

## **CT-3134 4 channels Voltage Input**

**0~5/0~10/±5/±10VDC,15 bits /16 bits**

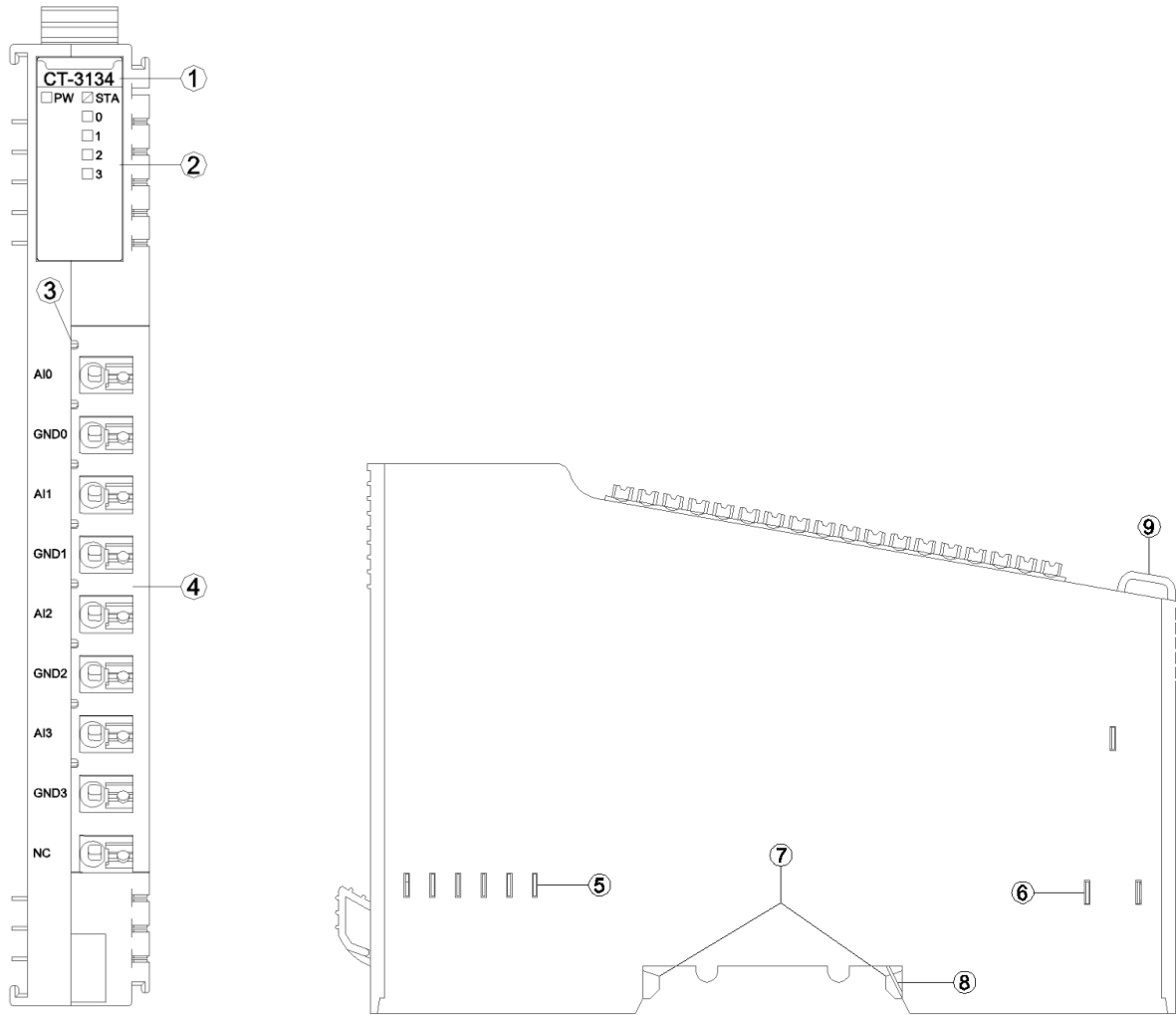
### **1 Module features**

- ◆ The module supports 4 channels of voltage signal input
- ◆ The module can collect 0~5VDC, 0~10VDC, ±5VDC, ±10VDC, with 15 bits and 16 bits resolution
- ◆ The module carries with 4 analog input channel LED indicator
- ◆ Filtering time can be set
- ◆ Channels can be disabled independently
- ◆ With isolation between channels

## 2 Technical Parameters

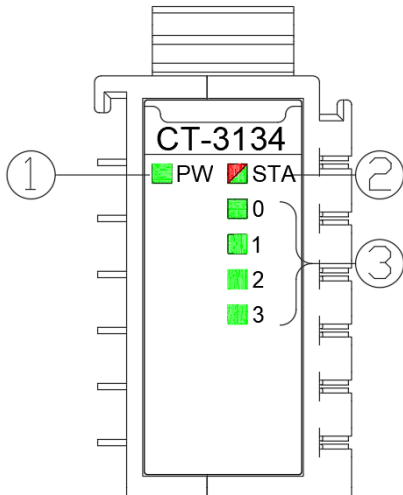
General parameters	
Power	Max.260mA@5.0Vdc
Isolation	I/O to internal bus isolation voltage AC 500V The isolation voltage between channels is AC 500V
Field Power	Not used
Wiring	Max.1.0mm <sup>2</sup> (AWG 17)
Mounting Type	35mmDIN-Rail
Size	115*14*75mm
Weight	65g
Environment Specification	
Operational Temperature	-40~55°C
Operational Humidity	5%~95% RH (No Condensation)
Ingress Protection Rating	IP20
Input Parameter	
Channel Number	4 channel voltage input
LED Indicator	4 channel input indicators
Input Voltage Range	0~5VDC, 0~10VDC, ±5VDC and ±10VDC
Resolution	16 bits
Accuracy	±0.3%@25°C ±0.5% @-40~55°C
Sampling Rate	12ms/4 channel
Output Impedance	100KΩ (±5%)
Channel disable	supported
Diagnostic function	Channel disabled fault value: -32767 Overflow: 32767 (Overflow failure value supported only in standard mode) Underflow: -32768(Underflow fault value supported only in standard mode)

### 3 Hardware Interface



- ① Module Type
- ② State indicator
- ③ N/A
- ④ Wiring Terminal and identification
- ⑤ Internal Bus
- ⑥ Field 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 Input channel LED indicator (green)

PW POWER STATE (GREEN)	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 is 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
0-3 channel LED indicator (GREEN)	Definition
ON	The input signal exceeds 0.15V or - 0.15V
OFF	Input signal invalid

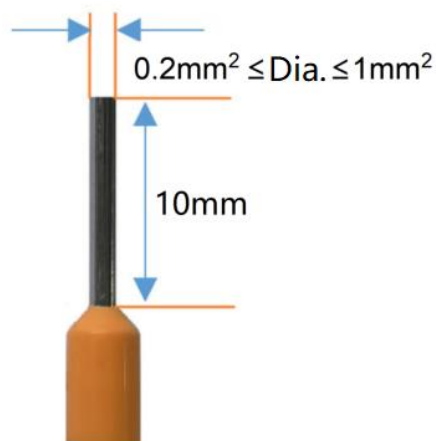
### 3.2 Terminal definition

Terminal Number	Definition	Definition
1	AI0	Signal Input CH0
2	GND0	Common port CH0
3	AI1	Signal Input CH1
4	GND1	Common port CH1
5	AI2	Signal Input CH2
6	GND2	Common port CH2
7	AI3	Signal Input CH3
8	GND3	Common port CH3
9	NC	Not Connected

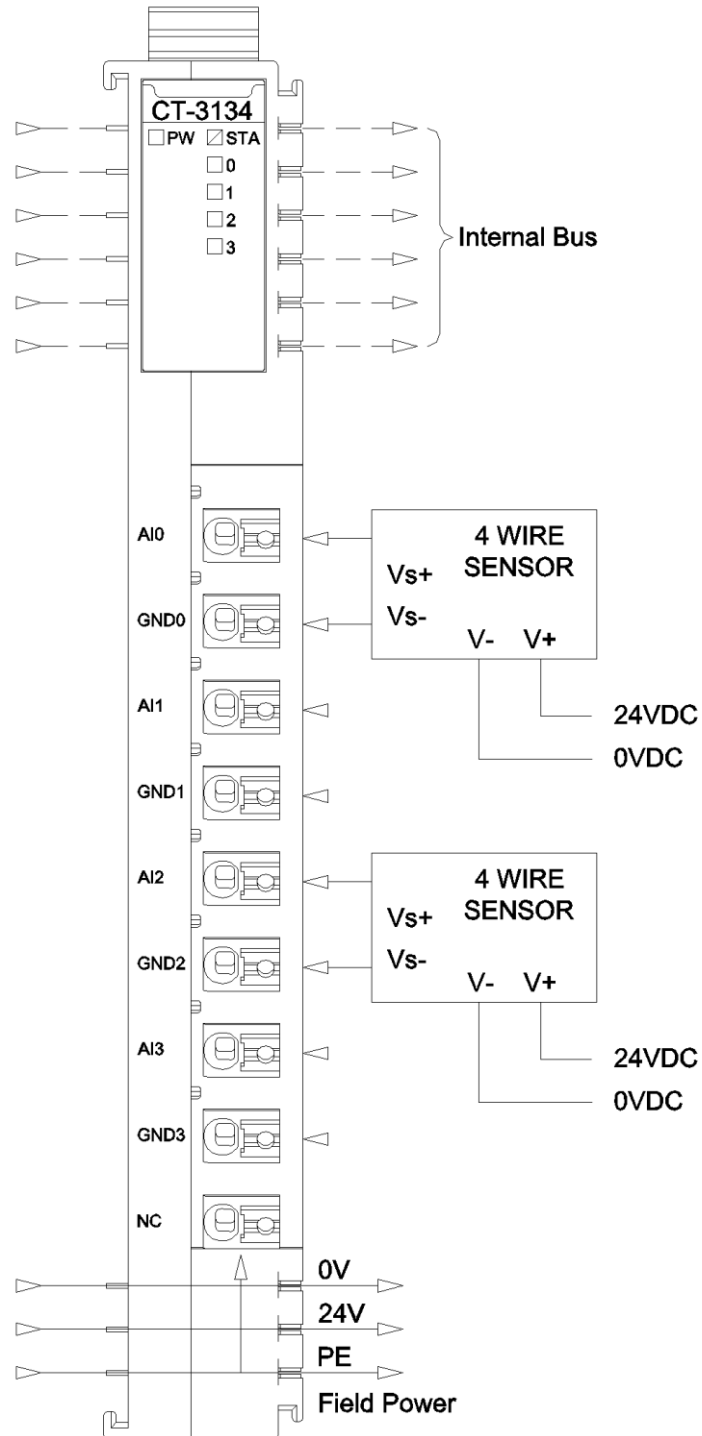
It is recommended to use cables with cores greater than 0.2mm<sup>2</sup> and smaller than 1mm<sup>2</sup>.

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

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): Voltage input data value

Process data definition(8AI)						
Voltage (0-5V)	Voltage (0-10V)	Voltage (±5V)	Voltage (±10V)	Decimal	HEX	
>5.06	>10.12	>5.06	>10.12	32767	0x7FFF	Overflow
5.06	10.12	5.06	10.12	27979	0x6D4B	Exceeds the upper limit
5V+0.1808mv	10V+0.3617mv	5V+0.1808mv	10V+0.3617mv	27649	0x6C01	
5	10	5	10	27648	0x6C00	Rated range
.	.	.	.	.	.	
.	.	.	.	.	.	
2.5	5	2.5	5	13824	0x3600	
.	.	.	.	.	.	
.	.	.	.	.	.	
0	0	0	0	0	0x0000	
/	/	.	.	.	.	
/	/	.	.	.	.	
/	/	-2.5	-5	-13824	0XCA00	
/	/	.	.	.	.	
/	/	.	.	.	.	
/	/	-5	-10	-27648	0x9400	
/	/	-5V-0.1808mv	-10V-0.3617mv	-27649	0x93FF	Exceeds the lower limit
/	/	-5.06	-10.12	-27979	0x92B5	
/	/	-5.06<	-10.12<	-32768	0x8000	Underflow



## 5.2 Process data definition (special mode)

Process data definition (8AI)					
Voltage (0-5V)	Voltage (0-10V)	Voltage ( $\pm 5V$ )	Voltage ( $\pm 10V$ )	Decimal	HEX
5	10	5	10	32767	0x7FFF
.	.	.	.	.	.
.	.	.	.	.	.
2.5	5	2.5	5	16383	0x3FFF
.	.	.	.	.	.
.	.	.	.	.	.
0	0	0	0	0	0x0000
/	/	.	.	.	.
/	/	.	.	.	.
/	/	-2.5	-5	-16384	0xC000
/	/	.	.	.	.
/	/	.	.	.	.
/	/	-5	-10	-32768	0x8000

## 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	Reserved						Range_ Mode	16Bit Data Format
Byte 1	Voltage Type (CH 1)				Voltage Type (CH 0)			
Byte 2	Voltage Type (CH 3)				Voltage Type (CH 2)			
Byte 3	Reserved							
Byte 4								
Byte 5	Filtering Time (CH0)							
Byte 6								
Byte 7	Filtering Time (CH1)							
Byte 8								
Byte 9	Filtering Time (CH2)							
Byte 10								
Byte 11	Filtering Time (CH3)							
Byte 12								
Byte 13	Reserved							
...								
Byte 29								

Data description:

**16Bit Data Format:** Sequence of 16-bit data byte transmission (Default:0)

0: A\_B

1: B\_A

**Range\_Mode:** Process data mode (default: standard mode)

Standard mode: same with SIEMENS process data definition

Special mode: max range of the hardware.

**Voltage Type(CH 0-3):** Input voltage type (Default:3)

0: disabled

1: 0~5Vdc

2: -5~5Vdc

3: 0~10Vdc

4: -10~10Vdc

**Filtering Time(CH0-CH3):** The input filtering time of the channel, unit in “ms”.

(Default: 10)

# A Dimension drawing

