






**Relay Output Terminal Unit**  
**TU721-R Series**  
**User manual**  
**IM23H73-E**














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Symbol Definition	
	<b>WARNING:</b> Indicates information that a potentially hazardous situation which, if not avoided, could result in serious injury or death.
	<b>RISK OF ELECTRICAL SHOCK:</b> Indicates information that Potential shock hazard where HAZARDOUS LIVE voltages greater than 30V RMS, 42.4V peak, or 60V DC may be accessible.
	<b>ESD HAZARD:</b> Indicates information that Danger of an electro-static discharge to which equipment may be sensitive. Observe precautions for handling electrostatic sensitive devices
	<b>ATTENTION:</b> Identifies information that requires special consideration.
	<b>TIP:</b> Identifies advice or hints for the user.

## Security& Caution Symbols

The following table lists Security& Caution symbols used on equipments.

No.	Symbol	Description
1		Direct current (DC)
2		Alternating current (AC)
3		Ground (Earth) terminal
4		Protective earth (ground) terminal
5		Reference ground (Earth) terminal
6		Frame or chassis
7		Equipotentiality
8		On (power)
9		Off (power)
10		Caution, risk of electric shock
11		Caution, hot surface
12		Caution, risk of danger
13		Electrostatic sensitive devices (ESD)

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# Relay Output Terminal Unit TU721-R Series

## Section 1 Description

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TU721-R is a 16-contact relay output terminal board, which is mainly used to cooperate with the D0711 module to drive the field equipment of high power. The terminal board is connected to the base MB745-S or MB746-S of the module through DB37 line, the socket of which is placed in the middle of the terminal board. The installation method of the terminal board is the same as the base's.

The TU721-R series terminal board has two types: TU721-R0000 and TU721-R0100. TU721-R0000 is passive relay output terminal board, while TU721-R0100 is active relay output terminal board.

Each relay of TU721-R0000 terminal board is provided with 3 output connection terminals, always-open contact, always-close contact and common terminal. Equipped with socket, the relay is convenient for replacement and maintenance.

Each relay of TU721-R0100 is provided with a pair of active input terminals. There is a socket with fuse at the contact side of the relay. All the fuses can be chosen according to practical needs. Equipped with socket, the relay is convenient for replacement and maintenance.

## Section 2 Technical Specifications

**Table 2-1 technical specifications of TU721-R**

Type of terminal board	TU721-R0000	TU721-R0100
Channel number	16	16
Output capacity	5A/220V AC, 5A/24V DC(pure resistance)	3A/channel(MAX), The total value of 8 channels should be less than 8 A
Isolation voltage between relay coil and contact	5,000VAC (1min, 10mA)	5,000VAC (1min, 10mA)
Operation time of contact (electric longevity)	More than 100 thousand times	More than 100 thousand times
Fuse		Melting type 1A (standard equipped)



**Tip:**

**If the relay needs to be replaced, the indexes of actually used relay should be referred.**

## Section 3 Interface Feature

### 3.1 Passive signal

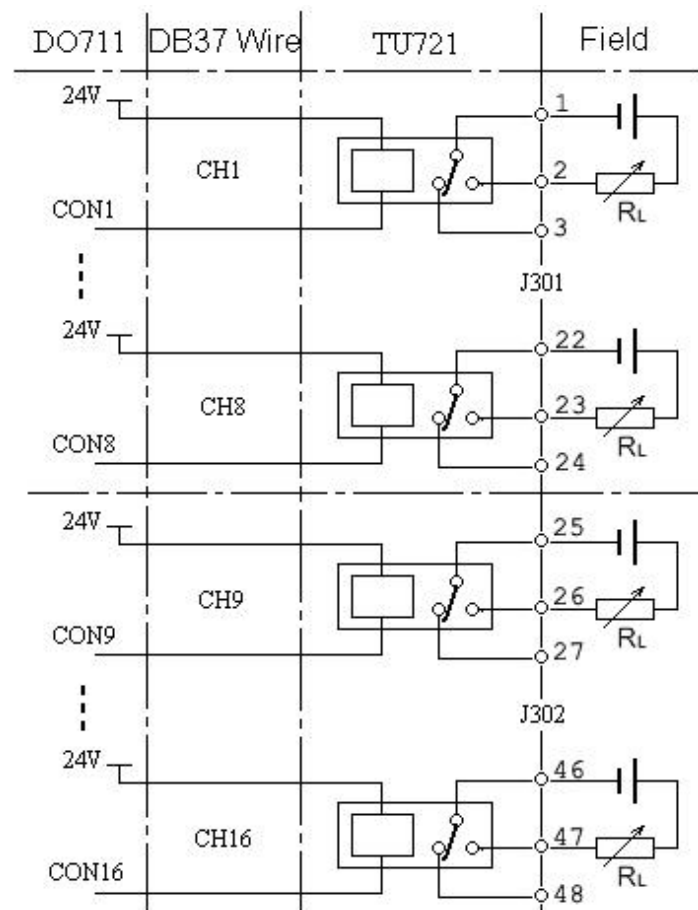


Figure 3-1 interface feature of TU721-R0000

### 3.2 Active signal

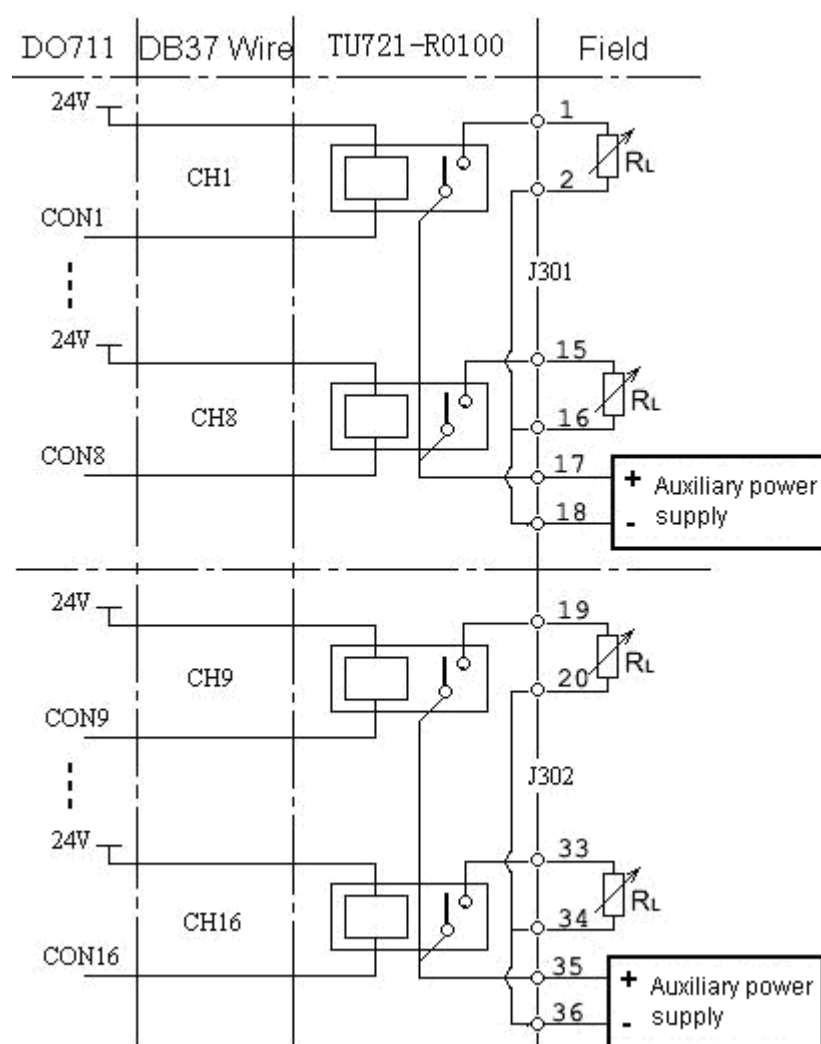


Figure 3-2 interface feature of TU721-R0100



## Section 4 Usage Instruction

### 4.1 External dimension of TU721-R

Length: 153.5mm      Width: 151.5mm

### 4.2 External structural diagram of TU721-R

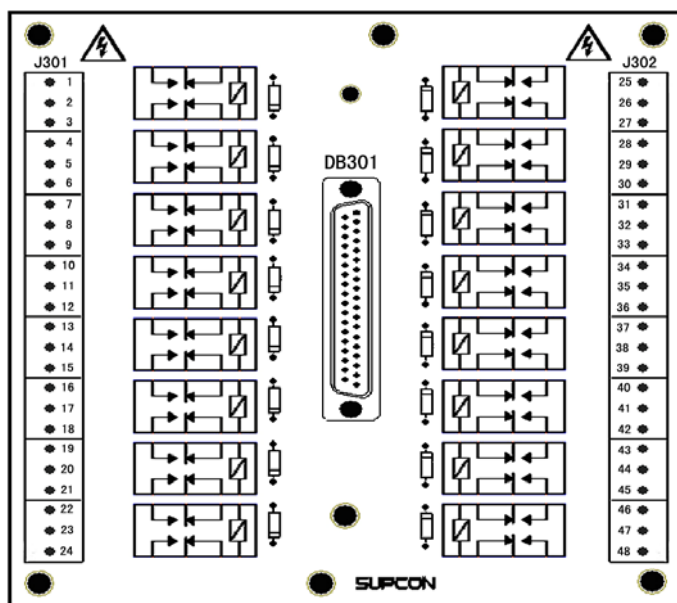


Figure 4-1 External structural diagram of TU721-R0000

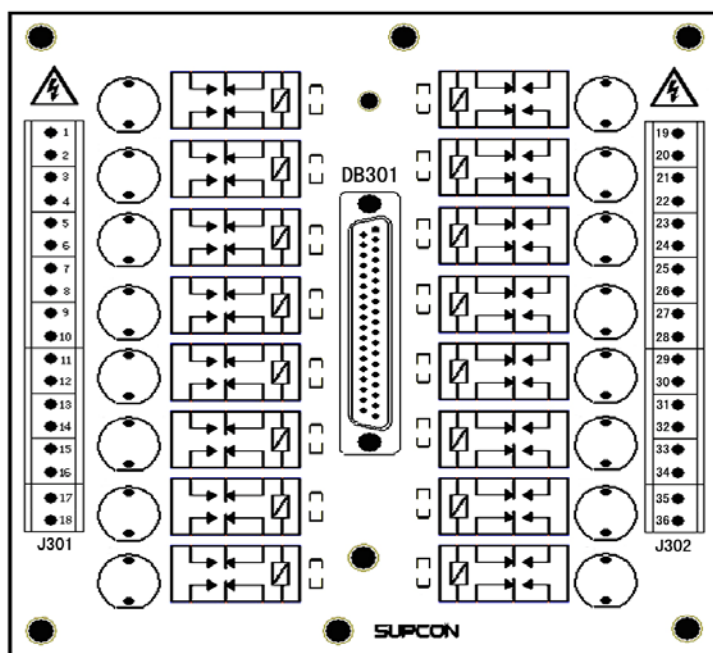


Figure 4-2 External structural diagram of TU721-R0100

## 4.3 Socket connector

Sockets connector instruction of TU721-R terminal board is shown in Table 4-1. J301 series terminals are in accordance with channel 1 (CH1) to channel 8 (CH8). J302 series terminals are in accordance with channel 9 (CH9) to channel 16 (CH16).

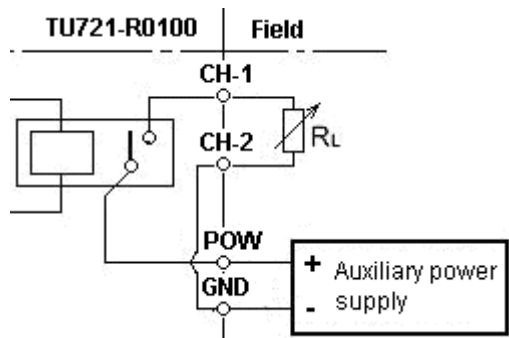
**Table 4-1 Plug Instruction of TU721-R**

Mark	Instruction
DB301	Socket with 37 pins connected to DO module
J301	Connection terminals of the first 8 channels
J302	Connection terminals of the latter 8 channels

## 4.4 Terminals definition & connection

### 4.4.1 Terminals connection of TU721-R0100

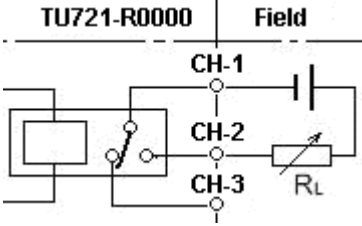
**Table 4-2 Connection instruction of TU721-R0100**

Wiring diagram	channel	Definition	terminal		Definition	channel
 <p>The first 8 channels and latter 8 channels independence power supply respectively.</p>	CH1	CH-1	1	19	CH-1	CH9
		CH-2	2	20	CH-2	
	CH2	CH-1	3	21	CH-1	CH10
		CH-2	4	22	CH-2	
	CH3	CH-1	5	23	CH-1	CH11
		CH-2	6	24	CH-2	
	CH4	CH-1	7	25	CH-1	CH12
		CH-2	8	26	CH-2	
	CH5	CH-1	9	27	CH-1	CH13
		CH-2	10	28	CH-2	
	CH6	CH-1	11	29	CH-1	CH14
		CH-2	12	30	CH-2	
	CH7	CH-1	13	31	CH-1	CH15
		CH-2	14	32	CH-2	
	CH8	CH-1	15	33	CH-1	CH16
		CH-2	16	34	CH-2	
	first 8 channels	POW	17	35	POW	latter 8 channels
		GND	18	36	GND	

### 4.4.2 Terminals connection of TU721-R0000

**Table 4-3 Connection instruction of TU721-R0000**

Wiring diagram	channel	Definition	terminal		Definition	channel
	CH1	CH-1	1	25	CH-1	CH9
		CH-2	2	26	CH-2	
		CH-3	3	27	CH-3	

Wiring diagram	channel	Definition	terminal		Definition	channel
 <p>The diagram shows a relay unit TU721-R0000 connected to a field RL. The field is represented by a coil with a diagonal line and the label RL. The relay unit has three channels: CH-1, CH-2, and CH-3. CH-1 is connected to terminal 4, CH-2 to terminal 5, and CH-3 to terminal 6. The field RL is connected to terminal 28. The diagram also shows a power source connected to terminals 4, 5, and 6.</p>	CH2	CH-1	4	28	CH-1	CH10
		CH-2	5	29	CH-2	
		CH-3	6	30	CH-3	
	CH3	CH-1	7	31	CH-1	CH11
		CH-2	8	32	CH-2	
		CH-3	9	33	CH-3	
	CH4	CH-1	10	34	CH-1	CH12
		CH-2	11	35	CH-2	
		CH-3	12	36	CH-3	
	CH5	CH-1	13	37	CH-1	CH13
		CH-2	14	38	CH-2	
		CH-3	15	39	CH-3	
	CH6	CH-1	16	40	CH-1	CH14
		CH-2	17	41	CH-2	
		CH-3	18	42	CH-3	
	CH7	CH-1	19	43	CH-1	CH15
		CH-2	20	44	CH-2	
		CH-3	21	45	CH-3	
	CH8	CH-1	22	46	CH-1	CH16
		CH-2	23	47	CH-2	
		CH-3	24	48	CH-3	

## Section 5 Revision

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*Table 5-1 Retrofit list of the version*

Document Version	Applicable Product Version	Remarks
V1.0	TU721-R-10.00.00	
V1.1(20151027)	TU721-R-10.00.00	
V1.2(20160503)	TU721-R-10.00.00	Add the base model number
V1.3(20161116)	TU721-R-10.00.00	Add code