Descriptions

Signal conditioning modules



RoHS

CE Report EN62368-1

UKCA Report BS EN62368-1

Features

- Two-port isolation (signal input and signal output)
- High accuracy of 0.1% Full Scale
- High linearity of 0.1% Full Scale
- Isolation test voltage 2kVAC for 60s
- Low ripple & noise: ≤35mVpp, 20MHz
- Extremely low temperature coefficient of ≤50ppm/℃
- Industrial grade operating temperature range from -40℃ to +85℃
- Compact DIP18 package, size 26 x 9.5 x 12.5mm
- ESD protection (IEC/EN61000-4-2 Contact ±4kV with performance perf. Criteria B)

Applications

- Control
- Electric power
- Communication

Selection Guide

Certification	Model	Power Supply Input Typ. (VDC)	Input Signal	Output Signal	Isolated Power Output (VDC)
EN/BS EN	TRE5540CN	15VDC	±10V	±10V	None
--	TRE5550CN	12VDC	±10V	±10V	None
	TRE6640CN	15VDC	±5V	±5V	None
	TRE6650CN	12VDC	±5V	±5V	None

Notes: *Product images are for reference only; the actual product shall prevail.

Specifications

Product Specifications	Item		Operating Conditions	Min.	Typ.	Max.	Unit
Input Specifications	Power Input	Input Voltage		Typ.-5%	Typ.	Typ.+5%	VDC
		Input Power	Signal full load	--	--	1.0	W
	Signal Input	Input Signal		See selection guide			
		Input Impedance	In case of max. input of voltage signal	10	--	--	MΩ
		Over Range	Maximum continuous over range	-15	--	+15	V
Output Specifications	Output Signal	Output Signal		See selection guide			
		Load Capacity	Voltage output	2	--	--	kΩ
		Ripple & Noise	20MHz bandwidth	--	--	35	mVp-p
Transmission Specifications	Signal Precision		Ta=25℃	-0.1%FS	--	+0.1%FS	--
	Power regulation		Power supply input Typ. ±5%	-0.05%FS	--	+0.05%FS	
	Load regulation		Change from no-load to full load	-0.05%FS	--	+0.05%FS	
	Temperature Coefficient		Operating temperature range from -40℃ to +85℃	--	--	50	ppm/℃
	Bandwidth			2	--	--	kHz
	Response time			--	--	1	ms
General Specifications	Electric Isolation			Isolated between the signal input and the signal output.			
	Isolation Test		Electric strength test for 1 minute with a leakage current <1mA, humidity <70%	2	--	--	kVAC
	Insulation Resistance		At 500VDC	100	--	--	MΩ
	Operating Temperature			-40	--	+85	℃
	Transportation and Storage Temperature			-40	--	+85	
	Case Temperature Rise		Ta=25℃	--	--	30	
	Safety Class			CLASS III			
	Application Environment		The presence of dust, severe vibration, shock and corrosive gas may cause damage to the product.				
Mechanical Specifications	Case Material		Black plastic, flame-retardant heat- resistant				
	Package		DIP18				
	Weight		5.8g(Typ.)				
	Cooling Method		Free air convection				

Electromagnetic Compatibility (EMC)

Immunity (EMS)	ESD	IEC/EN61000-4-2	Contact ±4kV	perf. Criteria B
	EFT	IEC/EN61000-4-4	Signal Input port ±1kV (see Fig. 2 for recommended circuit)	perf. Criteria B
	Surge	IEC/EN61000-4-5	Signal Input port ±1kV(line to ground) (see Fig. 2 for recommended circuit)	perf. Criteria B

Characteristic Curve

1. Carefully read and follow the instructions before use; contact our technical support if you have any question;
2. Do not use the product in hazardous areas;
3. Use only DC power supply source for this product. 220VAC power supply is prohibited;
4. It is strictly forbidden to disassemble the product privately in order to avoid product failure or malfunction;
5. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75%RH with nominal input voltage and rated output load.

Design Reference

1. Wiring diagram for product application

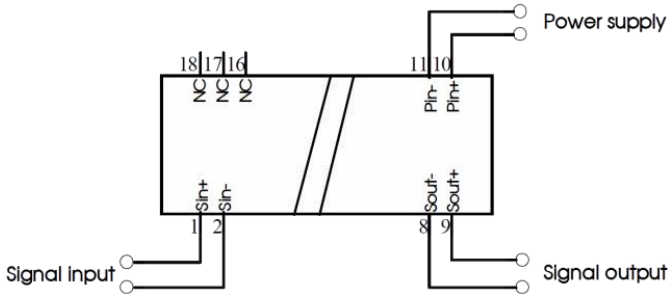


Fig. 1

Notes: NC: Not available for electrical connection.

2. EMC compliance recommended circuit

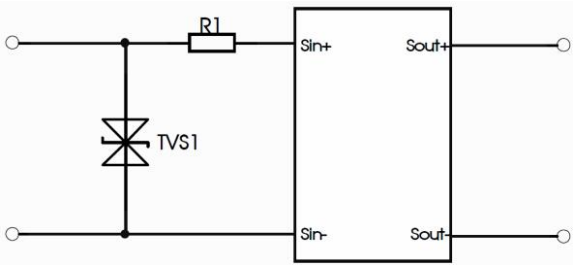
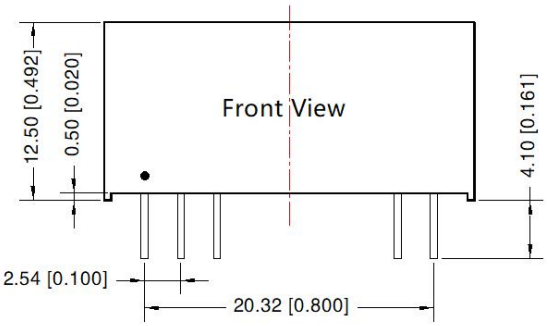


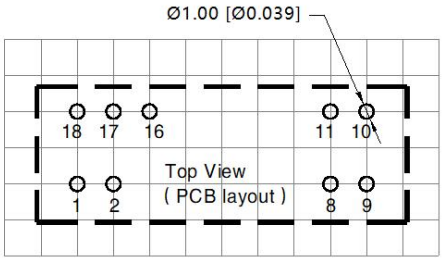
Fig. 2

Component	Recommended part
R1	12Ω/2W
TVS1	SMBJ15CA

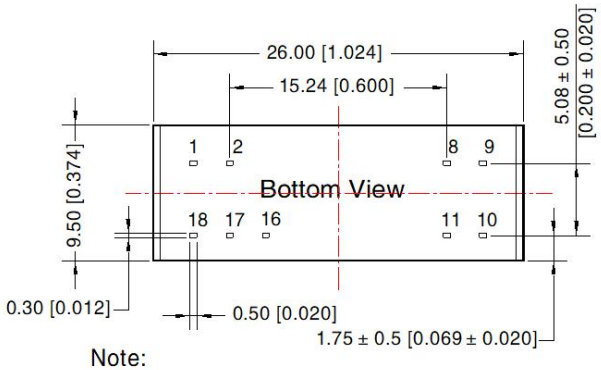
Dimensions and Recommended

THIRD ANGLE PROJECTION





Note: Grid 2.54*2.54mm



Note:
Unit: mm[inch]
Pin section tolerances: ± 0.10[± 0.004]
General tolerances: ± 0.25[± 0.010]

Pin-Out		
1	Sin+	Signal input(+)
2	Sin−	Signal input(−)
8	Sout−	Signal output(−)
9	Sout+	Signal output(+)
10	Pin+	Power input(+)
11	GND	GND
Others：NC		

NC: No connection

Notes:

1. All index testing methods in this datasheet are based on company corporate standards;
2. The above are the performance indicators of the product models listed in this datasheet. Some indicators of non-standard models will exceed the above requirements;
3. Products are related to laws and regulations: see "Features" and "EMC";
4. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.
5. The image certification marks are for reference only; please refer to the selection table for actual specifications. Certification is based on the physical mark or packaging label.