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WARRANTY



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双路温度变送器



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WARNING: These products are not designed for use in, and should not be used for, human applications.

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型号定义

型号	描述	供电
TXDIN70	双路温度变送器	100~240VAC,50/60Hz
TXDIN70-24V	双路温度变送器	24VDC
TXDIN70-DISPLAY	手持显示器	由双路温度变送器供电

功能概述

TXDIN70是DIN导轨安装的智能化的双路可编程温度变送器/信号隔离器，其输入信号可以为2路可任意编程的热电偶、热电阻及线性电压（mV），外部并联精密电阻可输入电流信号，输出为2路相互隔离的标准电流（4~20mA或0~20mA）输出，输入具备数字滤波功能。变送器可以作为2个独立的变送器或信号隔离器使用，降低了成本及设备的安装体积，使用灵活，方便。仪表可选24VDC/AC或100~240VAC电源电压，并通过ISO9001质量认证，可靠性高且符合EMC电磁兼容标准；其电源及全部I/O端子均通过了4KV的群脉冲（EFT）抗干扰测试，能在强干扰环境下可靠工作。仪表主要功能如下：

- 2路可编程测量输入回路，支持K、S、E、J、B、N、T、WRe5-WRe26、Pt100、Cu50、0~20mV、0~100mV、0~1V、0.2~1V等多种规格热电偶、热电阻及电压信号输入，热电偶自动冷端补偿，并可以自由定义温度变送输出的量程。2输入回路均具备数字滤波，且滤波强度可以独立调整或取消滤波。
- 使用高性能的元器件，大大降低温度漂移并使得2个通道之间相互干扰降低，使2路测量在精度及抗干扰性能上也达到了与单路测量仪表相当的水准。
- DIN导轨安装，宽度仅22.5mm，占用更小的柜体体积。
- 数字校正电流输出，无电位器，进一步提高了电流输出精度及稳定性。
- 可直接用1394连线连接TXDIN70-DISPLAY型手持显示器进行编程，使用方便。

技术规格

- 输入规格:

热电偶: K、S、R、E、J、T、B、N、WRe5-WRe26

热电阻: Pt100、Cu50

线性mV电压: 0~20mV、0~60mV、0~100mV、0~1V、0.2~1V、-20~+20mV、-100~+100mV等

- 测量范围:

K(-50~+1300℃)、S(-50~+1700℃)、R(-50~+1700℃)、T(-200~+350℃)、E(0~+1000℃)

J(0~+1200℃)、B(0~+1800℃)、N(-50~+1300℃)、WRe5-WRe26 (0~+2300℃)、Pt100 (-200~+900℃)

- 线性mV电压输入: 由用户用SCH及SCL参数自由定义

- 变送精度: $\pm 0.3\%FS \pm 1$ 个字 (包括输入与输出误差)

- 温度漂移: $\leq 0.015\%FS/^\circ C$ (包括输入与输出的温度漂移)

- 电磁兼容: IEC61000-4-4 (电快速瞬变脉冲群EFT), $\pm 4KV/5KHz$; IEC61000-4-5 (浪涌), 4KV

- 隔离耐压: 电源端与信号输入及输出端相互之间 $\geq 2300VDC$; 输入及2路输出相互之间 $\geq 200VDC$

- 输出规格: 0~22mA范围内自由定义, 最大输出电压 $\geq 11V$

- 电 源: 100~240VAC/50Hz + 10%, -15%或24VDC/AC可选

- 电源消耗: $\leq 3W$

- 使用环境: 温度 -10~+60℃, 湿度 $\leq 90\%RH$

注: B分度号热电偶在60~400℃范围可进行测量, 但精度无法达到标定精度, 在400~1800℃可保证精度

参数表

TXDIN70 通过参数来定义仪表的输入、输出方式。以下为参数功能表。

参数	功能	功能解释	设置范围																																																
INP1~2	输入规格	INP1~2分别定义1、2通道的输入规格 <table border="1"> <thead> <tr> <th>INP</th><th>输入规格</th><th>INP</th><th>输入规格</th></tr> </thead> <tbody> <tr> <td>0</td><td>K</td><td>1</td><td>S</td></tr> <tr> <td>2</td><td>R</td><td>3</td><td>T</td></tr> <tr> <td>4</td><td>E</td><td>5</td><td>J</td></tr> <tr> <td>6</td><td>B</td><td>7</td><td>N</td></tr> <tr> <td>8</td><td>WRe3~WRe25</td><td>9</td><td>WRe5~WRe26</td></tr> <tr> <td>10</td><td>用户指定的扩充输入规格</td><td>11~19</td><td>备用</td></tr> <tr> <td>20</td><td>CU50</td><td>21</td><td>Pt100</td></tr> <tr> <td>22~24</td><td>备用</td><td>25</td><td>0~75mV</td></tr> <tr> <td>26~27</td><td>备用</td><td>28</td><td>0~20mV电压输入</td></tr> <tr> <td>29</td><td>0~100mV</td><td>30</td><td>0~60mV电压输入</td></tr> <tr> <td>31</td><td>0~1mV</td><td>32</td><td>0.2~1V</td></tr> </tbody> </table>	INP	输入规格	INP	输入规格	0	K	1	S	2	R	3	T	4	E	5	J	6	B	7	N	8	WRe3~WRe25	9	WRe5~WRe26	10	用户指定的扩充输入规格	11~19	备用	20	CU50	21	Pt100	22~24	备用	25	0~75mV	26~27	备用	28	0~20mV电压输入	29	0~100mV	30	0~60mV电压输入	31	0~1mV	32	0.2~1V	0~39
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SCL1~2	信号变送 刻度下限	定义信号变送输出刻度下限	-9990~+30000 线性单位																																																
SCH1~2	信号变送 刻度上限	定义信号变送输出刻度上限。例如通道1需要将0~600℃范围的温度变送输出，则可以设置SCL1=0，SCH1=600；通道2变送输出范围为0~1000℃，则可设置SCL2=0，SCH=1000。																																																	

Scb1~2	输入平移修正	Scb参数用与对输入信号进行平移修正,以补偿传感器或输入信号本身的误差,或修正仪表冷端补偿误差。 仪表进行年度计量检定时,对恶劣环境下使用过一段时间的仪表,如果检定仪表误差超出范围,可先对仪表内部进行清洁及干燥处理,这样一般都能解决问题,如仍无法达到精度可采用修改Scb参数的方法来进行修正。	-1999~+4000定义单位或0.1℃
FIL1~2	数字滤波强度	FIL用于设置输入信号数字滤波的强度,0没有任何滤波,1只有取中间值滤波,2-40同时有取中间值滤波,FIL越大,测量值越稳定,但响应也越慢。一般在测量受到较大干扰时,可逐步增大FIL值,调整使测量值瞬间跳动小于2~5个字。在实验室对仪表进行计量检定时,则应FIL设置为0或1以提高响应速度。	0~40
OPn	变送输出通道信号	OPn=1~2,分别表示用OUTP变送输出1~2通道测量值,设置Opn=2时则OUTP也输出通道2信号,作为1进2出。	0~6
OPL	变送输出电流下限	OPL用于定义OUTP位置变送电流输出下限,单位是0.1mA。	0~110
OPH	变送输出电流上限	OPH用于定义OUTP位置变送电流输出上限,单位是0.1mA。例如:需要将通道1测量值0~600℃变送输出为4~20mA输出,则参数设置为:SCL1=0, SCH1=600, OPn=1, OPL=40, OPH=200。	0~220
OPL2	通道2输出下限	OPL2用于定义通道2变送电流输出下限,单位是0.1mA。	0~100
OPH2	通道2输出上限	OPH2用于定义通道2变送电流输出上限,单位是0.1mA。例如:需要将通道2测量值0~1000℃变送输出为4~20mA输出,则参数设置为:SCL2=0, SCH2=1000, OPL2=40, OPH2=200。	0~220
IVF1	OP1电流校正	该值用于修正OP1电流输出大小,数值越大,电流输出越大,通常出厂时该参数已调整正确,请勿自行修改,以免输出不准。	0~3000
IVF2	OP2电流校正	该值用于修正OP2电流输出大小,数值越大,电流输出越大,通常出厂时该参数已调整正确,请勿自行修改,以免输出不准。	0~3000
Loc	参数修改级别	当Loc设置为0或808时,用户才能修改参数,设置为其它值时不允许修改参数。	0~9999

符号说明

符号	解释
orAL	输入设定不正确，或； 输入接线松脱 / 热电偶故障，或； 线路短路
EErr	芯片软件错误
8888	芯片软件错误

端子接线图

TXDIN70指示灯及接线端子排布如图

1~2端子为电源输入，100~240VAC或24VAC/DC，+10%，-15%；

OP1~OP2指示灯，1~2路输出指示灯，通过亮度反映输出大小；

5, 6号端子分别第1路电流变送输出的正, 负极；

7, 8号端子为第2路电流变送输出的正, 负极；

10~12号端子为第二路输入，14~16号端子为第一路输入。

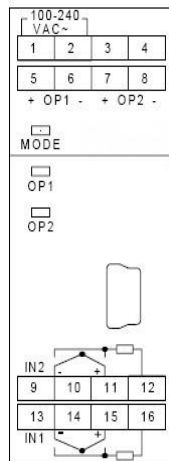
MODE指示灯，在仪表与上位机通信时通常产生亮/灭时间不相等的闪动，每闪灭一次表示与上位机通讯一次，此时可通过上位机查看仪表状态。若仪表6秒内没有收到上位机信号，则其会产生亮 / 灭时间相等的闪动，其含义如下：

当指示灯以1.6秒周期缓慢闪烁时，表示虽无通讯但仪表工作无报警（可视为正常）；

当指示灯以0.6秒周期较快闪烁时，表示仪表没有通讯，而且有报警等一般错误产生；

当指示灯以0.3秒周期快速闪烁时，表示无通讯且存在输入超量程（如热电偶、热电阻开路）等严重错误；

指示灯常灭表示仪表没电或损坏；常亮（超过8秒以上）表示仪表有上电但表已损坏。



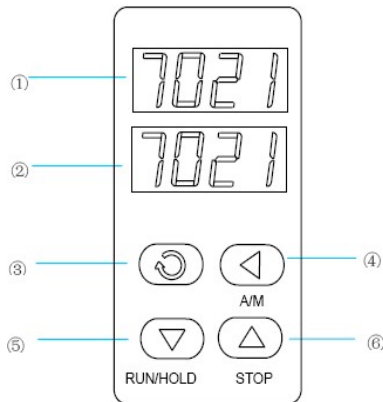
外接手持显示器操作

TXDIN70可以用1394插座及专用连线连接TXDIN70-DISPLAY 显示编程器对仪表内部参数进行编程，该手持编程器允许带电拔插，可以仅在需要编程时使用，也可以安装在DIN导轨上作TXDIN70I的长期显示器，各部位说明如下：

- | | |
|---------------------|---------------------|
| ① 上显示窗，显示回路1测量值或参数名 | ② 下显示窗，显示回路2测量值或参数值 |
| ③ 设置键 | ④ 数据移位 |
| ⑤ 数据减少键 | ⑥ 数据增加键 |

设置参数方法：当参数锁未锁上时，按(□)键并保持约2秒钟，等显示出参数后再放开。再按(□)键，仪表将依次显示各参数，如回路1输入规格InP1、参数锁Loc等等。对配置好并锁上参数锁的仪表、按(□)键即可显示参数（无需保持2秒），只出现操作工需要用到参数（现场参数）。通过(▼)、(▲)、(◀)等键可修改参数值。先按(◀)键再按(□)键可退出设置参数状态，按(◀)键保持不放可返回检查上一参数。

注：本仪表的1394插座只能专门连接本公司编程器，而不能用于连接其它的1394设备。





WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **25 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **two (2) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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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:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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