

Operation Manual DPM03 Multifunction Signal Display Monitor





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1 Security considerations

Please read this Specification carefully, prior to use of this, and keep the manual properly, for timely reference.

Solemn Statement :

This product cannot be used for any explosion-proof area.

Do not use this product in a situation where human life may be affected.

eyc-tech will not bear any responsibility for the results produced by the operators !

Warning!

- Installation and wiring must be performed by qualified personnel in accordance with all applicable safety standards.
- This product must be operated under the operating conditions specified in manual to prevent equipment damages.
- Please using the product under the ordinary pressure, or it will influence safe problem.
- This product must be operated under the operating condition specified in this manual to prevent equipment damages.
- This product must be operated under the normally atmospheric condition to prevent equipment damages.
- To prevent products damage, always disconnect the power supply from the product before performing any wiring and installation.
- All wiring must comply with local codes of indoor wiring and electrical installation rules.
- Please use crimp type terminal.
- To prevent personal injury, do not touch the moving part of product in operation.
- It may cause high humidity atmosphere during the product was breakdown. Please take safety strategy.



- 2 Dimension
- Dimension



Installation Dimension



3 Connection



*Please make sure the product and the device which connect with RS-485 are on common ground, avoid damaged product.

4 Installation





■ Remove way : Up the tail end of plastic slice, then pull it out



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C_{eyc-tech} 5 Menu Operation

eyc-tech DPM03 Menu Flowchart









6 Configuration Software

6.1 Application Program Introduction

User may download the configuration software on eyc-tech web site. Please decompress

the application prior to execute it. Operating System requirements: above Windows 7

SP1. Other application program requirements: above Microsoft Office 2003. Hardware

requirements: USB to RS-485 converter.

6.2 Establish RS-485 connection

- 1. Connect product to PC via RS-485 converter
- 2. Execute configuration software
- 3. Click "Interface > Config"





- 🖳 Interface × COM1] • PORT **BAUD RATE** 9600 • DATA FRAME None-8Bit-1Stop • TIMEOUT 300 ms d RETRY 2 times **f** STATION ID 1 Station ID Baud Rate Data Type Scan Apply Cancel
- 4. Select the corresponding values of com port as following
 - a. Port: Please confirm the connection com port first
 - b. Baud Rate (DPM03 default 9600)
 - c. Data Frame (device default None Parity Check, 8 data bits, 1
 - d. Response Timeout (default 300ms)
 - e. Retry, trial cycles if communication error (default 2 times)
 - f. Station ID (default 1)
- 5. Click "Apply"
- 6. Connect successfully
 - a. Show value and trend chart of the measurement
 - b. Show value and tread chart of device MCU temperature
 - c. Show "Open Port, Read successful"

Ceyc-tech_UI_DPM03_V1.0.1-20230922 Station 1*	
Display Configuration Interpolation Setting Information	
Measure 0.00 a	30ard Temperature (°C) 48.63 b
Clear OUT1 Snap Y Title (ON) Axis2 (ON)	Log 80 *
Chart Color Export X Title (ON) Legend (ON)	(OFF) 1 Minute Auto Scale
a 🔤	b
60-	-40
40	
20-	
0-	
14:14:52 14:15:03 14:15:13 14:15	23 14:15:33 14:15:43 14:15:53
Tim	8
- OUT1 - OUT2	
Open Port, Read successful	



6.3 Scan RS-485 connection

%Use scan function to connect when forgetting the connection information or having more facilities.

- 1. Connect the product to PC via RS-485 converter
- 2. Execute configuration software
- 3. Click "Interface > Config"



4. Select the corresponding values of com port as fallowing

🖳 Interface	×
PORT	COM1 -
BAUD RATE	9600 -
DATA FRAME None	e-8Bit-1Stop 🔹
TIMEOUT 300 ms	
RETRY 2 times	
STATION ID	1
Station ID Baud	Rate Data Type
• ال	
Scan App	ly Cancel

- 5. Click "Scan" to execute connection facilities
- 6. Scan connection facilities and set up



Multifunction Signal Display Monitor

a. Select Station ID

b. Click "CLOSE AND EXPORT"



7. Click "Apply"

🖳 Interf	ace			×			
РО	RT		COM1	-			
BA	BAUD RATE			-			
DA	DATA FRAME None-8Bit-1Stop •						
TIM	IEOUT 300	ms					
RE	FRY 2 tin	nes	(<u> </u>			
ST/	ATION ID		1				
	Ctation ID	David	Data	Data Tuno			
•	1	9600	Rate	N81			
•		_		4			
5	Scan	Арр	ly	Cancel			

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- 8. Connect successfully
 - a. Show value and trend chart of the measurement
 - b. Show value and tread chart of device MCU temperature
 - c. Show "Open Port, Read successful"

eevc-tech_UI_DPM03_V1.0.1-20230922 Station 1*	6
Ele Interface About	
Display Configuration Interpolation Setting Information	
Measure 0.00 a Board Temperature (°C) 49.07 b	
Clear OUT1 Snap Y Title (UN) Axis2 (ON) Log 00	A V
Chart Color Export X Title (ON) Legend (ON) (OFF) 1 Minute Auto Scale	A.
a h	_
80	
60	
40	
20	
10	
0	
14:16:15 14:16:25 14:16:35 14:16:45 14:16:55 14:17:50 14:18:00 Time	
Open Port, Read successful	.d

- 6.4 Setting RS-485 ModBus Protocol
- 1. Setting RS-485 connection as step 6.1
- 2. Click "Setting" tab



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• • •
10



3. Select Modbus Protocol parameter

a. Station ID: 1~247

b. Baud Rate: 9600, 19200, 38400, 57600, 115200

c. Data Frame: None-8Bit-1Stop, None-8Bit-2Stop, Even-8Bit-1Stop,

Even-8Bit-2Stop, Odd-8Bit-1Stop, Odd-8Bit-1Stop

eyc-tech_UI_DPM03_V1.0.1-20230922 \$	Station 1*							
File Interface About								
Diselau Configuration Internalistics [Sc	thing tefermetter							
Display Configuration Interpolation								
Monu Configuration								
Configuration Brief								
	INPUT	*						
Pead	IN-CURR							
Kedu	RANGE=420mA							
	DEC.P=XXX.XX							
	D1=0.00100.001iter/m	=						
write	INFARIZATION							
	=== RELAY ===							
	RELAY1							
Open	ACT =HI.AL							
	SETP=80.00							
	HYS -1.00							
6	ERR =DON'T CARE							
Save	UNDE=0 Second(s)							
	and OITPUT and							
	001101	Ŧ						
Modbur Protocol								
moubus Protocol								
Station ID	1 a							
	Apply							
Baud Rate 96	500 - D							
	Doad							
Data Frame None-	8Bit-1Stop - C							
Read Setting, Read successful								

- 4. Click "Apply"
- 5. Execute connection as step 6.2 or 6.3 again



6.5 Measurement Programming

Click the "Configuration" tab, the configuration divide by 4 sub groups as following.

- 1. Input function, this function could be found in "Input" tab
- a. Input type, current, voltage, frequency, pulse or modbus
- b. Number of input rate decimal places, up to 4
- c. Low point of input span
- d. High point of input span
- e. Analog input range (valid when the input selects current)
- f. Analog input range (valid when the input selects voltage)

------ The following input is valid when RS-485 is selected ------

- g. Modbus protocol type, master or slaver
- h. station ID
- i. Baud rate (valid when the input selects the master node)
- j. Parity check
- k. Stop bit
- l. Register address
- m. Register data type
- n. Data format, data word high and low exchange
- o. Numerical magnification

eyc-tech_UI_DPM	03_V1.0.1-20230922	Station 1*			- • ×
<u>File</u> Interface	About				
Display Configurat	ion Interpolation S	etting Informatio	n		
Input Output	Relay Option				
a Input	Current • g	Mode	Slave	-	
b Decimal	111.11 • h	Station ID	1		
C Digital Low	0.00 i	Baud Rate	9600	v	
d Digital High	100.00 j	Parity Check	None	-	
	k	Stop Bit	1 bit	-	
	L. L.	Address	0		
e Range (mA)	4-20mA - M	Register Type	S16	-	
f Range (Volt)	0-10V - N	Data Swap	No	-	
	0	Scaler	0.01	-	
		1			
	Read			Apply	
Read Setting, Read	l successful				



- 2. Output function, this function could be found in "Output" tab
- a. output type
- b. analog output range (valid when the output selects current)
- c. analog output range (valid when the output selects voltage)
- d. low point of output span
- e. high point of output span
- f. error reaction
- g. linear correction
- h. output cut-off
- i. response time

evc-tech_UI_DPM	03_V1.0.1-20230	922 Statio	n 1*			
Display Configurati	on Interpolatio	n Setting	Information			
Input Output	Relay Option					
а туре	Current	-				
Range (mA)	4-20mA	•				
C Range (Volt)	0-10V	-				
d Zero	0.00					
e Full Span	100.00					
F Error Reaction	None	-				
g Linearization	Off	•				
h Low Cut-off	0.00					
Response Time	0.5					
		_				
	Read				Apply	
Read Setting Read	russerful					
riead setting, Read	successful					

- 3. Relay function, this function could be found in "Relay" tab
- a. set point
- b. action mode, High if upscale active, Low if downscale active
- c. hysteresis
- d. alarm, NONE if disable, HOLD if memory and hold the first alarm until reboot, Action if active when alarm assert, Deaction if inactive when alarm assert
- e. relay on delay time (seconds)
- f. relay off delay time (seconds)

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ele eye-tech_UL_DPW	About	922 Station 1*							
Fie picerace	ADDUC								
Display Configurat	Display Configuration Interpolation Setting Information								
Input Output	Input Output Relay option								
A Cat Daint	80.00								
L Set Point	80.00								
U Alarm	High	•							
C Hysteresis	1.00								
d Error Reaction	None •	•							
e On Delay	0								
f Off Delay	0								
	Read	Apply							
Read Setting, Read successful									
-									





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- 4. The other items could be found in "Option" tab
- a. LED brightness, 0 darkest, 9 brightest
- b. password validation, NO if disable, YES is enable
- c. new password
- d. reset factory default

evc-tech UI DPM	03 V1.0.1-20230922 Station 1*
Ele Interface	About
Display Configurati	on nterpolation Setting Information
Input Output F	Relay
a Brightness	9
b Password	00 -
C New Password	0
d Restore Fa	ctory Default
	Read Apply
Read Setting, Read	successful .::

6.6 Linearity Computation

Click the Interpolation tab to specify the linear interpolation points

- a. Interpolation table
- b. Interpolation curve
- c. Interpolate input column, device measured value (raw value)
- d. Interpolate output column, device output value (standard value or correction value)
- e. Read the interpolation table of the device
- f. Clear the interpolation table on configuration software. Note: this action will not modify the interpolation table of the device
- g. apply, the interpolation would be written in device







6.7 Export and Import Configuration

Click the Setting tab to export and import device configuration

- a. summary text of device configuration
- b. read device configuration
- c. write device configuration
- d. load device configuration
- e. save device configuration

export procedure: device connection \rightarrow step b \rightarrow step e

import procedure: device connection \rightarrow step d \rightarrow step c

💑 eyc-ti	ech_UI_DPM03_V1.0.1-2023092	! Station 1*							
Ele	Interface About								
Display Configuration Interpolation Setting Information									
M	Monu Configuration a								
	ena configuration	Configuration Brief							
		INPUT	*						
b	Read	IN-CURR							
~		RANGE=420mA DEC P=YYY YY							
		DI=0.00100.00liter/m							
C	Write	=== LINEARIZATION ===							
Ŭ		LINEARIZATION=Off							
		PELAV1							
b l	Open	ACT =HI.AL							
ŭ,		SETP=80.00							
		HYS =1.00							
P	Savo	ERR =DON'T CARE							
L C	Juve	OFDE=0 Second(s)							
		OUTPUT							
M	odbus Protocol	L							
	Station ID	1							
	Station ID	Apply							
	Baud Rate	9600 -							
	Data Carrier	Dead							
	Data Frame None	e-8Bit-1Stop							
Read Catting Read suscessful									
wead 50	rung, nead auccession		.::						



6.8 Device Information

Click the Information tab to get device information

- a. device serial number
- b. device model name
- c. firmware version
- d. factory mode enabled state
- e. firmware checksum
- f. RS-485 enabled state
- g. input function enabled state
- h. output function enabled state
- i. totalizer enabled state

Input calibration information

- j. analog current input calibration points
- k. analog voltage input calibration points
- l. frequency input calibration points

Output calibration information

- m. analog voltage output calibration points
- n. analog current output calibration points
- o. Calibration date



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6.9 Display and Data Log

Click the Display tab to display the measurement data and start data log function

1. Data display: click the "Display" tab



2. Button description

Clear clear the plot chart

Chart toggle chart plotting line style

OUT1 select the OUTPUT channel you want to set

Color set the line color of the selected OUTPUT channel

Snap snap the currently chart plot

Export export data log since device is connected

- Y Title (ON) axis Y main coordinate, ON or OFF
- x Title (ON) axis X coordinate, ON or OFF

AxisY2 (ON) axis Y secondary coordinate, ON or OFF

Legend (ON) legend, ON or OFF



measurement data logging, ON or OFF

1 Minute

0 -30 axis X time scale

Auto Scale

axis Y amplitude scale



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- 3. Set the logging time interval
- a. File > Log Interval
- b. select the logging interval



- 4. Store/log measurement data
- I. Store measurement data: save the logging data since device is connected
 - A. Click Display > Export

😽 eyc-tech_UI_DF	PM03_V1.0.1-20230922 Statio	n 1*		
<u>F</u> ile <u>I</u> nterface	<u>A</u> bout			
Display Configu	ration Interpolation Setting	Information		
Measure	0.00	Board Tem	perature (°C)	50.59
Clear OUT1	Snap Y Title (ON)	Axis2 (ON) Log		80
Chart Color	Export X Title (ON)	Legend (ON) (OFF)	1 Minute	Auto Scale

B. Specify the path and filename > Save

€ eyc-tech_UL_DPM03_V1.0.1-20230922 Station 1*						
<u>E</u> le Interface <u>A</u> bout	Ele Interface About					
Display Configuration Interpole	Display Configuration Interpolation Setting Information					
Measure O.	Measure 0.00 Board Temperature (°C) 50.64					
Clear OUT1 Snap Y Chart Color Export X	Title (ON) Axis2 (ON) Log Title (ON) Legend (ON) (OFF)	1 Minute Auto Scal	80 × -20 ×			
80-			60			
60			_			
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Note: If the specified path and file name are the same, the original file data will be over written



- II. Log measurement data: start data logging
 - A. Click Display > Log(OFF)

€ eyc-tech_UI_DPM03_V1.0.1-20230922 Station 1*			
<u>File</u> Interface <u>A</u> bout			
Display Configuration Interpolation Setting Information	n		
Measure 0.00	Board Temperature (°C) 50.59		
Clear OUT1 Snap Y Title (ON) Axis2 (ON)	Log 80 🕀		
Chart Color Export X Title (ON) Legend (ON	(OFF) 1 Minute Auto Scale		

B. Specify the path and filename > save

ole ey	c-tech_UI_DPM03_V1.	0.1-20230922 Sta	tion 1*		
Ele	Interface About				
Displ	ay Configuration In	nterpolation Setti	ng Information		
Mo	acuro.	0.00	Roard To	mporature (%C) EO (-
1410	usure	0.00	bourd in	50.C	5
Cle	ear OUT1 Snap	Y Title (ON)	Axis2 (ON)		80
Ch	art Color Expor	t X Title (ON)	Legend (ON) (OFF)	-20
Cin		x rue (on)	Legend (ON)	1 Minute Auto Sca	e
					CO
	00-				- 00
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7 Inspection and maintenance

1. Maintenance

Since this product is inspected and calibrated for high accuracy at the factory before shipment, no calibration on the installation site is necessary when this product is installed. For inspection and maintenance follow the instructions below:

Periodically inspect this product for its sensing accuracy. Set the period between inspections based on operating temperature, dust content and dirt condition of the place of installation, and regular calibration is carried out to guarantee the accuracy.

2. Troubleshooting

If abnormality occurs during operation, please check and repair according to the following table and take necessary handling.

Problem	Check Items	Solutions
●No Output	●Incorrect Wiring	●Correct wiring
●Unstable Output	●Loose or disconnected wiring	Crew on terminal tightly or replace wires
	Power supply voltage and	• Replace the device
	quality	
● Unable to	●Incorrect Wiring	●Correct wiring
connect device thru.	●Loose or disconnected wiring	Crew on terminal tightly or replace wires
RS-485	Protocol mismatch	 Correct protocol setting or refer "6.3 Scan
	 Wiring length and terminator 	RS-485 connection"
		Shorter wiring length, replace terminator
	Range setting error	 Correct range setting
	●offset (Adj) value	 Correct or disable offset
● precision	 Linear correction 	 Correct or disable linear correction



Multifunction Signal Display Monitor

eyc-tech Measuring Specialist

enhance your capability with sensor technology

Air flow | Humidity | Dew point | Differential pressure | Liquid flow

Temp. | Pressure | Level | Air quality | Signal meter



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