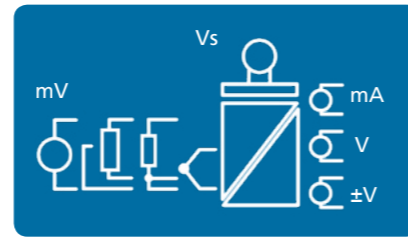


# Signal conditioning



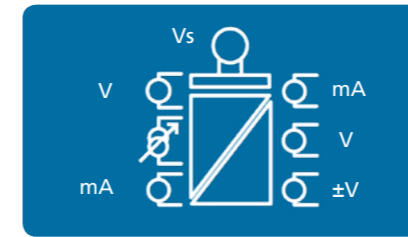
SEM 1600T

RTD, thermocouple, potentiometer, resistance or mV input. active / passive mA or voltage output.



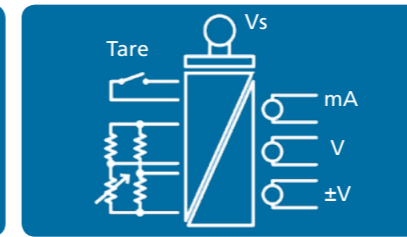
SEM 1600VI

mA / voltage conditioner with active / passive mA or voltage input and outputs.



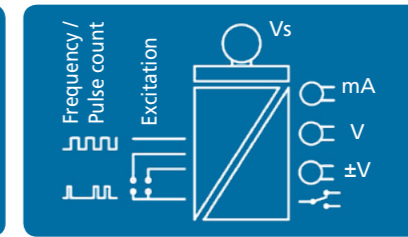
SEM 1600B

Load cell input signal conditioner with active / passive mA or voltage output.



SEM 1600F

Dual inputs, frequency and pulse counter. Active / passive mA or voltage and relay output.



## INPUT

Pt100
RTD other types
Resistance
Potentiometer
Thermocouple
Voltage
Current
Frequency
Pulse counter
Load cell

Yes
Yes
(10 to 10,500) Ω
1 kΩ to 100 kΩ auto sense
K, J, N, E, T, R, S, L, U, B, C(W5), D(W3), G(W)
(-100 to +200) mV
N/A
N/A
N/A
N/A

## OUTPUT

See datasheet for full details and specific output combinations

mA - active / passive
Voltage
Bi-polar voltage

## GENERAL

Isolation
Output zero/span alignment to input
User offset
User linearisation
Remote reset
Ambient operating
Power supply
Loop power supply
Sensor excitation
Configuration
Totalise
Maths functions
Width

Yes
Yes
Yes
Yes - resistance / potentiometer / mV
N/A
(-30 to +70) °C
Universal, (10 to 48) VDC and (10 to 32) VAC
Yes - output
N/A
PC
N/A
N/A
N/A
Flow formulae
17.5 mm

N/A
N/A
N/A
N/A
N/A
(-50 to +50) VDC
(-50 to +50) mA (active / passive)
N/A
N/A
N/A

mA - active / passive
Voltage
Bi-polar voltage

Yes
Yes
N/A
Yes
N/A
N/A
(-30 to +70) °C
Universal, (10 to 48) VDC and (10 to 32) VAC
Yes - input and output
N/A
PC
N/A
N/A
Flow formulae
17.5 mm

N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
Yes - 4-wire

mA - active / passive
Voltage
Bi-polar voltage

Yes
Yes - push-button
Yes - tare
Yes
Tare
(-30 to +70) °C
Universal, (10 to 48) VDC and (10 to 32) VAC
Yes - output
Yes
PC
N/A
N/A
N/A
17.5 mm

N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
N/A
0.01 Hz to 65 kHz
Yes
N/A

mA - active / passive
Voltage
Bi-polar voltage
Pulse (closed contact relay)

Yes
Yes
N/A
N/A
Yes
(-30 to +70) °C
Universal, (10 to 48) VDC and (10 to 32) VAC
Yes - output
Yes
PC
Yes
Yes
17.5 mm

# Signal conditioning



SEM 1630

RTD, thermocouple, passive mA, mV input, 2 change over relay outputs.



SEM 1633

RTD, potentiometer, resistance input with 2 change over relay outputs.



SEM 1636

Loop-powered input, with 2 change over relay outputs.

## INPUT

Pt100  
RTD other types  
Resistance  
Potentiometer  
Thermocouple

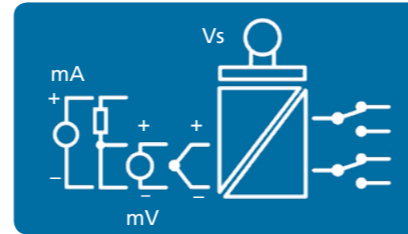
Voltage  
Current  
Frequency  
Pulse counter  
Load cell

## OUTPUT

See datasheet for full details and specific output combinations

## GENERAL

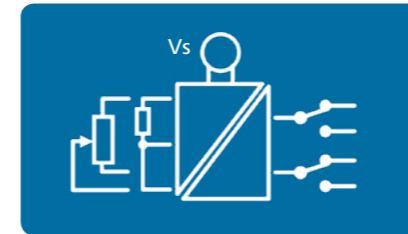
Isolation  
Output zero/span alignment to input  
User offset  
User linearisation  
Remote reset  
Ambient operating  
Power supply  
Loop power supply  
Sensor excitation  
Configuration  
Totalise  
Maths functions  
Width



Yes
N/A
N/A
N/A
K, J, N, E, T, R, S
(-10 to +75) mV
(-10 to +25) mA Passive
N/A
N/A
N/A

2 x (250 VAC @ 1A) C/O relay

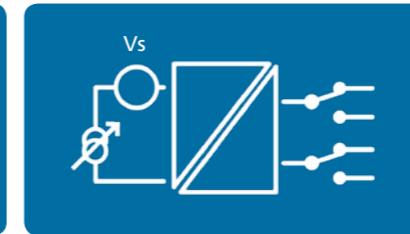
Yes
N/A
N/A
N/A
N/A
(-30 to +70) °C
24 VDC
N/A
N/A
PC
N/A
N/A
N/A
17.5 mm



Yes
Yes
(10 to 10,500) Ω
10 Ω to 100 kΩ auto sense
N/A
N/A
N/A
N/A
N/A
N/A

2 x (250 VAC @ 1A) C/O relay

Yes - relays
N/A
N/A
Yes - resistance / potentiometer
N/A
(-30 to +70) °C
Universal, (10 to 48) VDC and (10 to 32) VAC
N/A
N/A
PC
N/A
N/A
17.5 mm



N/A
N/A
N/A
N/A
N/A
N/A
(4 to 20) mA Passive
N/A
N/A
N/A

2 x (250 VAC @ 1A) C/O relay

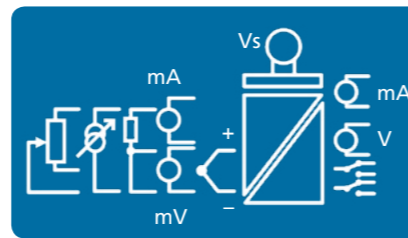
Yes - relays
N/A
N/A
Yes
N/A
(-30 to +70) °C
(4 to 20) mA loop
N/A
N/A
PC
N/A
Yes - flow formula
17.5 mm

# Signal conditioning



**SEM 1700**

Universal signal conditioner with current or voltage, and 2 change-over relay outputs.



**Single channel**

Yes
N/A
(20 to 400) $\Omega$
> 1 k $\Omega$
K, J, N, E, T, R, S, L, U, B, C, D, G
$\pm 50$ mV, $\pm 200$ mV, $\pm 1$ V, $\pm 10$ V
$\pm 30$ mA (active or passive)
N/A
N/A
N/A

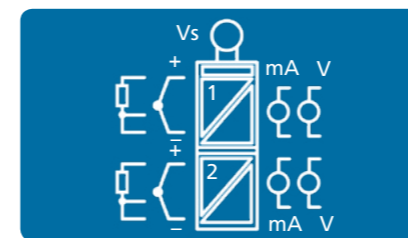
mA - active / passive
Voltage
2 x (250 VAC @ 1A) C/O Relay

Yes
Yes - push-button
N/A
N/A
N/A
(-30 to +70) $^{\circ}\text{C}$
Universal, (22 to 300) VDC and (24 to 250) VAC
Input and output
Yes - mA loop
PC - push-button
N/A
N/A
22 mm



**SEM 1720**

Dual-channel RTD, thermocouple, potentiometer, mV input with active / passive mA or voltage outputs.



**Dual channel**

Yes
Yes
N/A
1 k $\Omega$ to 100 k $\Omega$ auto sense
K, J, N, E, T, R, S, L, U, B, C, D, G
N/A
N/A
N/A
N/A

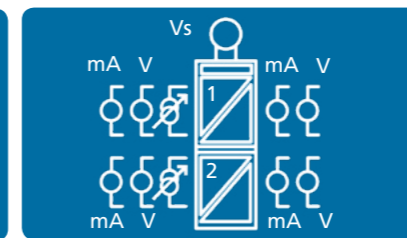
mA - active / passive
Voltage
Optional programmable maths outputs to include average, sum and splitter functions

Yes
N/A
Yes
Yes
N/A
(-30 to +70) $^{\circ}\text{C}$
Universal, (22 to 300) VDC and (24 to 250) VAC
Output, both channels
Yes - both channels
PC / DIP switch - pre-set ranges
N/A
Yes
22 mm



**SEM 1750**

Dual-channel mA / voltage conditioner with active / passive mA or voltage input and outputs.



**Dual channel**

N/A
N/A
N/A
N/A
N/A
$\pm 50$ VDC
$\pm 50$ mA (active / passive)
N/A
N/A
N/A

mA - active / passive
Voltage
Optional programmable maths outputs to include average, sum and splitter functions

Yes
N/A
N/A
Yes
N/A
(-30 to +70) $^{\circ}\text{C}$
Universal, (22 to 300) VDC and (24 to 250) VAC
Input and output, both channels
Yes - both channels
PC
N/A
Yes
22 mm

## INPUT

### TYPE

- Pt100
- RTD other types
- Resistance
- Potentiometer
- Thermocouple

- Voltage
- Current
- Frequency
- Pulse Counter
- Load Cell

## OUTPUT

See datasheet for full details and specific output combinations

## GENERAL

- Isolation
- Output zero/span alignment to input
- User offset
- User linearisation
- Remote reset
- Ambient operating
- Power supply
- Loop power supply
- Sensor excitation
- Configuration
- Totalise
- Maths functions
- Width

# Signal conditioning



**SEM 1000**

(4 to 20) mA current loop isolator.



**SEM 1010**

Provides isolated power for a transmitter derived from a powered loop.



**SEM 1015**

Converts DC voltage to an isolated (4 to 20) mA signal.



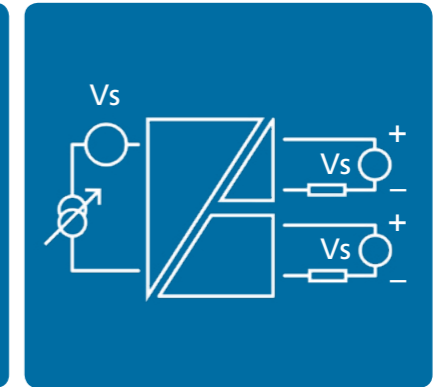
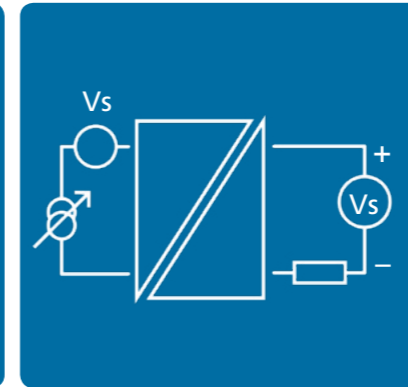
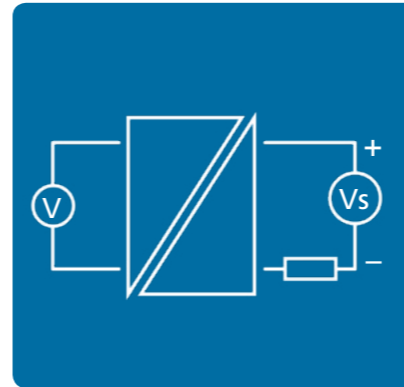
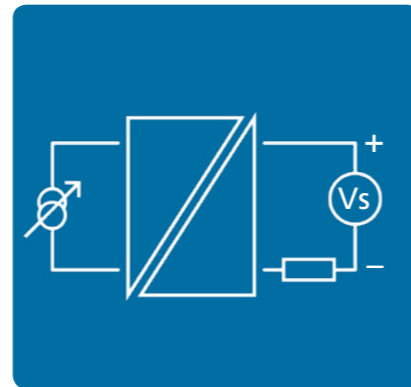
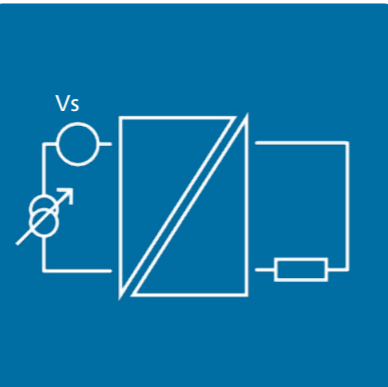
**SEM 1020**

Isolating current loop booster.



**SEM 1200**

Isolating current loop splitter.



**INPUT**

Type

(4 to 20) mA passive

2-wire (4 to 20) mA transmitter

DC voltage

(4 to 20) mA passive

(4 to 20) mA passive

Range

(4 to 20) mA

(4 to 20) mA

Any between (-10 to 100) VDC

(4 to 20) mA

(4 to 20) mA

**OUTPUT**

(4 to 20) mA active

(4 to 20) mA passive

(4 to 20) mA passive

(4 to 20) mA passive

2 x 2-wire (4 to 20) mA passive

**GENERAL**

Volt drop

Input 5.0 VDC typical

Output 5.0 VDC typical

Maximum loop supply

Input 35 VDC

Output 35 VDC

Isolation

500 VDC

500 VDC

Maximum load

Output 500 Ω

N/A

Power supply

Input loop

Output loop

Ambient operating temperature

(0 to +70) °C

(0 to +70) °C

Width

12.5 mm

21 mm

N/A

Input and output 2.7 VDC

Input and outputs 5.0 VDC

Output 30 VDC

Input and output 35 VDC

Input and output 32 VDC

500 VDC

500 VDC

500 VDC

N/A

Output 1200 Ω

Outputs 1200 Ω

Output loop

Both loops

All loops

(0 to +70) °C

(0 to +70) °C

(0 to +70) °C

12.5 mm

12.5 mm

12.5 mm