2 YEAR WARRANTY

CE

User's Guide

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TXDIN70 Series
Dual Transmitter

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CONTENTS

MODEL CONFIGURATION

Model	Description	Supply Power
TXDIN70	Dual Transmitter	100~240VAC,50/60Hz
TXDIN70-24V	Dual Transmitter	24VDC
TXDIN70-DISPLAY	Transmitter Display	From Transmitter

TECHNICAL SPECIFICATION

► **Input type:**

Thermocouple					
K	S	R	E	J	N
-50 to1300 ℃	-50 to1700℃	-50 to1600℃	0 to1000℃	0 to1200℃	-50 to 1300℃
T	B	WRe5-WRe26	WRe3-WRe25		
-200 to 350 ℃	0 to1800℃	0 to 2300℃	0 to 2300℃		

RTD	
Cu50	PT100
-50 to +150℃	-200 to +900℃

Linear Voltage
0 to 1V , 0.2 to 1 V, 0 to 20mV, 0 to 60mV, 0 to 100mV

► **Retransmission accuracy:**

0.3%FS ± 1 digit (including input and output error)

► **Output specification:**

Can be freely defined in the range of 0～22mA with maximum output voltage ≥ 11V

► **Temperature drift:**

≤0.015%FS /℃ (including the temperature drift of input and output)

► **Electromagnetic compatibility (EMC):**

±4KV/5KHz according to IEC61000-4-4 (EFT); 4KV according to IEC61000-4-5.

► **Isolation withstand voltage:**

Voltage between power, signal input and output terminals ≥2300VDC; between inputs or 2 outputs ≥200VDC

► **Power supply :**

100～240VAC, -15%, +10% / 50-60Hz; or 24VDC/AC.

► **Power consumption:**

≤ 3W

► **Operating Ambient :**

Temperature -10～+60℃; humidity ≤90%RH
Note: B thermocouple obtains the above measurement accuracy only at the range of 400～1800℃. Its measurement from 60～400℃ is less accurate.

PARAMETER AND SETTING

x means channel number. It can be 1~2.

<table>
<tr><th>Parameter</th><th>Description</th><th colspan="4">Remarks</th><th>Setting range</th></tr>
<tr><td rowspan="12">INPx</td><td rowspan="12">Input specification</td><td colspan="4"><table>
<tr><th>InP</th><th>Input spec.</th><th>InP</th><th>Input spec.</th></tr>
<tr><td>0</td><td>K</td><td>11~19</td><td>Spare</td></tr>
<tr><td>1</td><td>S</td><td>20</td><td>Cu50</td></tr>
<tr><td>2</td><td>R</td><td>21</td><td>Pt100</td></tr>
<tr><td>3</td><td>T</td><td>22~24</td><td>Spare</td></tr>
<tr><td>4</td><td>E</td><td>25</td><td>0～75mV voltage input</td></tr>
<tr><td>5</td><td>J</td><td>26~27</td><td>Spare</td></tr>
<tr><td>6</td><td>B</td><td>28</td><td>0～20mV voltage input</td></tr>
<tr><td>7</td><td>N</td><td>29</td><td>0～100mV voltage input</td></tr>
<tr><td>8</td><td>WRe3-WRe25</td><td>30</td><td>0～60mV voltage input</td></tr>
<tr><td>9</td><td>WRe5-WRe26</td><td>31</td><td>0~1 V</td></tr>
<tr><td>10</td><td>Spare</td><td>32</td><td>0.2~1V</td></tr>
</table></td><td rowspan="12">0 ~ 32</td></tr>
</table>

SCL**x**	Scale low limit	SCL and SCH define the corresponding scale range of linear output. E.g. For channel 1, in order to retransmit 0~600℃ from output 1, can set SCL1 = 0, and = 600. For channel 2, to transmit 0~1000℃, then SCL2=0, SCH2=1000.	-9990~+30000 units
SCH**x**	Scale high limit		
Scb**x**	Input offset	Scb is used for shift input to compensate the error caused by transducer, input signal, or auto cold junction compensation of thermocouple. **PV_after_compensation=PV_before_compensation + Scb**	-1999~+4000 units or 0.1℃

FIL**x**	Digital filter	The value of FIL will determine the ability of filtering noise. FIL=0, no filtering effect; FIL=1, filtering with mean; FIL=2~40, filtering with mean and integral. When a large value is set, the measurement input is stabilized but the response speed is slow. Generally, it can be set to 1 to 3. If great interference exists, then you can increase parameter FIL gradually to make momentary fluctuation of measured value less than 2 to 5. When the instrument is being metrological verified, FIL can be set to 0 or 1 to shorten the response time.	0~40
OPn	Re-transmission channel assignment	OPn=1, For 1 input 1 output or 2 inputs 2 outputs retransmission application, OPn=2, For 1 input 2 outputs retransmission (retransmission from input channel 2).	0~2

OPL	Low limit of current re-transmission of Channel 1	Define the low limit and high limit of current retransmission of channel 1. The engineering unit is 0.1mA. For example, retransmit 0~600℃ from input channel 1 to 4~20mA on output channel 1, then the parameter should be set as below: SCL1=0, SCH1=600, OPn=1, OPL=40, OPH=200.	0~110
OPH	High limit of current re-transmission of Channel 1		0~220

OPL2	Low limit of current re-transmission of Channel 2	Define the low limit and high limit of current retransmission of channel 2. The engineering unit is 0.1mA. For example, retransmit 0~1000℃ from input channel 2 to 4~20mA on output channel 2 , then the parameter should be set as below: SCL2=0, SCH2=1000, OPn=1, OPL2=40, OPH2=200.	0~100
OPH2	High limit of current re-transmission of Channel 2		0~220
IVF1	OP1 current correction (Please record the value when first use)	For adjusting the current of OP1 output. The greater IVF1, the greater current output. Note: This parameter was adjusted before delivery. It is better not to change this value by yourself.	0~3000 Default= (_____)

IVF2	OP2 current correction (Please record the value when first use)	For adjusting the current of OP2 output. The greater IVF1, the greater current output. Note: This parameter was adjusted before delivery. It is better not to change this value by yourself.	0~3000 Default= (_____)
Loc	Parameter lock	Loc=808, allow to display and modify all parameters. Otherwise, all parameters can't be modify and which just shown INPx, SCLx and SCHx from display	0 ~9999

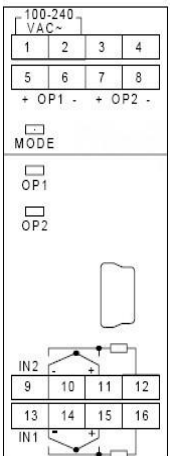
SYMBOL DESCRIPTIONS

Symbol	Description
orAL	Input specification setting is incorrect Or Input wiring is disconnected/ thermocouple problem Or Short circuited
EErr	IC Software error
8888	IC Software error

LAYOUT OF TERMINALS, INDICATION LIGHTS AND WIRING

Layout of TXDIN70 indication lights and terminals is illustrated below:
Terminal 1 and 2 are for power supply of 24VAC/DC or 100~240VAC.
Terminal 5 and 6 are the positive and negative pole of channel 1 current retransmission output.
Terminal 7 and 8 are the positive and negative pole of channel 2 current retransmission output.
Terminal 14～16 are for channel 1 input.
Terminal 10～12 are for channel 2 input.

Indication light at OP1～OP2: Indicate the outputs of channel 1 and 2. The luminosity of the light indicates the status of the output.



Indication light at MODE:
When the light flickers even faster, at a rate of once every 0.3 second, it indicates severe errors such as input exceeding its acceptable range.

When the light is off, it indicates that the instrument has no power or it is out of order. When the light is on (for at least longer than 8 seconds), it indicates that the instrument has power on but is out of order.

DISPLAY AND OPERATIONS

The parameters of TXDIN70 can be set by an external display TXIN70-Display which can be used to configure TXDIN70 at the initial set up, as well as remain connected to TXDIN70 and serves as an external display.

The functions of the parts of external display panel as below:

① Upper display window, displays PV of channel 1 or parameter code, when display keep flashing or the reading abnormal, please check the input specification set correct or not.

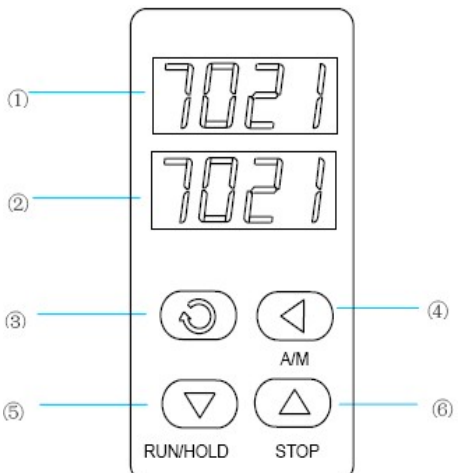
② Lower display window, displays PV of channel 2 or parameter value, when display keep flashing or the reading abnormal, please check the input specification set correct or not.

③ Setup key, for accessing parameter table and conforming parameter modification.

④ Data shift key.

⑤ Data decrease key

⑥ Data increase key.



Operation Instructions:

Setting parameters:

When the parameter lock “Loc” isn't locked, pressing  and holding for about 2 seconds will bring up the full parameter table. Pressing  will bring up the parameters one by one. Press◄ 、▲ or ▼ to modify the value of a parameter. Pressing ◄ and holding will return to the preceding parameter. Pressing ◄and holding and at the same time  press key will get out of the parameter table.

When the parameter lock “Loc” is locked, pressing  will bring up field parameter table which just shown INPx, SCLx and SCHx from display and can’t modify.

The instrument will automatically leave the parameter table if no key is pressed in the past 25 seconds, and the change of the last parameter will not be saved.

WARRANTY/DISCLAIMER

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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

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2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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