






Transferring Terminal Board of Digital Signal
TUA711-DO32
User Manual
IM23H76-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.

Safety & Caution Symbols

The following table lists Safety & 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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TUA711-DO32

Section 1 Overview

The TUA711-DO32 is a 32-channel digital module transferring terminal board that transfers the digital signal from the system side to the field side to drive the field device. When this terminal board is used with the transferring base MB745-S11, it could be connected to a non-redundant DO716-S11. When used with the transferring base MB746-S11, it could be connected to a pair of redundant DO716-S11.

The terminal board is connected to the transferring base through a DB37 cable; two 24VDC input power terminals are on the terminal board, redundant power supplier can be configured, and a replaceable fast-melt fuse is provided every 8 channels; 64 terminals are provided on the terminal board for output signals. Each channel contains 2 terminals for receiving and sending the field signals. For wiring details, please refer to the Illustrations for Wiring.

The terminal board is mounted on DIN rails and supports to be wired by a single side.

Section 2 Technical Specifications

Table 2-1 Technical Specifications

Parameter		Description
Model		TUA711-DO32
Type		Transferring terminal board of digital signals
Channel		32
Temperature	Working temperature	(-20~70)°C
	Storage temperature	(-40~85)°C
Humidity	Working humidity	10%RH~90% RH, no condensation
	Storage humidity	5% RH ~95% RH, no condensation
Distribution power		24VDC±10%
Fuse specification		2A/250V, fast-melt replaceable fuse
Module size (Length* width*height)		175mm×87mm×65mm

Section 3 Use Illustration

3.1 Terminal Board Appearance

The figure only shows the main connectors, including various types of terminals, cable interfaces, fuses and light indicators.

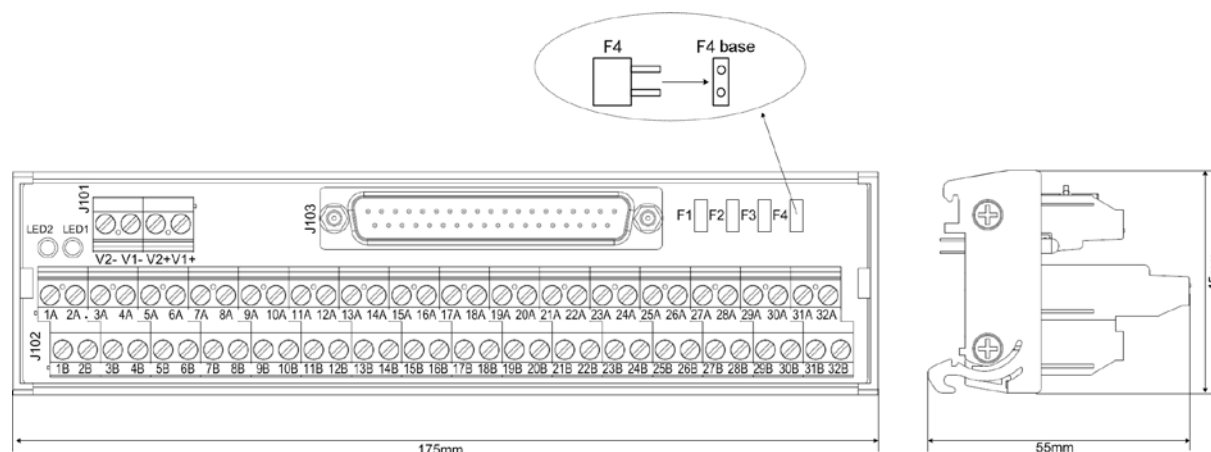


Figure 3-1 Appearance of Terminal Board

3.2 Connectors

Table 3-1 Illustrations for connectors

Marker	Description
J103	DB37 interface (male), it is used to connect to the transferring base.
J101	Power-distributing terminal of redundant power supplier, it is used to connect to 2-channel 24VDC power supplier.
J102	DO signal output terminals on field side, it is used to connect the device in field.
F1~F4	Fuses of distribution power (one fuse for every 8 channels)
LED1	V1 24VA light indicator of distribution power (on: normal, off: power off or power failure)
LED2	V2 24VB light indicator of distribution power (on: normal, off: power off or power failure)

3.3 Interface Features

The specific wiring method is shown in Figure 3-2

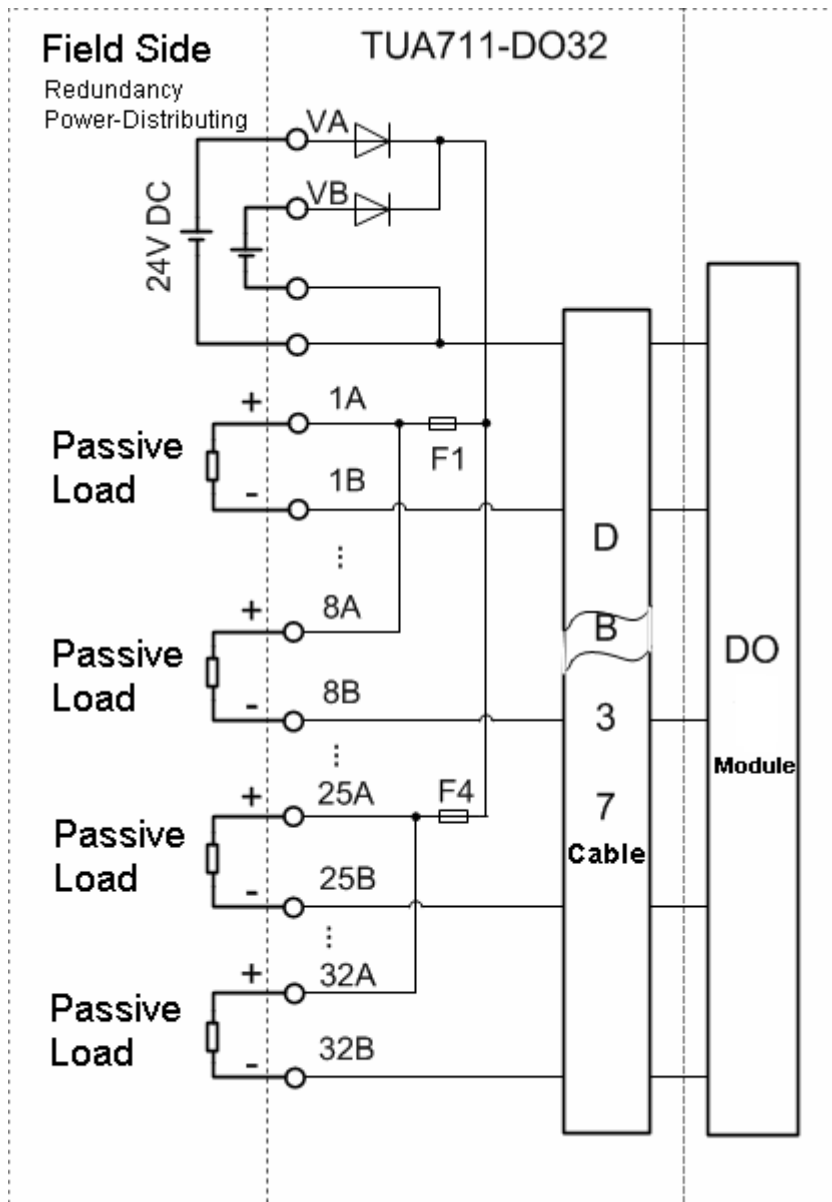


Figure 3-2 Circuit Wiring Diagram

3.4 Illustration for Wiring

The TUA711-DO32 terminal block contains two sets of terminals and a DB37 interface. The terminals are the power supply terminal and the output signal terminal.

- Power supplier terminals: marked as V2-, V1-, V2+, V1+, respectively connected to two redundant 24VDC power suppliers.
- Output signal terminals: marked as 1A, 1B, 2A, 2B, and so on, a total of 32 groups. A is + and B is -, and the loads are connected as shown in Figure 3-2.
- DB37 interface (male): It uses the standard DB37 cable to connect the I/O module transferring base.

The terminals of the TUA711-DO32 terminal board allow the maximum cross-section of the

accessed cable to be 2.5mm^2 . It is recommended to use a cable of 1mm^2 or 1.5mm^2 cross-section with a stripped length of 8mm and a torque of $(0.5\sim 0.6)\text{Nm}$.

Section 4 Accessory List

Accessory Name	Model
Fuse F1~F4	MSF002
DB37 Cable	LE37011

Section 5 Illustration for Engineering Application

5.1 Application Precautions

- When replacing the fuse, please be aware of cutting off the power supplier in advance to ensure the electricity safety.
- Functions of the terminal board in this version are the same as those of the last version.

5.2 Troubleshooting

- When the power indicators LED1 and LED2 are still off when the module is powered on, please check whether or not the power and wire connection are normal.
- When the power supplier and I/O modules are working normally, the load on the field side still fails to receive the driving signal, please check whether or not the corresponding fuses F1~F4 are normal.

Section 6 Revision

Retrofit List of the Version

Manual Version	Applicable Model Version	Remarks
V1.0 (20191023)	TUA711-DO32 V10.00.00 and above	First Edition
V1.1(20201116)	TUA711-DO32 V11.00.00 and above	Add the size and dimension of terminal board appearance, fuse location and power terminal markers.