

40 Channel AO/DO

Terminal Board

T8850S

User Manual

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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.

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AO/DO Terminal Board T8850S User Manual

Section 1 Basic Description

T8850S is a 40 channel AO/DO terminal board which is used for connecting the devices in the field with the DO module T8451 or AO module T8480 in the Trusted TMR system. Signals from the output module are respectively 24V DC and (4-20) mA.

Section 2 Performance Index

Table 2-1 Performance Index

Parameter		Description
Model		T8850S
Type		AO/DO terminal board
Channel Number		40 channels
Voltage Range		(18~28)V
Maximum Current (Each channel)		2A
Maximum Current (Each power supply group)		8A
Temperature	Working temperature	(-20~55)°C
	Storage temperature	(-40~70)°C
Humidity	Working humidity	10%RH~90%RH, no condensation.
	Storage humidity	5%RH~95%RH, no condensation.
Module size (Length×Width×Height)		290mm×108.2mm×64.7mm

Section 3 Instruction

3.1 Appearance of the Terminal Board

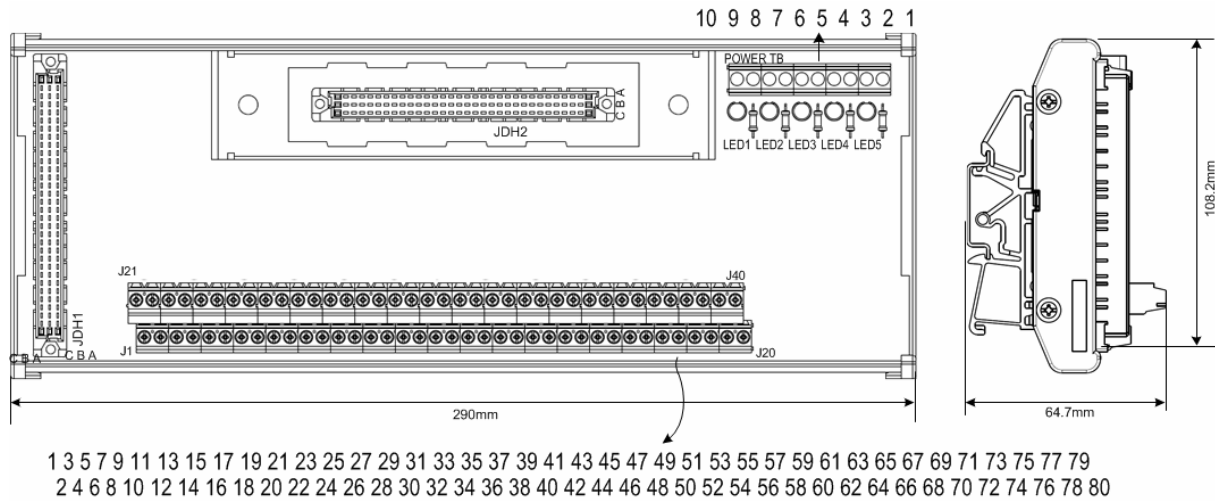


Figure 3-1 Appearance

3.2 Connector Description

Table 3-1 Connector Description

Identifier	Description
JDH1, JDH2	AO/DO module cable interface
POWER TB	Power supply wiring terminals
LED1~LED5	Light indicator
J1~J40	Wiring terminals of signals in the field

3.3 Interface Features

T8850S has 5 groups of power supply wiring terminals. Each group has 8 channels for power supply. Take the first group as the example. The signal channel principle is shown in the figure below.

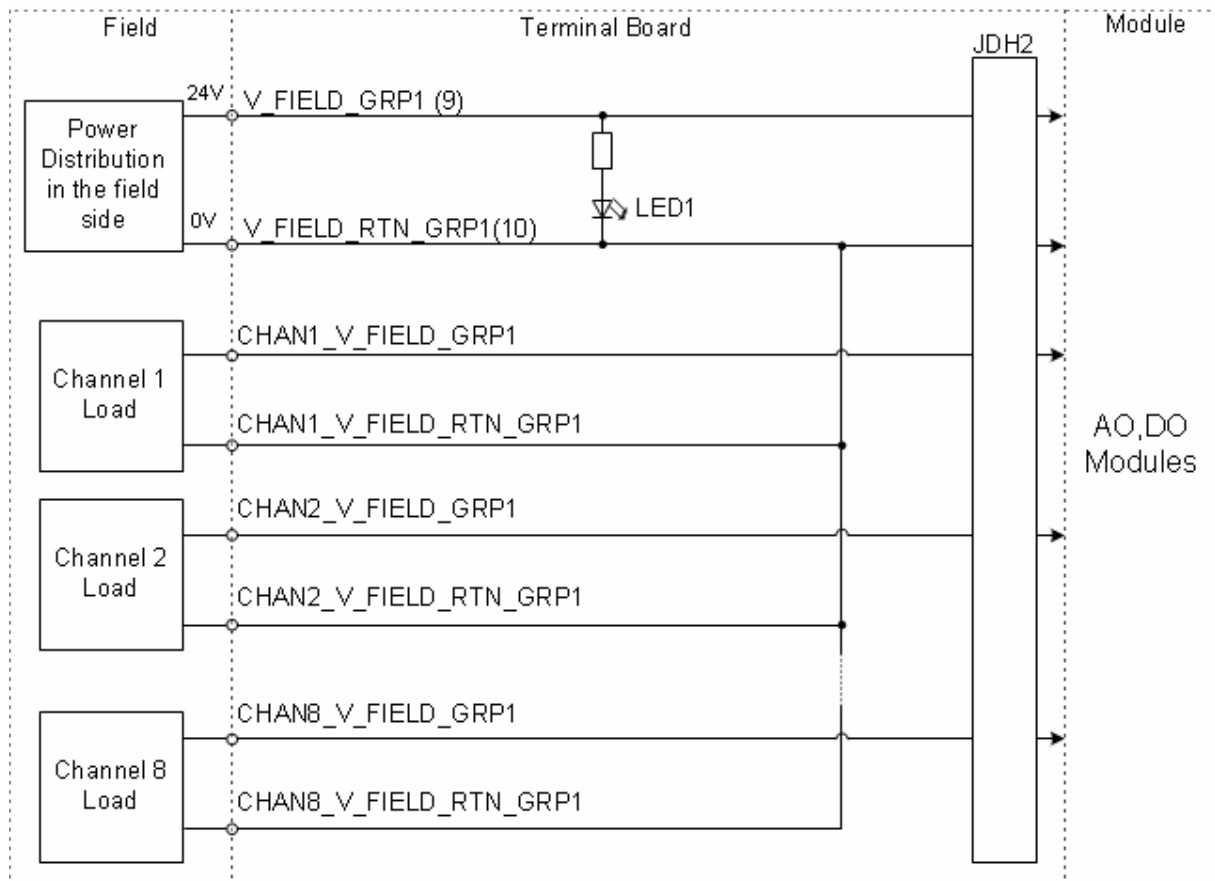


Figure 3-2 Circuit Wiring Diagram

3.4 Cable Description

Relevant cables connecting the terminal board are shown below:

PD-TC200 Trusted I/O slot cables

PD-TC500 Trusted I/O SmartSlot cables

3.5 Signal Terminal Wiring Table

Table 3-2 Wiring Description

Terminal	Definition	Terminal	Definition
1	V_FIELD_GRP1 of channel 1	2	V_FIELD_RTN_GRP1 of channel 1
3	V_FIELD_GRP1 of channel 2	4	V_FIELD_RTN_GRP1 of channel 2
5	V_FIELD_GRP1 of channel 3	6	V_FIELD_RTN_GRP1 of channel 3
7	V_FIELD_GRP1 of channel 4	8	V_FIELD_RTN_GRP1 of channel 4
9	V_FIELD_GRP1 of channel 5	10	V_FIELD_RTN_GRP1 of channel 5
11	V_FIELD_GRP1 of channel 6	12	V_FIELD_RTN_GRP1 of channel 6
13	V_FIELD_GRP1 of channel 7	14	V_FIELD_RTN_GRP1 of channel 7

Terminal	Definition	Terminal	Definition
15	V_FIELD_GRP1 of channel 8	16	V_FIELD_RTN_GRP1 of channel 8
17	V_FIELD_GRP2 of channel 9	18	V_FIELD_RTN_GRP2 of channel 9
19	V_FIELD_GRP2 of channel 10	20	V_FIELD_RTN_GRP2 of channel 10
21	V_FIELD_GRP2 of channel 11	22	V_FIELD_RTN_GRP2 of channel 11
23	V_FIELD_GRP2 of channel 12	24	V_FIELD_RTN_GRP2 of channel 12
25	V_FIELD_GRP2 of channel 13	26	V_FIELD_RTN_GRP2 of channel 13
27	V_FIELD_GRP2 of channel 14	28	V_FIELD_RTN_GRP2 of channel 14
29	V_FIELD_GRP2 of channel 15	30	V_FIELD_RTN_GRP2 of channel 15
31	V_FIELD_GRP2 of channel 16	32	V_FIELD_RTN_GRP2 of channel 16
33	V_FIELD_GRP3 of channel 17	34	V_FIELD_RTN_GRP3 of channel 17
35	V_FIELD_GRP3 of channel 18	36	V_FIELD_RTN_GRP3 of channel 18
37	V_FIELD_GRP3 of channel 19	38	V_FIELD_RTN_GRP3 of channel 19
39	V_FIELD_GRP3 of channel 20	40	V_FIELD_RTN_GRP3 of channel 20
41	V_FIELD_GRP3 of channel 21	42	V_FIELD_RTN_GRP3 of channel 21
43	V_FIELD_GRP3 of channel 22	44	V_FIELD_RTN_GRP3 of channel 22
45	V_FIELD_GRP3 of channel 23	46	V_FIELD_RTN_GRP3 of channel 23
47	V_FIELD_GRP3 of channel 24	48	V_FIELD_RTN_GRP3 of channel 24
49	V_FIELD_GRP4 of channel 25	50	V_FIELD_RTN_GRP4 of channel 25
51	V_FIELD_GRP4 of channel 26	52	V_FIELD_RTN_GRP4 of channel 26
53	V_FIELD_GRP4 of channel 27	54	V_FIELD_RTN_GRP4 of channel 27
55	V_FIELD_GRP4 of channel 28	56	V_FIELD_RTN_GRP4 of channel 28
57	V_FIELD_GRP4 of channel 29	58	V_FIELD_RTN_GRP4 of channel 29
59	V_FIELD_GRP4 of channel 30	60	V_FIELD_RTN_GRP4 of channel 30
61	V_FIELD_GRP4 of channel 31	62	V_FIELD_RTN_GRP4 of channel 31
63	V_FIELD_GRP4 of channel 32	64	V_FIELD_RTN_GRP4 of channel 32
65	V_FIELD_GRP5 of channel 33	66	V_FIELD_RTN_GRP5 of channel 33
67	V_FIELD_GRP5 of channel 34	68	V_FIELD_RTN_GRP5 of channel 34
69	V_FIELD_GRP5 of channel 35	70	V_FIELD_RTN_GRP5 of channel 35
71	V_FIELD_GRP5 of channel 36	72	V_FIELD_RTN_GRP5 of channel 36
73	V_FIELD_GRP5 of channel 37	74	V_FIELD_RTN_GRP5 of channel 37
75	V_FIELD_GRP5 of channel 38	76	V_FIELD_RTN_GRP5 of channel 38
77	V_FIELD_GRP5 of channel 39	78	V_FIELD_RTN_GRP5 of channel 39
79	V_FIELD_GRP5 of channel 40	80	V_FIELD_RTN_GRP5 of channel 40

3.6 Power Supplier Terminal Wiring Table

Terminal	Definition
1	V_FIELD_GRP5
2	V_FIELD_RTN_GRP5
3	V_FIELD_GRP4
4	V_FIELD_RTN_GRP4
5	V_FIELD_GRP3
6	V_FIELD_RTN_GRP3
7	V_FIELD_GRP2

Terminal	Definition
8	V_FIELD_RTN_GRP2
9	V_FIELD_GRP1
10	V_FIELD_RTN_GRP1

3.7 JDH1 and JDH2 Pin Definition

Terminal	C	B	A
1	SmartSlot Link C	SmartSlot Link B	SmartSlot Link A
2			
3	Chan 5	V_FIELD_GRP1	Chan 1
4	Chan 6	V_FIELD_GRP1	Chan 2
5	V_FIELD_RTN_GRP1	V_FIELD_GRP1	V_FIELD_RTN_GRP1
6	Chan 7	V_FIELD_GRP1	Chan 3
7	Chan 8	V_FIELD_GRP1	Chan 4
8			
9	Chan 13	V_FIELD_GRP2	Chan 9
10	Chan 14	V_FIELD_GRP2	Chan 10
11	V_FIELD_RTN_GRP2	V_FIELD_GRP2	V_FIELD_RTN_GRP2
12	Chan 15	V_FIELD_GRP2	Chan 11
13	Chan 16	V_FIELD_GRP2	Chan 12
14			
15	Chan 21	V_FIELD_GRP3	Chan 17
16	Chan 22	V_FIELD_GRP3	Chan 18
17	V_FIELD_RTN_GRP3	V_FIELD_GRP3	V_FIELD_RTN_GRP3
18	Chan 23	V_FIELD_GRP3	Chan 19
19	Chan 24	V_FIELD_GRP3	Chan 20
20			
21	Chan 29	V_FIELD_GRP4	Chan 25
22	Chan 30	V_FIELD_GRP4	Chan 26
23	V_FIELD_RTN_GRP4	V_FIELD_GRP4	V_FIELD_RTN_GRP4
24	Chan 31	V_FIELD_GRP4	Chan 27
25	Chan 32	V_FIELD_GRP4	Chan 28
26			
27	Chan 37	V_FIELD_GRP5	Chan 33
28	Chan 38	V_FIELD_GRP5	Chan 34
29	V_FIELD_RTN_GRP5	V_FIELD_GRP5	V_FIELD_RTN_GRP5
30	Chan 39	V_FIELD_GRP5	Chan 35
31	Chan 40	V_FIELD_GRP5	Chan 36
32			

Section 4 Revision

Table 4-1 Retrofit list of the version

Document Version	Applicable Model	Remarks
V1.0 (20191216)	T8850S V10.00.00	The first Edition.