

Automation for a Changing World

Delta Human Machine Interface DOP-*B* series





One Touch Gives You Limitles:

Meets Customer Needs. Satisfies a Variety of Applications. Provides

Energy Saving and Environmental Automation

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.

A Wide Range of Options

Three serial communication interfaces (RS-232/RS-485/RS-422), 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.



s Possibilities with HMI

Multiple Functions. Creates the Ultimate FA Equipment.

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.





Specifications

B04 Standard

	Model Name	Display Size	Display Type	Resolution	ROM	Ethernet	USB Host	USB Client	Memory Card	Audio Output
DOI	P-B04S211	4.7	65536 Colors TFT	480x272	4 MB	N/A	N/A	v1.1 * 1	N/A	N/A





B05 Standard

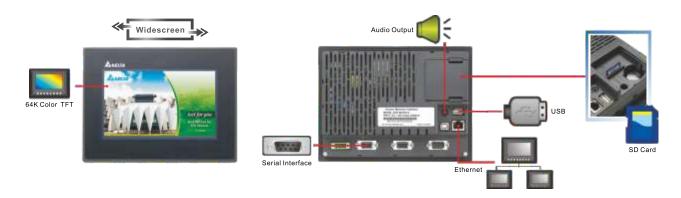
	Model Name	Display Size	Display Type	Resolution	ROM	Ethernet	USB Host	USB Client	Memory Card	Audio Output
DOF	P-B05S100	5.6	65536 Colors TFT	320x234	4 MB	N/A	v1.1 * 1	v1.1 * 1	N/A	N/A
DOF	P-B05S101	5.6	65536 Colors TFT	320x234	8 MB	N/A	v1.1 * 1	v1.1 * 1	N/A	N/A





B07 High Resolution Widescreen

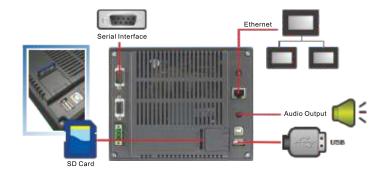
Model Name	Display Size	Display Type	Resolu tion	ROM	Ethernet	USB Host	USB Client	Memory Card		Delta Professional Integration Function
DOP-B07S411	7	65536 Colors TFT	800x480	128MB	N/A	v1.1 * 1	V2.0 * 1	N/A	N/A	N/A
DOP-B07S415	7	65536 Colors TFT	800x480	128MB	N/A	v1.1 * 1	V2.0 * 1	SD	N/A	N/A
DOP-B07E415	7	65536 Colors TFT	800x480	128MB	10/100 Base-T	v1.1 * 1	V2.0 * 1	SD	YES	N/A
DOP-B07PS415	7	65536 Colors TFT	800x480	128MB	N/A	v1.1 * 1	V2.0 * 1	SD	N/A	YES



High Resolution B07

Model Name	Display Size	Display Type	Resolu tion	ROM	Ethernet	USB Host				Delta Professional Integration Function
DOP-B07S515	7	65536 Colors TFT	800x600	128MB	N/A	v1.1 * 1	V2.0 * 1	SD	N/A	N/A
DOP-B07E515	7	65536 Colors TFT	800x600	128MB	10/100 Base-T	v1.1 * 1	V2.0 * 1	SD	YES	N/A
DOP-B07PS515	7	65536 Colors TFT	800x600	128MB	N/A	v1.1 * 1	V2.0 * 1	SD	N/A	YES

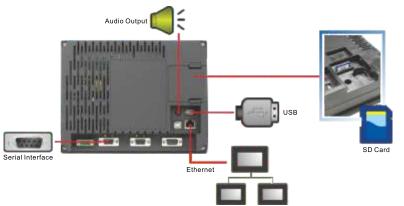




B08 High Resolution

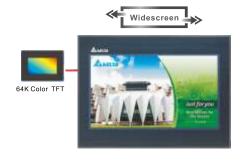
	Model Name	Display Size	Display Type	Resolution	ROM	Ethernet	USB Host	USB Client	Memory Card	Audio Output
DOF	P-B08S515	8	65536 Colors TFT	800x600	128MB	N/A	v1.1 * 1	V2.0 * 1	SD	N/A
DOF	P-B08E515	8	65536 Colors TFT	800x600	128MB	10/100 Base-T	v1.1 * 1	V2.0 * 1	SD	YES

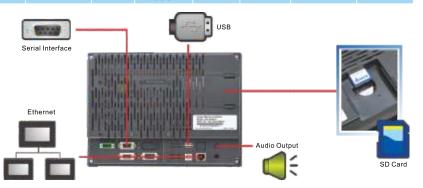




B10 High Resolution Widescreen

		Display Size	Display Type	Resolution	ROM	Ethernet	USB Host	USB Client	Memory Card	Audio Output
DOF	P-B10S615	10	65536 Colors TFT	1024x600	128MB	N/A	v1.1 * 1	V2.0 * 1	SD	N/A
DOF	P-B10E615	10	65536 Colors TFT	1024x600	128MB	10/100 Base-T	v1.1 * 1	V2.0 * 1	SD	YES







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

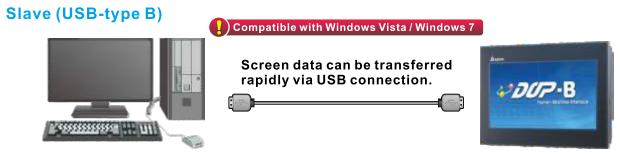


In case of errors, an alarm alerts users via an audio message in real time.

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.



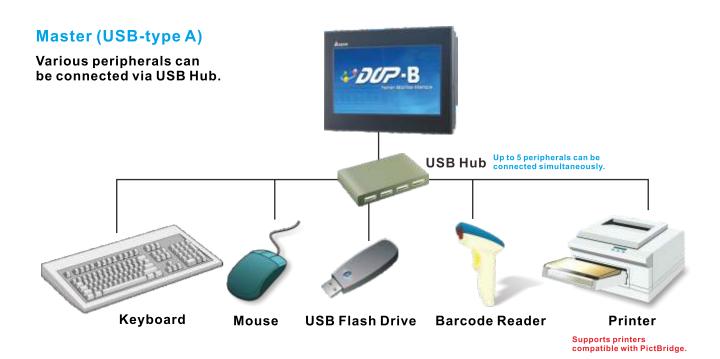
Supports Various Peripherals via USB Hub



Up to 480Mbps high-speed data transfer via USB v2.0



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







SD Card / USB Disk Versatile Storage Interface •

- Exploiting the convenience of SD card and USB disk, screen data transfer and collection can be quickly performed and the storage capacities of 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.

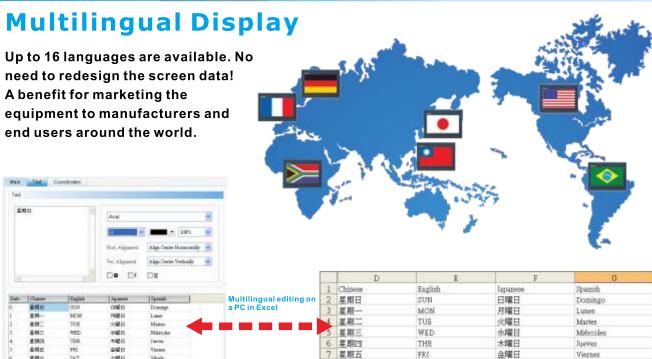
- Multiple project screen data can be saved in SD card / USB disk simultaneously and transferred to HMI. No need to connect to PC.
- The data saved in SD card / USB disk can be encrypted and the number of copies can be limited to protect the programs from unauthorized use.



- PLC ladder diagrams can be transferred and backup 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.







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Password Settings

Provide 8 levels of passwords to set user security to 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.



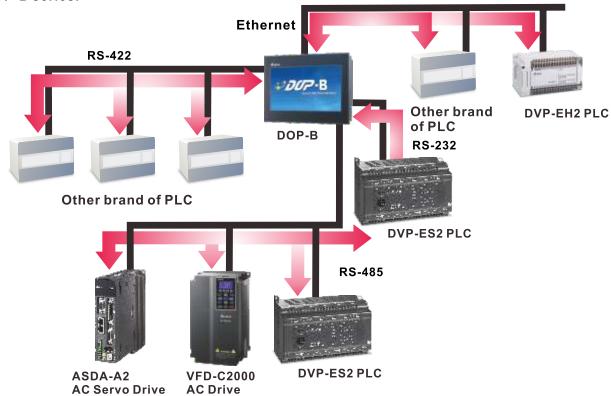




Provides Diverse Communication Interfaces

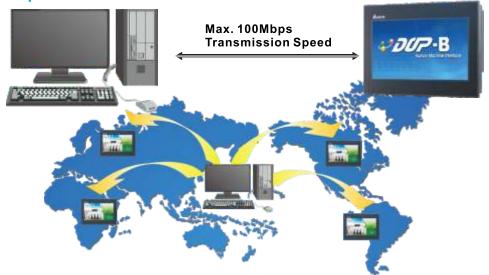
Easy to communicate with more than 30 brands of PLCs/Controllers

All DOP-B 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-B series.



Ethernet Ubiquitous High Speed Communication •

Ethernet Upload and Download



Easy to maintain and upgrade programs no matter where you are in the world.

Best Solution for Network Monitoring

Using an Ethernet connection can easily establish an N:N communication link and create the desired communication network according to different application requirements.

The DOP-B series HMI can use the IFD9506 Ethernet communication module, which is able to switch Ethernet and RS-485 interfaces quickly, to connect Delta's AC servo drive, AC motor drive, temperature controller and other industrial automation products via the Ethernet and control the entire network for a complete and ultimate network monitoring solution.



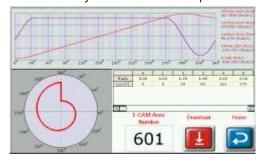
Delta Professional Integration Function: Electronic Cam (E-Cam) Curve Table

- 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.

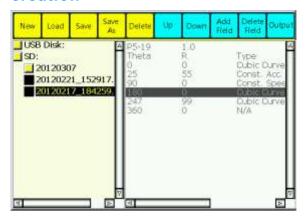


Supports E-Cam table macro for making E-Cam curve on HMI

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



Supports cubic curve manual creation

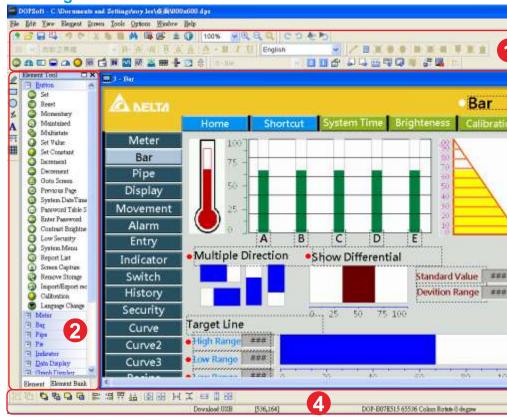






DOPSoft

The all new and upgraded configuration software provides couser-friendly operator interface. Make editing easier than evoof 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.

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.

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.

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.

5) Property Table

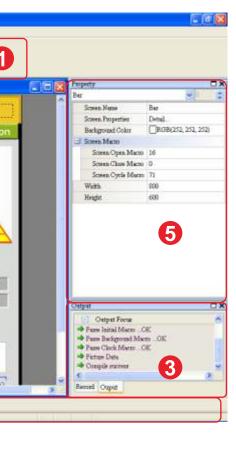
The Property Table displays the element property settings for each element.

Pictu

Newly desi attractive



omplete functions and a er with a whole new level



Convenient Screen Data Conversion

Compatible with the existing Screen Editor software, the project file created by Screen Editor 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

re Bank

gned picture bank offers more colorful and elements.



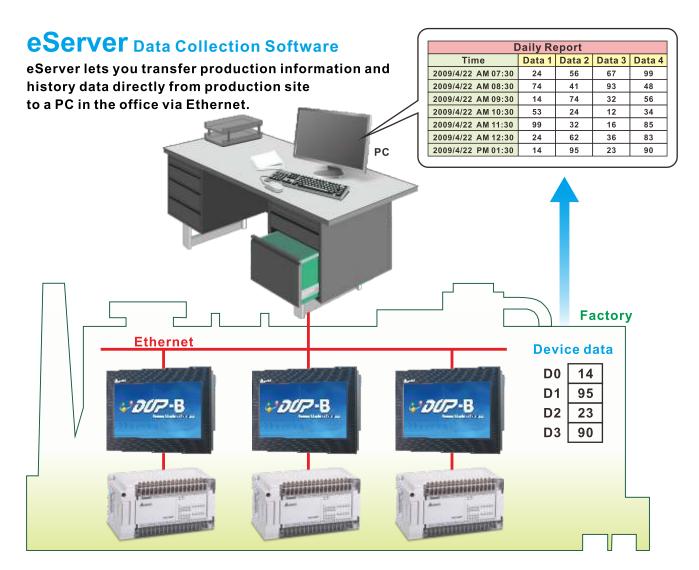
Minimum System Requirements of DOPSoft

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.delta.com.tw/industrialautomation/.



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 and monthly reports, and more automatically under different settings.

2) Database Sampling Data

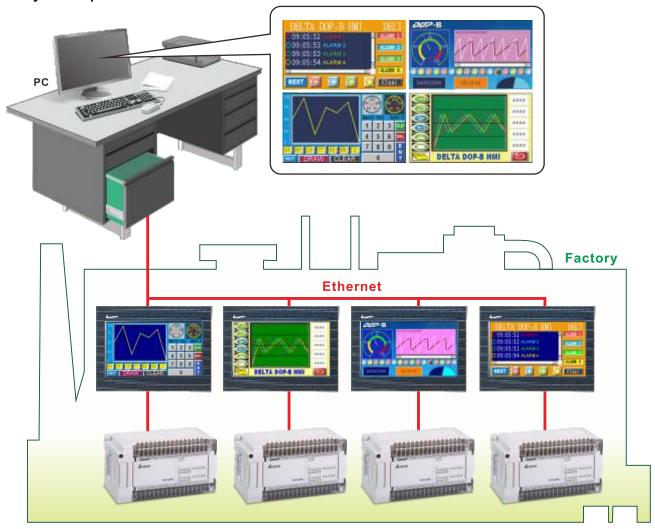
• Users can access any database via Open Database Connectivity (ODBC) interface.

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: 50MB 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

^{*} Users can download the eServer / eRemote software and the user manual at Delta's website via the following link: http://www.delta.com.tw/industrialautomation/.

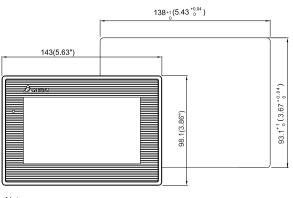


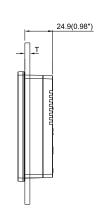


Dimensions

Units: mm (inches)

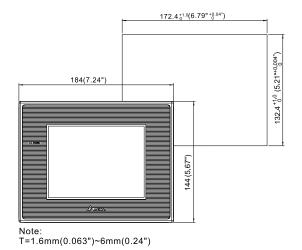
DOP-B04S211

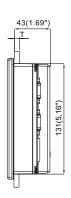




Note: T=1.6mm(0.06") ~5.0mm(0.19")







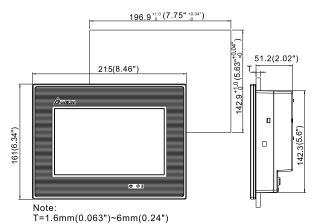
Optional Accessories

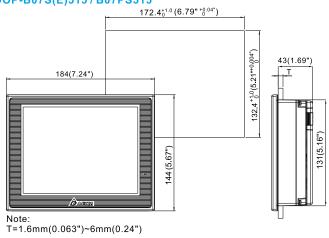
Model Name	Description
DOP-CA232DP	DOP-CA232DP: RS-232 Communication Cable for DVP Series PLC (Female Socket)
DVPACAB2A30	DVPACAB2A30: RS-232 Communication Cable for DVP Series PLC (Male Socket)
DOP-CAUSBAB	DOP-CAUSBAB: USB Communication Cable



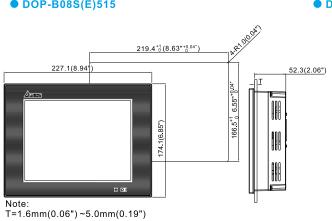
• DOP-B07S411 / B07S(E)415 /B07PS415

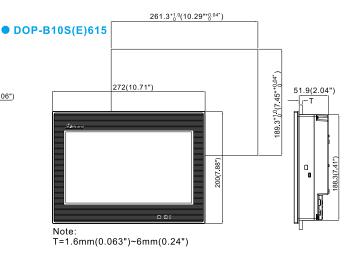
DOP-B07S(E)515 / B07PS515





• DOP-B08S(E)515





Ordering Information





Specifications

MODEL		DOP-B04S211	DOP-B05S100	DOP-B05S101	DOP-B07S411	DOP-B07S415	DOP-B07PS415	DOP-B07E415				
	Display Type	4.7" TFT LCD (65536 colors)	5.6" TFT LCD (65536 colors)		7" Widescr	een TFT LCD					
LCD	Resolution	480 x 272 pixels	320 x 2	34 pixels	800 x 480 pixels							
MODULE	Backlight		LED	Back Light (less	than 20,000 hours half-life at 25°C) ^(Note 1)							
	Display Size	113.68 x 58.75mm	113.28 x	84.70mm	154.08 x 85.92mm 152.4 x 91.44mm							
Operating S	ystem				Delta Real Time C	s						
MCU				32-bit	RISC Micro-con	troller						
NOR Flash I	ROM	Flash ROM 4 MB (OS System: 2MB / User Application: 2MB)	/ User) User		Flash ROM 128 (OS System: 3 User Applicati	0MB / Backup: 16	SMB /				
SDRAM		8Mb)	rtes	16Mbytes		64N	lbytes					
Backup Mer (Bytes)	mory	32Kbytes	128Kbytes 16Mbytes									
Sound	Buzzer			Multi-Tone	Frequency (2K ~	4K Hz)/85dB						
Output AUX		N/A	N/A	N/A	N/A	N/A	N/A	Stereo output				
Ethernet Int	terface	N/A	N/A	N/A	N/A	N/A	N/A	10/100 Mbps Auto- sensing(has built- in isolated power circuit (Note 3))				
Memory Ca	rd	N/A	N/A	N/A	N/A		SD card (suppo	rt SDHC)				
USB		1 USB Client Ver 1.1	1 USB Host (Note Client Ver 1.1	^{e2)} Ver 1.1 / 1 USB	1 US	B Host Ver	1.1 / 1 USB Client	Ver 2.0				
	СОМ1	RS-232 (Supports hardware flow control) / RS-422 /RS-485		RS	-232 (supports h	ardware flow coi	ntrol)					
Serial COM	COM2	N/A		RS-232 / RS	-485	RS-232 RS-485	/ RS-422	RS-232 / RS-422 RS-485(has built -in isolated power circuit (Note 3))				
Port	СОМЗ	N/A		RS-422 / RS	-485	RS-232 / RS-422 RS-485(has built -in isolated power circuit (Note 3))						
Function Ke	Э у	N/A										
	alendar (RTC)	Built-in Page 1997										
Cooling Me		Natural air circulation										
Safety Appr		CE / UL (Note 4) / KCC (Note 4)										
Waterproof I			DC +24V(-10% ~	+15%) (please us	IP65 / NEMA4 se isolated powe	r supply)		DC +24V(-10% ~ +15%)(has built-in isolated power circuit (Note 3))				
Voltage End	durance		AC500V for	1 minute (betwee	n charging DC24	terminal and FO	terminals)					
Power Cons	sumption ^(Note 5)	2.64W	3.0	ow	4W	5	w	7.5W				
Backup Bat	tery			3V lith	ium battery CR2	032 x 1						
Backup Bat	tery Life	It dep	ends on the tem	perature used an	d the conditions	of usage, about	3 years or more a	nt 25°C				
Operation T	emp				0°C ~ 50°C							
Storage Ter					-20°C ~ +60°C							
Ambient Hu	midity			RH [0~40°C], 1								
Vibration R	esistance			ompliant 5Hz≦f < Continuous: 0.5								
Dimensions	(W) × (H) × (D) mm	143 x 98.1 x 31.2	184 x 144 x 50	184 x 144 x 50	215 x 161 x 50	215 x 161 x 50	215 x 161 x 50	215 x 161 x 50				
Panel Cutor	ut (W) x (H) mm	138 x 93.1	172.4 x 132.4	172.4 x 132.4	196.9 x 142.9	196.9 x 142.9	196.9 x 142.9	196.9 x 142.9				
Weight		Approx. 295g	Approx. 670g	Approx. 670g	Approx. 820g	Approx. 970g	Approx. 970g	Approx. 970g				

- 1) The half-life of backlight is defined as original luminance being reduced by 50% when the maximum driving current is supplied to HMI.
- 2) USB Host port can provide up to 5V/ 500mA of power.
- 3) The isolated power circuit can withstand a 1500V voltage peak for 1 minute.
- 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 $normal\ operation, it is\ recommended\ using\ a\ power\ supply\ with\ a\ capacity\ 1.5\ \sim 2\ times\ the\ value\ of\ the\ power\ consumption.$
- 6) Users can download the Screen Editor V2.00, the program editor of Delta HMI product and the user manual via the following link: http://www.delta.com.tw/industrialautomation/.
- 7) The content of this catalogue may be revised without prior notice. Please consult our distributors or download the most updated version at http://www.delta.com.tw/industrialautomation/.

MODEL		DOP-B07S515	DOP-B07PS515	DOP-B07E515	DOP-B08S515	DOP-B08E515	DOP-B10S615	DOP-B10E615				
	Display Type	7" -	TFT LCD (65536 cold	ors)	8" TFT LCD (6	5536 colors)	10" Widescr	een TFT LCD				
LCD	Resolution		80	0 x 600 pixels			1024 x 600 j	oixels				
MODULE	Backlight		LEC	Back Light (less	than 10,000 hours	s half-life at 25°C)	(Note 1)					
	Display Size		141 x 105.75mm			21.5mm		28.7mm				
Operating S	System			D	elta Real Time OS							
MCU		32-bit RISC Micro-controller										
NOR Flash	ROM	(OS Sys	OM 128MB stem: 30MB / Backup oplication: 82MB)	: 16MB /	Flash ROM 128M (OS System: 30I 16MB / User App		Flash ROM 128 MB (OS System: 30MB / Backup: 16MB / User Application: 82MB)					
SDRAM		64Mbytes										
Backup Me (Bytes)	mory	16Mbytes										
Sound Effect	Buzzer		Multi-Tone Frequency (2K ~ 4K Hz)/85dB									
Output	AUX	N/A	N/A	Stereo output	N/A	Stereo output	N/A	Stereo output				
Ethernet In	terface	N/A	N/A	10/100 Mbps Auto- sensing(has built- in isolated power circuit (Note 3))		10/100 Mbps Auto- sensing(has built- in isolated power circuit (Note 3))		10/100 Mbps Auto- sensing(has built- in isolated power circuit (Note 3))				
Memory Ca	rd			SD	ard (support SDH	C)						
USB		1 USB Host (Note2) Ver 1.1 / 1 USB Client Ver 2.0										
	COM1		RS-232 (supports hardware flow control)									
Serial COM	COM2	RS-232 / RS	S-422 / RS-485	RS-232 / RS-422 RS-485(has built- in isolated power circuit (Note 3))			S-422 / RS-485 n isolated power	circuit ^(Note 3))				
Port	сомз	RS-232 / RS	S-422 / RS-485	RS-232 / RS-422 RS-485(has built- in isolated power circuit (Note 3))			S-422 / RS-485 n isolated power	circuit ^(Note 3))				
Function K	еу	N/A										
	alendar (RTC)	Built-in Control of the Control of t										
Cooling Me		Natural air circulation										
Safety App			CE / UL (Note 4) / KCC (Note 4)									
Waterproof Operation \	Voltage (Note 5)	DC +24V (-10% ~ +15%) (please use isolated power supply)	DC +24V (-10% ~ +15%) (has built-in isolated power circuit ^(Note 3))	+15%)(please use isolated	IP65 / NEMA4 DC +24V(-10% ~ +15%)(has built- in isolated power circuit (Note 3))		10% ~ +15%) n isolated power	circuit (Note 3))				
Voltage End	durance		AC500V for	1 minute (betwee	n charging DC24 t	erminal and FG te	erminals)					
Power Cons	sumption ^(Note 5)		7.68W		5.2W	7.8W	12	2W				
Backup Bat	ttery			3V lith	ium battery CR20	32 x 1						
Backup Bat	ttery Life	It	depends on the tem	perature used and		f usage, about 3 y	ears or more at 2	5°C				
Operation 1	Гетр				0°C ~ 50°C							
Storage Ter					-20°C ~ +60°C							
Ambient Hu			IEC 61131-2 C	ompliant 5Hz≦f <	9% ~ 55% RH [41 ~ 9Hz = Continuous	: 1.75mm / Occas	ional: 3.5mm					
	S (W) × (H) × (D) mm	184 x 144 x 50	9HZ≦T≦15UHZ = 184 x 144 x 50	184 x 144 x 50	g / Occasional: 1.0 227.1 x 174.1 x 61			272 x 200 x 61				
	ut (w) x (H) mm	172.4 x 132.4	172.4 x 132.4	172.4 x 132.4	219.4 x 166.5	219.4 x 166.5	261.3 x 189.3	261.3 x 189.3				
Weight		Approx. 800g	Approx. 800g	Approx. 800g	Approx. 1226g	Approx. 1228g	Approx. 1520g	Approx. 1520g				
			_		-							

- 1) The half-life of backlight is defined as original luminance being reduced by 50% when the maximum driving current is supplied to HMI.
- 2) USB Host port can provide up to 5V/ 500mA of power.
- 3) The isolated power circuit can withstand a 1500V voltage peak for 1 minute.
- 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 $normal\ operation, it is\ recommended\ using\ a\ power\ supply\ with\ a\ capacity\ 1.5\ \sim 2\ times\ the\ value\ of\ the\ power\ consumption.$
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