

Automation for a Changing World

# Delta Human Machine Interface DOP Series





# One Touch Gives You Limitless Possil

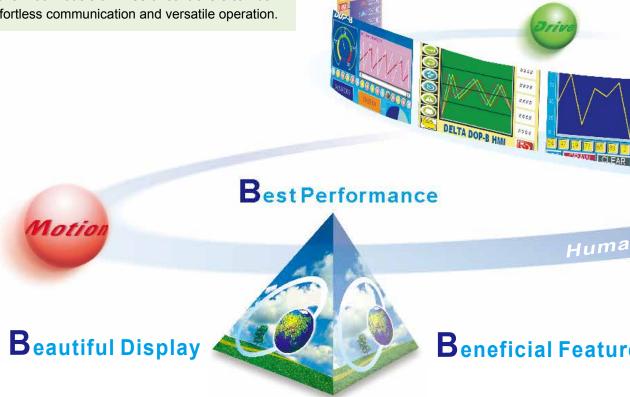
Meets Customer Needs. Satisfies a Variety of Applications. Provides Multiple Functions. Creates

### A Wide Range of Options

Three serial communication interfaces (RS-232/RS-422/RS-485), USB disk, Ethernet, audio output, SD card and more are supported for various applications.

### **Powerful Controller Drivers Support**

Not just Delta industrial automation products, but more than 30 brands, and over 100 models of PLCs or controllers can be connected for effortless communication and versatile operation.





# **Energy Saving and Environmental Automation**

es

All models are equipped with LED backlights which provide energy-efficient lighting that is made without mercury, reduces energy use and CO2 emissions, and protects the environment.

### **High Quality and Full-Color Display**

A full 65,536-color display is available on all models. With a whole new 2D drawing technique, the screen resolution is enhanced for more realistic images and for more colorful and vivid displays.





# **Product Line-up**

### **DOP-B** series

The DOP-B series provides various types and different sizes of touch panel HMIs with multiple dimensions and colors, and also offers fast and convenient control functions to meet the diverse application requirements demanded of industrial automation machines.

		DO	P-B		
4.3 inches Wide	Auto	B03S211 B03E211	7 inches	Auris	B07S515 B07E515 B07PS515
5.6 inches	Ann	B05S111	8 inches	A	B08S515 B08E515
	## # # # # # # # # # # # # # # # # # #	B07S401K	10.1 inches	Acc	B10S411 B10S615 B10E615
7 inches Wide		B07S411K	10.4 inches	Augus	B10S511 B10VS511 B10PE515
	Ance	B07S410 B07S411 B07E411 B07S415 B07E415 B07PS415			

### **DOP-H Series**

The DOP-H series provides handheld type HMIs and customized teaching pendants for controlling and programming the motion of robot arms and other motion control systems.



### **DOP-W Series**

The DOP-W series offers large-size HMIs that come with high resolution and high brightness touch screens, and should be your first choice to meet customer needs for a wide range of high-end industrial automation applications.

	DOP-W	
10.4 inches	Aires	W105B
12 inches	Ave:	W127B
15 inches		W157B





# **High Quality Display**



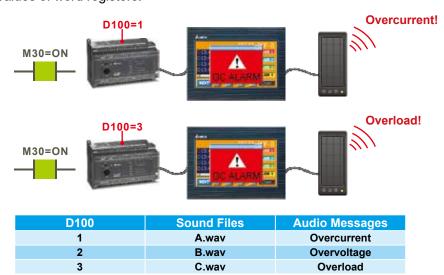
65,536-color high quality TFT display offers more realistic and vivid images to capture and visualize system and manufacturing processes more quickly.

# **Audio Output Interface**



In case of errors, an alarm alerts users via an audio message in real time.

► As the broadcast of alarms is triggered by the corresponding bit, the alarm messages can be played and output in different sound files by setting values of word registers.



# **Supports Various Peripherals via USB Hub**

**USB** 



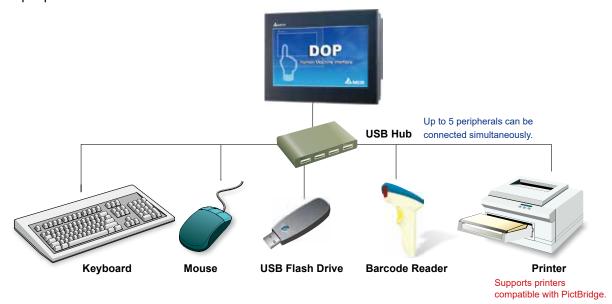
Using the bypass function, enable monitoring functions and modify PLC programs directly via the USB connection.

DOP

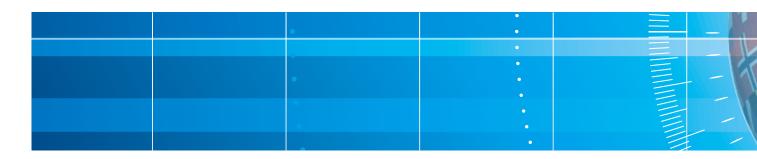
**RS-223** 

### Master (USB-type A)

Various peripherals can be connected via a USB Hub.



\*Supports Delta DVP series PLC only.



# SD Card / USB Disk Versatile Storage Interface

- Exploiting the convenience of an SD card or USB disk, screen data transfer and collection can be quickly performed and the storage capacities of the HMI can be easily increased. No need to worry about data capacity of excessive history and recipe data
- SD card and USB disk are in FAT32 format, fully compatible with Microsoft Windows and allow filenames that exceed eight characters in length



The recipe data can be saved in CSV format and easily edited on an external PC in Excel to effectively save PLC memory.



History and alarm information can also be saved in CSV format and stored to the SD card / USB disk.

- Multiple project screen data can be saved in SD card / USB disk simultaneously and transferred to HMI. No need to connect to a PC
- The data saved in an SD card / USB disk can be encrypted and the number of copies can be limited to protect the programs from unauthorized use



- PLC ladder diagrams can be transferred and backed up via SD card / USB disk even in a location where an external PC is not available
- SD card / USB disk are capable of storing several PLC ladder diagrams

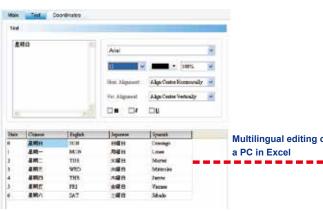


Support Delta DVP series PLC only.



# **Multilingual Display**

Up to 32 languages are available. No need to redesign the screen data! A benefit for marketing the equipment to manufacturers and end users around the world.

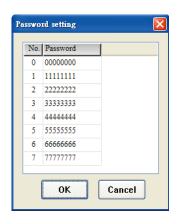




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# **Password Settings**

Provides 8 levels of passwords to set user security and prevent improper use. Only the security level that is equal to or higher than the current setting can use the element.





### **Element Invisible Function**

The element on the screen can be hidden by triggering the corresponding bit.



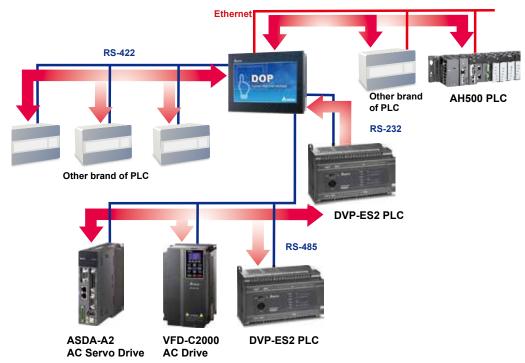




# **Provides Diverse Communication Interfaces**

### Easy to communicate with more than 30 brands of PLCs/Controllers

All DOP series models support RS-232/485/422 communication interfaces and over 20 different PLC/Controller drivers. With the aid of an Ethernet interface, it is possible to use four communication interfaces at the same time, easily connecting to various industrial automation devices for a complete communication network link managed by Delta's new DOP series.



### **VGA Model**

DOP-B10VS511 supports VGA video input which integrates live video and HMI display into one unit. Incorporated with Delta's DMV series machine vision system, Delta offers an integrated solution that delivers precise and reliable control to meet the needs of industry upgrades and bring benefits to our customers around the world.



# Integrates Delta Professional Functions (PS Models Only):

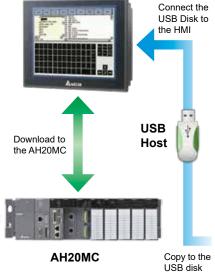
**Servo Drive** 

### **G-Code**

- Supports Delta's motion controllers: DVP-10MC / DVP-20PM / AH20MC
- Capable of viewing and changing the G-code files with the HMI
- Supports serial and Ethernet communications

**Drawing Machine** 





DOP-B07PS515

# Transform to G-Code

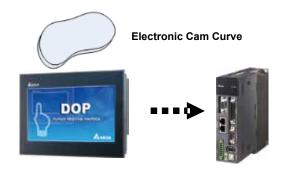
**Create Autocad files** 

N01 G00 Z1.00000 N10 G64 N20 G00 X51.41791 Y6.46013 N30 G01 Z-0.10000 F1000.00 N40 G01 X51.43897 Y6.57145 N50 G01 X51.46328 Y6.60449 N60 G01 X54.19628 Y9.64749 N70 G01 X54.54002 Y10.03007

N80 G01 X54.61772 Y10.20689 N90 G01 X54.69736 Y10.58087 N100 G01 X55.03397 Y11.59650 N110 G01 X55.22240 Y12.08614 N120 G01 X55.52968 Y12.78773

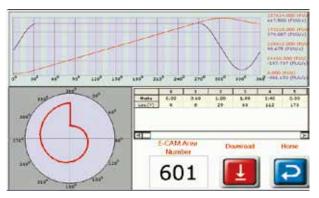
### **Electronic Cam (E-Cam) Curve Table**

- Supports ASDA-A2 series servo drives
- ▶ A personal computer is not required. Electronic cam curves can be generated on HMI and downloaded to the ASDA-A2 series servo drive directly

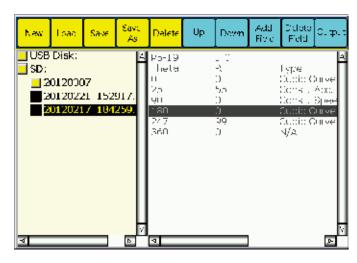


# Supports E-Cam table macro for making E-Cam curve on HMI

- Auto rotary shear with sealing zone
- Indirect printing
- Auto rotary shear cos compensation



### Supports cubic curve manual creation





### **DOP-W Features**



### The Ultimate in Industrial Versatility

- ▶ 1GHz high speed processor for higher computing performance
- ▶ Aluminum enclosure: greater vibration resistance and higher tolerance for ambient environments compared with plastic enclosure.
- ▶ The enclosure with dark gray mold texturing is easily cleaned and ideal for the medical and food sectors.
- ▶ 1024 x 768 pixels high resolution and high brightness display (W127B: 500 cd/m², W157B: 450 cd/m²)
- ▶ 256MB Flash ROM
- ▶ Highly reliable touch panel with min. 10,000,000 touches

### **Front Speaker**

- The built-in stereo amplifying speaker provides efficient alarm notifications. No additional speaker is required.
- ▶ Apart from replacing general alarm with buzzers, functions for playing recorded voice and reminders are available for multiple applications.
- Mechanism design breakthrough. The front panel including the front speaker has acquired the IP65 waterproof certificate.





### **Multiple Peripheral Interfaces**

- Supports 2 COM Ports
- Supports 2 Ethernet Ports
- Supports 3 USB Host 2.0 Ports
- Supports SD card
- Apart from traditional mounting, DOP-W also supports the VESA standard mounting interface making wall mounts easier.

\*VESA mounting interface is only available on devices above 12 inches.

### **Multi-User Authority Management**

This function allows users to assign authority levels and register passwords to set permissions for different user groups for security control. No need for third-party configuration and set-up costs.

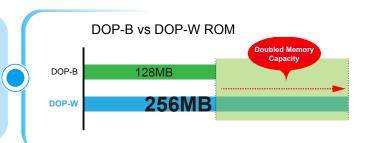


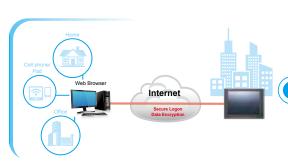
▶ 8 sets of user accounts with passwords for each user authority



### **High-Capacity Memory**

Increased memory capacity stores more nonvolatile data, such as alarm messages and historical records than ever before for power-loss protection.





# **More Powerful Remote Monitoring Function**

- Compatible with eRemote
- Supports VNC Server
  - Monitoring by eRemote software or web browser on PC
  - ▶ Apps for eRemote or VNC Client support Apps on Android devices
  - VNC Client supported Apps on iOS devices
    - \* JAVA is required in web browsers.

### **Two Individual Ethernet Ports**

► Two individual Ethernet ports are equipped as standard, one is for HMI communication and the other is for external I/O for quick and easy integration.







### **Multilingual Display**

- ► In addition to English and numbers, 16 languages are supported for a more localized interface
  - \* Supports English, Traditional Chinese, and Simplified Chinese only during the launching period.
  - \* Other languages such as Arabic, French, German, Hebrew, Hindi, Portuguese, Spanish, Japanese, Korean, Thai, Turkish, Russian, and Persian are continually added.

### **Video Player**

A new video player with self-defined playlist allows users to manage the list based on different applications.



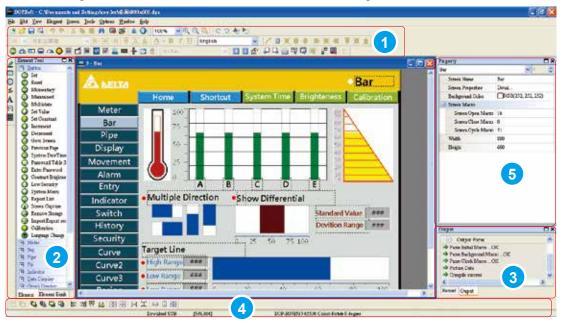


\* Supported Format: WMV



### **DOPSoft**

The all new and upgraded configuration software provides complete functions and a user-friendly operator interface. Make editing easier than ever with a whole new level of design.



### 1) Toolbar

Actions such as edit, save, upload and compile can be executed easily just by clicking the attractive and easy-to-see icons on the toolbar.

### 3) Output Window

The Output Window displays all the editing actions and output messages when the compile function is enabled. Once an error occurs, the error messages are displayed in Output Window as well.

### 5) Property Table

The Property Table displays the element property settings for each element.

# **Picture Bank**

Newly designed picture bank offers more colorful and attractive elements.

### 2 Element Tool Window

The Element Tool Window provides a wide variety of element icons for selection. Use the mouse to select the desired element icon and drag it onto the work place to create a new element.

### 4) Layout Toolbar

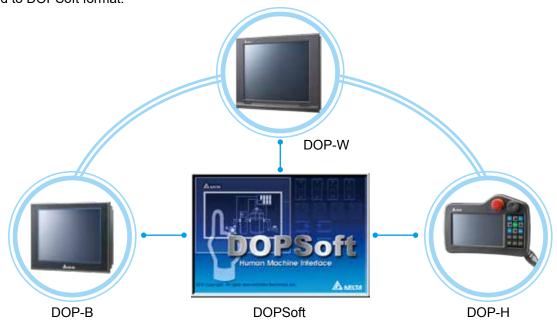
The Layout Toolbar offers Bring to Front, Send to Bottom, Align, Across / Down Space Evenly, Make Same Size and other functions for the benefit of creating intricate and beautiful elements.





### **Convenient Screen Data Conversion**

Compatible with all DOP series, project files can be easily upgraded and converted to DOPSoft format.



The screen data can be converted to different models even if the display size is not the same. The same project can be applied on different models.



\*After the screen data is converted, it still needs to confirm the element position, text size and other settings.

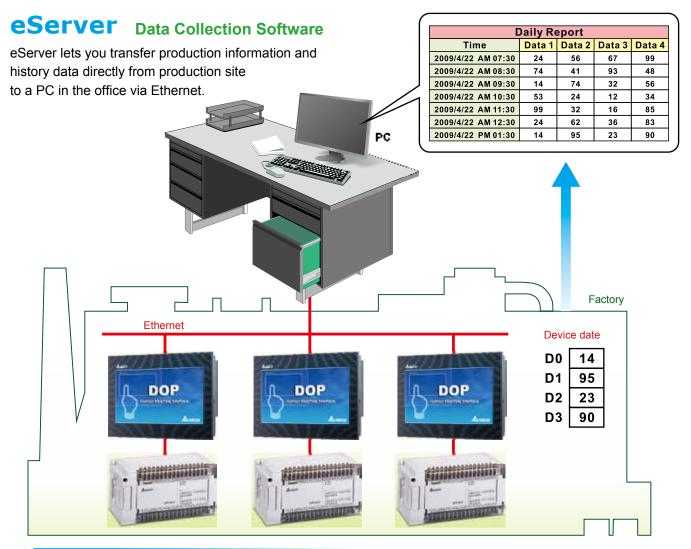
# **Minimum System Requirements of DOPSoft**

Hardware / Software	System Requirements				
CPU	Pentium4 1.6GHz or greater is recommended				
Memory	2G MB and above is recommended				
Hard Disk	Capacity: 400MB and above				
Monitor	Supports resolution: 800 x 600 or higher full-color display				
Printer	Printer compatible with Windows 2000 Windows XP / Windows Vista / Windows 7				
Operating System	Windows 2000 / Windows XP Windows Vista / Windows 7				

\*Users can download the DOPSoft configuration software and the user manual at Delta's website via the following link: http://www.deltaww.com



# Solution for Constructing a Network between Office and Production Site via Ethernet



### 1) Excel Sampling Data

- Collected data can be saved in user-defined Excel files according to purpose and to easily create production reports
- ▶ If the formulas in the Excel file are set in advance, the production data, i.e. defective rate, average working hours and capacity utilization rate, and more can be calculated in real time while production data is recorded
- ▶ Production data can be saved in daily reports, weekly reports, monthly reports, and others automatically under different settings.

### 2) Database Sampling Data

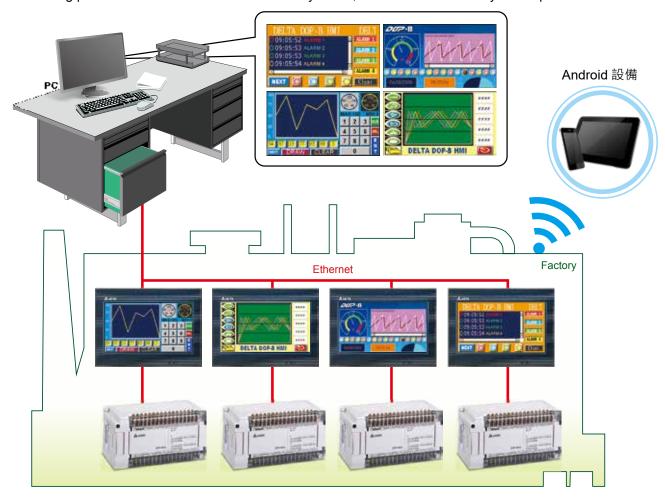
Users can access any database via ODBC (Open Database Connectivity) interface

### 3 Recipe Data Transfer

Users can transfer and backup the recipe data via eServer easily

### **eRemote** Remote Control Software

eRemote lets you view and monitor the same screen shown on the HMI at the production site, and control the manufacturing process via Ethernet. No matter where you are, remote control is easily accomplished.



# Minimum System Requirements for eServer / eRemote

Hardware / Software	System Requirements
CPU	Pentium 4,1.6GHz or greater is recommended
Memory	2G MB and above is recommended
Hard Disk	Capacity: 100MB and above
Monitor	Supports resolution: 1024 x 768 or higher full-color display.
Printer	Printer compatible with Windows 2000 / Windows XP / Windows Vista / Windows 7
Operating System	Windows 2000 / Windows XP / Windows Vista / Windows 7

<sup>\*</sup>Users can download the eServer / eRemote software and the user manual at Delta's website via the following link: http://www.deltaww.com

System Re		
Operating System	Android 4.1.2 and later versions	an Anda
Storage Capacity	860 KB and above	



# **Specifications**

### **DOP-B Series**

JOF -1	D Jenes											
	MODEL	DOP-B03S211	DOP-B03E211	DOP-B05S111	DOP-B07S410	DOP-B07S411	DOP-B07E411	DOP-B07S401K DOP-B07S411K	DOP-B07S415	DOP-B07PS415	DOP-B07E415	
	Display Size and Type	4.3" TI	FT LCD	5.6" TFT LCD			7"	Widescreen TFT I	LCD			
	Display Colors					65536	6 colors					
LCD	Resolution (pixels)	480	x 272	320 x 234				800 x 480				
MODULE	Backlight					LED Ba	ack Light					
	Luminance (cd/m²)	280	400	200	250	250	250	250	350	350	350	
	Backlight Life (hours)	20,000	10,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	
	MCU					400	MHz					
Flas	sh ROM (Bytes)	128	MB	128 MB	4MB			128	в МВ			
í	RAM (Bytes)		64MB					64MB				
Backu	ıp Memory (Bytes)		16MB		32k			16	MB			
	Buzzer				Multi-	-Tone Frequency	( 2K ~ 4K Hz ) /	85dB				
	AUX	N	/A	N/A				N/A			Stereo output	
	Ethernet	N/A	1 Port (Note 2)	N/A	N	I/A	1 Port (Note 2)		N/A		1 Port (Note 2)	
N	Memory Card	N	/A	N/A		N	N/A		SD	card (supports SD	OHC)	
"					4 1100 0"	·			SD	a (sapporto OD		
	USB	1 USB Host Ver 1.1 / 1 USB Client 1 USB Client Ver 2.0 Ver 2.0					11	JSB Host Ver 1.1 /	1 USB Client Ve	r 2.0		
		DS 232 (Supr	oorts hardware	RS-232 (Supports	RS-232 (Supports hardware flow	DQ 3	232 (Supports har	dware	DQ 2	222 (Supports hard	dwara	
	COM1		l) / RS-485	hardware flow	control)/	11.0-2	RS-232 (Supports hardware flow control)			RS-232 (Supports hardware flow control) <sup>(Note 2)</sup>		
Serial COM				control)(Note 2)	RS-485 / RS-422							
Port	COM2	RS-422 / RS-S485	RS-422 / RS-485 (Note 2)	RS-232 / RS-485 (Note 2)	N/A		RS-232 / RS-48	5	RS-232	/ RS-422 / RS-	485 <sup>(Note 2)</sup>	
	COM3			RS-422 /	NI/A		DC 400 / DC 40	ıE	DC 222	/ DC 422 / DC	AOE(Note 2)	
	COIVIS	N/A RS-422 / RS-485 RS-232 / RS-				/ NO-422 / NO-	400					
	VGA Input	N/A N/A N/A										
	lta Professional gration Function	N	/A	N/A			N/A			YES	N/A	
F	Function Key	N	/A	N/A	N/A 8 N/A							
Perpetu	ual Calendar (RTC)					Bu	ilt-in					
Co	ooling Method					Natural ai	r circulation					
Sa	afety Approval					CE	/ UL					
	terproof Degree				IP65 / UL type 4x							
Opera	ation Voltage (Note 3)					DC +24V ( -10	% ~ +15% ) <sup>(Note2)</sup>					
Volt	tage Endurance			A	C500V for 1 minu	te (between char	ging DC24 termin	al and FG termina	ls)			
Power	Consumption (Note 5)	2.64W	2.64W	3.0 W	3.5 W	4 W	4 W	4W	5 W	5W	7.5W	
В	ackup Battery					3V lithium batt	tery CR2032 x 1					
Bac	ckup Battery Life	It depends on the temperature used and the conditions of usage, about 3 years or more at 25 °C										
Op	peration Temp.	0°C ~ 50°C										
S	Storage Temp.	-20°C ~ +60°C										
Am	Ambient Humidity 10%				% ~ 90% RH (0 ~	40° C), 10% ~ 55	5% RH (41 ~ 50 °	C), Pollution Degre	ee 2			
	Vibration IEC 61131-2				2 compliant 5Hz ~	8.3Hz = Continu	ious: 3.5mm, 8.3F	Hz ~ 150Hz = Cont	tinuous: 1.0g			
	Shock	IEC 60068-2-27 compliant 15g peak for 11 ms duration, X, Y, Z directions for 6 times										
(W)	Dimensions x ( H ) x ( D ) mm	129 × 103 × 39	129 x103 × 39	184 × 144 × 50	215 × 161 × 35.3	215 × 161 × 50	215 x 161 x 50	215 × 161 × 50	215 × 161 × 50	215 × 161 × 50	215 × 161 × 50	
	Panel Cutout W)x(H)mm	118.8 × 92.8	118.8 × 92.8	172.4 × 132.4	196.9 × 142.9	196.9 × 142.9	196.9 x 142.9	196.9 × 142.9	196.9 × 142.9	196.9 × 142.9	196.9 × 142.9	
,	Weight	Approx. 230 g	Approx. 264 g	Approx. 670 g	Approx. 700 g	Approx. 820 g	Approx. 820 g	Approx. 820 g	Approx. 970 g	Approx. 970g	Approx. 970 g	
. T		diameter of the contract of th		500/			P 11 11841					

The half-life of backlight is defined as original luminance being reduced by 50% when the maximum driving current is supplied to HMI.
 With built-in isolated power circuit.
 Please use isolated power supply.
 Some models are in the process of application for UL and KCC certification. For more information, please consult our distributors.

<sup>5)</sup> The value of the power consumption indicates the electrical power consumed by HMI with no peripheral devices connected.

To ensure normal operation, it is recommended using a power supply with a capacity 1.5 ~2 times the value of the power consumption.

6) The content of this catalogue may be revised without prior notice. Please consult our distributors or download the most updated version at http://www.deltaww.com

DOP-B07S515	DOP-B07PS515	DOP-B07E515	DOP-B08S515	DOP-B08E515	DOP-B10S511	DOP-B10VS511	DOP-B10E515	DOP-B10PE515	DOP-B10S411	DOP-B10S615	DOP-B10E615
	7" TFT LCD		8" TF1	r LCD		10.4" T	FT LCD		10.1	" Widescreen TFT	LCD
					65536	colors					
	800 x 600		800 >	c 600		800	x 600		800 x 480	1024	x 600
					LED Ba	ack Light					
450	450	450	500	500	300	300	300	300	300	200	200
20,000	20,000	20,000	25,000	25,000	10,000	10,000	10,000	10,000	20,000	15,000	15,000
					400	MHz					
128 MB 128 MB							В МВ			128 MB	
	64MB		641	МВ		64	MB			64MB	
	16MB		161	МВ		16	6MB			16MB	
				Multi	-Tone Frequency	( 2K ~ 4K Hz ) /	85dB				
	/A	Stereo output	N/A	Stereo output		/A		output		I/A	Stereo output
N.	/A	1 Port (Note 2) SD card	N/A	1 Port (Note 2)	N	/A	1 Por	t (Note 2)	N	//A	1 Port (Note 2)
SD card (sup	oports SDHC)	(supports SDHC)	SD card (sup	ports SDHC)	N	/A	SD card (sup	oports SDHC)	N/A	SD card (sup	ports SDHC)
		05/10)		1 L	JSB Host Ver 1.1	/ 1 USB Client Ve	r 2.0				
	32 (Supports hard flow control)(Note 2)		RS-232 (Supp flow con		RS-232 (Supports hardware flow control)	RS-2	232 (Supports hard flow control) (Note 2)		RS-232 (Supports hardware flow control)	RS-232 (Supp flow con	oorts hardware trol) <sup>(Note 2)</sup>
RS	S-232 / RS-485 <sup>(No</sup>	ote 2)	RS-232 / RS-42	2 / RS-485 <sup>(Note 2)</sup>	RS-232 / RS-485	RS-232 / RS-485 <sup>(Note2)</sup>	RS-232 / RS-42	22 / RS-485 <sup>(Note 2)</sup>	RS-232 / RS-485	RS-232 / RS-42	2 / RS-485 <sup>(Note 2)</sup>
RS	S-422 / RS-485 <sup>(No</sup>	ote 2)	RS-232 / RS-42	2 / RS-485 <sup>(Note 2)</sup>	RS-232 / RS- 422 / RS-485	RS-232 / RS- 422 / RS- 485 <sup>(Note2)</sup>	RS-232 / RS-42	22 / RS-485 <sup>(Note 2)</sup>	RS-232 / RS-422 / RS-485	RS-232 / RS-42	2 / RS-485 <sup>(Note 2)</sup>
	N/A		N	/A	N/A	Resolution 800x600 pixels Scanning Frequency 56 Hz / 60 Hz	N	//A	N/A		
N/A	YES	N/A	N	/A		N/A		YES		N/A	
	N/A		N	/A		N	I/A			N/A	
					Bu	ilt-in					
					Natural air	r circulation					
					CE	/ UL					
					IP65 / L	JL type 4x					
					DC +24V ( -109	% ~ +15% ) <sup>(Note2)</sup>					
			F	AC500V for 1 minu	te (between char	ging DC24 termin	al and FG termina	ls)			
7.68W	7.68 W	7.68 W	5.2W	7.8W	6.1 W	6.1 W	9.6 W	9.6W	6.6 W	12W	12W
						ery CR2032 x 1					
			It depends of	on the temperature		nditions of usage, ~ 50°C	about 3 years or	more at 25 °C			
						~ 50°C ~ +60°C					
			10	)% ~ 90% RH (0 ~			C), Pollution Deare	ee 2			
				-2 compliant 5Hz ~							
				0068-2-27 complia				•			
184 × 144 × 50	184 × 144 × 50	184 × 144 × 50	227.1×174.1×61	·					272×200×61	272×200×61	272 × 200 × 61
172.4 × 132.4	172.4 × 132.4	172.4 × 132.4	219.4 × 166.5	219.4 × 166.5	285.2×210.2	285.2×210.2	285.2 × 210.2	285.2×210.2	261.3 × 189.3	261.3×189.3	261.3 × 189.3
Approx. 800 g	Approx. 800 g		Approx. 1226g								
			as original lumina				-		Approx. 1020g	Approx. 1020 g	Approx. 1020 g

<sup>1)</sup> The half-life of backlight is defined as original luminance being reduced by 50% when the maximum driving current is supplied to HMI.

2) With built-in isolated power circuit.

3) Please use isolated power supply.

4) Some models are in the process of application for UL and KCC certification. For more information, please consult our distributors.

5) The value of the power consumption indicates the electrical power consumed by HMI with no peripheral devices connected.

To ensure normal operation, it is recommended using a power supply with a capacity 1.5 ~2 times the value of the power consumption.

6) The content of this catalogue may be revised without prior notice. Please consult our distributors or download the most updated version at http://www.deltaww.com



# **Specifications**

### **DOP-H Series**

Model		DOP-H07S425 DOP-H07S465 DOP-H07S42A DOP-H07S46A		DOP-H07E425 DOP-H07E42A	DOP-H07E465 DOP-H07E46A				
	Display Size and Type	7" Widescreen TFT LCD							
	Display Colors	65536 colors							
LCD	Resolution (pixels)	800 x 480							
MODULE	Backlight	LED Back Light							
	Luminance (cd/m²)	450							
	Backlight Life (hours)(Note 1)		20,	000					
	MCU		400	MHz					
Fla	ash ROM (Bytes)		128	MB					
	RAM (Bytes)		64	MB					
Back	cup Memory (Bytes)		16	MB					
	Buzzer		Multi-Tone Frequency	( 2K ~ 4K Hz ) / 80dB					
	Audio Output		N	/A					
	USB		1 USB Clie	ent Ver 2.0					
	SD			ports SDHC)					
8	Serial COM Port	RS-422 /	RS-485 <sup>(Note 2)</sup>		/A				
	Ethernet	1	N/A	1 Por	ts <sup>(Note2)</sup>				
	Function Key		1						
Ca	ble Length & Type			Name: 5 - 5 m Name: A - 10 m					
E	Emergency Stop	B-contact: 2 Rated voltage: DC 30V Maximum rated current: 1A Minimum allowable load: DC 5V/1 mA Complies with IEC60947-5-1, EN60947-5-1, IEC60947-5-5, EN60947-5-5, UL 508, and CSA C22.2 No.14, GB 14085.5							
3-Posi	ition Operation Switch	•	DC 3 V/5mA .7-5-8, IEC60947-5-1, EN60947 e with ISO12100-1, -2/EN12100						
	Handwheel	N/A	Rated Voltage: <dc 200="" 24v="" 45°="" 50(p="" 90°="" a="" a,="" and="" b="" b:="" difference="" frequency="" hz<="" in="" max.="" of="" output="" phase="" phase:="" pulse:="" r)="" resolution:="" response:="" square="" td="" ±=""><td>N/A</td><td>Rated Voltage: <dc 200="" 24v="" 45°="" 50(p="" 90°="" a="" a,="" and="" b="" b:="" difference="" frequency="" hz<="" in="" max.="" of="" output="" phase="" phase:="" pulse:="" r)="" resolution:="" response:="" square="" td="" ±=""></dc></td></dc>	N/A	Rated Voltage: <dc 200="" 24v="" 45°="" 50(p="" 90°="" a="" a,="" and="" b="" b:="" difference="" frequency="" hz<="" in="" max.="" of="" output="" phase="" phase:="" pulse:="" r)="" resolution:="" response:="" square="" td="" ±=""></dc>				
Pe	erpetual Calendar	Built-in							
(	Cooling Method	Natural cooling							
;	Safety Approval	CE							
Waterprod	of Level of Panel Display	IP55							
Ope	ration Voltage (Note3)	DC +24V (±15%) (with built-in isolated power circuit)(Note2)							
Vo	oltage Endurance	AC500V for 1 minute (between charging (DC24V terminal) and FG terminals)							
Powe	r Consumption (Note 5)			5W					
	Backup Battery	3V lithium battery CR2450 × 1							
Backup Battery Life		About 5 years or more at 25oC but subjects to the temperature and the conditions during usage.							
Operation Temperature			0°C ~	40°C					
Storage Temperature		-20 °C ~ +60 °C, 10% ~ 90% RH							
Ope	rating Environment	10% ~ 9	0% RH【0~40°C】; 10%~55	% RH 【41 ~ 50 $^{\circ}$ C 】; Pollution	n Degree 2				
	Vibration	Conforn	ns to IEC61131-2; Continuous: 5	5Hz ~ 8.3Hz 3.5 mm, 8.3Hz ~	150Hz 1G				
	Shock	Confo	rms to IEC60068-2-27; 11ms, 1	5G Peak , X, Y, Z direction for	6 times				
Dimensions	( W ) $\times$ ( H ) $\times$ ( D ) mm	25	7.4 × 170.3 × 71.8 (Emergency s	stop switch and hook are include	ded.)				
	Weight		750g (cable	e excluded)					

<sup>1)</sup> The half-life of backlight is defined as original luminance being reduced by 50% when the maximum driving current is supplied to HMI.

 <sup>1)</sup> The half-life of backlight is defined as original luminance being reduced by 50% when the maximum driving current is supplied to HMI.
 2) With built-in isolated power circuit.
 3) Please use isolated power supply.
 4) Some models are in the process of application for UL and KCC certification. For more information, please consult our distributors.
 5) The value of the power consumption indicates the electrical power consumed by HMI with no peripheral devices connected.
 To ensure normal operation, it is recommended using a power supply with a capacity 1.5 ~2 times the value of the power consumption.
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### **DOP-W Series**

	MODEL	DOP-W105B	DOP-W127B	DOP-W157B		
	Display Size and Type	10.4" TFT LCD	12.1" TFT LCD	15" TFT LCD		
	Display Colors	65536 colors				
LCD MODULE	Resolution (pixels)	800 x 600 1024 x 768				
	Backlight		LED Back Light			
	Luminance (cd/m²)	300	500	450		
	Backlight Life (hours)(Note 1)	10,000	30,000	100,000		
	MCU		1 GHz			
Flas	sh ROM (Bytes)		256 MB			
1	RAM (Bytes)		256 MB			
Ва	ackup Memory	800000	numbers of data (alarm data + historic	cal data)		
	Buzzer	Mult	ti-Tone Frequency(2K~4K Hz) / 8	80dB		
,	Audio Output	Stereo output	Stereo output / Bui	ilt in 1.5W Speaker		
	USB	1 USB Host Ver 2.0	3 USB Ho	ost Ver 2.0		
	SD		SD card (supports SDHC)			
	COM1		N/A			
Serial COM Port	COM2	RS-232 / RS-422 / RS-485 <sup>(Note 2)</sup>				
	COM3	RS-232 / RS-422 / RS-485 <sup>(Note 2)</sup>				
	Ethernet	2 Ports <sup>(Note2)</sup>				
Perpeti	ual Calendar (RTC)	Built-in <sup>(Note5)</sup>				
C	ooling Method	Natural air circulation				
Sa	afety Approval	CE / UL				
Wa	terproof Degree	IP65 / UL type 4x IP65 / UL type 1				
Opera	ation Voltage (Note3)	DC +24V ( -10% ~ +15% )				
Vol	tage Endurance	AC500V for 1 minute (between charging (DC24V terminal) and FG terminals)				
Power	Consumption (Note 6)	13.5W	18.5W	21.6W		
В	ackup Battery	Uses a gold-cap	acitor instead of a battery, no need to	replace batteries		
Bac	kup Battery Life	It can keep the RTC working at least seven days in a working environment where the conditions do not exceed the specifications for DOP-W series.				
Opera	ation Temperature		0°C ~ 50°C			
Stora	age Temperature	-20 °C ~ +60 °C, 10% ~ 90% RH				
An	nbient Humidity	10% ~ 9	0% RH [0 ~ 40 °C], 10% ~ 55% RH [41 Pollution Degree 2	~ 50 °C]		
Vibration		IEC61131-2 compliant $5Hz \le f$	< 8.3Hz = Continuous: 3.5mm, 8.3Hz	≦f≦150Hz = Continuous: 1.0g		
	Shock	IEC 60068-2-27 compli	iant 15g peak for 11 ms duration, X, Y,	Z directions for 6 times		
	Dimensions x ( H ) x ( D ) mm	299 × 224 × 46.8	313 × 239.5 × 67.5	384.4 × 295.8 × 67.8		
	Panel Cutout W)x(H)mm	285.2 × 210.2	302.7 × 228.7	372.4 × 283.7		
	Weight	Approx. 1750 g	Approx. 2830 g	Approx. 3880 g		

<sup>1)</sup> The half-life of backlight is defined as original luminance being reduced by 50% when the maximum driving current is supplied to HMI.

<sup>5)</sup> The value of the power consumption indicates the electrical power consumed by HMI with no peripheral devices connected.

To ensure normal operation, it is recommended using a power supply with a capacity 1.5 ~2 times the value of the power consumption.

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<sup>2)</sup> With built-in isolated power circuit.

3) Please use isolated power supply.

4) Some models are in the process of application for UL and KCC certification. For more information, please consult our distributors.



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

29.5(1.16")

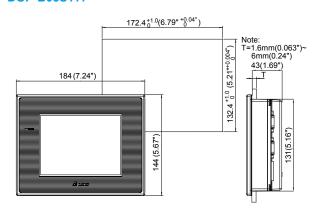
# Dimensions Unit: mm (inches)

### **DOP-B Series**

### • DOP-B03S(E)211

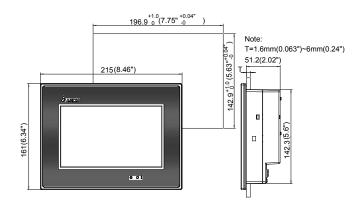
# 118.8°; 0(4.68" °°, 04" ) 129(5.08") 129(5.08") 129(5.08") 129(5.08")

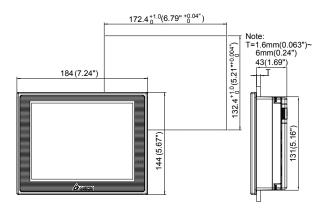
### • DOP-B05S111



### • DOP-B07S(E)415 / DOP-B07PS415

### • DOP-B07S(E)515 / DOP-B07PS515

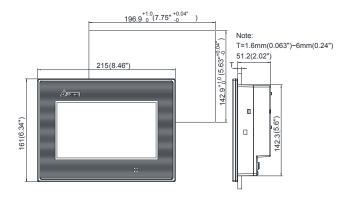




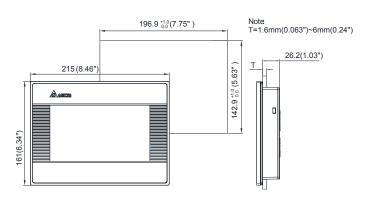


### **DOP-B Series**

### • DOP-B07S411 / B07E411



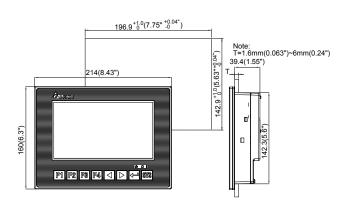
### • DOP-B07S410



### • DOP-B07S401K

# 196.9 0 (7.75" +0.04") Note: T=1.6mm(0.063")~6mm(0.24") 37.50(1.48") 142.9<sup>+1.0</sup>(5.63"+0.04") 161(6.34")

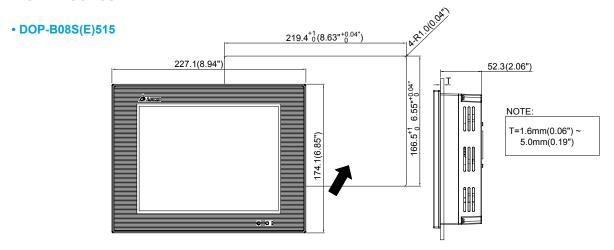
### • DOP-B07S411K



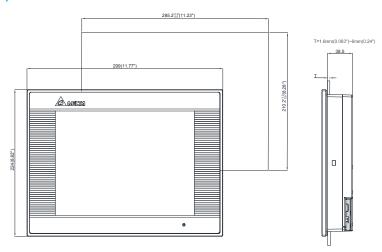


# **Dimensions** Unit: mm (inches)

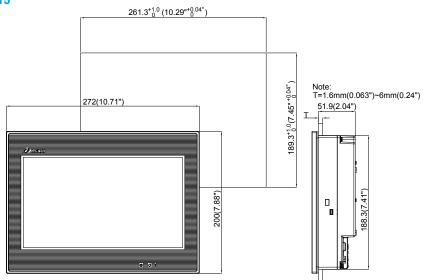
### **DOP-B Series**



### • DOP-B10S(E)51x / DOP-B10PE515 / DOP-B10VS511



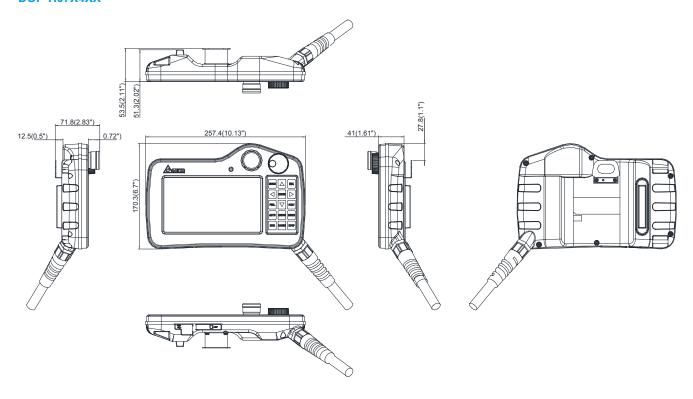
• DOP-B10S(E)615



# **Dimensions** Unit: mm (inches)

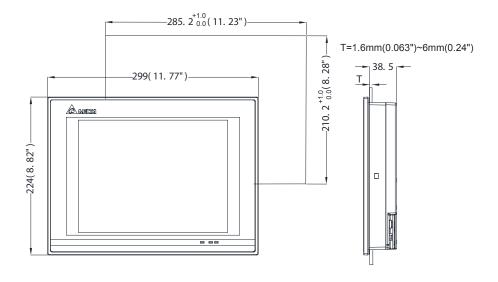
### **DOP-H Series**

### • DOP-H07X4XX



### **DOP-W Series**

### • DOP-W105B

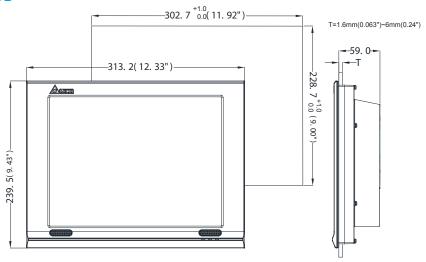


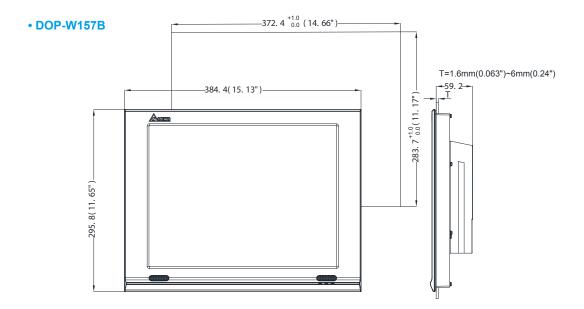


# Dimensions Unit: mm (inches)

### **DOP-W Series**

### • DOP-W127B

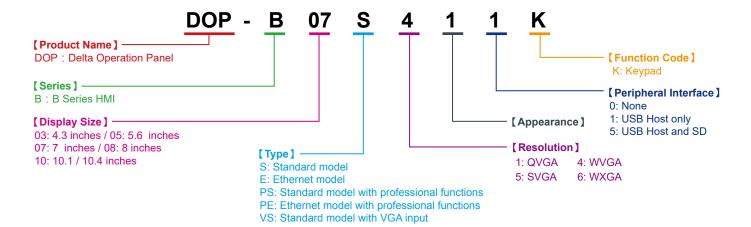


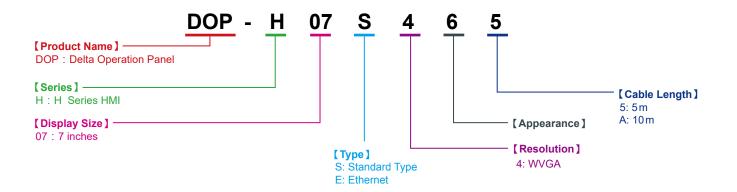


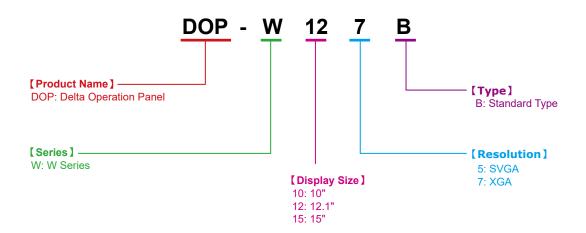
# **Optional Accessories**

Model Name	Description
DOP-CA232DP	DOP-CA232DP: RS-232 Communication Cable for DVP Series PLC (Female Socket)
DVPACAB2A30	DVPACAB2A30: RS-232 Communication Cable for DVP Series PLC (Male Socket)
DOP-CAUSBAB	DOP-CAUSBAB: USB Communication Cable

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