Send Quote Requests to info@automatedpt.com
Call +1(800)985-6929 To Order or Order Online At Deltaacdrives.com

2016-04-11
5012618605- WB05

High Color • Wide Screen • User-Friendly HMI Products

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

DOP-*W*

DOP-W105B / DOP-W127B / DOP-W157B Instruction Sheet

(1) Preface

Thank you for purchasing DELTA's DOP-W 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) Safety Precautions

Carefully note and observe the following safety precautions when receiving, inspecting, installing, operating, maintaining and troubleshooting. The following words, DANGER, WARNING and STOP are used to mark safety precautions when using the Delta's HMI product. Failure to observe these precautions may void the warranty!

Installation

DANGER

- Comply with quick start for installation. Otherwise it may cause equipment damage.
- Do not install the product in a location that is outside the stated specification for the HMI. Failure to observe this caution may result in electric shock, fire, or explosion.
- Do not install the product in a location where temperatures will exceed specification for the HMI. Failure to observe this caution may result in abnormal operation or damage the product.
- Please note that this equipment has obtained EMC registration for commercial use. In the event that it has been mistakenly sold or purchased, please exchange it for equipment certified for home use.
- Do not use this product as an alarm device for disaster early warning that may result in personal injury, equipment damage, or system emergency stop.

Wiring

DANGER

- Connect the ground terminals to a class-3 ground (Ground resistance should not exceed 100Ω). Improper grounding may result in communication error, electric shock or fire.

Operation

WARNING

- The users should use Delta editing software, DOPSoft to perform editing in Delta's HMI product. To perform editing and confirming HMI programs without using Delta editing software, DOPSoft in Delta's HMI product may result in abnormal operation.
- To prevent the personal injury and equipment damage, when designing HMI programs, please ensure that a communication error occurred between Delta's HMI product and the connecting controller or equipment will not result in system failure or malfunction.
- Please be sure to backup the screen data and HMI programs in case they are lost, accidentally deleted or worse.

STOP

- Do not modify wiring during operation. Otherwise it may result in electric shock or personal injury.
- Never use a hard or pointed object to hit or strike the screen as doing this may damage the screen and let the screen has not respond at all, and then cause HMI to work abnormally.

Maintenance and Inspection

STOP

- Do not touch any internal or exposed parts of the HMI as electrical shock may result.
- Do not remove operation panel while power is on. Otherwise electrical shock may result.
- Wait at least 10 minutes after power has been removed before touching any HMI terminals or performing any wiring and/or inspection as an electrical charge may still remain in the HMI with hazardous voltages even after power has been removed.
- Turn the power off before changing backup battery and check system settings after finishing change. (all data will be cleared after changing battery).
- Be sure the ventilation holes are not obstructed during operation. Otherwise malfunction may result due to bad ventilation or overheating troubles.

Wiring Method

WARNING

- Do not use a voltage that will exceed specification for the HMI. Failure to observe this caution may result in electric shock or fire.
- Remove the terminal block from the HMI before wiring.
- Insert only one wire into one terminal on the terminal block.
- If the wiring is in error, perform the wiring again with proper tools. Never use force to remove the terminals or wires. Otherwise, it may result in malfunction or damage.

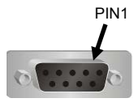
Communication Wiring

WARNING

- Comply with communication wiring specification for wiring.
- Wiring length should comply with the stated specification for the HMI.
- Proper grounding to avoid bad communication quality.
- To avoid noise and interference, the communication cable, all power cables, and motor power cable should be placed in separate conduits.

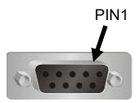
(3) Pin Definition of Serial Communication

DOP-W105B / DOP-W127B / DOP-W157B COM2 Port

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

Note1: Blank = No Connection.

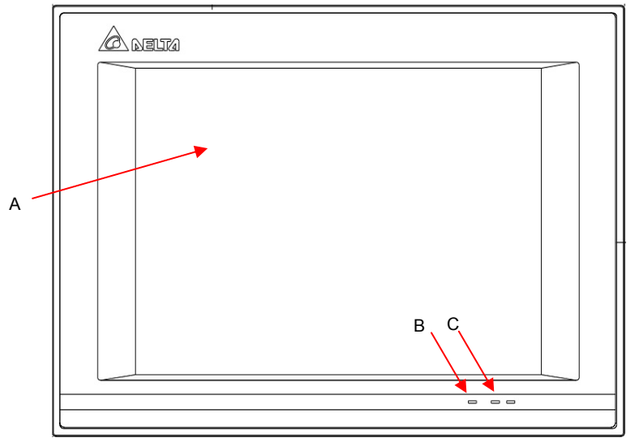
DOP-W105B / DOP-W127B / DOP-W157B COM3 Port

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

Note1: Blank = No Connection.

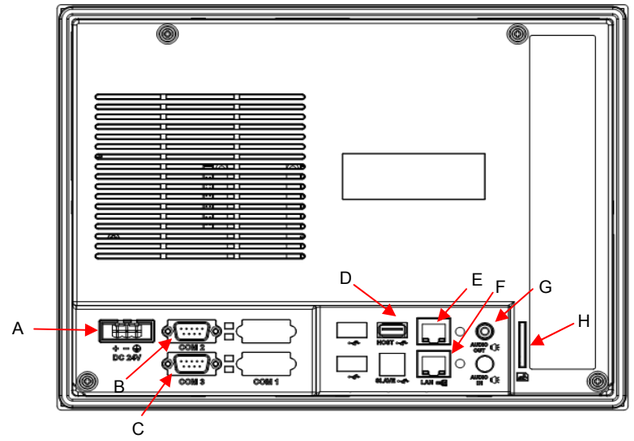
(4) Parts Names

DOP-W105B (Front View)



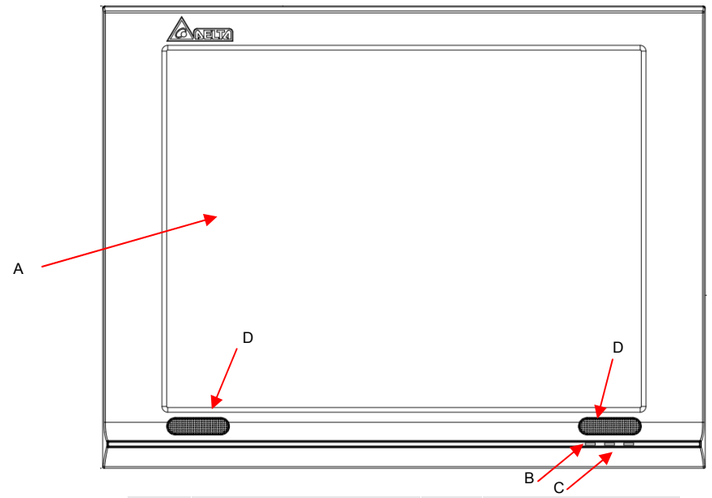
A	Touch Screen / Display	B	Power LED Indicator
C	Operation LED Indicator / Alarm LED Indicator		

DOP-W105B (Rear View)



A	Power Input Terminal	B	COM2
C	COM3	D	USB Host
E	Ethernet LAN1	F	Ethernet LAN2
G	Audio	H	SD

DOP-W127B / DOP-W157B (Front View)

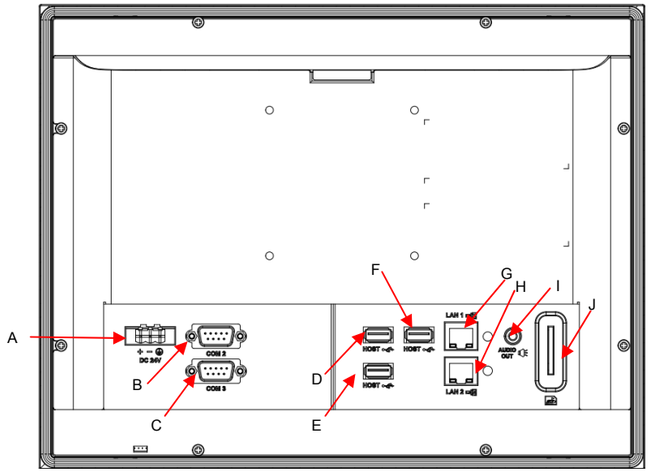


A	Touch Screen / Display	B	Power LED Indicator
C	Operation LED Indicator / Alarm LED Indicator	D	1.5W Built In Speaker

Send Quote Requests to info@automatedpt.com
Call +1(800)985-6929 To Order or Order Online At Deltaacdrives.com

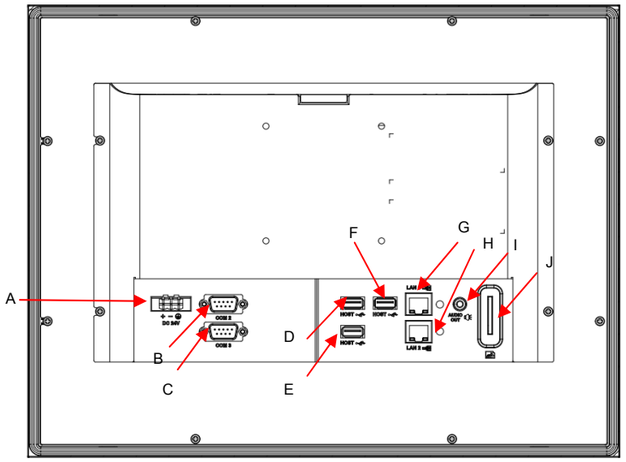
Send Quote Requests to info@automatedpt.com
Call +1(800)985-6929 To Order or Order Online At Deltaacdrives.com

DOP-W127B (Rear View)



A	Power Input Terminal	B	COM2
C	COM3	D	USB Host
E	USB Host	F	USB Host
G	Ethernet LAN1	H	Ethernet LAN2
I	Audio	J	SD

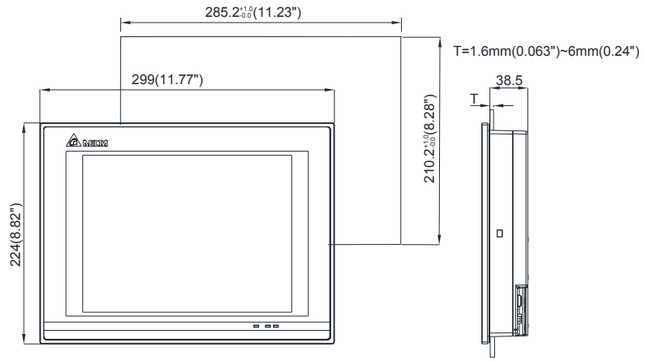
DOP-W157B (Rear View)



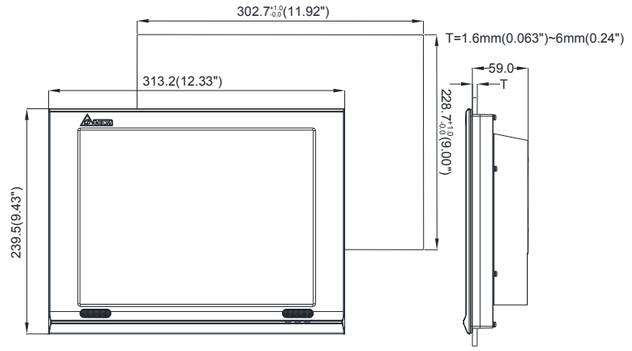
A	Power Input Terminal	B	COM2
C	COM3	D	USB Host
E	USB Host	F	USB Host
G	Ethernet LAN1	H	Ethernet LAN2
I	Audio	J	SD

(5) Dimensions

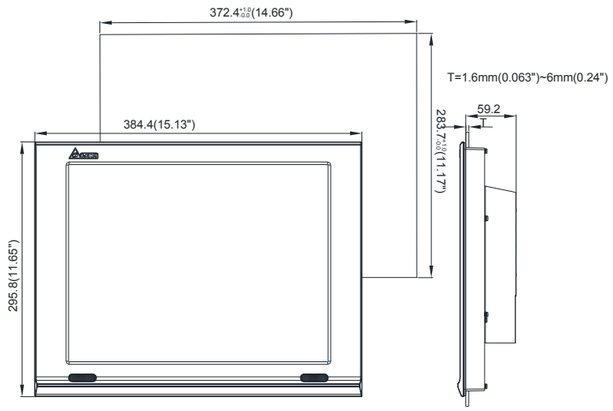
DOP-W105B



DOP-W127B



DOP-W157B



(6) Specifications

MODEL		DOP-W105B	DOP-W127B	DOP-W157B
LCD MODULE	Display Type	10.4" TFT LCD	12.1" TFT LCD	15" TFT LCD
	Resolution	800 x 600 pixels	1024 x 768 pixels	
	Backlight	LED Back Light		
	Backlight Life	less than 10,000 hours	less than 30,000 hours	less than 80,000 hours
	Luminance	300 cd/m² (Typ.)	500 cd/m² (Typ.)	450 cd/m² (Typ.)
	Display Size	211.20 x 158.40mm	245.76*184.32mm	304.1*228.1mm
Operation System		Windows® CE 6.0		
MCU		ARM Cortex-A8 (1GHz)		
NAND Flash ROM		SLC NAND Flash ROM 256 MB		
SDRAM		256 Mbytes		
Backup Memory		800000 numbers of data (alarm data + historical data)		
Touch Screen Interface		4-wire resistive touch screen > 10,000,000 operated		
Buzzer		Multi-Tone Frequency (2K ~ 4K Hz) / 80dB		
Audio Output		I2S Decode, Stereo Headphone jack only	I2S Decode, Stereo Headphone jack + Built in 1.5W Speaker	
USB		1 USB Host Ver 2.0	3 USB Host Ver 2.0	
SD		SDHC x 1		
Serial COM Port	COM1	N/A		
	COM2	RS-232 / RS-422 / RS-485 (has built-in isolated power circuit (Note 1))		
	COM3	RS-232 / RS-422 / RS-485 (has built-in isolated power circuit (Note 1))		
Ethernet		2 Ports IEEE 802.3(10BASE-T) IEEE 802.3u(100BASE-TX) IEEE 802.3x (Full Duplex and flow control)		
Perpetual Calendar (RTC)		Built-in		
Cooling Method		Natural air circulation		
Safety Approval		CE / UL (Note 3)		
Waterproof Degree		IP65 / NEMA4 (Note 3)		
Operation Voltage (Note2)		DC +24V (-10% ~ +15%) (please use isolated power supply)		
Voltage Endurance		AC500V for 1 minute (between charging (DC24V terminal) and FG terminals)		
Power Consumption (Note 2)		13.5W (Max)	18.5W (Max)	21.6W (Max)
Backup Battery		uses a gold-capacitor instead of a battery, no need replacement of batteries		
Backup Battery Life		It can keep the RTC work at least seven days under the working environment where the conditions do not exceed the specifications for DOP-W series.		
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		
Noise Immunity		DOP-W105B / DOPW-127B / DOP-W157B		
	ESD (IEC 61131-2, IEC 61000-4-2)	±6KV Contact Discharge		
		±10KV Air Discharge		
	EFT (IEC 61131-2, IEC 61000-4-4)	Power Line:±1KV (Class A)		
		Communication I/O: ±500V (Class A)		
	Surge (IEC 61132-2, IEC 61000-4-5)	Power line ±1KV DM		
		Series Port ±500V CM		
		Ethernet ±500KV CM		
	RS (IEC 61131-2, IEC 61000-4-3)	80MHz ~ 1GHz, 10V/m. 1.4GHz ~ 2.0GHz, 10V/m		
	CS (EN 61000-4-6, IEC61131-2 9.10)	150kHz ~ 80MHz, 3V/m		
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		299 x 224 x 46.8	313 x 239.5 x 67.5	384.4*295.8*67.8
Panel Cutout (W) x (H) mm		285.2 x 210.2	302.7 x 228.7	372.4*283.7
Weight		Approx. 1750g	Approx. 2830g	Approx. 3880g

NOTE

1) The withstand voltage of the isolated power circuit is 1500V peak for 1 minute.
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) Some models are in the process of application to UL and KCC certification. For more information, please consult our distributors.
4) 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.

Send Quote Requests to info@automatedpt.com
Call +1(800)985-6929 To Order or Order Online At Deltaacdrives.com