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# **CT-3268 8 channels analog input /0~20mA OR -20~0mA OR $\pm 20$ mA /15bit Single-ended bipolar**

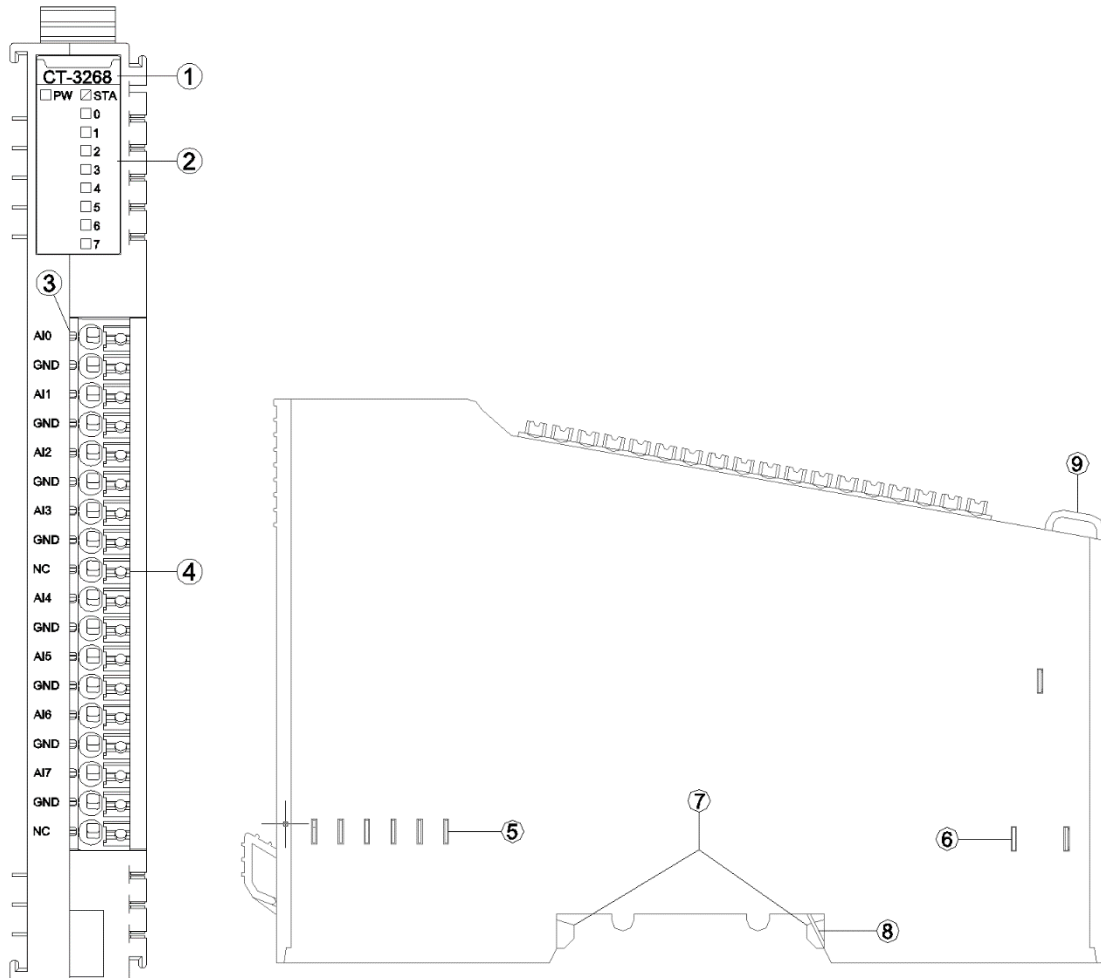
## **1 Module features**

- ◆ the module supports 8-channel current signal acquisition.
- ◆ the module can be configured for 0~20mA OR -20~0mA OR  $\pm 20$ mA current signal acquisition.
- ◆ the module supports 2-wire (non-loop output, external power supply is required)
- ◆ the internal bus of the module and field input adopts magnetic insulation.
- ◆ the module input channel is to be connected to the field active analog signal current output sensor.
- ◆ the module channel equips with TVS overvoltage protection.

## 2 Technical parameters

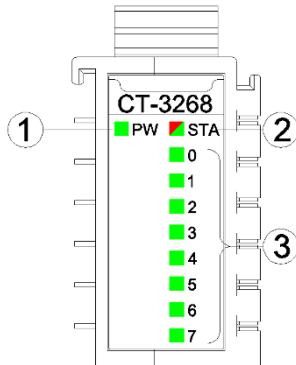
General Parameters	
Power	Max.65mA@5.0Vdc
Isolation	I/O to internal bus: magnetic isolation (2.5KVrms) Power isolation: DC-DC
Wiring	Max.1.0mm <sup>2</sup> (AWG 17)
Installation	35mm DIN-Rail
Size	115*14*75mm
Weight	65g
Environmental parameters	
Working temperature	-40~85°C
Environmental humidity	5%-95% (No Condensation)
Ingress Protection Rating	IP20
Input parameters	
Channel Number	8 channels
LED Indicator	8 LED channel state indicators
Input range	Maximum: 0~24mA
Resolution ratio	15 Bit
Acquisition precision	±0.3% full range, @25°C
	±0.5% full range, @-20~70°C
Sampling rate	28ms/8 channels
Data format	16-bit signed integer
Diagnostic function	Standard mode: Overflow 32767 Standard mode: Underflow -32768 Channel disabled: -32767

### 3 Hardware interfaces



- ① Hardware interfaces
- ② State indicator
- ③ (non field channel indicator)
- ④ Wiring Terminal and marking
- ⑤ Internal Bus
- ⑥ Field Power
- ⑦ Buckle
- ⑧ Grounding Spring Sheet
- ⑨ Fixed Wiring Harness

### 3.1 LED indicator lights



- ① Power indicator light (green)
- ② Module State indicator (red/green)
- ③ Input channel indicator light (green)

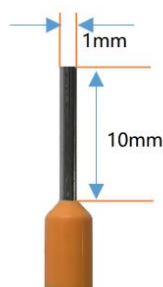
PW power indicator	Definition
ON	Internal bus power supply is normal
OFF	Internal bus power supply is failure
STA module State indicator	Definition
Green slow flash (2.5hz)	The internal bus of the module is not started
Red slow flash (2.5hz)	Module internal bus offline
Green on	Operation normal
Flash(2.5Hz) (RED/GREEN)	Upgrading mode
Flash(10Hz) (RED/GREEN)	Firmware upgrading
Red flashes twice	Module exception has been soft-restarted
0-7 channel indicator light	Definition
ON	Input signal $\geq 1\%$ range
OFF	Input signal $< 1\%$ range

### 3.2 Terminal definition

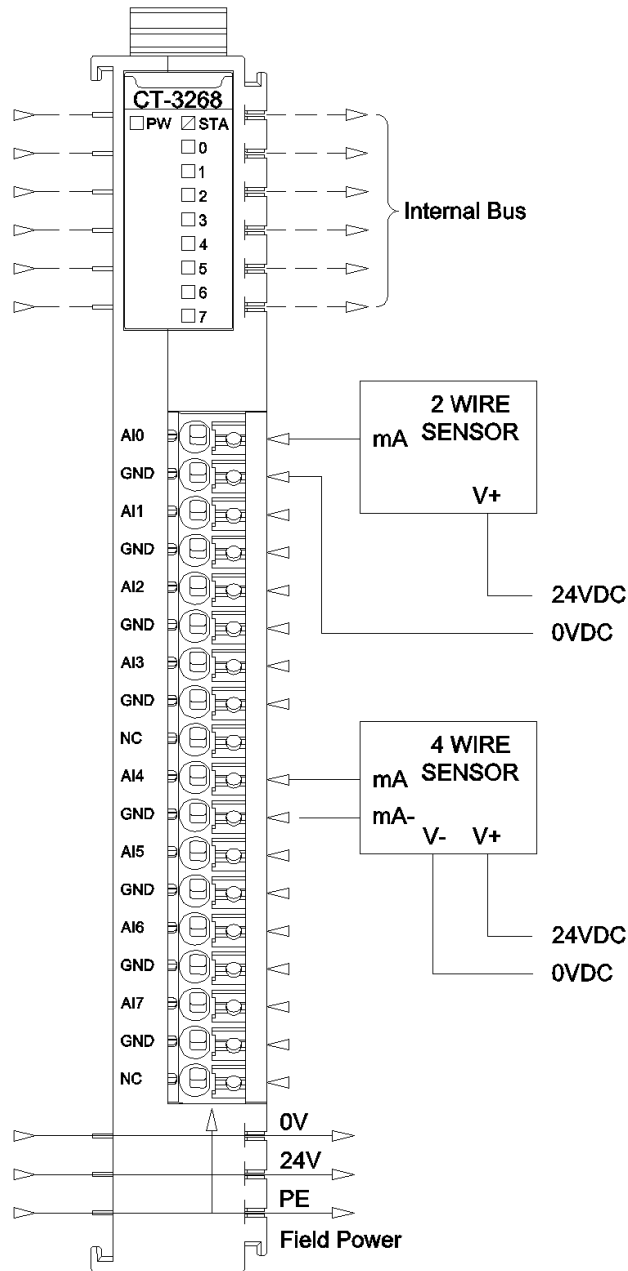
Terminal number	Definition	Description
1	AI0	Current input CH0
2	GND	
3	AI1	Current input CH1
4	GND	
5	AI2	Current input CH2
6	GND	
7	AI3	Current input CH3
8	GND	
9	NC	Not connected
10	AI4	Current input CH4
11	GND	
12	AI5	Current input CH5
13	GND	
14	AI6	Current input CH6
15	GND	
16	AI7	Current input CH7
17	GND	
18	NC	Not connected

It is recommended to use cables with cores smaller than 1mm<sup>2</sup>.

The cold-pressed terminal parameters are as follows:



## 4 Wiring



## 5 Process data definition

Input data								
Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	Analog Input Data(CH 0)							
Byte 1								
Byte 2	Analog Input Data(CH 1)							
Byte 3								
Byte 4	Analog Input Data(CH 2)							
Byte 5								
Byte 6	Analog Input Data(CH 3)							
Byte 7								
Byte 8	Analog Input Data(CH 4)							
Byte 9								
Byte 10	Analog Input Data(CH 5)							
Byte 11								
Byte 12	Analog Input Data(CH 6)							
Byte 13								
Byte 14	Analog Input Data(CH 7)							
Byte 15								

### 5.1 Process data definition (standard mode)

Data description:

**Analog Input Data (CH0-7):** input value of the corresponding channel current signal.

Analog Input Data (CT-3268)			
Current (0-20mA)	Decimal	Hexadecimal	Remark
>23.52	32767	7FFF	Overflow
23.52	32511	7EFF	Exceed the upper limit
.	.	.	
>20	27649	6C01	
20	27648	6C00	Rated range
.	.	.	
10	13824	3600	
.	.	.	
0	0	0	
<0	0	0	Exceed the lower limit
.	.	.	



-3.52	-4864	ED00	
<-3.52	-32768	8000	Underflow
Analog Input Data (CT-3268)			
Current (0-20mA)	Decimal	Hexadecimal	Remark
>3.52	32767	7FFF	Overflow
3.52	4864	1300	Exceed the upper limit
.	.	.	
>0	0	0	
0	0	0	Rated range
.	.	.	
-10	-13824	CA00	
.	.	.	
-20	-27648	9400	
<-20	-27949	93FF	Exceed the lower limit
.	.	.	
-23.52	-32511	8101	
<-23.52	-32768	8000	Underflow

Analog Input Data (CT-3268)			
Current (0-20mA)	Decimal	Hexadecimal	Remark
>23.52	32767	7FFF	Overflow
23.52	32511	7EFF	Exceed the upper limit
.	.	.	
>20	27649	6C01	
20	27648	6C00	Rated range
.	.	.	
10	13824	3600	
.	.	.	
0	0	0	
.	.	.	Rated range
-10	-13824	CA00	
.	.	.	
-20	-27648	9400	
<-20	-27949	93FF	
.	.	.	
-23.52	-32511	8101	
<-23.52	-32768	8000	Underflow

## 5.1 Process data definition (special mode)

Data description:

**Analog Input Data (CH0-7):** input value of the corresponding channel current signal.

Analog Input Data (CT-3268)					
Current (0-20mA)	Current (-20-0mA)	Current (±20mA)	Decimal	Hexadecimal	Remarks
20	.	20	32767	7FFF	Normal range
.	.	.	.	.	
10	.	10	13824	3600	
.	.	.	.	.	
0	0	0	0	0	
<0	.	.	.	.	
.	-.10	-10	-13824	CA00	
.	.	.	.	.	
.	-.20	-20	-32768	8000	

## 6 Configuration parameter definition

Configuration parameters								
Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	16Bit Data Format							
Byte 1	Current Type Ch#7	Current Type Ch#6	Current Type Ch#5	Current Type Ch#4	Current Type Ch#3	Current Type Ch#2	Current Type Ch#1	Current Type Ch#0

Data description:

**16Bit Data Format:** Analog data storage format. (default: 0)

0: A-B

1: B-A

**Current Type Ch#(0-7):** Type of input signal. (default: 1)

0: -20~0mA

1: 0~20mA

2: -20~20mA

## A Dimension drawing

