

Relay Output Terminal Unit






TUA711-DOR16

User manual

IM23H65-E

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Symbol Definition	
	WARNING: Indicates information that a potentially hazardous situation which, if not avoided, could result in serious injury or death.
	RISK OF ELECTRICAL SHOCK: Indicates information that Potential shock hazard where HAZARDOUS LIVE voltages greater than 30V RMS, 42.4V peak, or 60V DC may be accessible.
	ESD HAZARD: Indicates information that Danger of an electro-static discharge to which equipment may be sensitive. Observe precautions for handling electrostatic sensitive devices
	ATTENTION: Identifies information that requires special consideration.
	TIP: 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 TUA711-DOR16

Section 1 Overview

TUA711-DOR16 is a digital output terminal unit isolated by relay, and mainly works with 1 non-redundant or a pair of redundant 16-channel digital output modules DO712-S11. The control digital signal in system is sent to field after isolated by the relay of terminal unit, and mainly used for driving the field devices of high power. The terminal unit can work with the change-over bases MB745-S11 or MB746-S11 via the wire DB37.

Each channel of TUA711-DOR16 has 3 terminals, and supports outputting the passive normally open signal and passive normally closed. Every channel has the channel indicator light, the power supply has changeable fuse and indicator light, and the relay has socket. Therefore, user can change and maintain conveniently.

This terminal unit applies DIN rail installation and supports inlet wire of single side.

Section 2 Specifications

Table 2-1 Specifications

Parameter		Instruction
Model		TUA711-DOR16
Type		Relay Output Terminal Unit
Channel		16
Temperature	Work	(-20~70)°C
	Storage	(-40~85)°C
Humidity	Work	10%RH~90%RH, No Condensation
	Storage	5%RH~95%RH, No Condensation
Coil Power Supply		24V DC \pm 10%
Contact Operation Times		> 100000
Maximum Contact Operation Frequency		20 Times/Minute (Rated Control Capacity)
Load		3A/ Channel (MAX)
Fuse (16 Channels for Each Group in Coil)		24A Pluggable Fuse
Dimension (L×W×H)		300mm×90mm×70mm

Section 3 Usage



RISK OF ELECTRICAL SHOCK:

The terminals in terminal unit may have high voltage and cannot be touched directly!

3.1 Appearance

The appearance of TUA711-DOR16 is shown in Figure 3-1.

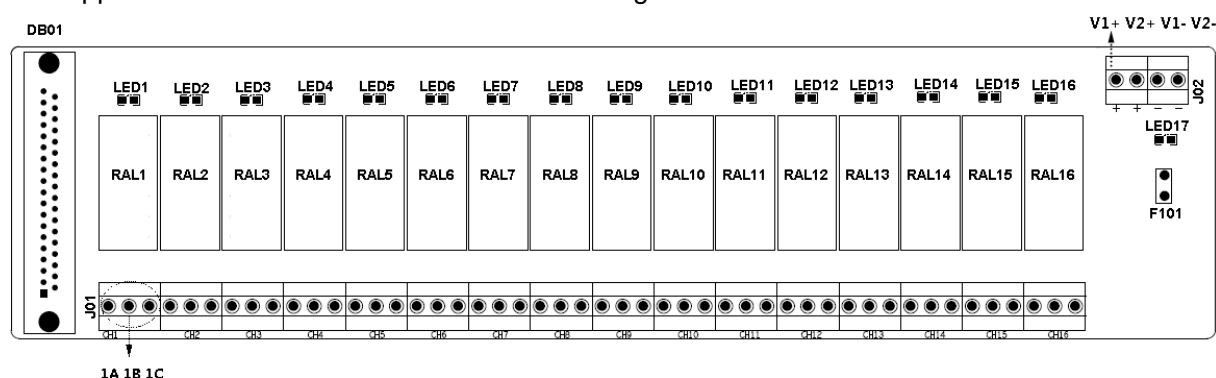


Figure 3-1 Appearance

3.2 Connectors

Table 3-1 Connectors

Sign	Instruction
DB01	Socket of 16-Channel DO Module
J02	Terminal of Coil Power Supply
J01	Signal Terminal
F101	Fuse of Coil Power Supply (Model: F 2A)
LED17	Power Indicator Light of Coil Power Supply
RAL1~RAL16	Pluggable Relay of 16-Channel (Model: RCL424024)
LED1~LED16	Indicator Light of 16-Channel (ON: have signal; OFF: No Signal)

3.3 Interface Features

Connect the 2 terminals of A and B or B and C from the 3 terminals according to the field requirements of normally open or normally closed. The circuit is shown in Figure 3-2, in which takes the 1st channel and the 16th channel as examples.

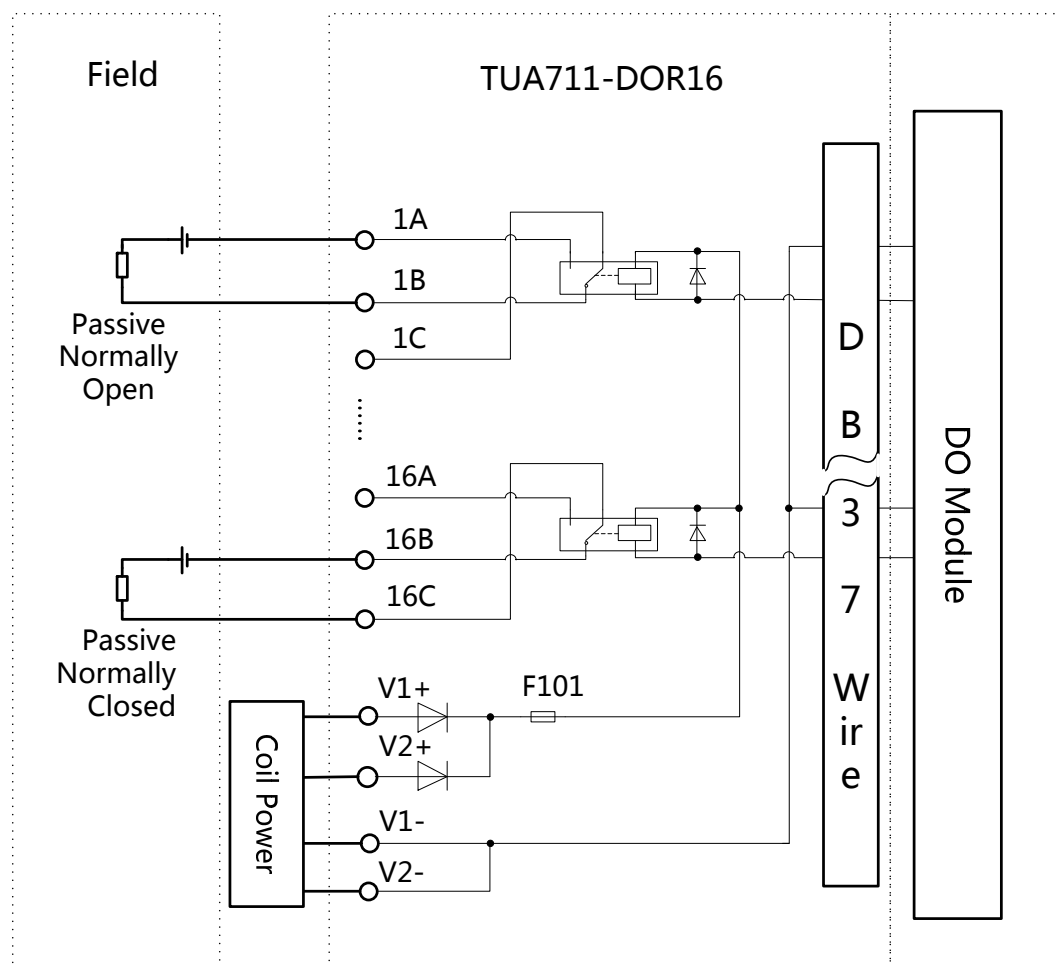


Figure 3-2 Circuit

The maximum section of wire allowed to connect the terminal in TUA711-DOR16 is 2.5mm^2 . The wires with sections of 1mm^2 or 1.5mm^2 , the wire stripping length of 8mm and the tightening torque of (0.5~0.6)Nm are recommended.



3.4 Terminal Definition and Wiring

CHn(n=1~16) refers to channel number. Channels are centralized isolated.

In the figures below, “n” refers to 1~16 and numbers the channels. For example, the 3 terminals of the 8th channel are 8A, 8B and 8C.

Table 3-2 Wiring

Wiring	CH1~8	Terminal	CH9~16	Terminal
	CH1	1A	CH9	9A
		1B		9B
		1C		9C
	CH2	2A	CH10	10A
		2B		10B
		2C		10C
	CH3	3A	CH11	11A
		3B		11B
		3C		11C

Wiring	CH1~8	Terminal		CH9~16	Terminal	
<div>Passive Normally Open</div> <div></div> <div>nA</div> <div>nB</div> <div>nC</div> <div>nA</div> <div>Passive Normally Closed</div> <div></div> <div>nB</div> <div>nC</div>	CH4	4A		CH12	12A	
		4B			12B	
		4C			12C	
	CH5	5A		CH13	13A	
		5B			13B	
		5C			13C	
	CH6	6A		CH14	14A	
		6B			14B	
		6C			14C	
	CH7	7A		CH15	15A	
		7B			15B	
		7C			15C	
	CH8	8A		CH16	16A	
		8B			16B	
		8C			16C	
	Coil Power	J02 (24VDC)				
		V1+, V2+, V1-, V2-				

Section 4 Troubleshooting

When the input power of J02 is normal but the LED17 is off, the power loop has fault. Please check the fuses F101.

Section 5 Revision

Table 5-1 Retrofit list of the version

Document Version	Applicable Product Version	Remarks
V1.0(20131012)	TUA711-DOR16 V10.00.00 and later versions	The first version.
V1.1(20140519)	TUA711-DOR16 V10.00.00 and later versions	Modify relay model
V1.2(20161116)	TUA711-DOR16 V10.00.00 and later versions	Add wire specifications Add code