

**DEH**

**Speed Measurement & Over-speed Protection  
Module Terminal Board**






**TU711-R1100**

**User manual**

**IM19H31-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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# **Speed Measurement & Over-speed Protection Module Terminal Board TU711-R1100**

## **Section 1 Description**

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Terminal board TU711-R1100 works with speed measurement & over-speed protection module. One TU711-R1100 can connect with three speed measurement & over-speed protection modules.

## Section 2 Technical Specifications

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*Table 2-1 Technical Specifications*

Parameter	Description	
Model	TU711-R1100	
Power Supply	24VDC (-10%~10%)	
Temperature	Operating Temperature	(-20~70)℃
	Storage Temperature	(-40~85)℃
Humidity	Operating Humidity	10%~90%, No Vapor Condensation
	Storage Humidity	5%~95%, No Vapor Condensation
Dimension (With Cover)	158*152*50.5 mm	

## Section 3 Usage Instruction

### 3.1 External Structural Diagram

The external structural diagram and dimension of TU711-R1100 terminal board with special cover is shown as below.

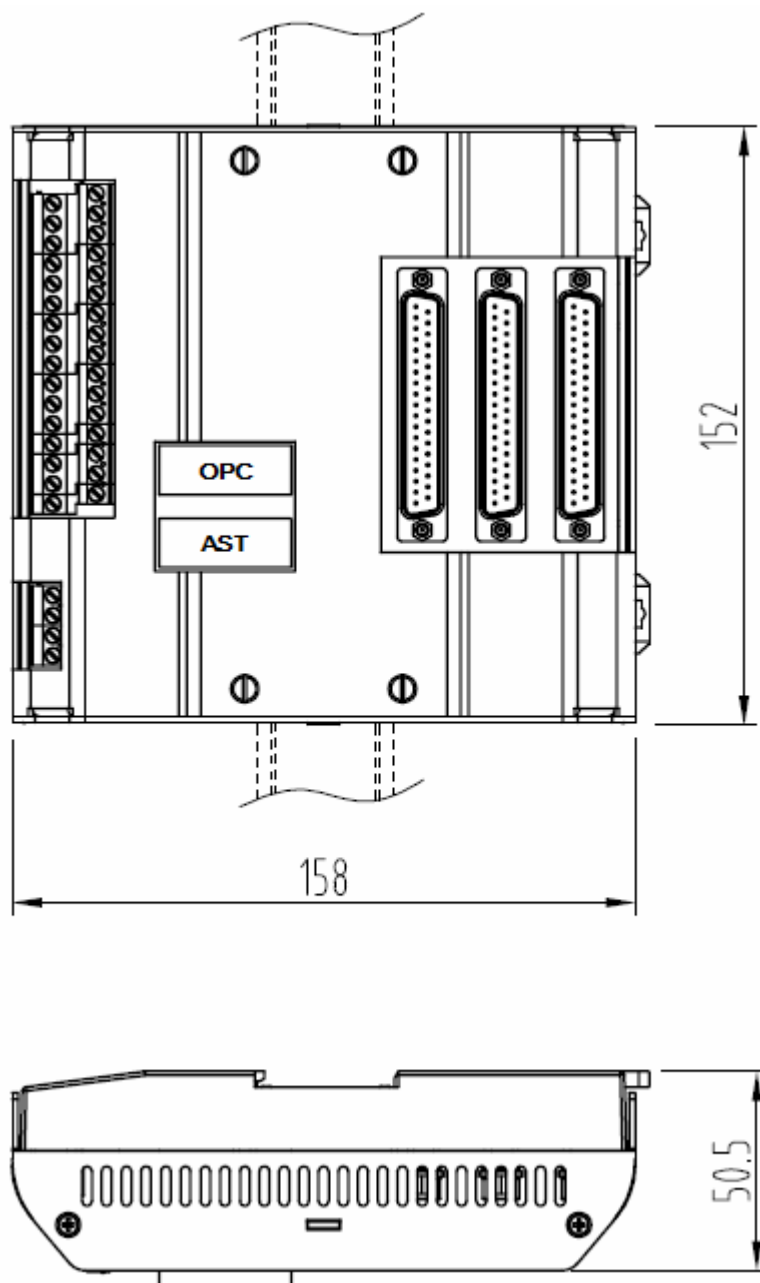
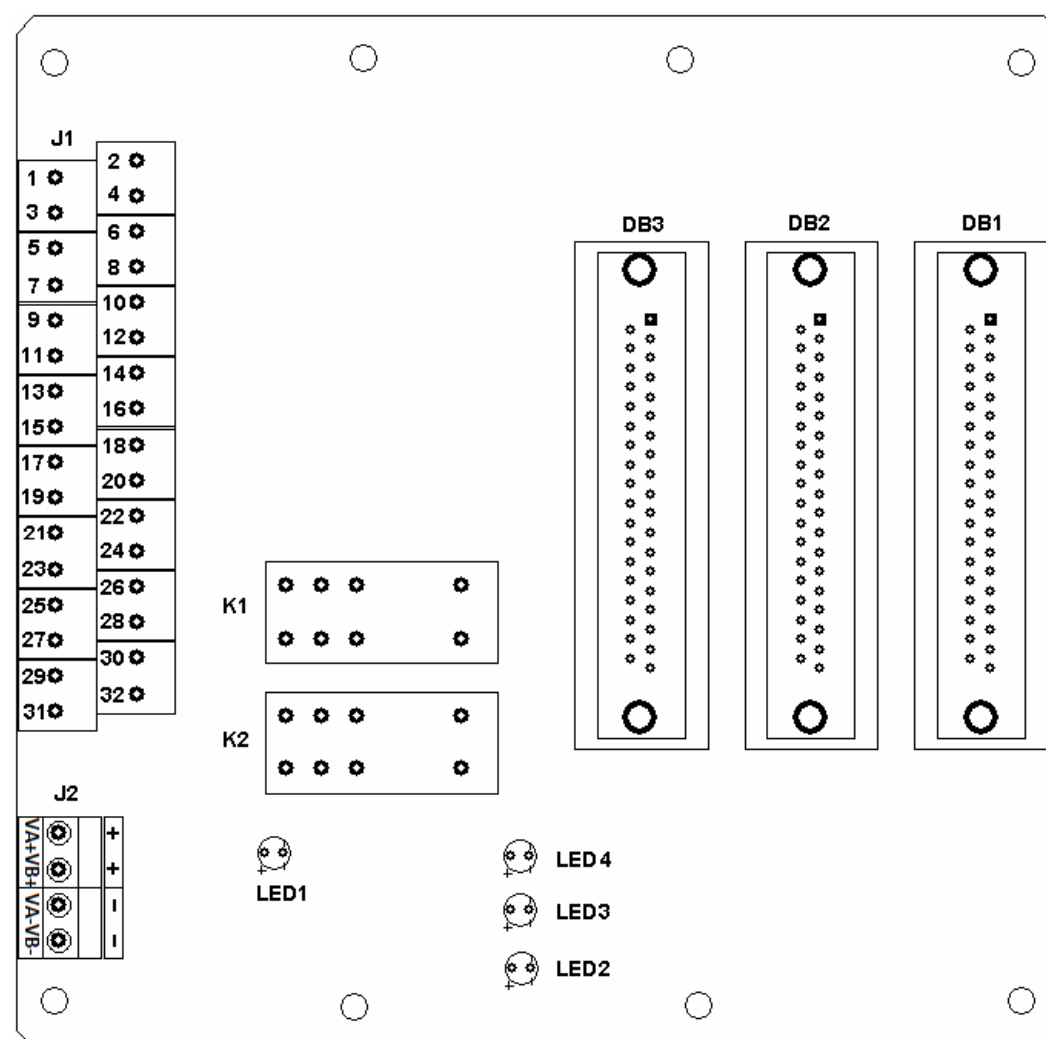


Figure 3-1 External Structural Diagram and Dimension of TU704-R1100

## 3.2 Socket Connector

The socket connectors are shown as below.



**Figure 3-2 Socket Connector Diagram of TU704-R1100**

Instruction for socket connectors on TU711-R1100 is listed as below.

**Table 3-1 Notes for Socket Connectors on TU711-R1100**

No.	Instruction
J1	Terminal
LED1	Terminal Board Power Indicator
LED2, LED3, LED4	Module Power Indicator
DB1, DB2, DB3	DB37 Cable Socket
K1	OPC Relay
K2	AST Relay
J2	Auxiliary Power Terminal



### 3.3 Terminals Definition & Connection



**Attention:**

**Make sure the correction of all connection to avoid serious fault.**

J1 is the field terminal and its definition is shown as below.

**Table 3-2 Terminal Definition & Connection**

	Terminal No.	Signal	Instruction
No.1 Module	1, 2	Rotational Speed Signal From the Field	Input Terminals for Rotational Speed Signal (Sine Wave), Having no Positive or Negative Pole
	3, 4	No Connection	Empty
	5, 6	Field Grid Connected Switch Tripping	Input Terminals of Signal for Grid Connected Switch Tripping (Normally-open Dry Contact ), and Contact Point Closed Means Switch Trip
	7, 8	Field Emergency Shutdown Signal	Emergency Shutdown Signal (Dry Contact), and Contact Point Closed Means Emergency Shutdown
No.2 module	9, 10	Field Rotational Speed Signal	Input Terminals for Rotational Speed Signal (Sine Wave), Having no Positive or Negative Pole
	11, 12	No Connection	Empty
	13, 14	Field Grid Connected Switch Tripping	Input Terminals of Signal for Grid Connected Switch Tripping (Normally-open Dry Passive Contact ), and Contact Point Closed Means Switch Tripping
	15, 16	Field Emergency Shutdown Signal	Emergency Shutdown Signal (Dry Contact), and Contact Point Closed Means Emergency Shutdown
No.3 Module	17, 18	Field Rotational Speed Signal	Input Terminals for Rotational Speed Signal (Sine Wave), Having no Positive or Negative Pole
	19, 20	No Connection	Empty
	21, 22	Field Grid Connected Switch Tripping	Input Terminals of Signal for Grid Connected Switch Trip (Normally-open Contact ), and Contact Point Closed Means Switch Tripping
	23, 24	Field Emergency Shutdown Signal	Emergency Shutdown Signal (Dry Contact), and Contact Point Closed Means Emergency Shutdown
Public Part	25, 26	No Connection	Empty
	27, 28	OPC Output	“Two Out of Three” Output (Dry Contact) for Protection of Over-speed for 103%, and the Closed Contact Point Means the Output
	29, 30	No Connection	Empty
	31, 32	Shading Braking Output	“Two Out of Three” Output (Dry Contact) for Protection of Over-speed for 110%, and the Closed Contact Point Means the Output

### 3.4 “Two Out of Three” Logic Instruction of TU711-R1100

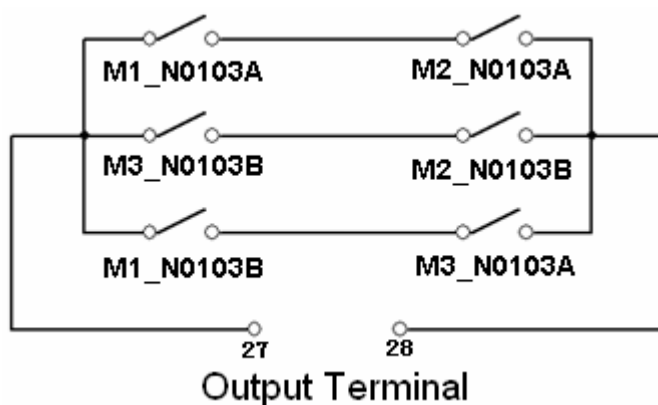


Figure 3-3 “Two Out of Three” Logic Instruction of 103% Alarm Output

Tip:



M1, M2, and M3 represent three AM721 modules, N0103A and N0103B represent two channels of 103% alarm outputs on of AM721 respectively, and the logic of “Two out of three” for 110% alarm output is the same to it.

### 3.5 Installation & Maintenance

The terminal board applies standard DIN rail installation. Details refer to the OS Hardware User Manual.

TU711-R1100 has a special cover. Its installation is shown as below. Screw down the four screws to the double-screw bolts.

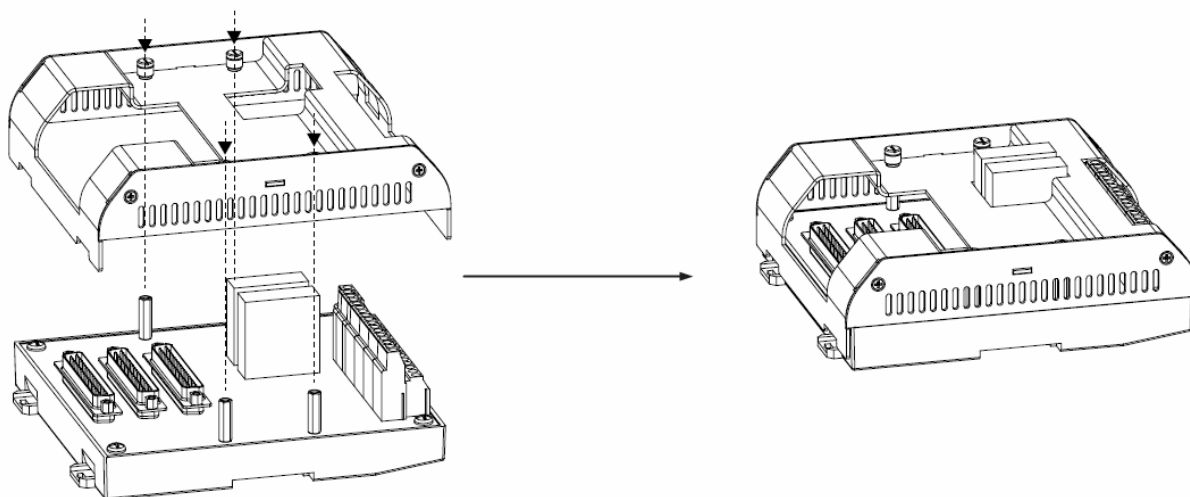


Figure 3-4 Installation of the Special Cover

## Section 4 Revision

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*Table 4-1 Retrofit list of the Version*

Document Version	Applicable Product Version	Remarks
V1.0(20111118)	TU704-R1100 V10.00.00	The First Version
V1.1(20170511)	TU704-R1100 V10.00.00	Add code, delete naming criterion of specification code of terminal board
V1.2(20170922)	TU704-R1100 V10.00.00	Modfiy some description