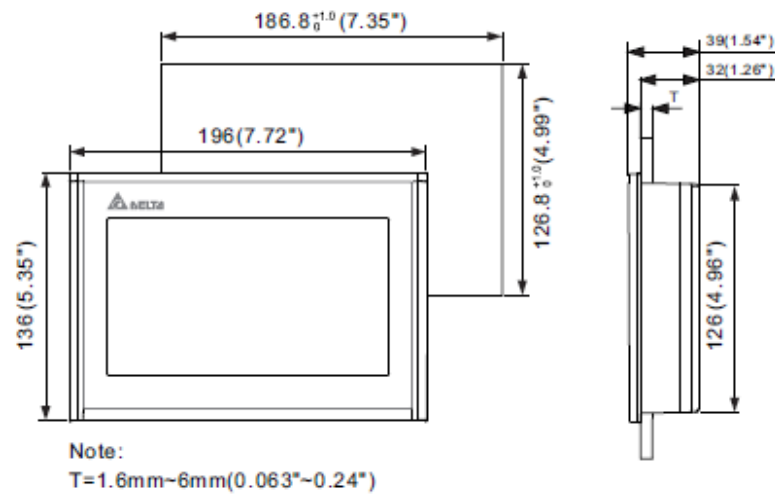
#### (4) Dimensions for Installation

##### DOP-103WQ



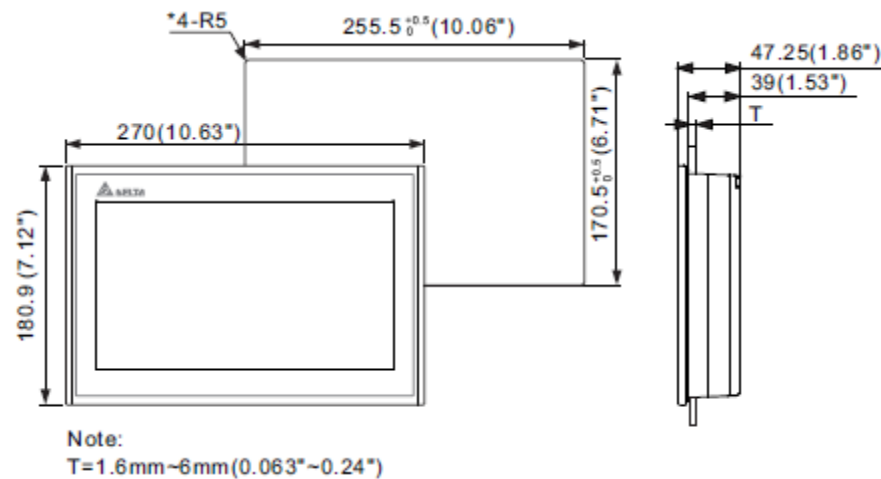
Operation Temperature is 0°C to 50°C and Storage Temperature is -20°C to +60°C

##### DOP-107WV



Operation Temperature is 0°C to 50°C and Storage Temperature is -20°C to +60°C

##### DOP-110WS



Operation Temperature is 0°C to 50°C and Storage Temperature is -20°C to +60°C

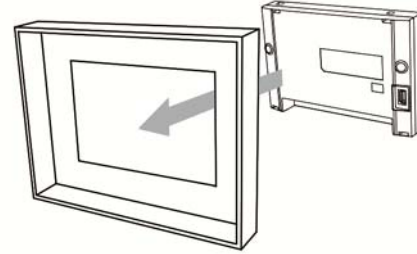
#### (5) Installation and Wiring

##### Installation Notes:

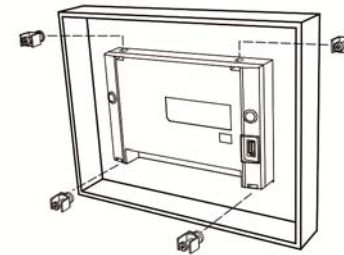
- Improper installation will result in malfunction and greatly reduce the life of the HMI. Be sure to follow the guidelines in this quick start when installing the HMI.
- In order to ensure the HMI being well ventilated, make sure that the ventilation holes are not obstructed and provide sufficient clearance for the HMI.
- To protect the panel, be sure to install a waterproof gasket into HMI.
- For use on a flat surface of a Type 4X "Indoor Use Only" enclosure or equivalent. If Enclosure with lower type rating will cause de-rating.
- The allowable thickness of the panel for mounting should be less than 5 mm.

##### Installation Method:

Step 1:  
Put the waterproof gasket into HMI and then insert the HMI into the panel cutout.

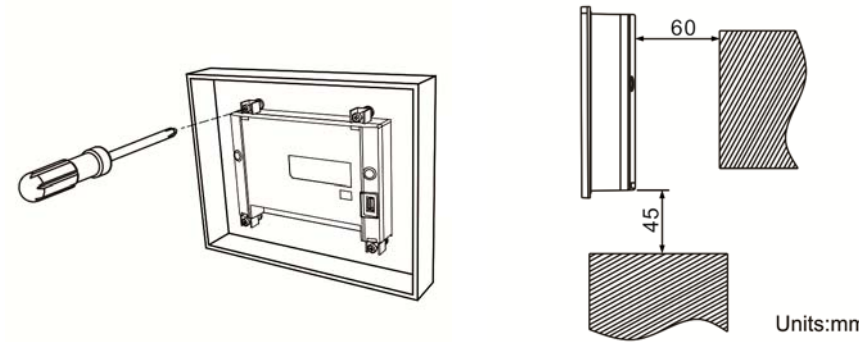


Step 2:  
Place the fasteners into slots and tighten the screws till reaching the panel cutouts.



Step 3:  
Tighten the screws with torque less than 0.5N-M / 0.7N-M to avoid damage to the plastic case.  
DOP-107/DOP-110 Torque: 6.17 lb-inch (0.7N-M)  
DOP-103 Torque: 4.41 lb-inch (0.5N-M)

Step 4:  
For heat dissipation, please keep a minimum clearance of 60 mm on the rear of the HMI.

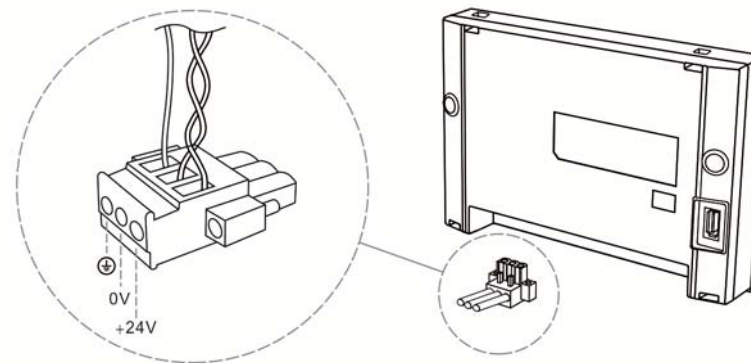


Recommended wiring is as follows:

Type	Wire Gauge (AWG)	Stripped length	Torque
Solid	24 ~ 12	7 ~ 8 mm	5 kg-cm (4.3 lb-in)
Stranded	24 ~ 12	7 ~ 8 mm	5 kg-cm (4.3 lb-in)



Be sure to perform wiring by referring to the following figure (power supply connector), wiring must be rated 75°C min.



#### (6) Specifications

Model	DOP-103WQ	DOP-107WV	DOP-110WS	
LCD Module	Display Type	4.3" TFT LCD (65535 colors)	7" TFT LCD (65535 colors)	10.1" TFT LCD (65535 colors)
	Resolution	480 x 272 pixels	800 x 480 pixels	1024 x 600 pixels
	Backlight	LED Back Light (less than 10,000 hours half-life at 25°C) (Note 1)	LED Back Light (less than 20,000 hours half-life at 25°C) (Note 1)	LED Back Light (less than 30,000 hours half-life at 25°C) (Note 1)
	Display Size	95.04 x 53.856 mm	154.08 x 85.92 mm	225.52 x 128.10 mm
	Brightness	400 cd/m <sup>2</sup> (Typ.)	450 cd/m <sup>2</sup> (Typ.)	450 cd/m <sup>2</sup> (Typ.)
CPU	ARM Cortex-A8 (800MHz)			

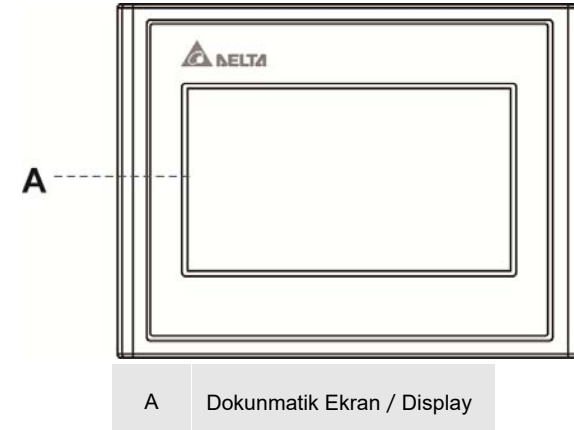
Pobrano z: <https://automatyka-sklep.eu/panel-hmi-10-1-dop-110ws-delta-electronics>

Model	DOP-103WQ	DOP-107WV	DOP-110WS
Flash ROM	256 Mbytes		
RAM	512 Mbytes		
Touch Screen	4-wire resistive touch screen > 10,000,000 operated		
Buzzer	Multi-Tone Frequency (2 K ~ 4 K Hz) / 80 dB		
Ethernet Interface	10/100 Mbps Auto sensing (with built-in isolated power circuit) (Note 2)		
USB	1 USB Slave Ver 2.0 1 USB Host Ver 2.0		
SD	N/A		SD * 1
Serial Communication Port	COM1	RS-232 (supports flow control) / RS-485 (Note 2)	RS-232 (supports flow control) (Note 2)
	COM2	RS-422 / RS-485 (Note 2)	RS-232 (supports flow control) / RS-485 (Note 2)
	COM3	N/A	RS-422 / RS-485 (Note 2)
Function Keys	N/A		
Perpetual Calendar	Built-in		
Cooling Method	Natural cooling		
Safety Approval	CE / UL (Please use shielding Ethernet cable and the magnetic ring with filter of 300 ohm/100 MHz)		
Waterproof Level of Panel Display	IP65 (Not be evaluated by UL) / NEMA4 / Type 4X indoor use only		
Operation Voltage (Note 2)	+24 V <sub>DC</sub> (-15% ~ +15%) (with built-in isolated power supply unit) Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)		
Voltage Endurance	500 V <sub>AC</sub> for 1 minute (between charging (DC24V terminal) and FG terminals)		
Power Consumption (Note 2)	5.8W (Max) (Note 3)	8.4W (Max) (Note 3)	11W (Max) (Note 3)
Backup Battery	3V lithium battery CR2032 x 1		
Backup Battery Life	About 3 years or more at 25°C but subjects to the temperature and the conditions during usage.		
Operation Temperature	0°C ~ 50°C		
Storage Temperature	-20°C ~ +60°C		
Operating Environment	10% ~ 90% RH [0 ~ 40°C], 10% ~ 55% RH [41 ~ 50°C]; Pollution degree: 2		
Vibration Resistance	Conforms to IEC61131-2; Continuous: 5 Hz ~ 8.3 Hz 3.5 mm, 8.3 Hz ~ 150 Hz 1 G		
Shock Resistance	Conforms to IEC60068-2-27: 11 ms, 15 G Peak, X, Y, Z direction for 6 times		
Dimension (W) x (H) x (D) mm	137 x 103 x 37.1	196 x 136 x 39	270 x 180.9 x 47.25
Dimension for Installation (W) x (H) mm	118.8 x 92.8	186.8 x 126.8	255 x 170
Weight	Approx. 280g	Approx. 560 g	Approx. 1.1 Kgs



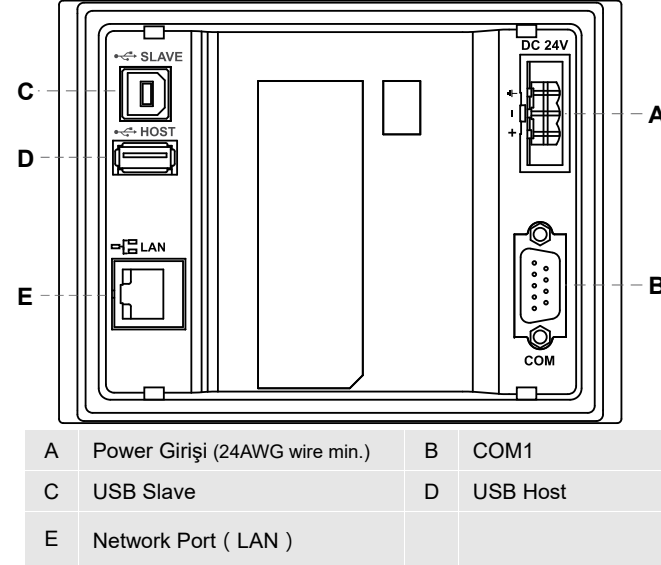
DOP-103WQ  
DOP-107WV  
DOP-110WS

(3) Parça isimleri  
DOP-103WQ (Ön Görünüm)



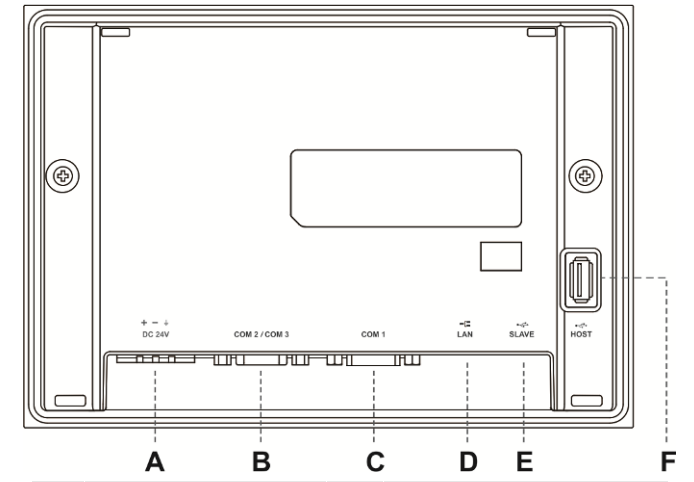
A Dokunmatik Ekran / Display

DOP-103WQ (Arka Görünüm)



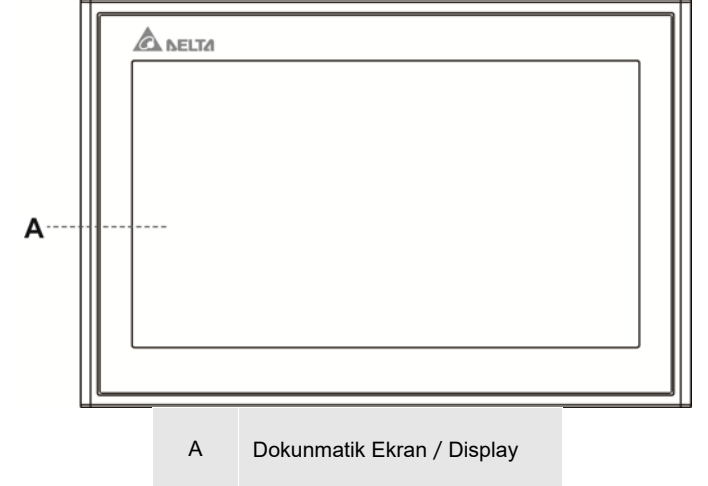
A Power Girişi (24AWG wire min.) B COM1  
C USB Slave D USB Host  
E Network Port ( LAN )

DOP-107WV (Arka Görünüm)



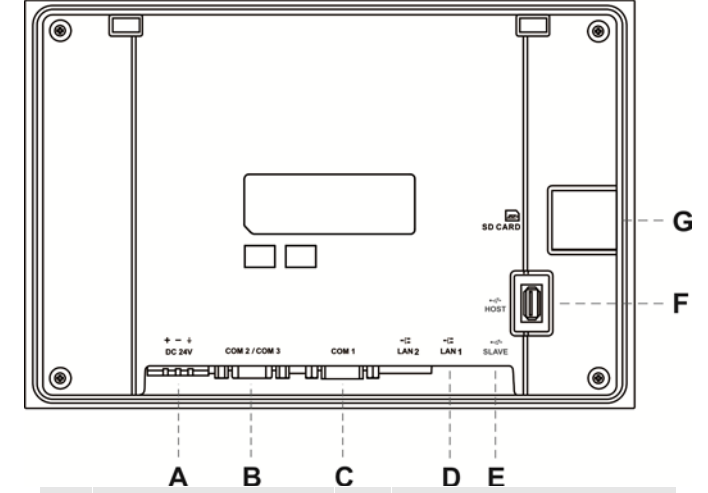
A Power Girişi (24AWG wire min.) B COM2 / COM3  
C COM1 D Network Port (LAN)  
E USB Slave F USB Host

DOP-110WS (Ön Görünüm)



A Dokunmatik Ekran / Display

DOP-110WS (Arka Görünüm)



A Power Girişi (24AWG wire min.) B COM2/ COM3  
C COM1 D Network Port (LAN)  
E USB Slave F USB Host  
G SD Card

DOP-103WQ COM Pinleri

COM Port	Pin	MODE1		MODE2		MODE3	
		COM1 RS-232	COM2 RS-485	COM1 RS-485	COM2 RS-485	COM1 RS-232	COM2 RS-422
	1			D+			TXD+
	2	RXD				RXD	
	3	TXD				TXD	
	4		D+		D+		RXD+
	5	GND		GND		GND	
	6			D-			TXD-
	7	RTS					RTS
	8	CTS					CTS
	9		D-		D-		RXD-

DOP-107WV / DOP-110WS COM1 Pinleri

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

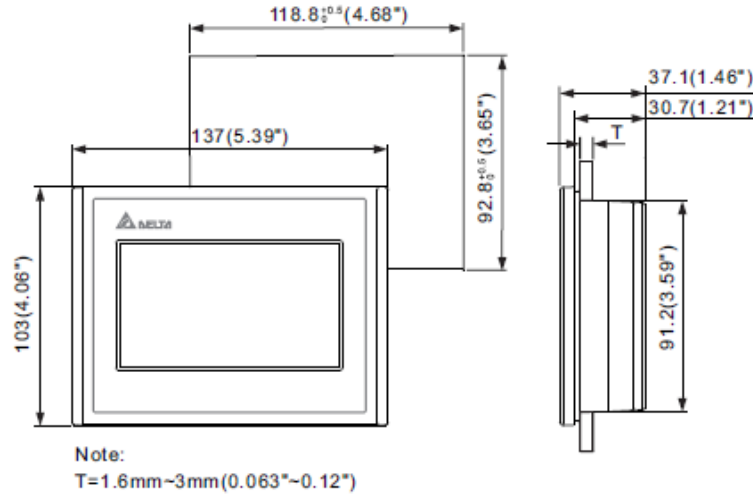
DOP-107WV / DOP-110WS COM2 Pinleri

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

Not 1: Boş olan terminallere bağlantı yapılmaz.

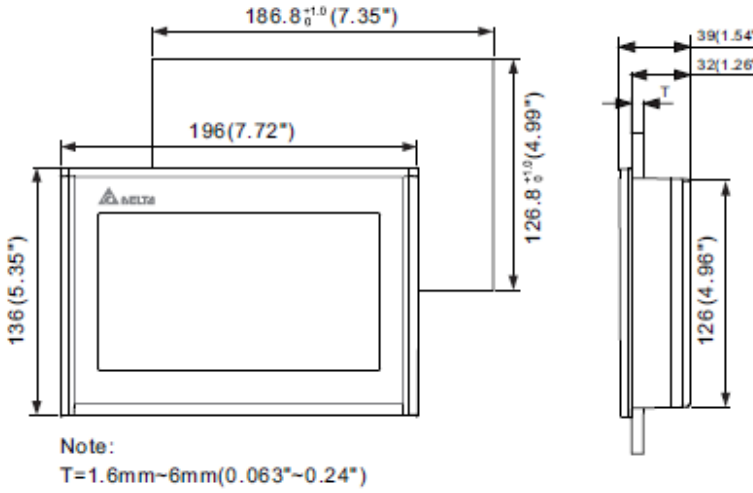
#### (4) Kurulum için Ölçüler

##### DOP-103WQ



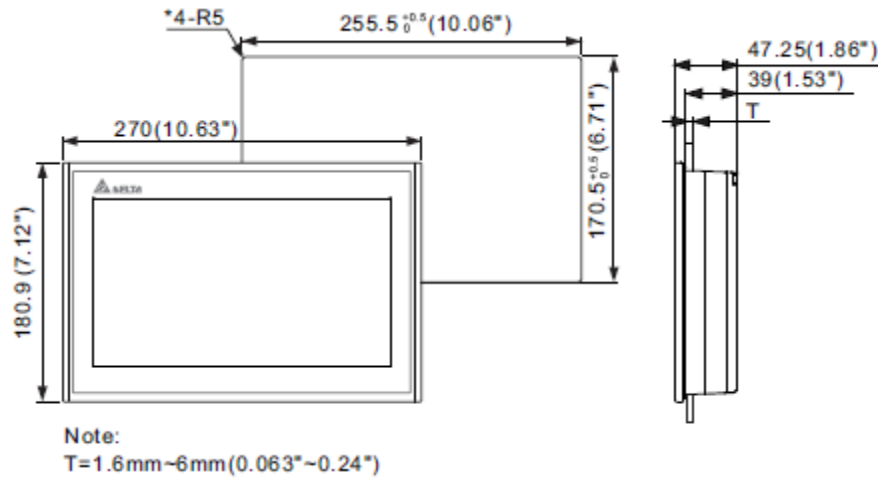
Çalışma Sıcaklığı olduğu 0°C için 50°C ve Saklama Koşulları olduğu -20°C için +60°C

##### DOP-107WV



Çalışma Sıcaklığı olduğu 0°C için 50°C ve Saklama Koşulları olduğu -20°C için +60°C

##### DOP-110WS



Çalışma Sıcaklığı olduğu 0°C için 50°C ve Saklama Koşulları olduğu -20°C için +60°C

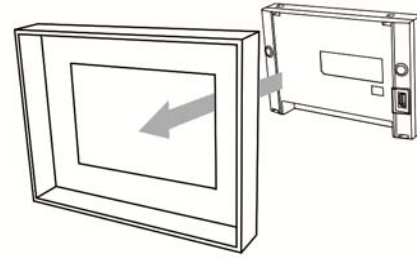
#### (5) Kurulum ve Bağlantı

##### Kurulum Notları:

- Yanlış kurulum yapılması ürünün zarar görmesini veya çalışma ömrünün kismalmasına sebep olur. HMI kurulumunun doküman da belirtildiği gibi yapılması gerekir
- HMI'nın havalandırmasının doğru olduğuna emin olmak için, havalandırma deliklerinin tıkalı olmadığına ve HMI etrafında gerekli boşluğun bırakıldığına emin olunuz
- Panelin iyi korunduğuna emin olmak için, HMI içine su geçirmez conta koyduğunuza emin olunuz.
- Düz yüzey, Tip 4X "Sadece kapalı alanda kullanım" ve eşdeğer ortamlarda kurulum yapılmalıdır.
- Montaj için kullanılan panelin kalınlığı 5 mm'den az olmalıdır.

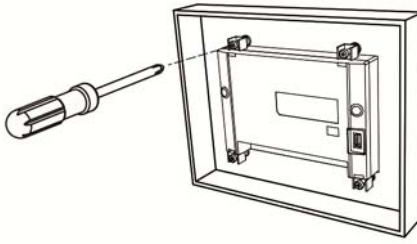
##### Kurulum Metodu:

Adım 1:  
HMI içine su geçirmez contanın takıldığına emin olunuz ve sonra pano boşluğuna yerleştiriniz.

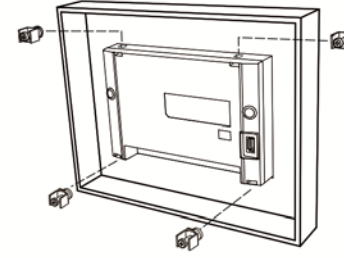


Adım 3:  
Plastik kasaya zarar vermemek için vidayı 0.5N-M / 0.7N-M'den az bir tork ile sıkınız.

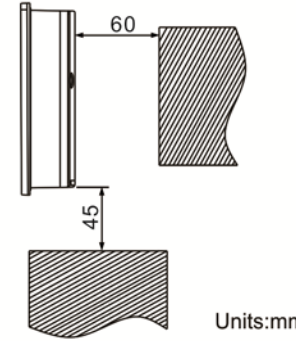
DOP-107 / DOP-110 Tork: 6.17lb-inch(0.7N-M)  
DOP-103 Tork: 4.41lb-inch (0.5N-M)



Adım 2:  
Montaj aparatlarını HMI'nın yuvalarına yerleştiriniz ve sonra panoya değene kadar vidaları sıkınız.



Adım 4:  
Isı dağılımı sağlanabilmesi için HMI arka paneli ile duvar, kurulum yüzeyi veya başka kontrol cihazı arasında en az 60 mm boşluk bırakınız.

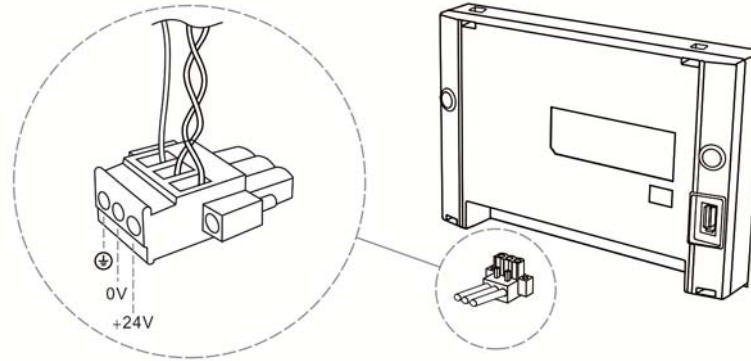


Bağlantı özelliklerini aşağıdaki tabloda görebilirsiniz:

Tip	Kablo Ölçüsü (AWG)	Soyma Uzunluğu	Tork
Tek damarlı	24~ 12	7 ~ 8 mm	5 kg-cm (4.3 lb-in)
Çok damarlı	24 ~ 12	7 ~ 8 mm	5 kg-cm (4.3 lb-in)



Bağlantının aşağıdaki şekilde gösterildiği gibi yapıldığına emin olunuz. (Besleme konnektörü)



#### (6) Özellikler

Model	DOP-103WQ	DOP-107WV	DOP-110WS
Display Tipi	4.3" TFT LCD (65535 renk)	7" TFT LCD (65535 renk)	10.1" TFT LCD (65535 renk)
Çözünürlük	480 x 272 piksel	800 x 480 piksel	1024 x 600 pixels
Aydınlatma	LED Aydınlatma (Yarım ömürde 25°C'de 10,000 saatten az) <sup>(Not 1)</sup>	LED Aydınlatma (Yarım ömürde 25°C'de 20,000 saatten az) <sup>(Not 1)</sup>	LED Back Light (less than 30,000 hours half-life at 25 °C) <sup>(Note 1)</sup>
Display Ölçüsü	95.04 x 53.856 mm	154.08 x 85.92 mm	225.52 x 128.10 mm
Parlaklık	400 cd/m <sup>2</sup> (Tipik)	450 cd/m <sup>2</sup> (Tipik)	450 cd/m <sup>2</sup> (Tipik)
CPU	ARM Cortex-A8 (800 MHz)		
Flash ROM	256 Mbyte		
Dahili Hafıza	512 Mbyte		

Dokunmatik Ekran	4-telli rezistif dokunmatik ekran > 10,000,000 işleme		
Buzzer	Multi-Tone Frekans (2 K ~ 4 K Hz) / 80 dB		
Ethernet Arabirimi	10/100 Mbps Otomatik Algılama (dahili izoleli güç devresi) <sup>(Not 2)</sup>		
USB	1 USB Slave Ver 2.0 1 USB Host Ver 2.0		
SD	N/A		SD * 1
Seri Haberleşme Portu	COM1	RS-232 (Flow kontrol destekler) / RS-485 <sup>(Not 2)</sup>	RS-232 (Flow kontrol destekler) <sup>(Not 2)</sup>
	COM2	RS-422 / RS-485 <sup>(Not 2)</sup>	RS-232 (Flow kontrol destekler) / RS-485 <sup>(Not 2)</sup>
	COM3	N/A	RS-422 / RS-485 <sup>(Not 2)</sup>
Fonksiyon Tuşları	N/A		
Sürekli Takvim	Dahili		
Soğutma Metodu	Doğal Soğutma		
Güvenlik Onayı	CE / UL (Lütfen ekranlı Ethernet kablosu ve 300 ohm/100 MHz filtre ile manyetik halka kullanınız)		
Panel Display Su Geçirmezlik Seviyesi	IP65/NEMA4		
Çalışma Voltajı <sup>(Not2)</sup>	+24 VDC (-15% ~ +15%) (Dahili izoleli güç kaynağı ile) (SELV devresi tarafından beslenir (Şebeke hattından çift yalıtım ile izole edilmiştir))		
Voltaj Dayanıklılığı	1 dakika için 500 V <sub>AC</sub> (DC24V terminal ve FG terminaleri arası)		
Güç Tüketimi <sup>(Not 2)</sup>	5.8W (Max) <sup>(Not 3)</sup>	8.4W (Max) <sup>(Not 3)</sup>	11.04 W (Max) <sup>(Not 3)</sup>
Backup Pili	3V lityum pil CR2032 × 1		
Backup Pili Ömrü	Normal koşullarda 25°C'de 3 yıl veya daha fazla.		
Çalışma Sıcaklığı	0°C ~ 50°C		
Saklama Koşulları	-20°C ~ +60°C		
Çalışma Ortamı	10% ~ 90% RH [0 ~ 40°C], 10% ~ 55% RH [41 ~ 50°C]; Kirlenme derecesi: 2		
Titreşim Direnci	IEC61131-2 ile uyumlu; Sürekli: 5 Hz ~ 8.3 Hz 3.5 mm, 8.3 Hz ~ 150 Hz 1 G		
Şok Direnci	IEC60068-2-27 ile uyumlu: 11 ms, 15 G Pik, X, Y, Z yönünde 6 kere		
Ölçüler (W) x (H) x (D) mm	137 x 103 x 37.1	196 x 136 x 39	270 x 180.9 x 47.25
Kurulum Yeri Ölçüleri (W) x (H) mm	118.8 x 92.8	186.8 x 126.8	255 x 170
Ağırlık	Yaklaşık 280 g	Yaklaşık 560 g	Yaklaşık 1.1 Kgs

##### Delta Greentech Elektronik San. Ltd. Şti.

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1688 Jiangxing East Road,  
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Wujiang City, Jiang Su Province,  
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TEL: 86-512-6340-3008  
FAX: 86-769-6340-7290



DOP-103WQ  
DOP-107WV  
DOP-110WS

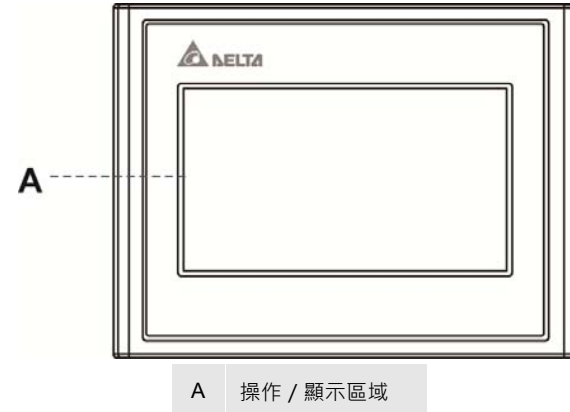
DOP-107WV / DOP-110WS COM2 定義

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	RTS				RTS	
	8	CTS				CTS	
	9		D-		D-		RXD-

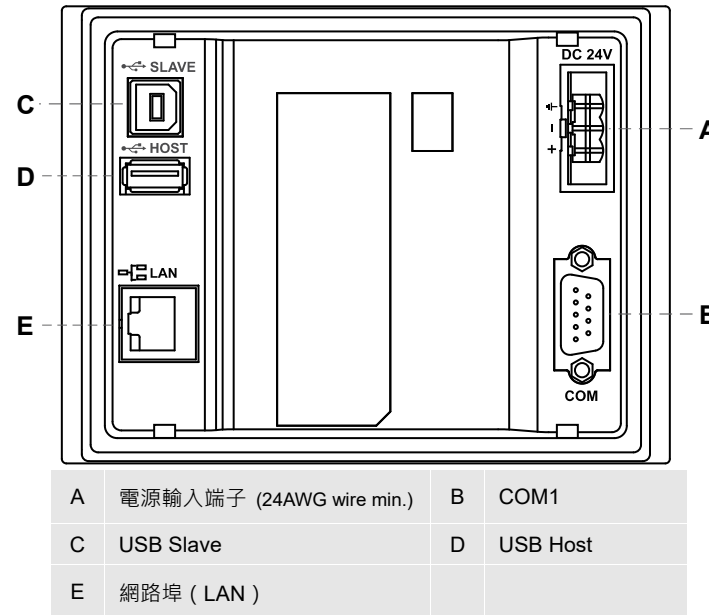
註 1：空白 = 不需連接

(3) 各部位說明

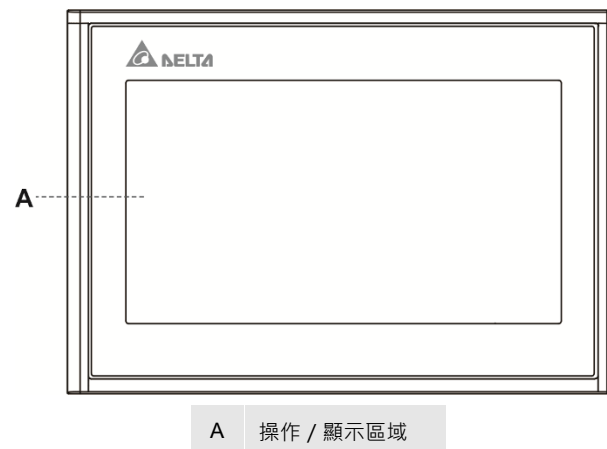
DOP-103WQ (正面)



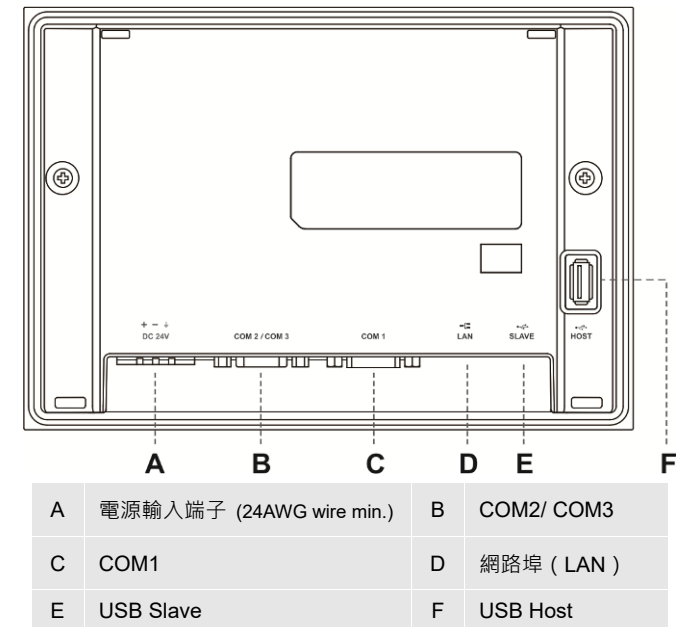
DOP-103WQ (背面)



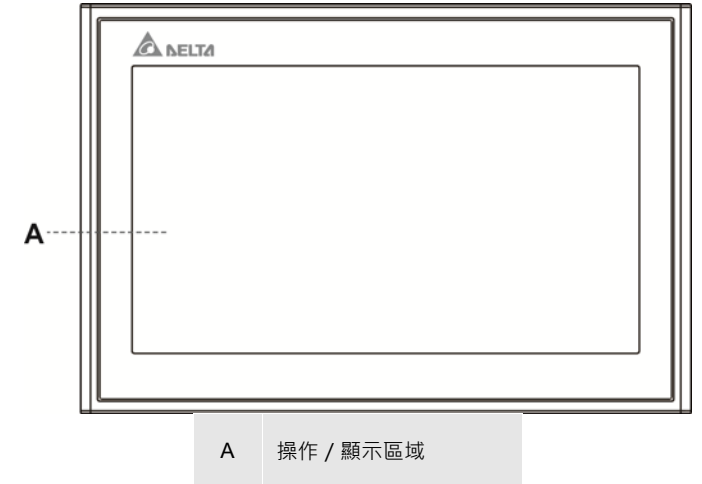
DOP-107WV (正面)



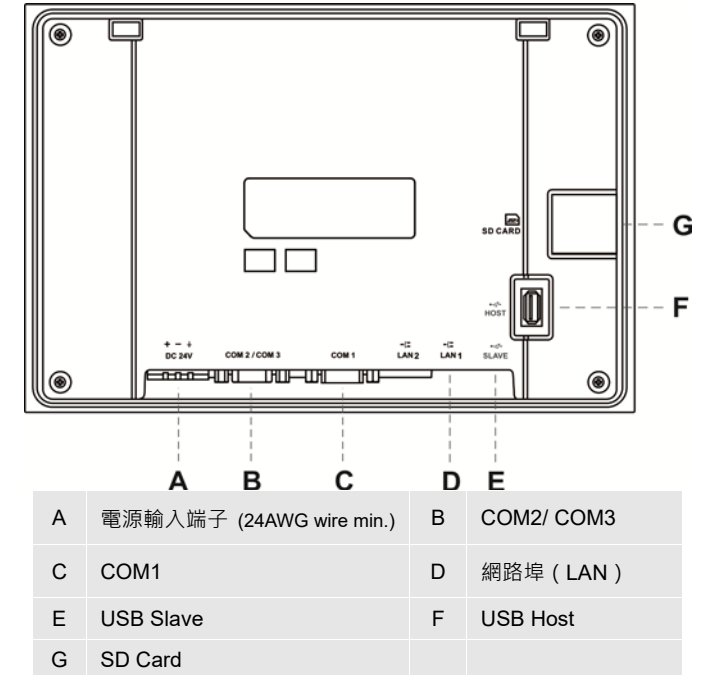
DOP-107WV (背面)



DOP-110WS (正面)



DOP-110WS (背面)



DOP-103WQ COM 定義

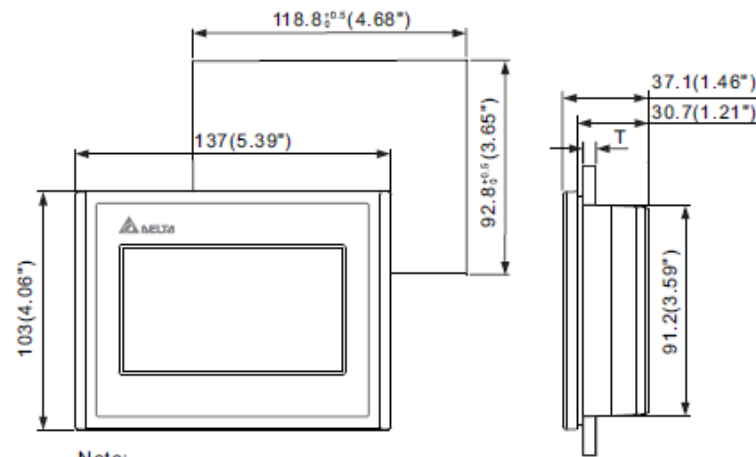
COM Port 示意圖	腳位	MODE1		MODE2		MODE3	
		COM1	COM2	COM1	COM2	COM1	COM2
		RS-232	RS-485	RS-485	RS-485	RS-232	RS-422
	1			D+		RXD	TXD+
	2	RXD				TXD	
	3	TXD					
	4		D+		D+		RXD+
	5	GND		GND		GND	
	6			D-			TXD-
	7	RTS				RTS	
	8	CTS				CTS	
	9		D-		D-		RXD-

DOP-107WV / DOP-110WS COM1 定義

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

#### (4) 開孔尺寸

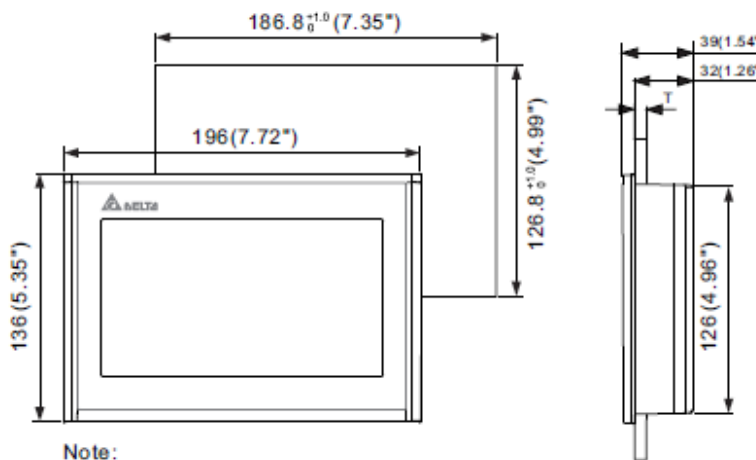
##### DOP-103WQ



Note:  
T=1.6mm~3mm(0.063"~0.12")

操作溫度為 0°C ~ 50°C、儲存溫度為 -20°C ~ +60°C

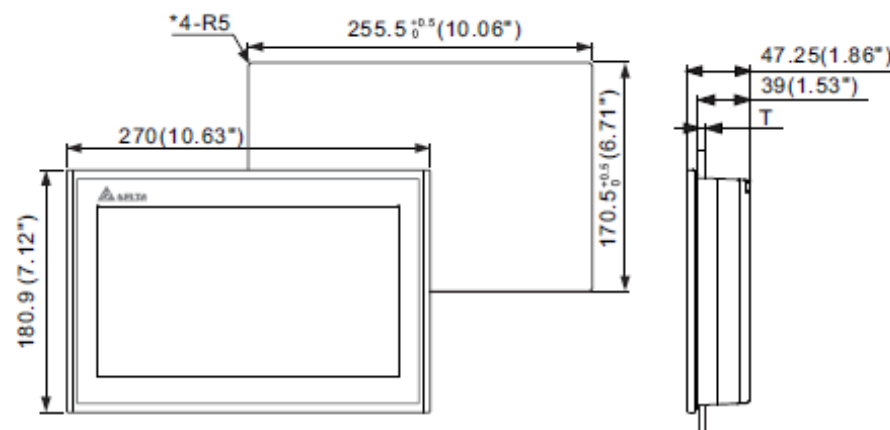
##### DOP-107WV



Note:  
T=1.6mm~6mm(0.063"~0.24")

操作溫度為 0°C ~ 50°C、儲存溫度為 -20°C ~ +60°C

##### DOP-110WS



Note:  
T=1.6mm~6mm(0.063"~0.24")

操作溫度為 0°C ~ 50°C、儲存溫度為 -20°C ~ +60°C

#### (5) 安裝方向與配線

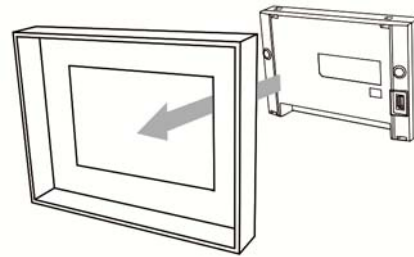
注意事項：

- 安裝方向必須依圖面所示，否則會造成故障。
- 為了使冷卻循環效果良好，安裝人機介面時，其上下左右與相鄰的物品和擋板(牆)必須保持足夠的空間，否則會造成散熱不良。
- 使用於 Type 4X 室內用等級之外殼平面。
- 安裝面板最大板厚請勿超過 5 mm (0.2 inches)。

安裝示意圖：

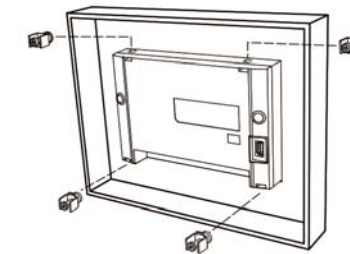
步驟一：

請確實套上防水墊圈，然後再安裝人機介面。



步驟二：

請確實將固定片螺絲組裝入內，然後下方鉤住前蓋螺絲頭頂住控制箱內側。

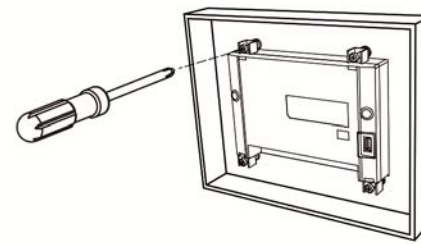


步驟三：

請以 0.5 N-M ~ 0.7 N-M 的扭力鎖緊螺絲，請勿超過此扭力，否則將損壞塑膠外殼。

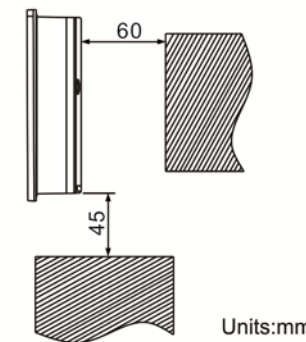
DOP-107 / DOP-110 扭力: 6.17lb-inch ( 0.7N-M )

DOP-103 扭力: 4.41lb-inch ( 0.5N-M )



步驟四：

安裝時，請再人機後方及下方各預留 60 mm(2.36 inches)及 45 mm (1.77 inches) 的散熱空間。



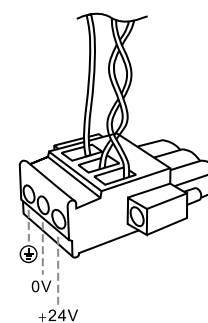
配線：

種類	電源配線(AWG)	剝線長度	扭力
單芯線	24 ~ 12	7 ~ 8 mm (0.28 ~ 0.31 inches)	5 kg-cm (4.3 lb-in)
多芯線	24 ~ 12	7 ~ 8 mm (0.28 ~ 0.31 inches)	5 kg-cm (4.3 lb-in)



請參考下圖電源接頭端子進行配線，安裝與配線要求至少使用耐溫等級 75°C (167°F) 以上之線材：

請參考下圖電源接頭端子進行配線，安裝與配線要求至少使用等級 75 度以上：



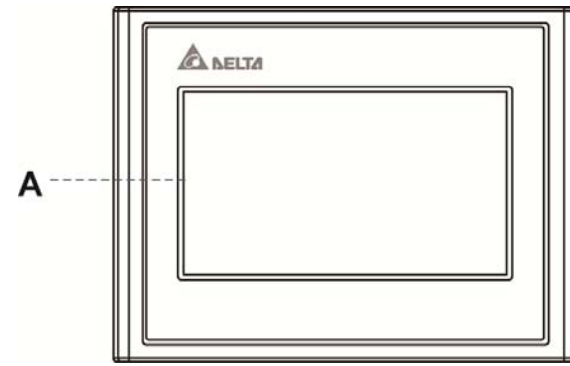
#### (6) 硬體規格

型號	DOP-103WQ	DOP-107WV	DOP-110WS	
顯示器	面板種類	4.3" TFT LCD ( 65535 色 )	7" TFT LCD ( 65535 色 )	10.1" TFT LCD (65535 colors)
	解析度	480 x 272 pixels	800 x 480 pixels	1024 x 600 pixels
	背光燈	LED Back Light ( 常溫 25°C 下半衰期>1 萬小時 ) (Note 1)	LED Back Light ( 常溫 25°C 下半衰期>2 萬小時 ) (Note 1)	LED Back Light( 常溫 25°C 下半衰期>3 萬小時 ) (Note 1)
	顯示範圍	95.04 x 53.856 mm	154.08 x 85.92 mm	225.52 x 128.10 mm
	亮度	400 cd/m <sup>2</sup> (Typ.)	450 cd/m <sup>2</sup> (Typ.)	450 cd/m <sup>2</sup> (Typ.)
中央處理器	ARM Cortex-A8 (800MHz)			
Flash ROM	256 Mbytes			
RAM	512 Mbytes			
觸控面板	四線電阻式 > 10,000,000 operated			
蜂鳴器	Multi-Tone Frequency ( 2K ~ 4K Hz ) / 80dB			
網路介面	1 Port, 10/100 Mbps 自動偵測 ( 內建隔離電路 (Note 2) )			
USB	1 USB Slave Ver 2.0 1 USB Host Ver 2.0			
SD	N/A		SD * 1	
串列通訊埠	COM1	RS-232(支援流量控制) / RS-485 <sup>(Note 2)</sup>	RS-232(支援流量控制) <sup>(Note 2)</sup>	
	COM2	RS-422 / RS-485 <sup>(Note 2)</sup>	RS-232(支援流量控制) / RS-485 <sup>(Note 2)</sup>	
	COM3	N/A	RS-422 / RS-485 <sup>(Note 2)</sup>	
輔助鍵	N/A			
萬年曆	內建			
冷卻方式	自然冷卻			
安規認證	CE / UL (請使用 shielding 網路線與使用磁環 300ohm/100MHz 濾波)			
面板防水等級	IP65/NEMA4			
工作電壓 (Note2)	DC +24V ( -15% ~ +15% ) ( 請使用隔離式電源供應器 ) Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)			
絕緣耐力	DC24V 端子與 FG 端子間：AC500V, 1 分鐘			
消耗功率 (Note 2)	5.8W (Max) <sup>(Note 3)</sup>	8.4W (Max) <sup>(Note 3)</sup>	11W (Max) <sup>(Note 3)</sup>	
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	137 x 103 x 37.1	196 x 136 x 39	270 x 180.9 x 47.25	
開孔尺寸 (W) x (H) mm	118.8 x 92.8	186.8 x 126.8	255 x 170	
重量	約 280g	約 560g	約 1.1 Kgs	



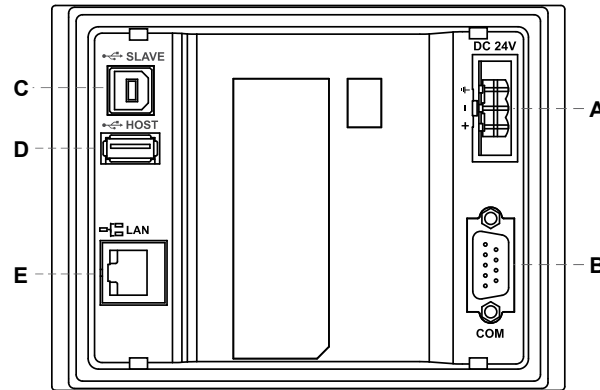
DOP-103WQ  
DOP-107WV  
DOP-110WS

(3) 各部位说明  
DOP-103WQ (正面)



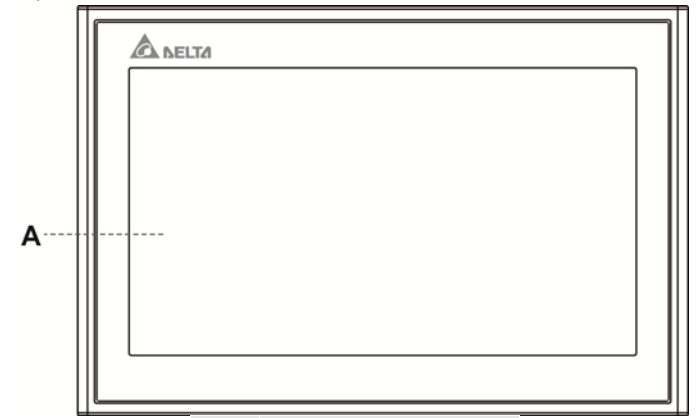
A 操作 / 显示区域

DOP-103WQ (背面)



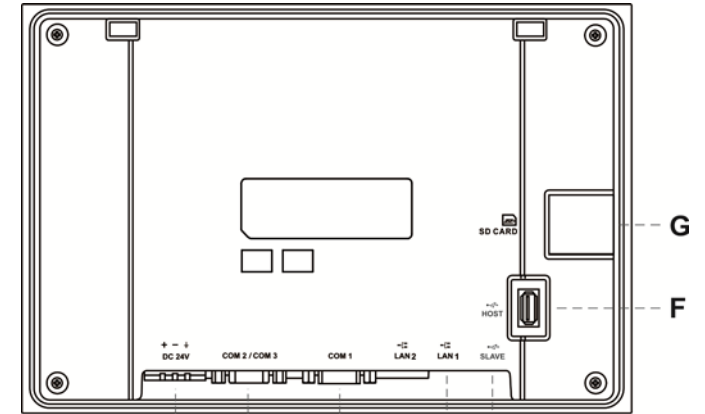
A	电源输入端子(24AWG wire min.)	B	COM1
C	USB Slave	D	USB Host
E	网络口 (LAN)		

DOP-110WS (正面)



A 操作 / 显示区域

DOP-110WS (背面)



A	电源输入端子 (24AWG wire min.)	B	COM2/ COM3
C	COM1	D	网络口 (LAN)
E	USB Slave	F	USB Host
G	SD Card		

DOP-103WQ COM 定义

COM Port 示意图	脚位	MODE1		MODE2		MODE3	
		COM1	COM2	COM1	COM2	COM1	COM2
		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	RTS				RTS	
	8	CTS				CTS	
	9		D-		D-		RXD-

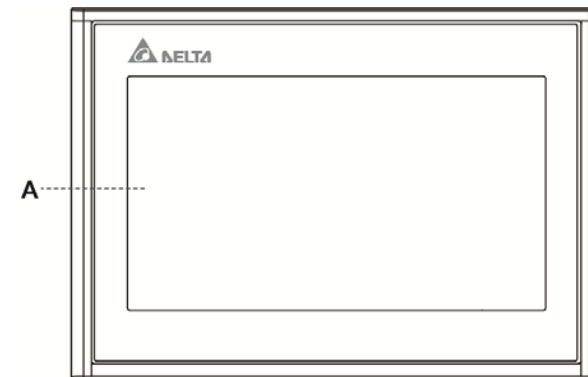
DOP-107WV / DOP-110WS COM1 定义

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

DOP-107WV / DOP-110WS COM2 定义

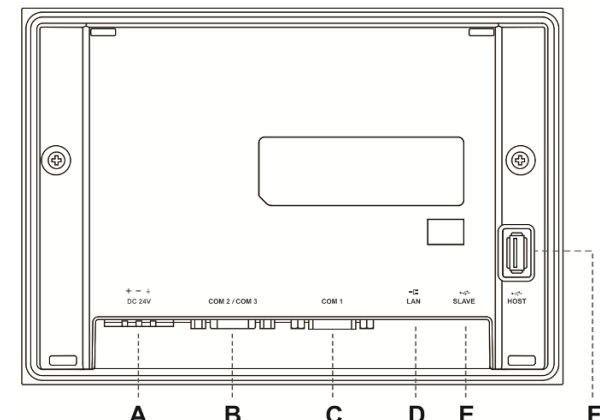
COM Port 示意图	脚位	MODE1		MODE2		MODE3	
		COM2	COM3	COM2	COM3	COM2	COM3
		RS-232	RS-485	RS-485	RS-485	RS-232	RS-422
	1			D+			TXD+
	2	RXD				RXD	
	3	TXD				TXD	
	4		D+		D+		RXD+
	5	GND		GND		GND	
	6			D-			TXD-
	7	RTS				RTS	
	8	CTS				CTS	
	9		D-		D-		RXD-

DOP-107WV (正面)



A 操作 / 显示区域

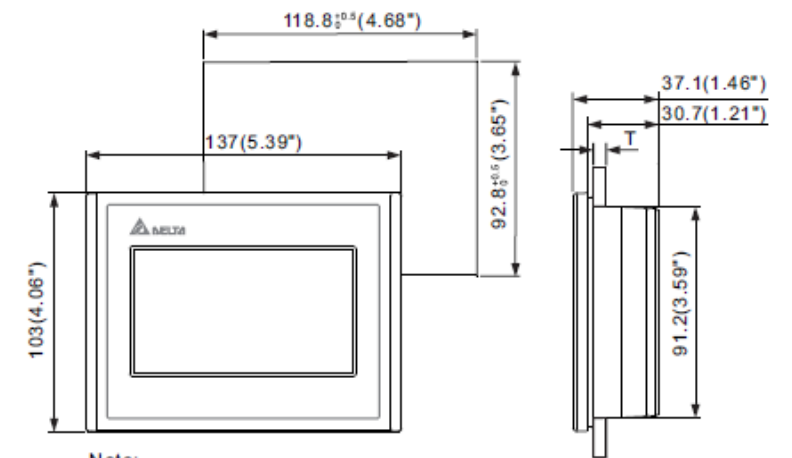
DOP-107WV (背面)



A	电源输入端子(24AWG wire min.)	B	COM2/ COM3
C	COM1	D	网络口 (LAN)
E	USB Slave	F	USB Host

(4) 开孔尺寸

DOP-103WQ

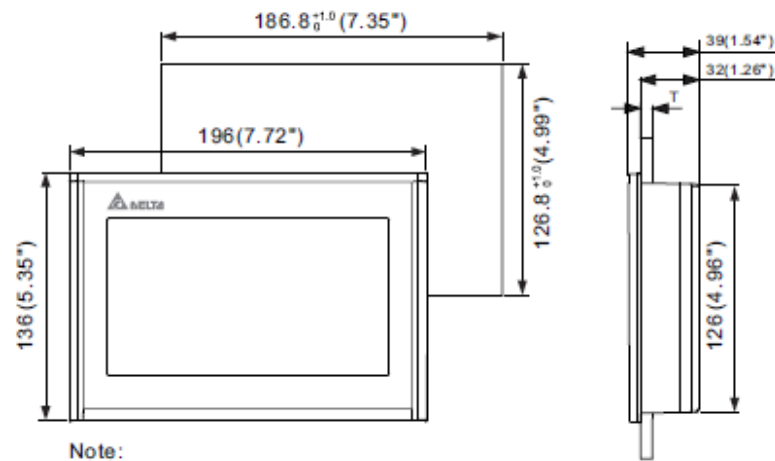


Note:  
T=1.6mm~3mm(0.063"~0.12")

操作温度为 0°C ~ 50°C、储存温度为 -20°C ~ +60°C

注 1: 空白=请勿接线

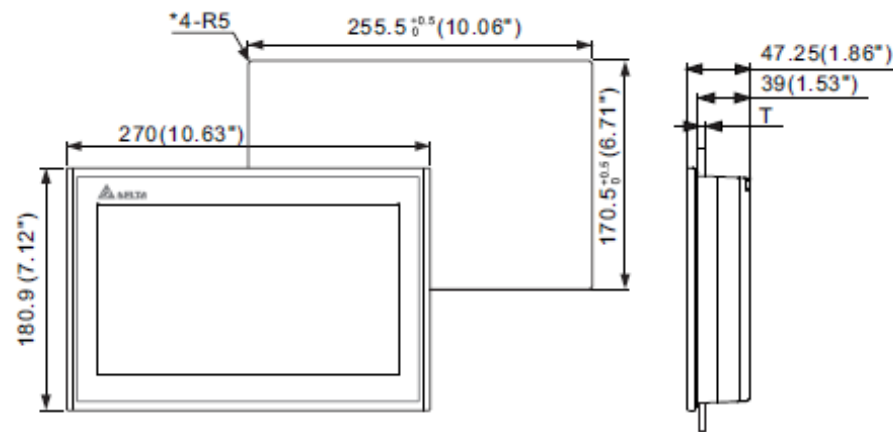
## DOP-107WV



Note:  
T=1.6mm~6mm(0.063"~0.24")

操作温度为 0°C ~ 50°C、储存温度为 -20°C ~ +60°C

## DOP-110WS



Note:  
T=1.6mm~6mm(0.063"~0.24")

操作温度为 0°C ~ 50°C、储存温度为 -20°C ~ +60°C

## (5) 安装方向与配线

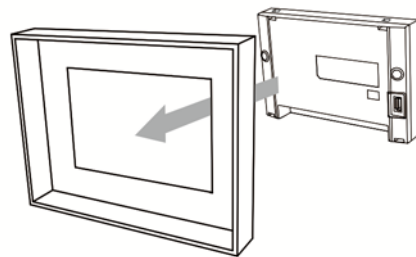
注意事项：

- 安装方向必须依规定，否则会造成故障。
- 为了使冷却循环效果良好，安装人机界面时，其上下左右与相邻的物品和挡板(墙)必须保持足够的空间，否则会造成散热不良。
- 使用于 Type 4X 室内用等级的外壳平面。
- 安装面板最大板厚请勿超过 5mm。

安装示意图：

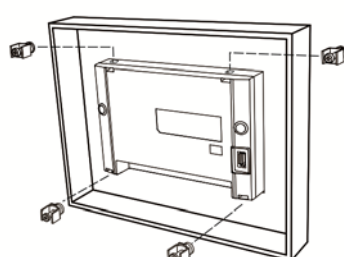
步骤一：

请确实将防水垫圈装入，然后再安装人机界面



步骤二：

请确实将固定片螺丝组装入内，然后下方钩住前盖螺丝头顶住控制箱内侧



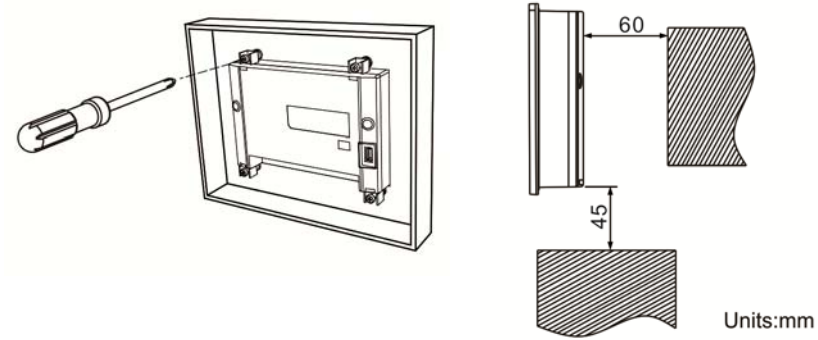
步骤三：

请以 0.5N-M / 0.7N-M 扭力锁紧，切记不可超过此 安装时，人机后方请预留 60mm 散热空间

步骤四：

DOP-107 / DOP-110 扭力: 6.17lb-inch ( 0.7N-M )

DOP-103 扭力: 4.41lb-inch ( 0.5N-M )

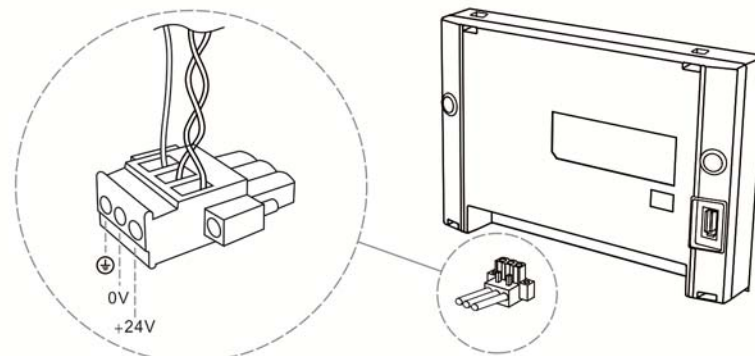


配线：

种类	电源配线(AWG)	剥线长度	扭力
单芯线	24~ 12	7 ~ 8 mm	5 kg-cm (4.3 lb-in)
多芯线	24 ~ 12	7 ~ 8 mm	5 kg-cm (4.3 lb-in)



请参考下图电源接头端子进行配线：



## (6) 硬件规格

型号	DOP-103WQ	DOP-107WV	DOP-110WS
面板种类	4.3" TFT LCD ( 65535 色 )	7" TFT LCD (65535 色)	10.1" TFT LCD (65535 色)
解析度	480 x 272 pixels	800 x 480 pixels	1024 x 600 pixels
背光灯	LED Back Light ( 常温 25°C 下半衰期>1 万小时 ) (Note 1)	LED Back Light ( 常温 25°C 下半衰期>2 万小时 ) (Note 1)	LED Back Light ( 常温 25°C 下半衰期>3 万小时 ) (Note 1)
显示范围	95.04 x 53.856 mm	154.08x85.92 mm	225.52 x 128.10 mm
亮度	400 cd/m <sup>2</sup> (Typ.)	450 cd/m <sup>2</sup> (Typ.)	450 cd/m <sup>2</sup> (Typ.)
中央处理器	ARM Cortex-A8 (800MHz)		
Flash ROM	256 Mbytes		
RAM	512 Mbytes		
触控操作器	四线电阻式 > 10,000,000 operated		
蜂鸣器	Multi-Tone Frequency ( 2K ~ 4K Hz ) / 80dB		
网络界面	10/100 Mbps 自动侦测 ( 内建隔离电路 ) (Note 2)		
USB	1 USB Slave Ver 2.0 1 USB Host Ver 2.0		
SD	N/A		SD * 1
串行通讯口	COM1	RS-232(支援流量控制) / RS-485 (Note 2)	RS-232(支援流量控制) (Note 2)
	COM2	RS-422 / RS-485 (Note 2)	RS-232(支援流量控制) / RS-485 (Note 2)
	COM3	N/A	RS-422 / RS-485 (Note 2)
辅助键	N/A		
万年历	内建		
冷却方式	自然冷却		

安规认证	CE / UL (请使用 shielding 网络线及使用磁环 300ohm/100MHz 滤波)		
面板防水等级	IP65/NEMA4		
工作电压 (Note2)	DC +24V (-15% ~ +15%) (请使用隔离式电源供应器) Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)		
绝缘耐力	DC24V 端子与 FG 端子间: AC500V, 1 分钟		
消耗功率 (Note 2)	5.8W (Max) (Note 3)	8.4W (Max) (Note 3)	11W (Max) (Note 3)
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		
尺寸 (W) x (H) x (D) mm	137 x 103 x 37.1	196 x 136 x 39	270 x 180.9 x 47.25
开孔尺寸 (W) x (H) mm	118.8 x 92.8	186.8 x 126.8	255 x 170
重量	约 280g	约 560g	约 1.1 Kgs

部件名称 Part Name	有毒物质 -Hazardous Substances					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬 (Cr VI)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
金属部件 Metal Part	X	O	O	O	O	O
塑料部件 Plastic Part	O	O	O	O	O	O
电子件 Electronic	X	O	O	O	O	O
触点 Contacts	O	O	X	O	O	O
线缆和线缆附件 Cable & Cabling accessories	X	O	O	O	O	O
电池 Battery	O	O	O	O	O	O

本表格依据 SJ/T 11364 的规定编制。

O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。  
X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。

This table is made according to SJ/T 11364.  
O: Indicates that the concentration of hazardous substance in all of the homogeneous materials for this part is below the limit as stipulated in GB/T 26572.  
X: Indicates that concentration of hazardous substance in at least one of the homogeneous materials used for this part is above the limit as stipulated in GB/T 26572.



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