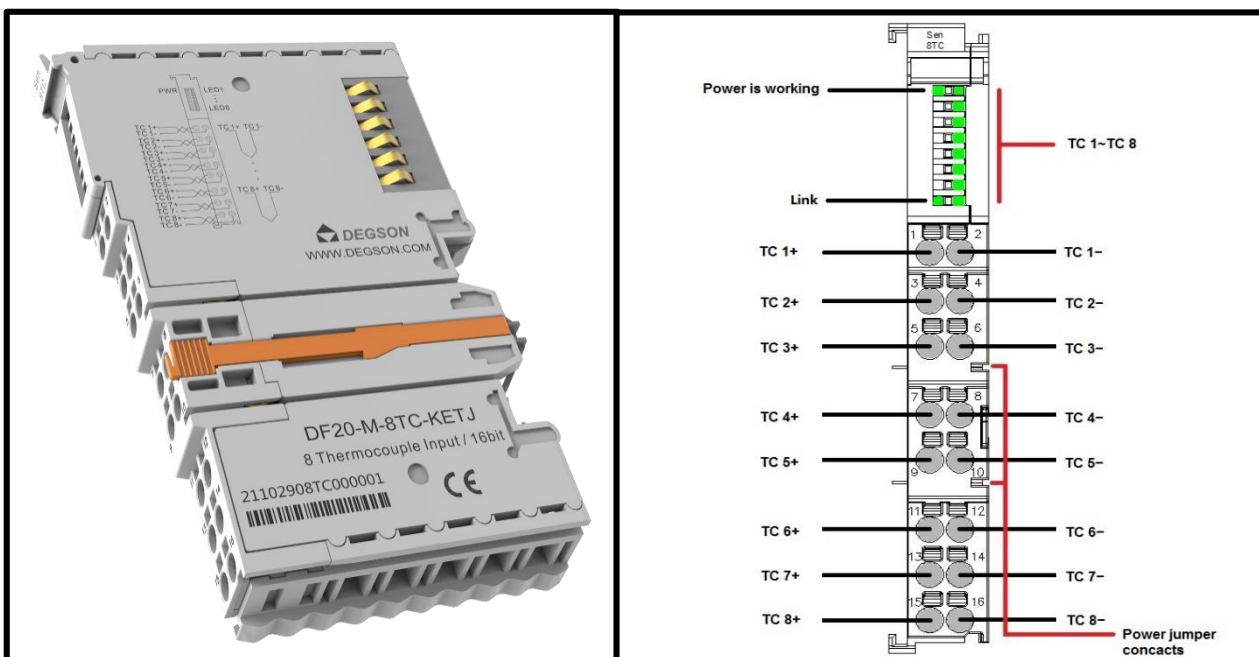


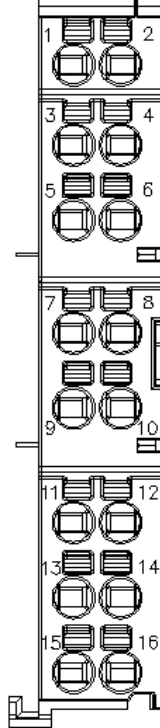
◆ 8 channel TC measurement (DF20-M-8TC-KETJ)

- The module supports 8-channel thermocouple signal acquisition, K type ,E type ,T type ,J type ,B type ,S type ,R type ,N type ,L type.
- The module could be connected to a 2-wire thermocouple sensor.
- This module reserved eight cold end compensation output channels to compensate the cold end temperature difference.
- The two LED indicators respectively indicate the normal operation and communication of the module.
- Each channel is equipped with an LED indicator.
- Field and system levels are Magnetic isolated.
- Transmitted with a resolution of 16 bits.
- Protection level IP20.



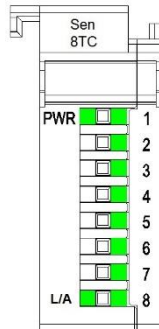
2. Hardware Interface

● Wiring Terminal



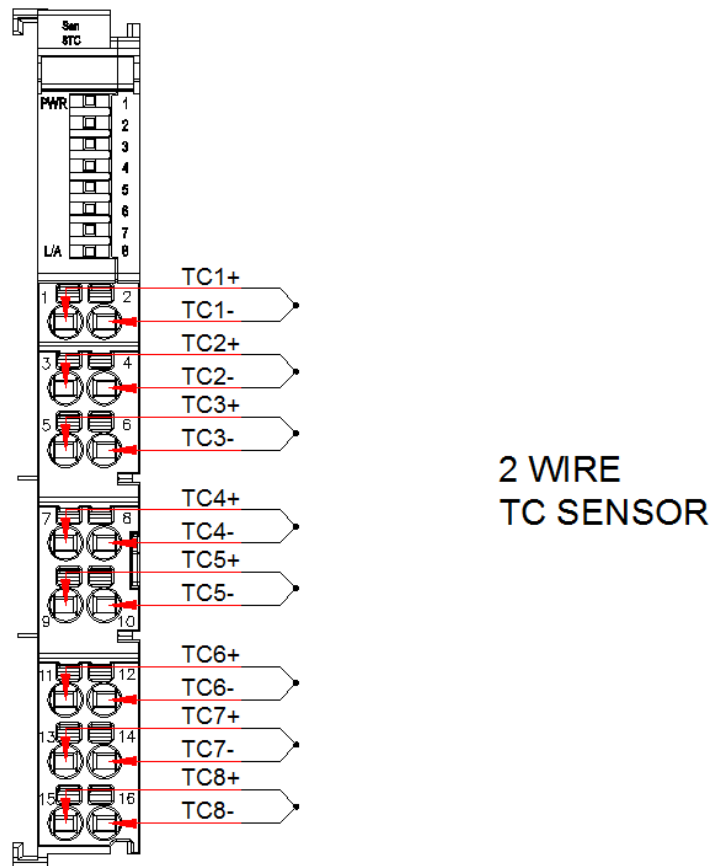
No.	Signal	Description
1	TC 1+	Signal Input CH 1
2	TC 1-	
3	TC 2+	Signal Input CH 2
4	TC 2-	
5	TC 3+	Signal Input CH 3
6	TC 3-	
7	TC 4+	Signal Input CH 4
8	TC 4-	
9	TC 5+	Signal Input CH 5
10	TC 5-	
11	TC 6+	Signal Input CH 6
12	TC 6-	
13	TC 7+	Signal Input CH 7
14	TC 7-	
15	TC 8+	Signal Input CH 8
16	TC 8-	

● LED Indicator



LED Indicator	State		Definition
PWR	Green:ON		Power Normal
	Green:OFF		Power Failure
L/A	Power-on	Green:ON	Module is being initialized
		Green:OFF	Module initialization is complete
	Running	Green: Flash	The module runs normally
		Green:OFF	Module operating fault
1	Green:Flash		CH 1 is normally sampled
	Green:ON		Value :exceeds limit
	Green:OFF		Disconnection
2	Green:Flash		CH 1 is normally sampled
	Green:ON		Value :exceeds limit
	Green:OFF		Disconnection
3	Green:Flash		CH 1 is normally sampled
	Green:ON		Value :exceeds limit
	Green:OFF		Disconnection
4	Green:Flash		CH 1 is normally sampled
	Green:ON		Value :exceeds limit
	Green:OFF		Disconnection
5	Green:Flash		CH 1 is normally sampled
	Green:ON		Value :exceeds limit
	Green:OFF		Disconnection
6	Green:Flash		CH 1 is normally sampled
	Green:ON		Value :exceeds limit
	Green:OFF		Disconnection
7	Green:Flash		CH 1 is normally sampled
	Green:ON		Value :exceeds limit
	Green:OFF		Disconnection
8	Green:Flash		CH 1 is normally sampled
	Green:ON		Value :exceeds limit
	Green:OFF		Disconnection

● Wiring



As shown in the picture:

There are 8 channels in total, Port 1,2 is CH 1 ; Port 3,4 is CH 2; Port 5,6 is CH 3; Port 7, 8 is CH 4; Port 9,10 is CH 5 , Port 11,12 is CH 6; Port 13,14 is CH 7; Port 15,16 are CH 8.

The module could be connected to a 2-wire thermocouple sensor., Connect the positive terminal of the sensor to port 1, the negative terminal to port 2, and so on.

3.Process data definition

DF20-M-8TC-KETJ Module process data definition

Input data									
Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	Data type
Byte 0	Analog Input Data(Channel 1)								Int16
Byte 1									
Byte 2	Analog Input Data(Channel 2)								Int16
Byte 3									
Byte 4	Analog Input Data(Channel 3)								Int16
Byte 5									
Byte 6	Analog Input Data(Channel 4)								Int16
Byte 7									
Byte 8	Analog Input Data(Channel 5)								Int16
Byte 9									
Byte 10	Analog Input Data(Channel 6)								Int16
Byte 11									
Byte 12	Analog Input Data(Channel 7)								Int16
Byte 13									
Byte 14	Analog Input Data(Channel 8)								Int16
Byte 15									

Data description:

Analog Input Data(Channel 1~8): Analog signal Input value of corresponding channel.

Analog Input Data (DF20-M-4TC-KETJ) —E type		
Temperature (°C)	Decimal	
>1010	32767	Exceeds the upper limit
1010	10100	Overflow
1000	10000	Rated range
...	...	
...	...	
-270	-2700	
-280	-2800	Underflow
<-280	-32767	Exceeds the lower limit
Line break	-32768	Line break
Analog Input Data (DF20-M-4TC-KETJ) —J type		
Temperature (°C)	Decimal	
>1210	32767	Exceeds the upper limit
1210	12100	Overflow
1200	12000	Rated range
...	...	
...	...	
-210	-2100	
-220	-2200	Underflow
<-220	-32767	Exceeds the lower limit
Line break	-32768	Line break
Analog Input Data (DF20-M-4TC-KETJ) —T type		
Temperature (°C)	Decimal	
>410	32767	Exceeds the upper limit
410	4100	Overflow
400	4000	Rated range
...	...	
...	...	
-270	-2700	
-280	-2800	Underflow
<-280	-32767	Exceeds the lower limit
Line break	-32768	Line break
Analog Input Data (DF20-M-4TC-KETJ) —K type		
Temperature (°C)	Decimal	
>1380	32767	Exceeds the upper limit
1380	13800	Overflow
1370	13700	Rated range
...	...	

...	...	
-270	-2700	
-280	-2800	Underflow
<-280	-32767	Exceeds the lower limit
Line break	-32768	Line break
Analog Input Data (DF20-M-4TC-KETJ) —B type		
Temperature (°C)	Decimal	
>1830	32767	Exceeds the upper limit
1830	18300	Overflow
1820	18200	Rated range
...	...	
...	...	
50	500	
40	400	Underflow
<40	-32767	Exceeds the lower limit
Line break	-32768	Line break
Analog Input Data (DF20-M-4TC-KETJ) —S type		
Temperature (°C)	Decimal	
>1770	32767	Exceeds the upper limit
1770	17700	Overflow
1760	17600	Rated range
...	...	
...	...	
-50	-500	
-60	-600	Underflow
<-60	-32767	Exceeds the lower limit
Line break	-32768	Line break
Analog Input Data (DF20-M-4TC-KETJ) —R type		
Temperature (°C)	Decimal	
>1780	32767	Exceeds the upper limit
1780	17800	Overflow
1770	17700	Rated range
...	...	
...	...	
-50	-500	
-60	-600	Underflow
<-60	-32767	Exceeds the lower limit
Line break	-32768	Line break
Analog Input Data (DF20-M-4TC-KETJ) —N type		
Temperature (°C)	Decimal	
>2330	32767	Exceeds the upper limit
2330	17800	Overflow
2320	17700	Rated range
...	...	

...	...	
0	0	
-10	-100	Underflow
<-10	-32767	Exceeds the lower limit
Line break	-32768	Line break
Analog Input Data (DF20-M-4TC-KETJ) —L type		
Temperature (°C)	Decimal	
>910	32767	Exceeds the upper limit
910	9100	Overflow
900	9000	Rated range
...	...	
...	...	
-200	-2000	
-210	-2100	Underflow
<-210	-32767	Exceeds the lower limit
Line break	-32768	Line break

4.Machinery installation

● Dimension drawing

The installation size is shown in the following figure (unit: mm):

