YUA

E1601 0002

Wall-mounted Digital Dispiay Controller

· Instrucion Manual ·

Version: 1.01

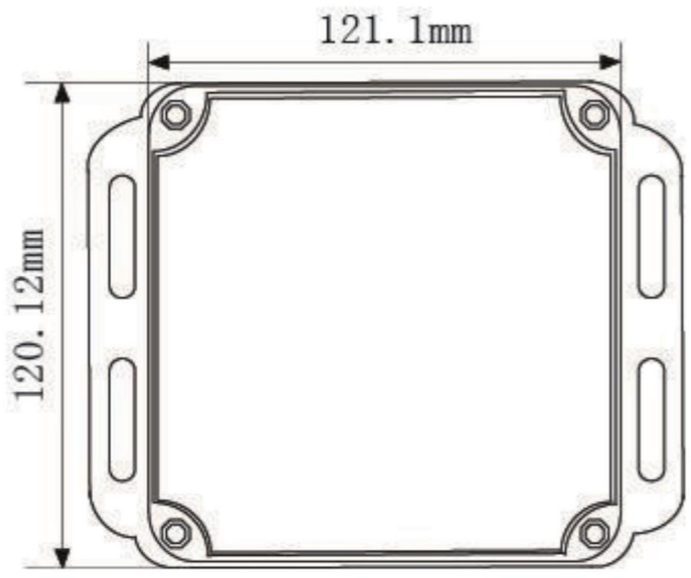
Wall-mounted Digital Display Controller User Manual

Product Introduction

E1601 0002 Wall-mounted Digital Display Controller adopts surface mount technology, automatic placement machine production, has a strong anti-interference ability. The shell is made of enhanced PC material, the whole instrument is in wall-mounted structure, so the installation is very simple. This instrument uses dual LED digital display, supporting TC, RTD, voltage, current signal input; supporting one-way transmission output or RS485 communication output function; supporting two-way alarm function; available with DC24V feed output, allowing power distribution for the transmitter on site; AC100-240V switching power supply, allowing measurement, display, alarm control, transmission output, data acquisition and communications of the temperature, pressure, liquid level and other parameters of industrial process.

1 Terminal Assignments and Dimensions





Dimensions: W*H*D: 121.1×120.12×60mm

2 Product List

E1601 0002 – □ – □ – □ – □ – □
① ② ③ ④ ⑤

①Input graduation			
Code	Graduation (measurement range)	Code	Graduation (measurement range)
00	TC B(400~1800°C)	20	0~20mV (-1999~9999)
01	TC S(0~1600°C)	21	0~40mV (-1999~9999)
02	TC K(0~1300°C)	22	0~100mV (-1999~9999)
03	TC E(0~1000°C)	23	Internal reserve
04	TC T(-200.0~400.0°C)	24	Internal reserve
05	TC J(0~1200°C)	25	0~20mA (-1999~9999)
06	TC R(0~1600°C)	26	0~10mA (-1999~9999)
07	TC N(0~1300°C)	27	4~20mA (-1999~9999)
08	F2(700~2000°C)	28	0~5V (-1999~9999)
09	TC Wre3-25(0~2300°C)	29	1~5V (-1999~9999)
10	TC Wre5-26(0~2300°C)	30	Internal reserve
11	RTD Cu50(-50.0~150.0°C)	31	0~10V (-1999~9999)

12	RTD Cu53(-50.0~150.0°C)	32	0~10mA root (-1999~9999)
13	RTD Cu100(-50.0~150.0°C)	33	4~20mA root (-1999~9999)
14	RTD Pt100(-200.0~650.0°C)	34	0~5V root (-1999~9999)
15	RTD BA1(-200.0~600.0°C)	35	1~5V root (-1999~9999)
16	RTD BA2(-200.0~600.0°C)	55	Full switch
17	Linear resistance 0~400Ω(-1999~9999)		
18	Remote resistance 0-350Ω (-1999~9999)		
19	Remote resistance 30-350Ω (-1999~9999)		

②Transmission output (OUT)

Code	Output type (load resistor RL)
X	No output
0	4-20mA(RL≤500Ω)
1	1-5V(RL≥250KΩ)
2	0-10mA(RL≤1KΩ)
3	0-5V(RL≥250KΩ)
4	0-20mA(RL≤500Ω)
5	0-10V(RL≥4KΩ)
D1	RS485 communication interface (Modbus RTU)

③Alarm (relay contact output)

Code	Alarm number
X	No output
1	Alarm 1
2	Alarm 2

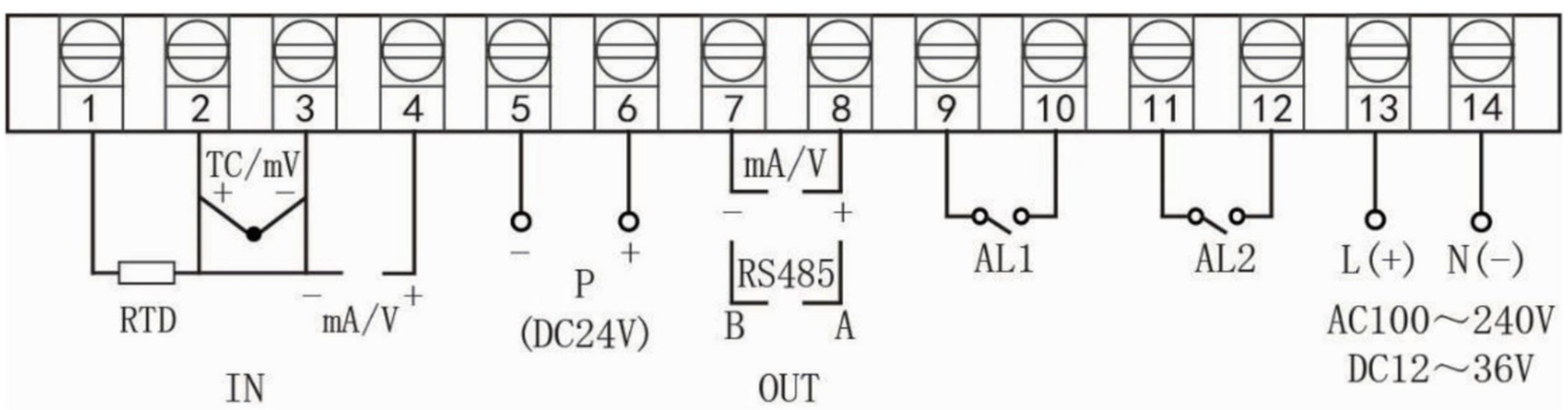
④Feed output

Code	Feed output
X	No output
P	Feed output

⑤Power supply

Code	Voltage range
A	AC/DC100~240V (50/60hz)
D	DC12~36V

3 Wiring Diagram



4 Operation

After power-on self-testing, the instrument will enter operation state, and in operation state, press ⟲ key to set the parameters.

(1) Press ◀ key, to reset the instrument;

(2) In any other menu, press ⟲ key for 5 seconds to return to measurement screen;

★ Return to operation state

(1) Manual Return: In the instrument parameters setting mode, hold down the ⟲ key for 5 seconds, the instrument will automatically return to the real-time measurement.

(2) Auto Return: In the instrument parameters setting mode, do not press any key, after 60 seconds, the

instrument will automatically return to the real-time measurement.

4.1 Level-1 parameters setting

In operation, press the key the PV window will display LOC, and the SV window will display parameter character: Press Up key or Down key for setting.

Level-1 parameters are as follows (the following parameters correspond to the ordered type functions, and if there is no such function, the corresponding parameter will not display):

Parameter	Symbol	Name	Range (character)	Description	Factory preset value
LoC	LoC	Lock the parameter	LoC＝00 LoC≠00. 132 LoC=132	No lock (effective modification of level-1 parameter) Lock (ineffective modification of level-1 parameter) No lock (effective modification of level-1 or level-2 parameter)	00
AL 1	AL1	First alarm value	-1999～9999	First alarm setpoint	50 or 50.0
AL2	AL2	Second alarm value	-1999～9999	Second alarm setpoint	50 or 50.0
AH 1	AH1	First alarm hysteresis	0～9999	First alarm hysteresis value	02 or 2.0
AH2	AH2	Second alarm hysteresis	0～9999	Second alarm hysteresis value	02 or 2.0
SdI S	SdiS	SV window displays the following in measurement state	SdiS=0 SdiS=1 SdiS=2 SdiS=5 SdiS=6 SdiS=7	Display input graduation code Display the first alarm value Display the second alarm value Display PH unit Display ° C No display	0

4.2 Level-2 parameters setting

In operating state, press key down, the PV screen will show LOC, and SV screen will show parameter character: Press Up/Down key to set the value, LOC=32, and press the key for long, to enter the level-2 parameters. The level-2 parameters are shown below (the following parameters are corresponding to the functions of the ordered model, and if there is no such function, the parameter will not appear):

Parameter	Symbol	Name	Range (character)	Description	Factory preset value
Pn	Pn	Input graduation	0～35	Set input graduation type (by reference to input signal type list)	27
dP	Dp	Decimal point	Dp=0 Dp=1 Dp=2 Dp=3	No decimal point Decimal point in tens (display XXX.X) Decimal point in hundreds (display XX.XX) Decimal point in thousands (display X.XXX)	0
ALn 1	ALM1	First alarm mode	ALM1=0 ALM1=1	No alarm The first alarm is lower limit alarm	2

			ALM1=2	The first alarm is upper limit alarm	
AL n2	ALM2	Second alarm mode	ALM2=0 ALM2=1 ALM2=2	No alarm The second alarm is lower limit alarm The second alarm is upper limit alarm	1
F K	FK	Filter coefficient	0～4	Set filter coefficient of instrument to prevent display value jitter	0
Addr	Addr	Device number	0～250	Set the device number of instrument in communication	1
bAUd	bAud	Communication baud rate	1200 2400 4800 9600	Baud rate is 1200bps Baud rate is 2400bps Baud rate is 4800bps Baud rate is 9600bps	9600
Pb	Pb	Display input zero shift	Full range	Set the input zero shift	0
PK	PK	Display input range scale	0~1.999	Set the amplification scale of input range display	1.000
ouL	0uL	Transmission output LRL	Full range	Set the transmission output LRL	0
ouH	0uH	Transmission output URL	Full range	Set the transmission output URL	1000
PL	PL	Measurement range lower limit	Full range	Set the measurement range lower limit of input signal	0
PH	PH	Measurement range upper limit	Full range	Set the measurement range upper limit of input signal	1000
Cut	Cut	Measuring low-cut	0.000–1.000	This function is only active for voltage / current signal root formula: Input signals < input signal lower limit + (input signal upper limit - input signal lower limit) * When setting the percentage, the instrument displays the measurement range lower limit	0.000
out	0ut	Transmission output type	Signal type / Parameter symbol / Signal type / Parameter symbol 0–20mA / 20mA / 0–5V / 0–5V 0–10mA / 10Ma / 1–5V / 1–5V 4–20mA / 4–20 / No output / 0mA		4–20
T-Pb	T–Pb	Cold end zero correction	Full range	Set the cold end zero correction value	0
T-PK	T–Pk	Cold end gain correction	0~1.999	Set the cold end zero gain correction value	1.000
o-Pb	o–Pb	Transmission output zero shift	–1.9990～2.000	Set the transmission output zero shift	0
o-PK	0–Pk	Amplification scale of	0～2.000	Set the amplification scale of transmission output	1.000

		transmission output			
FSEL	FSEL	Power frequency selection	FSEL=0 FSEL1	Power frequency is 50Hz Power frequency is 60Hz	0
dISt	DISt	Sampling filter	1～5	Set the sampling filter of the instrument: The smaller is the value, the faster the sampling is; The larger is the value, the slower the sampling is.	5

Input signal type list:

Graduation number Pn	Signal type	Measurement range	Graduation number Pn	Signal type	Measurement range
0	TC B	400～1800℃	17	0~500Ω Linear resistance	-1999～9999
1	TC S	0～1600℃	18	0~350Ω remote resistance	-1999～9999
2	TC K	0～1300℃	19	30~350Ω remote resistance	-1999～9999
3	TC E	0～1000℃	20	0～20mV	-1999～9999
4	TC T	-200.0～400.0℃	21	0～40mV	-1999～9999
5	TC J	0～1200℃	22	0～100mV	-1999～9999
6	TC R	0～1600℃	25	0～20mA	-1999～9999
7	TC N	0～1300℃	26	0～10mA	-1999～9999
8	TC F2	700～2000℃	27	4～20mA	-1999～9999
9	TC Wre3-25	0～2300℃	28	0～5V	-1999～9999
10	TC Wre5-26	0～2300℃	29	1～5V	-1999～9999
11	RTD Cu50	-50.0～150.0℃	31	0～10V	-1999～9999
12	RTD Cu53	-50.0～150.0℃	32	0~10mA root	-1999～9999
13	RTD Cu100	-50.0～150.0℃	33	4~20mA root	-1999～9999
14	RTD Pt100	-200.0～650.0℃	34	0~5V root	-1999～9999
15	RTD BA1	-200.0～600.0℃	35	1~5V root	-1999～9999
16	RTD BA2	-200.0～600.0℃			

Note: The method of fast switching graduation number: Change the graduation number of level-2 parameters Pn, move the decimal point to hundreds or thousands digit, press Up/Down key to switch the first and the last graduation number; decimal point in tens, switch the graduation number at the interval of ten; decimal point in ones, sequentially switch the graduation number.

5 Digital Communications

Digital communication allows the display instrument to communicate with PC or computer network systems, subject to MODBUS RTU protocol, the details of the protocol are available at: www.modbus.org. Don’t use any interface board not isolated, communication may be affected by different interference or potential. Wire should be shielded twisted pair.

★ For specific parameters, please refer to "Instrument Communication CD"

There will be no further notice of any change in the content of this Manual.