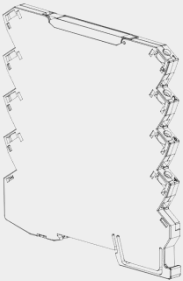


BM800-TC/VI-11

VI.0

Signal Isolator Installation

Supports Type K and Type J inputs



Disclaimer

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The manufacturer reserves the right to revise product specifications without prior notice. Please consult local authorized distributors for the latest specifications before placing orders.

Product Description

The BM800-TC/VI-11 is a 6.2 mm thick signal isolator for DIN 35 mm rail mounting. It features 1-channel input and 1-channel output with galvanic isolation between the input, output and power supply circuits. This device converts thermocouple signals at the input side into isolated DC signals including 0/4-20 mA, 0/1-5 V and 0/2-10 V at the output. The measuring range and output signal type can be configured via DIP switches. It supports Type K and Type J thermocouple inputs, and the rated supply voltage is 24 V DC.

Electrical Specifications

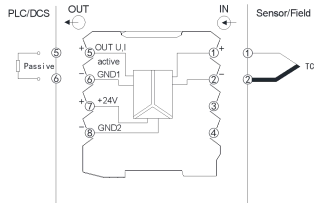
Model	BM800-TC/VI-11
Input Specifications	
Input channel	1
Input signal	Thermocouples (Type K, Type J)
Minjmm configurable span	300°C
Output Specifications	
Output channel	1
Available outputs	Active 0/4-20mA, 0/1-5V, 0/2-10V
Max output current	25mA
Output ripple	≤50mVpp(@250Ω)
Load capacity	Current output ≤550Ω; Voltage output ≥10kΩ

Power Supply Parameters	
Nominal supply	24V DC
Operating supply range	20~35V DC
Power consumption	≤1.8 W (Iout=20 mA, 24 V DC, 550 Ω load)
General Performance	
Conversion Accuracy	≤0.1% F.S. (Input range ≥ 1000°C) ≤0.2°C / Input Range × 100% F.S. (Input range < 1000°C)
Temperature drift	100ppm/°C
Response time(10-90%)	≤1s
Overvoltage category	II
Pollution degree	2
Ingress protection	IP20
Dielectric strength	1.5kV AC, 50Hz, 60s (between input, output and power circuits)
Insulation resistance	100MΩ
Overall dimension	W6.2mm × H97mm × D100mm
Weight	approx.70g
Mounting	DIN35 standard rail

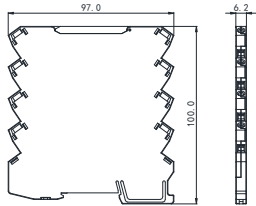
Wiring Specifications

Connection Type	Screw terminal connection
Solid single-core wire size	0.5~2.5mm²
Stranded flexible wire size	0.5~2.5mm²
AWG wire gauge	20~13
Wire stripping length	8mm
Ambient Specifications	
Operating ambient temperature	-20~60°C
Storage ambient temperature	-40~80°C
Max operating altitude	≤2000m
Relative ambient humidity	≤95%RH,non-condensing

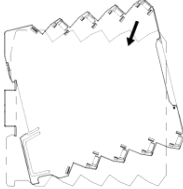
Product Application



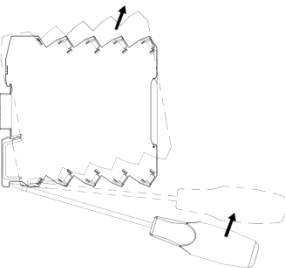
Product Dimensions (Unit: mm)



Installation



Removal



DIP Switch			ON OFF			
Function	Description			S1		
				1	2	
Input Wiring Mode Switching	Type K Thermocouple					
	Type J Thermocouple					
	Cold Junction Compensation Switch (ON)					
	Cold Junction Compensation Switch (OFF)					
				3	4	5
Output signal selection	0-20mA					
	4-20mA					
	0-10V					
	2-10V					
	0-5V					
	1-5V					
				6	7	
Fault response configuration	sensor open/upper overrange/lower overrange/sensor short/incorrect DIP setup(Input starting value exceeds ending value, non-existent DIP switch setting); Setting1					
	sensor open/upper overrange/lower overrange/sensor short/incorrect DIP setup(Input starting value exceeds ending value, non-existent DIP switch setting); Setting2					
	sensor open/upper overrange/lower overrange/sensor short/incorrect DIP setup(Input starting value exceeds ending value, non-existent DIP switch setting); Setting3					
	sensor open/upper overrange/lower overrange/sensor short/incorrect DIP setup(Input starting value exceeds ending value, non-existent DIP switch setting); Setting4					
				8		
Setting	Host configuration / DIP switch configuration; Host configuration enabled					
	Host Configuration / DIP Switch Configuration; DIP Switch Configuration Enabled					

Setting \ Output		0-20mA	4-20mA	0-10V	2-10V	0-5V	1-5V
Setting1	Open-circuit input	0mA	4mA	0V	2V	0V	1V
	Upper overrange	20mA	20mA	10V	10V	5V	5V
	Lower overrange	0mA	4mA	0V	2V	0V	1V
	Short-circuited input	0mA	4mA	0V	2V	0V	1V
	Wrong DIP setting	21mA	21mA	10.5V	10.5V	5.25V	5.25V
Setting2	Open-circuit input	20.5mA	20.5mA	10.25V	10.25V	5.125V	5.125V
	Upper overrange	0mA	3.5mA	0V	1.75V	0V	0.75V
	Lower overrange	21.5mA	21.5mA	10.5V	10.5V	5.25V	5.25V
	Short-circuited input	21mA	21mA	10.5V	10.5V	5.25V	5.25V
	Wrong DIP setting	20.5mA	20.5mA	10.25V	10.25V	5.125V	5.125V
Setting3	Open-circuit input	0mA	4mA	0V	2V	0V	1V
	Upper overrange	21.5mA	21.5mA	10.5V	10.5V	5.25V	5.25V
	Lower overrange	21mA	21mA	10.5V	10.5V	5.25V	5.25V
	Short-circuited input	20mA	20mA	10V	10V	5V	5V
	Wrong DIP setting	0mA	4mA	0V	2V	0V	1V
Setting4	Open-circuit input	21.5mA	21.5mA	10.5V	10.5V	5.25V	5.25V

Setting	Temperature Value	S2			
End of Input Range	-200℃	□	□	□	□
	-150℃	■	□	□	□
	-100℃	□	■	□	□
	-80℃	■	■	□	□
	-60℃	□	□	■	□
	-40℃	□	□	■	□
	-20℃	□	□	□	□
	-0℃	■	■	■	□
	20℃	□	□	□	■
	40℃	■	□	□	■
	60℃	□	■	□	■
	80℃	■	■	□	■
	100℃	□	□	■	■
	125℃	■	□	□	■
	150℃	□	■	■	■
	200℃	■	■	■	■

Setting	Temperature Value	S2							
End of Input Range	0℃	□	□	□	□	□	□	□	□
	10℃	■	□	□	□	□	□	□	□
	20℃	□	■	□	□	□	□	□	□
	30℃	■	■	□	□	□	□	□	□
	40℃	□	□	■	□	□	□	□	□
	50℃	■	□	■	□	□	□	□	□
	60℃	□	■	■	□	□	□	□	□
	70℃	■	■	■	□	□	□	□	□
	80℃	□	□	□	■	□	□	□	□
	90℃	■	□	□	■	□	□	□	□
	100℃	□	■	□	■	□	□	□	□
	110℃	■	■	□	■	□	□	□	□
	120℃	□	□	■	■	□	□	□	□
	130℃	■	□	■	■	□	□	□	□
	140℃	□	□	■	■	□	□	□	□
	150℃	■	■	■	■	□	□	□	□
	160℃	□	□	□	□	■	□	□	□
	170℃	■	□	□	□	■	□	□	□
	180℃	□	■	□	□	■	□	□	□

Setting	Temperature Value	S2						Temperature Value	S2						Temperature Value	S2					
		5	6	7	8	9	10		5	6	7	8	9	10		5	6	7	8	9	10
End of Input Range	190°C	■	■	□	□	■	□	560°C	□	■	■	□	□	■	1150°C	■	□	□	■	■	■
	200°C	□	□	□	■	□	■	580°C	■	■	■	□	□	■	1200°C	□	□	□	■	■	■
	220°C	■	□	■	□	■	□	600°C	□	□	□	■	□	■	1250°C	■	■	□	■	■	■
	240°C	□	■	■	□	■	□	620°C	■	□	□	■	□	■	1300°C	□	□	■	■	■	■
	260°C	■	■	■	□	■	□	640°C	□	■	□	□	■	■	1350°C	■	□	■	■	■	■
	280°C	□	□	□	■	■	□	660°C	■	■	□	■	□	■	1372°C	□	□	■	■	■	■
	300°C	■	□	□	■	■	□	680°C	□	□	■	□	□	■							
	320°C	□	□	■	■	■	□	700°C	■	□	■	□	□	■							
	340°C	■	■	□	■	■	□	720°C	□	■	■	■	□	■							
	360°C	□	□	■	■	■	□	740°C	■	■	■	■	□	■							
	380°C	■	□	■	■	■	□	760°C	□	□	□	□	■	■							
	400°C	□	■	■	■	■	□	780°C	■	□	□	□	■	■							
	420°C	■	■	■	■	■	□	800°C	□	■	□	□	□	■							
	440°C	□	□	□	□	□	■	850°C	■	■	□	□	□	■							
	460°C	■	□	□	□	□	■	900°C	□	□	■	□	■	■							
	480°C	□	■	□	□	□	■	950°C	■	□	□	□	■	■							
	500°C	■	■	□	□	□	■	1000°C	□	■	■	□	■	■							
	520°C	□	□	■	□	□	■	1050°C	■	■	■	□	□	■							
	540°C	■	□	■	□	□	■	1100°C	□	□	□	■	■	■							

Product Wiring

8mm
AWG20-13
0.5mm²-2.5mm²

0.5Nm

Notes

The product shall be installed in an area where the ambient air contains no corrosive substances that damage chromium, nickel and silver platings.

Contact Information

Headquarters: Acrel Co., LTD.
Trade Company: Acrel E-Business(Shanghai)Co.,Ltd
Address: No.253 Yulv Road, Jiading District, Shanghai, China
TEL.: +86-21-69156352
Web-site: www.acrel-electric.com
E-mail: sales@acrel-electric.com
Postcode: 201801
Manufacturer: Jiangsu Acrel Electrical Manufacturing Co., LTD.
Address: No.5 Dongmeng Road,Dongmeng industrial Park, Nanzha Street,Jiangyin City,Jiangsu Province,China
TEL./Fax: 0086-510-86179970
Web-site: www.jsacrel.com
Postcode: 214405
E-mail: sales@email.acrel.cn