






Change-over Terminal Unit
TUA711-DIO32
User manual
IM23H62-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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Change-over Terminal Unit TUA711-DIO32

Section 1 Overview

TUA711-DIO32 is a digital change-over terminal unit of 32 channels, and mainly applied with wiring in change-over mode. When working with the base MB745-S11, TUA711-DIO32 can connect a non-redundant DI715-S11 or DO716-S11. When working with the base MB746-S11, it can connect a pair of redundant DI715-S11 or DO716-S11.

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-DIO32
Type		Digital Change-over Terminal Unit
Channel		32
Temperature	Work	(-20~70)°C
	Storage	(-40~85)°C
Humidity	Work	10%RH~90%RH, No Condensation
	Storage	5%RH~95%RH, No Condensation
Dimension (L x W x H)		200mm x 45mm x 55mm

Section 3 Usage

3.1 Appearance

The appearance of TUA711-DIO32 is shown in Figure 3-1.

In TUA711-DIO32, DB01 is the interface of the wire DB37, and J01 corresponds to the terminal of module connecting DB01. TUA711-DIO32 can connect the system module via DB37, and connect the field device via the terminal J01.

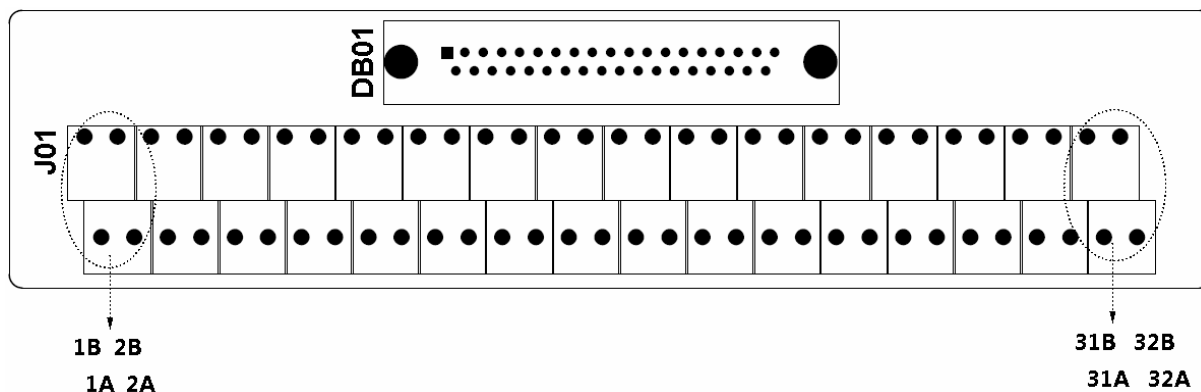


Figure 3-1 Appearance of TUA711-DIO32

3.2 Connectors

Table 3-1 Connectors

Sign	Instruction
DB01	DB37 Interface of Module
J01	Field Terminal Corresponding to Module

3.3 Interface Features

When TUA711-DIO32 connects the module DI715-S11, each channel has 2 terminals. The terminal unit only supports inputting passive contact signal. The 2 terminals in channel are not positive or negative. The field circuit is shown in Figure 3-2.

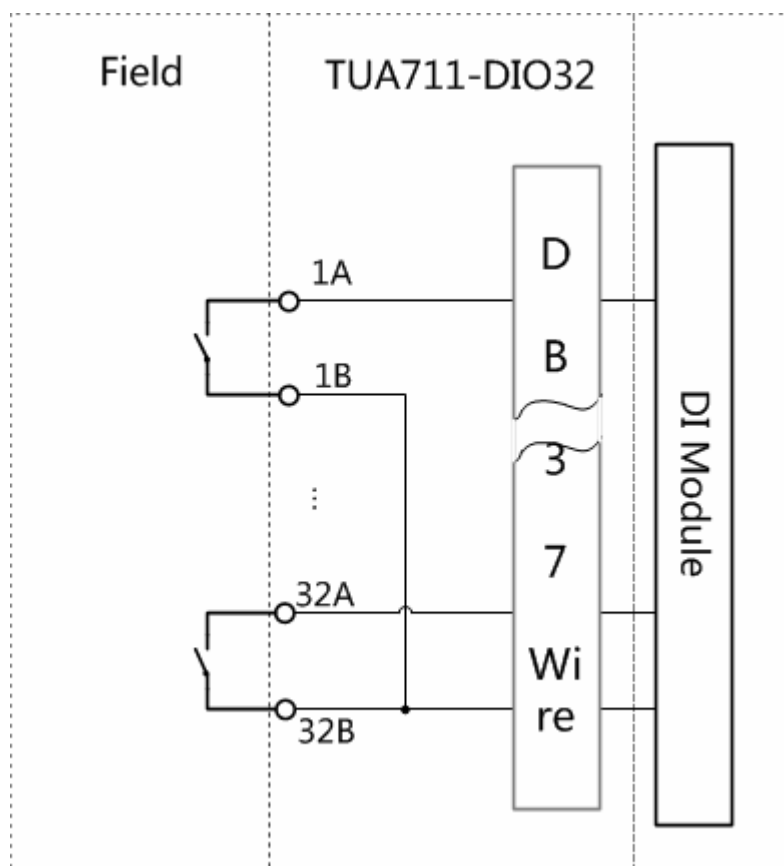


Figure 3-2 Circuit (1)

When TUA711-DIO32 connects DO716-S11, each channel has 2 terminals. The circuit is shown in Figure 3-3.

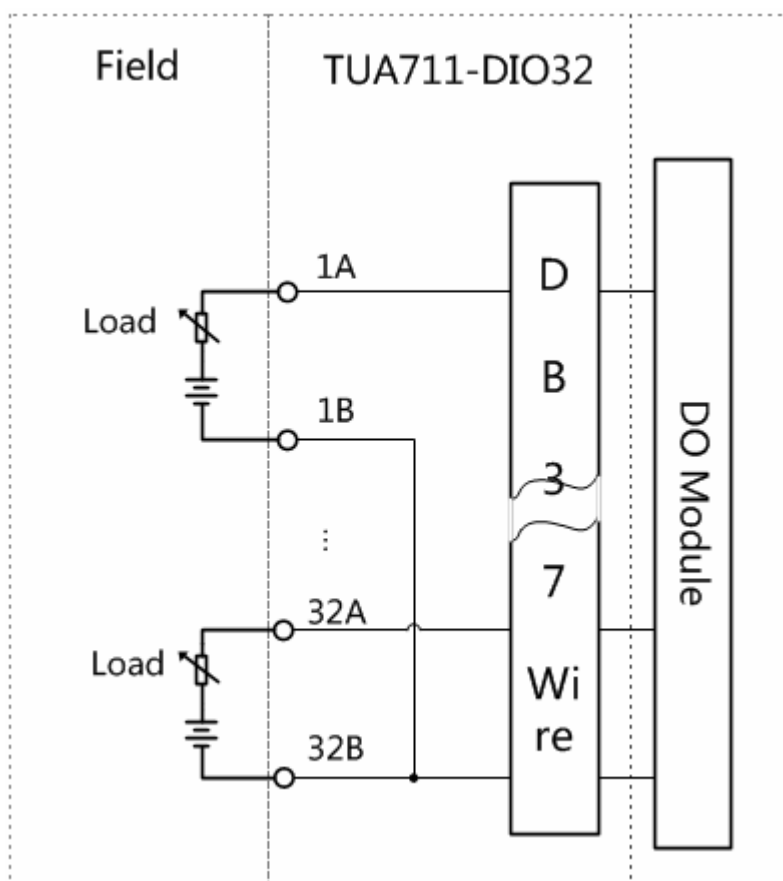


Figure 3-3 Circuit (2)

The maximum section of wire allowed to connect the terminal in TUA711-DIO32 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

When TUA711-DIO32 connects DI715-S11 or DO716-S11, each channel has 2 terminals. In the figures below, “n” refers to 1~16 and numbers the channels. For example, the 2 terminals of the 8th channel are 8A and 8B.

Table 3-2 Wiring

Wiring	CH1~16	Terminal	CH17~32	Terminal
Work with DI715-S11: 	CH1	1A	CH17	17A
		1B		17B
Work with DO716-S11: 	CH2	2A	CH18	18A
		2B		18B
	CH3	3A	CH19	19A
		3B		19B
	CH4	4A	CH20	20A
		4B		20B
	CH5	5A	CH21	21A
		5B		21B
	CH6	6A	CH22	22A

Wiring	CH1~16	Terminal		CH17~32	Terminal
	CH7	6B			22B
		7A		CH23	23A
	CH8	7B			23B
		8A		CH24	24A
	CH9	8B			24B
		9A		CH25	25A
	CH10	9B			25B
		10A		CH26	26A
	CH11	10B			26B
		11A		CH27	27A
	CH12	11B			27B
		12A		CH28	28A
	CH13	12B			28B
		13A		CH29	29A
	CH14	13B			29B
		14A		CH30	30A
	CH15	14B			30B
		15A		CH31	31A
	CH16	15B			31B
		16A		CH32	32A
		16B			32B

Section 4 Revision

Table 4-1 Retrofit list of the version

Document Version	Applicable Product Version	Remarks
V1.0(20131012)	TUA711-DIO32 V10.00.00 and later versions	The first version.
V1.1(20150915)	TUA711-DIO32 V10.00.00 and later versions	Modify the circuit.
V1.2(20161117)	TUA711-DIO32 V10.00.00 and later versions	Add wire specifications Add code