



## High color • Wide screen • **DOP-107DV** User-Triendly No.18, Xinglong Rd., Taoyuan City User-friendly 33068. Taiwan

# Instruction Sheet

### (1) General precautions

Thank you for purchasing this product. This DOP-107DV instruction sheet provides information for the DOP-107DV series HMI. Before using this product, read through this instruction sheet carefully to ensure the correct use of the product. Keep this sheet handy for quick reference whenever needed. Before finishing reading this sheet, follow the instructions below:

- Install the product in an indoor location, which is free of vapor and corrosive and inflammable gas. Refer to the wiring diagram when connecting the wires.
- Ensure this product is correctly grounded. The grounding method must comply with the national electrical standard guidelines (refer to NFPA 70: National Electrical Code, 2005 Ed.).
- Do not disassemble the HMI or change the wiring when power is on.
- Do not touch the power supply when power is on, or it may cause electric shock.
- When the HMI displays a low power notification and requires a battery change, contact Delta or local distributors for the replacement. Do not change the batteries by yourself.
- This product can be used with other industrial automation equipment. Read through this sheet carefully and install the product according to the instructions to avoid danger.
- Cleaning method: use a dry cloth to clean the product.
- This product must be used at an altitude below 2,000 m (6561.68 ft).
- If the equipment is used in a manner not specified by the manufacturer, the protection function provided by the equipment may be impaired.
- For repair and maintenance, contact Delta Electronics, Inc. Address: No.18, Xinglong Rd., Taoyuan City, Taiwan. TEL: +886-3-3626301.

If you have any inquiry during operation, contact our local distributors or Delta Customer Service Center. The instruction sheet may be revised without prior notice. Contact our distributors or download the latest version from the Delta website (http://www.deltaww.com.tw/ia).

### (2) Communication port pin assignment

### DOP-107DV COM1

	Pin	MODE1		MODE2		MODE3	
COM Port		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+
$\left(\bigcirc \left(\begin{smallmatrix} 5 & 0 & 0 & 0 & 0 \\ 9 & 0 & 0 & 0 & 0 \\ 9 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 &$	5	GND		GND		GND	
	6	-	-	D-	-	-	TXD-
	7	RTS	-	-	-	RTS	-
	8	CTS	-	-	-	CTS	-
	9	-	D-	-	D-	-	RXD-

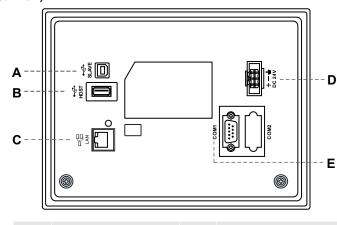
Note: the mark "-" means connection is not required.

# (3) Description of each part DOP-107DV (front view)

# **DELTA** Α

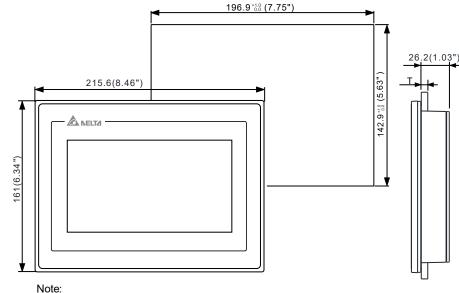
A Operation / display area

DOP-107DV (rear view)



А	USB Slave	В	USB Host
С	Ethernet (LAN)	D	Power input connector (24AWG wire min.)
Е	COM1	-	-

### (4) Mounting dimensions DOP-107DV



T = 1.6 mm - 6 mm(0.063" - 0.24")

Unit: mm (inch)

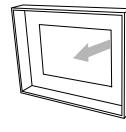
Operation temperature: 0°C to 50°C (32°F to 122°F) Storage temperature: -20°C to 60°C (-4°F to 140°F)

# (5) Installation and wiring Precautions:

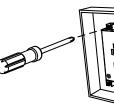
- malfunction.
- adjacent objects or walls
- (for indoor use only).
- Use copper wires.

Installation diagram:

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



Step 3: Tighten the screws with the torque between 0.5 N-M and 0.7 N-M to avoid damage to the plastic case. DOP-107DV torque: 6.17 lb-inch (0.7 N-M)



Wiring:			
Туре	Wire gauge (AWG)	Stripped length	Torque
Solid	24 - 12	7 - 8 mm (0.28 - 0.31 inches)	5 kg-cm (4.3 lb-in)
Stranded	24 - 12	7 - 8 mm (0.28 - 0.31 inches)	5 kg-cm (4.3 lb-in)



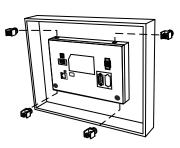
Mount the HMI according to the following illustration. Incorrect installation direction may result in

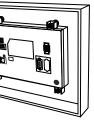
To ensure the HMI is well ventilated, make sure there is sufficient space between the HMI and the This product should be used on a case or platform which conforms to enclosure Type 4X standard

The maximum panel thickness for mounting must be no greater than 5 mm (0.2 inches).

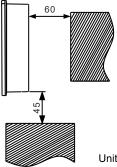


Step 2: Place the fasteners into the slots and tighten the screws until reaching the panel cutouts.



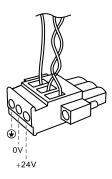


Step 4: For heat dissipation, keep a minimum clearance of 60 mm (2.36 inches) and 45 mm (1.77 inches) respectively on the rear and bottom of the HMI.



Unit: mm

Refer to the following diagram when wiring the power connector. The temperature rating of the cable must be greater than 75°C (167°F).



### (6) Hardware specifications

Panel type   7" TFT LCD (65535 colors)     Backlight   LED back light (half-life under room temperature 25°C > 20,000 hours) <sup>17</sup> Display range   154.08 mn * 85.92 mn     Brightness   400 cd / m² (Typ.)     CPU   ARM Cortex-A8 (800 MHz)     Flash ROM   256 Mbytes     RAM   256 Mbytes     Touchscreen   4-wire resistive touchscreen > 1,000,000 operated     Buzzer   Multi-tone frequency (2 - 4 kHz) / 80 dB     Network interface   1 port, 10/100 Mbps auto-detection (with built-in isolated power circuit) <sup>2</sup> USB   1 USB Slave Ver 2.0; 1 USB Host Ver 2.0     Sorial   COM1   RS-232 (supports flow control) / RS-485 <sup>-2</sup> COM3   N/A   N/A     Auxiliary function key   N/A   Support and a control on the figure of a contron to the figure of a control on the figure of a control	(0) Haruwar Mo	•	DOP-107DV		
DisplayResolution $800 \times 480$ pixelsDisplay range154.08 mm * 85.92 mmBrightness400 cd / m² (Typ.)CPUARM Cortex-A8 (800 MHz)Flash ROM256 MbytesRAM256 MbytesTouchscreen4-wire resistive touchscreen > 1.000.000 operatedBuzzerMulti-tone frequency (2 - 4 kHz) / 80 dBNetwork interface1 port, 10/100 Mbps auto-detection (with built-in isolated power circuit) <sup>2</sup> USB1 USB Slave Ver 2.0; 1 USB Host Ver 2.0SDN/AAutiliary function keyN/ACOM2RS-422 / RS-485 <sup>-2</sup> COM3N/AAutiliary function keyN/AColing methodCE / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz)Panel waterproof levelIP65 / NEMA4 / UL TYPE 4X (indoor use only)Operation voltage <sup>22</sup> SEU Vace (nor 1 minute (between DC24V terminal and FG terminal) Supplied by Class 2 or SEU Vorcut (loaded from MMX by double insulator)Leakage current500 V <sub>Ac</sub> for 1 minute (between DC24V terminal and FG terminal) Power consumption <sup>3</sup> Backup battery3V lithium battery CR2032 x 1Backup battery3V lithium battery CR2032 x 1Norage environment-20°C to +60°C (42°F to 140°F), 					
Display   Backlight   LED back light (half-life under room temperature 25°C > 20,000 hours) <sup>14</sup> Display range Brightness   154.08 mm * 85.92 mm 8400 cd / m² (Typ.)     CPU   ARM Cortex-A8 (800 MHz)     Flash   RAM     256 Mbytes     RAM   256 Mbytes     Touchscreen   4-wire resistive touchscreen > 1,000,000 operated     Buzzer   Multi-tone frequency (2 - 4 kHz) / 80 dB     Network interface   1 port, 10/100 Mbps auto-detection (with built-in isolated power circuit) <sup>2</sup> USB   1 USB Slave Ver 2.0; 1 USB Host Ver 2.0     SD   N/A     Auxiliary function key   N/A     COM2   RS-422 / RS-485 <sup>-2</sup> COM3   N/A     Auxiliary function key   N/A     Approvals   CE / UL (use shielding network cabe and magnetic ring with the filter of 300 ohm / 100 MHz)     Panel waterproof level   IP65 / NEMA4 / UL TYPE 4X (indoor use only)     Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)     Leakage current   500 V <sub>AC</sub> for 1 minute (between DC24V terminal and FG terminal)     Power consumption <sup>-3</sup> 8.8 W (Max) <sup>-3</sup> Backup battery   3V lithium bat	Display				
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Brightness $400 \text{ cd} / \text{m}^2 (\text{Typ.})$ CPUARM Cortex-A8 (800 MHz)Flash ROM256 MbytesRAM256 MbytesTouchscreen4-wire resistive touchscreen > 1,000,000 operatedBuzzerMulti-tone frequency (2 - 4 kHz) / 80 dBNetwork interface1 port, 10/100 Mbps auto-detection (with built-in isolated power circuit)?USB1 USB Slave Ver 2.0; 1 USB Host Ver 2.0SDN/ASerial communication portCOM1RS-232 (supports flow control) / RS-485 '2COM2RS-422 / RS-485 '2COM3N/AAuxiliary function keyN/ACalendarBuilt-inColoing methodNatural coolingApprovalsCE / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz)Panel waterproof levelIP65 / Verz vircuit (solated from AAINS by double insulation)Leakage current500 Vac for 1 minute (between DC24V terminal and FG terminal)Power consumption'38.8 W (Max)'3Backup battery3V lithium battery CR2032 x 1About 3 years or more at 25°C (77°F) (subject to operation temperature (subject to operation temperature and condition)Operation temperature0°C to 50°C (32°F to 122°F), pollution degree: 2Vibration resistanceConforms to IEC60068-2-2°. 11 ms, 15 G Peak, in X, Y, Z directions each for 6 timesDimensions (W) x (H) x (D) mm215 x 161 x 35.5Mounting dimensions (W) x (H) mm196.9 x 142.9					
CPU ARM Cortex-A8 (800 MHz)   Flash ROM 256 Mbytes   RAM 256 Mbytes   Touchscreen 4-wire resistive touchscreen > 1,000,000 operated   Buzzer Multi-tone frequency (2 - 4 kHz) / 80 dB   Network interface 1 port, 10/100 Mbps auto-detection (with built-in isolated power circuit) <sup>12</sup> USB 1 USB Slave Ver 2.0; 1 USB Host Ver 2.0   Serial communication port COM1 RS-232 (supports flow control) / RS-485 <sup>12</sup> COM2 RS-422 / RS-485 <sup>12</sup> COM3   COM3 N/A N/A   Auxiliary function key N/A N/A   Calendar Built-in Built-in   Colong method Natural cooling CE / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz)   Panel waterproof level IP65 / NEMA4 / UL TYPE 4X (indoor use only)   Operation voltage <sup>12</sup> Supplied by Class 2 or SEUV circuit (solated from MAINS by double insulation)   Leakage current 500 V <sub>AC</sub> for 1 minute (between DC24V terminal and FG terminal)   Power consumption <sup>13</sup> 8.8 W (Max) <sup>3</sup> Backup battery 3V itthium battery CR2032 x 1   About 3 years or more at 25°C (77°F) Storage temperature Cofforms to					
Flash ROM256 MbytesRAM256 MbytesTouchscreen4-wire resistive touchscreen > 1,000,000 operatedBuzzerMulti-tone frequency (2 - 4 kHz) / 80 dBNetwork interface1 port, 10/100 Mbps auto-detection (with built-in isolated power circuit)'2USB1 USB Slave Ver 2.0; 1 USB Host Ver 2.0SDN/ACOM1RS-232 (supports flow control) / RS-485 '2COM2RS-422 / RS-485 '2COM3N/AAuxiliary function keyN/ACalendarBuilt-inColing methodNatural coolingApprovalsCE / UL (use shielding network cable and magnetic ring with the filter of 300 hm / 100 MHz)Panel waterproof levelIP65 / NEMA4 / UL TYPE 4X (indoor use only)Operation voltage'2Supplet by Class 2 or SELV circuit (isolated from MAINS by double insulation)Leakage current500 V <sub>AC</sub> for 1 minute (between DC24V terminal and FG terminal)Power consumption'38.8 W (Max)'3Backup battery3V lithium battery CR2032 x 1About 3 years or more at 25'C (77'F)Storage temperature0°C to 50°C (32'F to 122'F)Operation temperature0°C to 50°C (105.8'F to 142'F)Operation temperature10% to 59% RH [41 to 50°C (105.8'F to 142'F)]Operation resistanceConforms to IEC60103-2: continuous vibration 5 Hz - 8.3 Hz with amplitude 3.5 mm; 8.3 Hz - 150 Hz with amplitude 1GOnorms (W) x (H) x (D) mm215 x 161 x 35.5Mounting dimensions (W) x (H) mm196.9 x 142.9	CF				
Touchscreen   4-wire resistive touchscreen > 1,000,000 operated     Buzzer   Multi-tone frequency (2 - 4 kHz) / 80 dB     Network interface   1 port, 10/100 Mbps auto-detection (with built-in isolated power circuit)? <sup>2</sup> USB   1 USB Slave Ver 2.0; 1 USB Host Ver 2.0     SD   N/A     Serial communication port   COM1     COM2   RS-422 / RS-485 <sup>*2</sup> COM3   N/A     Auxiliary function key   N/A     Coling method   Natural cooling     CE / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz)     Panel waterproof level   IP65 / NEMA4 / UL TYPE 4X (indoor use only)     Operation voltage <sup>*2</sup> Soupplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)     Leakage current   500 V <sub>Ac</sub> for 1 minute (between DC24V terminal and FG terminal)     Power consumption <sup>*3</sup> 8.8 W (Max) <sup>*3</sup> Backup battery life   (subject to operation temperature and condition)     Operation perature   0°C to 50°C (32°F to 122°F), pollution degree: 2     Conforms to IEC60108-2-27: 11 ms, 15 G Peak, in X, Y, Z directions each for 6 times     Ower consumption*   Calendar     Storage temperature   -20°C	Flash	ROM			
Buzzer   Multi-tone frequency (2 - 4 kH2) / 80 dB     Network interface   1 port, 10/100 Mbps auto-detection (with built-in isolated power circuit) <sup>22</sup> USB   1 USB Slave Ver 2.0; 1 USB Host Ver 2.0     SD   N/A     Serial communication port   COM1   RS-232 (supports flow control) / RS-485 <sup>22</sup> COM3   RS-422 / RS-485 <sup>22</sup> COM3     CoM4   RS-232 (supports flow control) / RS-485 <sup>22</sup> COM3   N/A     Auxiliary function key   N/A     Calendar   Built-in     Cooling method   Natural cooling     Approvals   CE / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz)     Panel waterproof level   IP65 / NEMA4 / UL TYPE 4X (indoor use only)     Operation voltage <sup>22</sup> DC + 24V (-15% to +15%) (use an isolated power supply)     Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)   Eleakage current     S00 V <sub>AC</sub> for 1 minute (between DC24V terminal and FG terminal)   Power consumption <sup>3</sup> Backup battery   3V lithium battery CR2032 x 1     Backup battery   About 3 years or more at 25°C (7°F)     Storage temperature   -20°C to 60°C (105.8°F to 122°F)	RA	M	256 Mbytes		
Buzzer   Multi-tone frequency (2 - 4 kH2) / 80 dB     Network interface   1 port, 10/100 Mbps auto-detection (with built-in isolated power circuit) <sup>22</sup> USB   1 USB Slave Ver 2.0; 1 USB Host Ver 2.0     SD   N/A     Serial communication port   COM1   RS-232 (supports flow control) / RS-485 <sup>22</sup> COM3   RS-422 / RS-485 <sup>22</sup> COM3     CoM4   RS-232 (supports flow control) / RS-485 <sup>22</sup> COM3   N/A     Auxiliary function key   N/A     Calendar   Built-in     Cooling method   Natural cooling     Approvals   CE / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz)     Panel waterproof level   IP65 / NEMA4 / UL TYPE 4X (indoor use only)     Operation voltage <sup>22</sup> DC + 24V (-15% to +15%) (use an isolated power supply)     Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)   Eleakage current     S00 V <sub>AC</sub> for 1 minute (between DC24V terminal and FG terminal)   Power consumption <sup>3</sup> Backup battery   3V lithium battery CR2032 x 1     Backup battery   About 3 years or more at 25°C (7°F)     Storage temperature   -20°C to 60°C (105.8°F to 122°F)	Touchs	screen	4-wire resistive touchscreen > 1,000,000 operated		
USB   1 USB Slave Ver 2.0; 1 USB Host Ver 2.0     SD   N/A     Serial communication port   COM1   RS-232 (supports flow control) / RS-485 <sup>*2</sup> COM2   RS-422 / RS-485 <sup>*2</sup> COM3   N/A     Auxiliary function key   N/A     Coling method   N/A     Cooling method   Natural cooling     CE / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz)     Panel waterproof level   IP65 / NEMA4 / UL TYPE 4X (indoor use only)     Operation voltage <sup>*2</sup> Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)     Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)   Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)     Power consumption <sup>3</sup> 8.8 W (Max) <sup>3</sup> Backup battery   3V lithium battery CR2032 x 1     About 3 years or more at 25°C (77°F)   (subject to operation temperature and condition)     Operation temperature   -20°C to +60°C (42°F to 140°F)     Operating environment   10% to 55% RH [41 to 50°C (105.8°F to 122°F), pollution degree: 2     Offorms to IEC60068-2-27: 11 ms, 15 G Peak, in X, Y, Z directions each for 6 times     Dimensions   215 x 161	Buz	zer			
$\begin{tabular}{ c c c c c } \hline SD & N/A \\ \hline N/A \\ \hline Serial communication port & COM1 & RS-232 (supports flow control) / RS-485 $^{12}$ \\ \hline COM2 & RS-422 / RS-485 $^{12}$ \\ \hline COM3 & N/A \\ \hline Auxiliary function key & N/A \\ \hline Calendar & Built-in \\ \hline Cooling method & Natural cooling \\ \hline Cooling method & Natural cooling \\ \hline Ce / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz) \\ \hline Panel waterproof level & IP65 / NEMA4 / UL TYPE 4X (indoor use only) \\ \hline DC + 24V (-15\% to + 15\%) (use an isolated power supply) \\ Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation) \\ \hline Leakage current & 500 V_{AC} for 1 minute (between DC24V terminal and FG terminal) \\ Power consumption $^{3}$ & 8.8 W (Max) $^{3}$ \\ \hline Backup battery & 3V lithium battery CR2032 x 1 \\ \hline About 3 years or more at 25°C (77°F) \\ (subject to operation temperature 0°C to 50°C (32°F to 122°F) \\ \hline Storage temperature & -20°C to +60°C (-4°F to 140°F) \\ \hline Operation resistance & Conforms to IEC61131-2: continuous vibration 5 Hz - 8.3 Hz with amplitude 3.5 mr, 8.3 Hz - 150 Hz with amplitude 1G \\ \hline Shock resistance & Conforms to IEC60068-2-27: 11 ms, 15 G Peak, in X, Y, Z directions each for 6 times \\ \hline Dimensions (W) x (H) x (D) mm & 196.9 x 142.9 \\ \hline (W) x (H) mm & 196.9 x 142.9 \\ \hline \end{tabular}$	Network	interface			
Serial communication portCOM1RS-232 (supports flow control) / RS-485 "2COM2RS-422 / RS-485 "2COM3N/AAuxiliary function keyN/AColspan="2">CoM3N/AColspan="2">COM3N/AColspan="2">Colspan="2">Colspan="2">N/AColspan="2">Auxiliary function keyN/AColspan="2">Colspan="2">Colspan="2">N/AColspan="2">Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Co	US	SB	1 USB Slave Ver 2.0; 1 USB Host Ver 2.0		
Serial communication port   COM2   RS-422 / RS-485 <sup>°2</sup> COM3   N/A     Auxiliary function key   N/A     Auxiliary function key   N/A     Calendar   Built-in     Cooling method   Natural cooling     Approvals   CE / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz)     Panel waterproof level   IP65 / NEMA4 / UL TYPE 4X (indoor use only)     Operation voltage <sup>°2</sup> Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)     Leakage current   500 V <sub>AC</sub> for 1 minute (between DC24V terminal and FG terminal)     Power consumption <sup>°3</sup> 8.8 W (Max) <sup>°3</sup> Backup battery   3V lithium battery CR2032 x 1     Backup battery life   (subject to operation temperature and condition)     Operation temperature   0°C to 50°C (32°F to 122°F)     Storage temperature   -20°C to +60°C (-4°F to 140°F)     Operating environment   10% to 55% RH [41 to 50°C (105.8°F to 122°F), pollution degree: 2     Vibration resistance   Conforms to IEC60131-2: continuous vibration 5 Hz - 8.3 Hz with amplitude 3.5 mm; 8.3 Hz - 150 Hz with amplitude 1G     Shock resistance   Conforms to IEC60068-2-27: 11 ms, 15 G Peak, in X, Y, Z directions each for 6	SD		N/A		
communication port   COM2   RS-422 / RS-485 *2     COM3   N/A     Auxiliary function key   N/A     Auxiliary function key   N/A     Calendar   Built-in     Cooling method   Natural cooling     Coling method   Natural cooling     Approvals   CE / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz)     Panel waterproof level   IP65 / NEMA4 / UL TYPE 4X (indoor use only)     Operation voltage**   Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)     Leakage current   500 V <sub>AC</sub> for 1 minute (between DC24V terminal and FG terminal)     Power consumption***   8.8 W (Max)***     Backup battery   3V lithium battery CR2032 x 1     Backup battery life   About 3 years or more at 25°C (77°F)     (subject to operation temperature o°C to 50°C (32°F to 122°F)   10% to 55% RH [41 to 50°C (105.8°F to 122°F)     Operating environment   10% to 90% RH [0 to 40°C (32°F to 104°F)]     Operating environment   10% to 90% RH [0 to 40°C (32°F to 104°F)]     Vibration resistance   Conforms to IEC60131-2: continuous vibration 5 Hz - 8.3 Hz with amplitude 1G     Shock resistance   Conforms to I	Sorial	COM1	RS-232 (supports flow control) / RS-485 *2		
COM3N/AAuxiliary function keyN/ACalendarBuilt-inCooling methodNatural coolingApprovalsCE / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz)Panel waterproof levelIP65 / NEMA4 / UL TYPE 4X (indoor use only)Operation voltage"2DC +24V (-15% to +15%) (use an isolated power supply) Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)Leakage current500 V <sub>AC</sub> for 1 minute (between DC24V terminal and FG terminal)Power consumption"38.8 W (Max)"3Backup battery3V lithium battery CR2032 x 1Backup battery life (subject to operation temperature and condition)Operation temperature0°C to 50°C (32°F to 122°F)Storage temperature-20°C to +60°C (-4°F to 140°F)Operation resistanceConforms to IEC61131-2: continuous vibration 5 Hz - 8.3 Hz with amplitude 3.5 mm; 8.3 Hz - 150 Hz with amplitude 1GShock resistanceConforms to IEC60068-2-27: 11 ms, 15 G Peak, in X, Y, Z directions each for 6 timesDimensions (W) x (H) x (D) mm215 x 161 x 35.5Mounting dimensions (W) x (H) mm196.9 x 142.9	communication	COM2	RS-422 / RS-485 <sup>*2</sup>		
CalendarBuilt-inCooling methodNatural coolingApprovalsCE / UL (use shielding network cable and magnetic ring with the filter of 300 ohm / 100 MHz)Panel waterproof levelIP65 / NEMA4 / UL TYPE 4X (indoor use only)Operation voltage*2DC +24V (-15% to +15%) (use an isolated power supply) Supplied by Class 2 or SELV circuit (isolated from MAINS by double insulation)Leakage current500 V <sub>AC</sub> for 1 minute (between DC24V terminal and FG terminal)Power consumption*38.8 W (Max)*3Backup battery3V lithium battery CR2032 x 1Backup battery life(subject to operation temperature and condition)Operation temperature0°C to 50°C (32°F to 122°F)Storage temperature-20°C to +60°C (-4°F to 140°F)10% to 55% RH [41 to 50°C (105.8°F to 122°F)], pollution degree: 2Vibration resistanceConforms to IEC60131-2: continuous vibration 5 Hz - 8.3 Hz with amplitude 3.5 mm; 8.3 Hz - 150 Hz with amplitude 1GDimensions (W) x (H) x (D) mm215 x 161 x 35.5Mounting dimensions (W) x (H) mm196.9 x 142.9	роп	COM3	N/A		
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Shock resistanceConforms to IEC60068-2-27: 11 ms, 15 G Peak, in X, Y, Z directions each for 6 timesDimensions (W) x (H) x (D) mm215 x 161 x 35.5Mounting dimensions (W) x (H) mm196.9 x 142.9	Vibration resistance		Conforms to IEC61131-2: continuous vibration 5 Hz - 8.3 Hz with		
Dimensions (W) x (H) x (D) mm   215 x 161 x 35.5     Mounting dimensions (W) x (H) mm   196.9 x 142.9	Shock resistance		Conforms to IEC60068-2-27: 11 ms, 15 G Peak, in X, Y, Z directions each		
Mounting dimensions (W) x (H) mm 196.9 x 142.9					
	Mounting dimensions		196.9 x 142.9		
	Weight		Approx. 700 g		

Note:

- The half-life of the backlight is defined as the maximum luminance being reduced by 50% when the maximum drive current is supplied to the HMI. The life of LED backlight shown here is estimated at the room temperature of 25°C (77°F) with ambient humidity.
- 2. The withstand voltage of the isolated power circuit is 1500V peak for 1 minute.
- The HMI power consumption is the power consumed when the HMI is not connecting with other peripheral devices. To ensure normal operation of the HMI, the recommended capacity of the power supply is 1.5 to 2 times of the specified power consumption.
- 4. Isolated power supply is recommended.
- For the programming software DOPSoft of DOP-100 series and its user manual, you can download them at <u>http://www.delta.com.tw/ia</u>.
- DOP-100 series can be used with other industrial automation equipment. Read through this sheet carefully and install the product according to the instructions to avoid danger.