



# **Two-wire Display and Control Unit**





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# Manual for 2-wire LCD display and control unit

# 1. Brief

Omega series universal intelligent 2-wire LCD digital display is fit for all of the transmitters and converters with  $4\sim$ 20mA 2-wire technique, just as pressure, differential pressure, temperature, flow, PH, acceleration and so on. 16 Bit ADC MCU inside. Customer can use the three buttons to program the zero point, Span, unit, decimal point, damping and alarm point etc. instead of the potentiometer. The actual value will expressed by the schedule. And it can replace all of the analog indicators in the market

## 2. feature

- 1) High accuracy and stability.
- 2) 16 Bit ADC MCU inside.
- 3) The scope of the value can be displayed on the LCD is -1.9.9.9.9.  $\sim$  9.9.9.9.9.
- 4) LCD can work at 3mA. Dropout voltage  $\leq 3.1$ V
- 5) 34 optional units. Many kinds of the value can be displayed, such as pressure, temperature, PH and so on.
- 6) Friendly soft interface.
- The schedule show the value measured in real time, and it will twinkle to alarm
- 8) Two OPTO switch outputs, NPN, PNP output

# 3. Setting

- "**M**" menu item for setting
- "• " to move the cursor
- "T "to change the value that the cursor point to and move the decimal point.

### 3.1 power on

After the digital LCD display was connected to the current circle  $4 \sim 20$ mA,

LCD is lighted, the initial screen display the default setting:



# 3.2 Zero-point (value to be displayed for 4mA)

Press button "M" to enter zero-point setting mode: (Factory default setting is

4.0000mA)

hudenbedeeb	hadaataataataataataat
UΩ	000
1.0	000
SET	ZERO

 $\rightarrow$  Press " $\blacktriangleleft$ " to move the cursor.

 $\rightarrow$  Press "  $\uparrow$ " to change the value that the cursor point to.

 $\rightarrow$  When the cursor move to the first left number, press " $\checkmark$ " again, the

decimal point is twinkling, press "<sup>†</sup>" to move the decimal point.

 $\rightarrow$  Press "M" to confirm setting and return to the menu item

## 3.3 Span (value to be displayed for 20mA)

Press "M" to continue, span setting mode is displayed:

(Factory default setting 20.000mA)



 $\rightarrow$  Press " $\blacktriangleleft$ " to move the cursor.

- $\rightarrow$  Press " To change the value that the cursor point to.
- $\rightarrow$  When the cursor move to the first left number, press " $\leftarrow$ " again, the

decimal point will twinkle, press " <sup>1</sup>" to move the decimal point.

 $\rightarrow$  Press "M" to confirm setting and return to the menu item

#### 3.4 Unit setting

Press button "M" to continue, unit setting mode is displayed:



→ Press "←" or "↑" to select the unit, For example "°C" is selected, unit is displayed on the LCD.

Optional units: V, mV, bar, mbar, Pa, KPa, MPa, mH2O, mmH2O, cmH2O, mmHg, PSI, TOR, kg, g, N, KN, °C, °F, K, RH, VOL, PPM, LEL, PH, m, cm, mm, INCH, M/S, Ohm, Kohm, %.

#### 3.5 Decimal digits

Press button "M" to continue, decimal digits setting mode is displayed:

	7								
SET	тов Тов								
→Press	" <b>←</b> " or	" <b>†</b> " to	select	the 1	number	of	decimal	digits,	(Valid
number	: 0,1,2,3)								

## 3.6 Damping

Press button "M" to continue, damping setting model is displayed:



 $\rightarrow$  Press " $\blacktriangleleft$ " to move the cursor.

 $\rightarrow$  Press " " to change the value that the cursor point to. Value is increased

and decreased by step 0.1s. (Min=0s, Max=99. 9, step 0.1s)

 $\rightarrow$  "M" to confirm setting and return to the menu item.

#### 3.7 Alarm

Press button "M" to continue, alarm setting mode is displayed:



→ Press "←" or "↑" to change the setting either "ON" or "OFF".
"ON" means the setting parameter is available, and the alarm was expressed by the twinkle of the schedule on the top and the value. "OFF" means the alarm setting parameter is unavailable.

## 3.8 The first alarm point.

Press button "M" to continue, first alarm point setting mode is display:



The method of setting is the same as step 3.2

#### 3.9 The second alarm point

Press button "M" to continue, second alarm point setting mode is display:



The method of setting is the same as step 3.2

#### 3.10 The direction of the first alarm pint

Press button "M" to continue, the direction of the first alarm point setting mode

is displayed:



### 3.11 The direction of the first alarm point

Press button "M" to continue, the direction of the first alarm pint setting mode

is displayed:



Other is the same as 3.10.

#### 3.12 The delay

Press button "M" to continue, delay setting mode is display:



 $\rightarrow$  Setting is the same as 3.6 (Min=0s, Max=99.9s step 0.1)

# 3.13 Display Mode

Press button "M" to continue, display mode setting is display:



Three display modes are for selection:

Pressure, Current or Percent

### **4** Dimensions





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