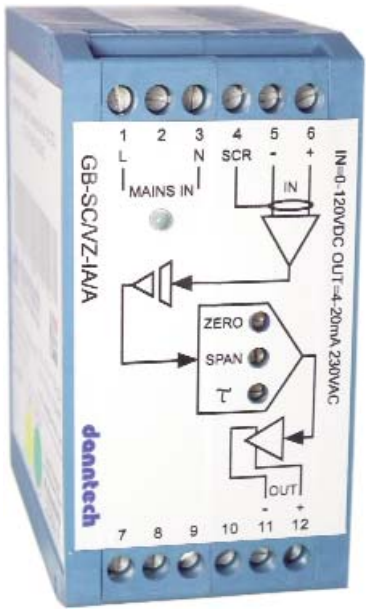
SIGNAL CONVERTER



Our range of signal converters provide a convenient way of converting almost any input voltage or current to commonly used process signal levels. Voltages of down to 50 mV can be converted to a standard current or voltage output. Customized input and output requirements can usually be met on request. A high quality instrumentation amplifier forms the input stage with galvanic isolation between input and output. A filter with adjustable time constant between 0 and 20 seconds is also provided for the filtering of noisy signals.

APPLICATIONS:

Signal conversion.

Filtering of noisy signals.

Elimination of the effects of ground loops from distributed process signals.

The protection of signals against common mode interferences such as motors, contactors and power line surges.

Process signal amplification in situations where the line impedance is too great to effectively drive the required instrumentation.

The current input versions have 50 Ω input impedance and add very little additional loop resistance.

The outputs can drive loads of up to 500 Ω which is sufficient to drive a measurement loop of several kilometres.

Individual channel isolation and the elimination of common mode offsets for non-isolated computer and PLC inputs.

SPECIFICATIONS:

- Standard input signal ranges from 0-50 mV, ±10 V to 4-20 mA.
- Bipolar input and output configurations.
- Customised input and output ranges on request.
- Input impedance of >100 kΩ for the voltage input and 50 Ω for the current input models.
- Maximum input signals of 250 V for voltage input and 100 mA for the current input.
- Output signal ranges of 0-10V, ±10 V, 4-20 mA and 0-20 mA.
- Output load >2 kΩ for the voltage output and 500 Ω maximum for the current output.
- Multi-turn trimpot adjustment for zero and span on the front of the unit.
- Adjustable filter with time constant from 0 to 20 seconds.
- Frequency response 1 kHz with filter disabled.
- Linearity better than 0.1% of full scale.
- Auxiliary supply 115/230 VAC ±10% 50/60 Hz or 12/24 VDC ±5%.
- Isolation between input and output >1,500 VAC for AC powered versions and >1,000 VAC for DC powered versions.
- Operating temperature -10°C to 60°C.
- 24 hour operational burn-in.
- Calibration sheet provided for each unit manufactured.
- DIN rail mounting with dimensions 40 x 80 x 85 mm (W x H x D).

danntech PROCESS INSTRUMENTATION

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CURRENT INPUT

4 - 20 mA = A
0 - 20 mA = B
±5.5 mA = C
0 - 1 mA = D
0 - 5 mA = E
0 - 200 mA = L
0 - 800 mA = M

VOLTAGE INPUT

0 - 10 V = A
0 - 50 mV = B
±50 mV = C
0 - 5 V = D
±5 V = E
1 - 5 V = F
±10 V = G
0 - 100 mV = H
0 - 150 mV = I
±150 mV = J
0 - 1 V = K
0 - 20 V = L
0 - 30 V = M
±1.25 V = P
0 - 60 mV = Q
±1.5 V = R
0 - 200 mV = S
0 - 15 V = T
±20 mV = U
±100 mV = V
±50 V = W
0 - 3 V = X
0 - 100 VDC = Y
0 - 120 VDC = Z
0 - 800 mV = AA
±400 mV = AB
0 - 1300 mV = AC
±100 VDC = AD
0 - 50 VDC = AE
0 - 200 VDC = AD
±75 mV = AF
0 - 24 VDC = AG

GB-SC/ I V - I V / ☐☐

CURRENT OUTPUT

A = 4 - 20 mA
B = 0 - 20 mA
D = 0 - 1 mA
E = 0 - 5 mA
F = 20 - 4 mA

VOLTAGE OUTPUT

A = 0 - 10 V
B = 0 - 50 mV
C = ±50 mV
D = 0 - 5 V
E = ±5 V
F = 1 - 5 V
G = ±10 V
K = 0 - 1 V
M = 0 - 20 mV

Auxiliary Power Supply

A = 230 VAC
B = 115 VAC
C = 24 VDC
D = 12 VDC

Internal Configuration

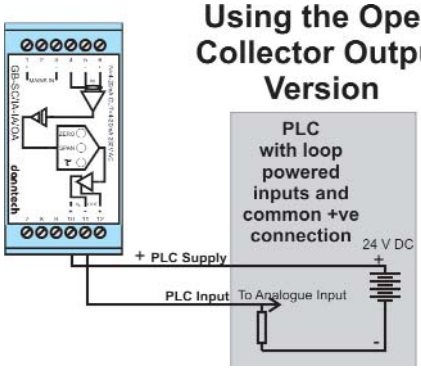
I = inverted signal output
O = open collector output configuration
E = wide range zero and span adjustment
F = internal filter DISABLED, for fast response
(leave this letter out if none of these options are used)

Example:

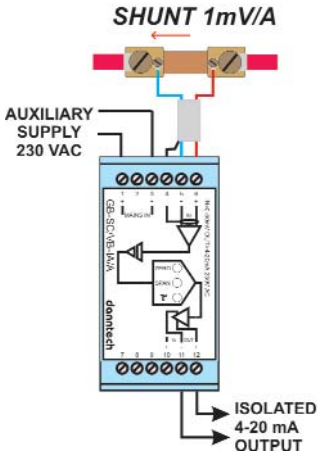
GB-SC/IA-VA/B is
Input = 4-20 mA
Output = 0-10 V
Auxiliary Supply = 115 VAC

Customized inputs and outputs available on request.

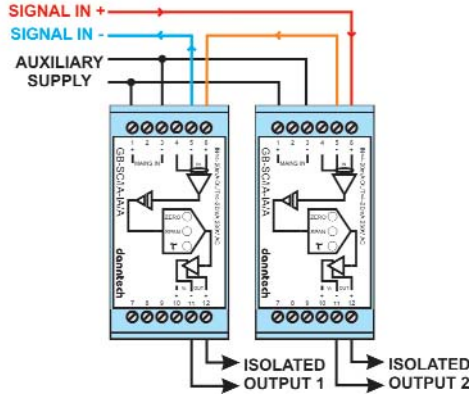
Using the Open Collector Output Version



DC Current Shunt Amplifier and Isolator



Using the Signal Converter as an Isolator and Signal Splitter



Typical Part Numbers and Descriptions:

GB-SC/IA-IA/A	Signal Converter 4-20mA/4-20mA 230VAC
GB-SC/IA-IA/B	Signal Converter 4-20mA/4-20mA 115VAC
GB-SC/IA-IA/C	Signal Converter 4-20mA/4-20mA 24VDC
GB-SC/IA-IA/D	Signal Converter 4-20mA/4-20mA 12VDC
GB-SC/IA-IB/IA	Signal Converter 4-20mA/0-20mA I 230VAC
(4 to 20 mA input, 20 to 0 mA inverted output, 230 VAC)	
GB-SC/IA-VA/B	Signal Converter 4-20mA/0-10V 115VAC
GB-SC/IA-VF/...	Signal Converter 4-20mA/0-5V .....
GB-SC/IB-IA/OA	Signal Converter 0-20mA/4-20mA OC 230VAC
(0 to 20 mA input,4 to 20 mA output, open collector output)	
GB-SC/IB-VA/...	Signal Converter 0-20mA/0-10V .....
GB-SC/IC-IB/...	Signal Converter +/-5.5mA/0-20mA .....
GB-SC/SPEC	Signal Converter to Customer Specs.
GB-SC/VA-IA/...	Signal Converter 0-10V/4-20mA .....

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