

Datasheet

RS Pro Signal Converter 4 → 20 mA Input, 2 x 4 → 20 mA Output

Stock No: 466-2264



IEC61508: Typically, SIL2. (Please contact Sales Office for details).

Function: Conversion of a single mA or Voltage input into two independently isolated current or voltage outputs. The BM320 is ideally suited to providing signals for both local indication/control and remote monitoring and control from the one input signal. The BM320 still maintains 3 port isolation with the input and both output circuits powered from separate secondaries of the transformer. Options on the BM320 include a Subtractor and an Adder or Averager. With these inputs are restricted to mA or Voltage and the BM320 can only accept two inputs.

Options on 4 to 20mA input versions, Upscale Drive on loss of input signal.

SPECIFICATIONS		TERMINATION DETAILS																																								
<p>INPUTS: Please note that the following are typical ranges. Other ranges available, please contact sales office.</p> <p>DC Current Standard Ranges 0 to 10mA into 100 ohms 4 to 20mA into 62 ohms Optional Ranges 0 to 1mA into 100 ohms 0 to 10mA into 10 ohms 4 to 20mA into 10 ohms Option: Upscale drive on loss of 4 to 20mA input signal Other current inputs as required Minimum current 10µA, Maximum current 100mA</p> <p>D C Voltage Between -250 and +250 Volts DC Minimum voltage span 5mV Maximum voltage span 500V Input Impedance:1MΩ greater</p> <p>A C Current 0 – 1A</p> <p>A C Voltage 0 – 250 V</p>	<p>Resistance (2 wire) Between 0 and 20K ohms Minimum span 5 ohms Maximum span 20K ohms</p> <p>Potentiometers (3 wire) Between 0 and 10K ohms Minimum span 10 ohms Maximum span 10K ohms</p> <p>Resistance Thermometers (RTDs, PT100s) 2 or 3 wire 100 or 130 ohms at 0°C Measurable range, -200°C to +800°C Minimum temperature span 10°C Maximum temperature span 600°C Input is linearised</p> <p>Thermocouples Type B, E, J, K, N, R, S & T Temperature covered: Type Range MinTemp Change B 600 to 1800°C 400°C E -260 to 1000°C 65°C J -200 to 1200°C 80°C N 0 to 1300°C 150°C R 50 to 1760°C 400°C S 80 to 1760°C 400°C T -260 to 400°C 100°C Automatic cold junction compensation Open circuit thermocouple monitoring upscale or downscale drive</p>	<p>OUTPUTS: DC Current 0 to 10mA into 10 to 1500 ohms 4 to 20mA into 10 to 750 ohms Other ranges as required Minimum span 1mA Maximum span 20mA</p> <p>DC Voltage The voltage output is derived from passing a mA signal through an internal resistor 0 to 1 Volt DC thru 51 ohms 0 to 10 Volt DC thru 510 ohms 1 to 5 Volt DC thru 240 ohms Other ranges as required Minimum span 1 Volt DC Maximum span 10 Volt DC</p> <p>Input/Output/Supply Isolation 600 Volts > 20M ohms</p> <p>N.B. Each output can be of a different type and range i.e. 1 x 4 to 20mA and 1 x 1 to 5 Volts</p>	<p>SUPPLY: Power Supplies 9 to 30 Volt DC with converter to maintain signal to power supply isolation</p> <p>Power Required 3 Watts Maximum</p> <p>Pilot Light Red LED shows Power ON</p> <p>GENERAL:</p> <p>Linearity Error Proportional to input ±0.1% of span</p> <p>Response Time ~50ms - Step 0 to 65% -3dB at 4.5KHz</p> <p>Temperature Coefficient ±0.1% of span / Δ10°C</p> <p>Operating Storage / Temperature Range 0 to +45°C / -20 to +60°C</p> <p>Weight 195 gms</p>																																							
<p>MECHANICAL DETAILS</p>	<p>Terminal</p> <p>1</p> <p>2 Inputs - See below</p> <p>3</p> <p>4 Unused</p> <p>5 Output A Passive -ve</p> <p>6 Output A Active +ve</p> <p>7 Output A Active -ve / Output A Passive +ve</p> <p>Terminal</p> <p>8 Output B Active -ve / Passive +ve</p> <p>9 Output B Active +ve</p> <p>10 Output B Passive -ve</p> <p>11 Unused</p> <p>12 Power Supply +ve</p> <p>13 Unused</p> <p>14 Power Supply -ve</p>	<table border="1"> <thead> <tr> <th>Inputs</th> <th>AC Current</th> <th>AC Volts</th> <th>DC mA</th> <th>DC mV/V</th> <th>T/Cs</th> <th>2 Wire Slidewire</th> <th>3 Wire Pot</th> <th>Resistance Thermometer</th> <th>Dual Inputs</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>~</td> <td>~</td> <td>-ve</td> <td>-ve</td> <td>-ve</td> <td>0%</td> <td>0%</td> <td></td> <td>B+</td> </tr> <tr> <td>2</td> <td>~</td> <td>~</td> <td>+ve</td> <td>+ve</td> <td>+ve</td> <td>100%</td> <td>Wiper</td> <td></td> <td>A+</td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>100%</td> <td></td> <td>Common</td> </tr> </tbody> </table>	Inputs	AC Current	AC Volts	DC mA	DC mV/V	T/Cs	2 Wire Slidewire	3 Wire Pot	Resistance Thermometer	Dual Inputs	1	~	~	-ve	-ve	-ve	0%	0%		B+	2	~	~	+ve	+ve	+ve	100%	Wiper		A+	3							100%		Common
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<p>ORDERING DETAILS</p> <p>a) Give identification code, i.e.BM320</p> <p>b) Give details of input signal, i.e. input type (as listed above) and range. If thermocouple input please specify upscale or downscale drive for open circuit protection. For 4 to 20mA input, please specify if upscale drive required on loss of input signal.</p> <p>c) Give outputs required, both type and range, i.e. 2 x 4 to 20mA</p>																																										