

CT-2738 8 channels relay output 1A/30VDC/30W

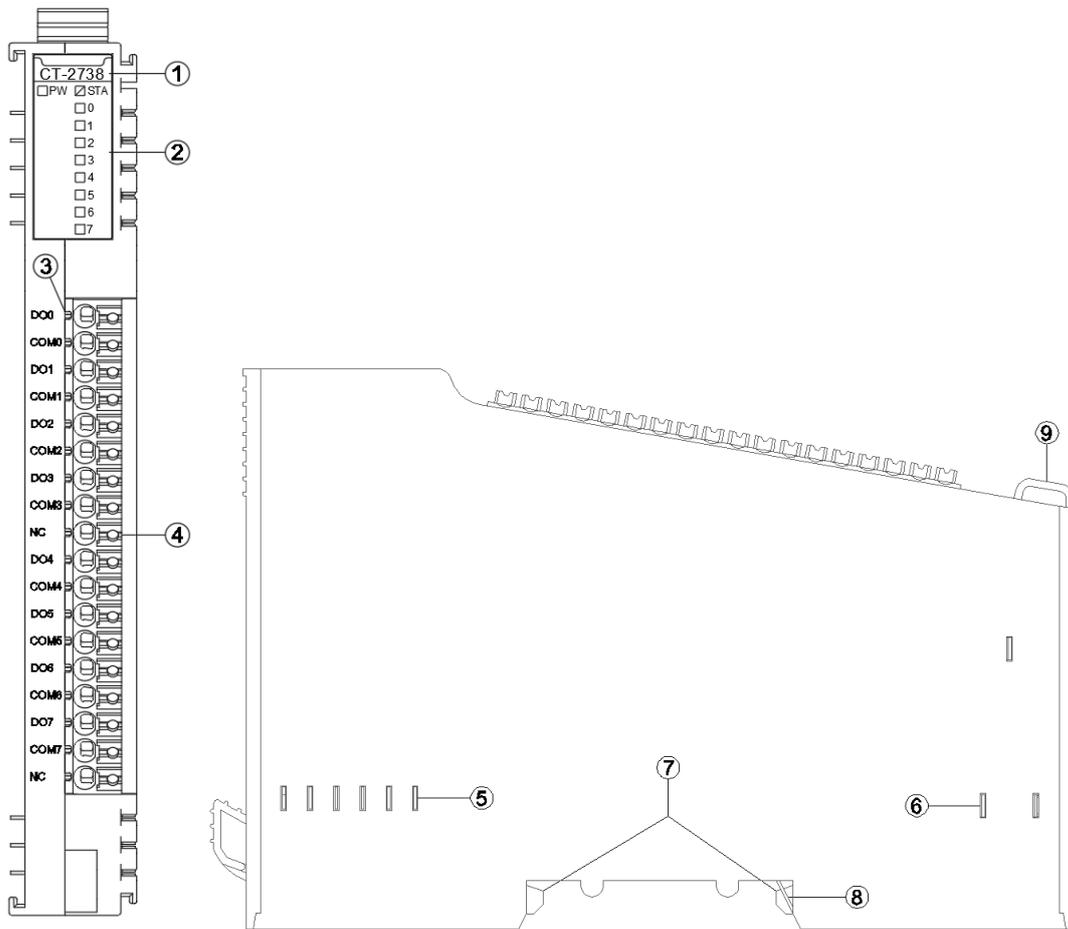
1 Module features

- ◆ 8-channel relay normally on output
- ◆ 8 LED channel indicators
- ◆ Low on resistance ($\leq 100\text{m}\Omega$)
- ◆ With isolation between channels
- ◆ Built-in TVS bidirectional diode, built-in RC circuit
- ◆ Resistive and inductive loads can be connected

2 Technical Parameters

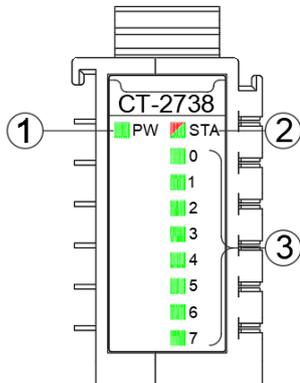
General parameters	
Power Consumption	Max.250mA@5.0Vdc
Isolation	I/O channel to internal Bus isolation voltage AC 500V Isolation voltage between channels AC 500V
Field Power	Not used
Wiring	Max.1.0mm ² (AWG 17)
Mounting Type	35mm DIN-Rail
Size	115*14*75mm
Weight	65g
Environment Specification	
Operational Temperature	-40~85°C
Operational Humidity	5%~95%(No Condensation)
Ingress Protection Rating	IP20
Output Parameter	
Channel Number	8 channel Relay normally on output
LED Indicator	8 channel output LED Indicator
Max. Switching Current	Resistive load: 1A Inductive load: 1A
Max. Switching Voltage	30VDC
Max. Switching Power	30W
Switching Frequency	Resistive load: Max 2Hz Inductive load: Max 0.5Hz
Contact Resistance	≤100mΩ
Output Delay	ON to OFF: Max.10ms OFF to ON: Max.10ms
Mechanical Endurance	2x10 ⁷
Electricity Endurance	1x10 ⁵
Vibration	10Hz~55Hz 1.5mm Double vibration amplitude
Impact	Stability: 98m/s ² Strength: 980m/s ²

3 Hardware Interface



- ① Module Type
- ② State indicator
- ③ N/A
- ④ Wiring Terminal and identification
- ⑤ Internal Bus
- ⑥ Filed Power
- ⑦ Buckle
- ⑧ Grounding Spring Sheet
- ⑨ Fixed Wiring Harness

3.1 LED Indicator definition



- ① Power LED indicator (green)
- ② Module State LED indicator (red/green)
- ③ Output channel LED indicator (green)

PW Power State (RED)	Definition
ON	Internal bus Power Normal
OFF	Internal bus Power Failure
STA Module State (RED/GREEN)	Definition
Green slow flash (2.5Hz)	Module internal bus is not started
Red slow flash (2.5Hz)	Module internal bus offline
ON (GREEN)	Operation normal
Flash(2.5Hz) (RED/GREEN)	Upgrading mode
Flash(10Hz) (RED/GREEN)	Firmware Update
Double Flash (RED)	Module Exception, has been soft-restarted
0-7 channel LED indicator (GREEN)	Definition
ON	Output signal valid
OFF	Output signal invalid

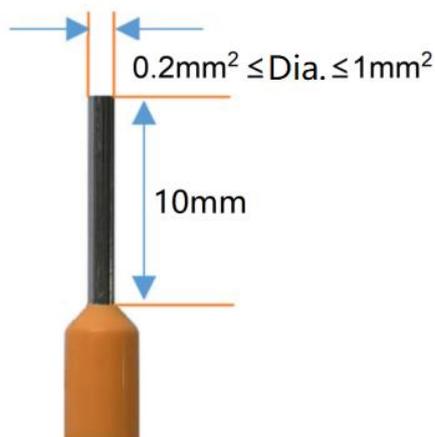
3.2 Terminal definition

Terminal Number	Definition	Description
1	DO0	Channel 0 output
2	COM0	Channel 0 Common Port
3	DO1	Channel 1 output
4	COM1	Channel 1 Common Port
5	DO2	Channel 2 output
6	COM2	Channel 2 Common Port
7	DO3	Channel 3 output
8	COM3	Channel 3 Common Port
9	NC	Not Connected
10	DO4	Channel 4 output
11	COM4	Channel 4 Common Port
12	DO5	Channel 5 output
13	COM5	Channel 5 Common Port
14	DO6	Channel 6 output
15	COM6	Channel 6 Common Port
16	DO7	Channel 7 output
17	COM7	Channel 7 Common Port
18	NC	Not Connected

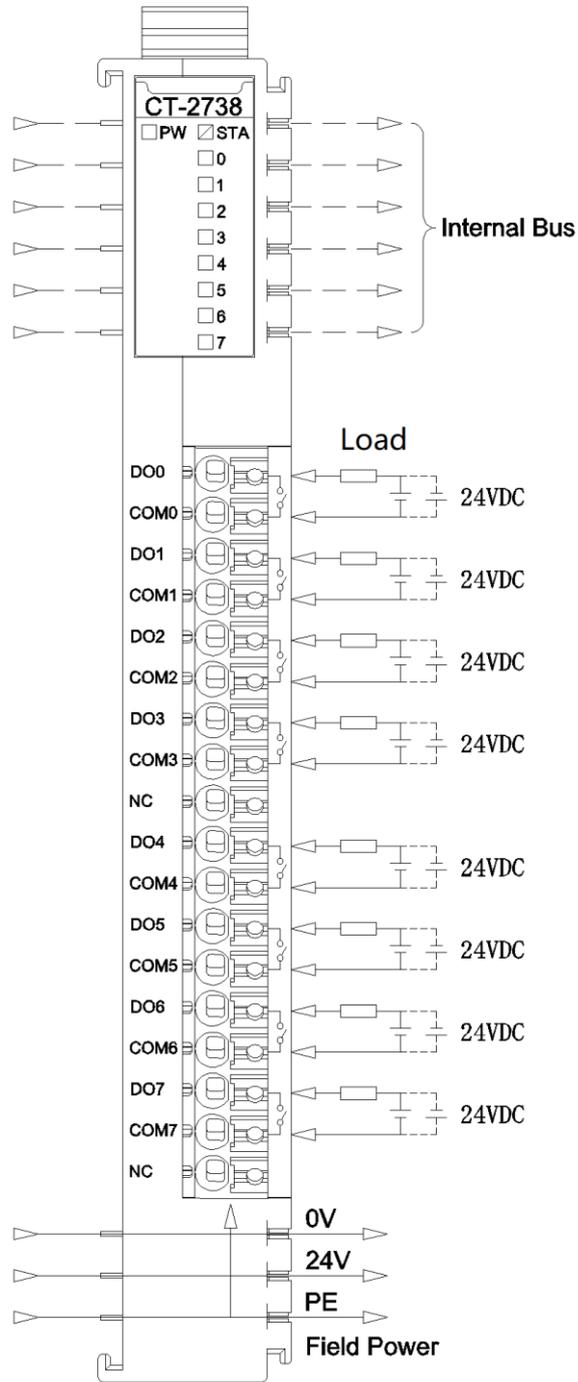
It is recommended to use cables with cores greater than 0.2mm² and smaller than 1mm².

When connecting cables (terminals) with cores, need to check and connect them according to the corresponding node serial number.

The cold-pressed terminal parameters are as follows:



4 Wiring



5 Process data definition

Output Data								
Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	DO Ch#7	DO Ch#6	DO Ch#5	DO Ch#4	DO Ch#3	DO Ch#2	DO Ch#1	DO Ch#0

Data description :

DO Ch#(0-7): When the bit is 1, the output signal of corresponding channel is effective and the output contact of relay is closed. When the bit is 0, the output is invalid and the relay contact is disconnected.

0: The output signal is invalid

1: The output signal is valid

6 Configuration parameters definition

Configuration parameters								
Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	Fault Action for Output Ch#7	Fault Action for Output Ch#6	Fault Action for Output Ch#5	Fault Action for Output Ch#4	Fault Action for Output Ch#3	Fault Action for Output Ch#2	Fault Action for Output Ch#1	Fault Action for Output Ch#0
Byte 1	Fault Value for Output Ch#7	Fault Value for Output Ch#6	Fault Value for Output Ch#5	Fault Value for Output Ch#4	Fault Value for Output Ch#3	Fault Value for Output Ch#2	Fault Value for Output Ch#1	Fault Value for Output Ch#0

Data description:

Fault Action for Output Ch#(0-7): Fault output mode. When IO module detects that internal bus communication is failed and enters offline mode, the output data will be processed in this mode. (Default: 0)

0: Hold the last output state.

1: Output fault value

Fault Value for Output Ch#(0-7): When the fault output mode is 1, this bit would set the fault output value, and when the internal bus of IO module is offline, this setting value will be output. (Default: 0)

0: Output low level.

1: Output high level.

A Dimension drawing

