

- Designed for use with Penny & Giles SLS, SRS and SRH position sensors, but is also suitable for use with any contactless position transducers, tilt sensors, pressure transducers and load cells that have a 0-5Vdc output signal
- Supply voltage: 10-30 Vdc unregulated
- Output signal: 4-20mA (or 5-19mA) and 0.5 to 4.5 Vdc
- Optional range of voltage output signals by using VM card
- Optional PWM output signal by using PWM card
- IP68 metal enclosure
- User-adjustable gain and zero settings
- CE approved
- Rapid despatch



The new Penny & Giles model SSC is a Sensor Signal Conditioning unit housed in an IP68 protected metal enclosure. It is suitable for use with any sensor that produces a dc output signal voltage in the range 0 - 5Vdc. The SSC also provides a 5Vdc source that may be used as a supply for many types of sensor, including potentiometers, contactless position transducers, tilt sensors, pressure transducers and load cells.

The SSC converts the sensor output voltage signal to a 4 - 20mA (or optional 5 19mA) current output, or by using additional module cards, into a variety of different voltage formats or a digital PWM output. Model SSC

normally operates from an unregulated 10 - 30Vdc supply. Where lowest noise performance is required with the optional voltage module card, a negative supply in the range -10 to -30Vdc may also be employed.

The SSC housing is designed to be mounted on a bulkhead close to the sensor, by using M5 screws through the mounting holes that are located under the housing lid. The supply, output and sensor connections are routed through two IP68 rated cable glands that can accommodate cable diameters of between 3 and 8mm. Connections are made to a screw terminal block on the SSC board.

SPECIFICATIONS

ELECTRICAL

SUPPLY VOLTAGE	10 – 30Vdc unregulated When optional Voltage Module (VM) card is fitted, a -10 to -30Vdc negative supply may also be connected to increase current sinking capability and reduce noise. If a negative supply is not connected, the VM card automatically generates its own
OVER VOLTAGE PROTECTION	Unit can operate indefinitely at 33Vdc and is capable of absorbing short duration transients above this
SUPPLY CURRENT	10mA maximum (plus output currents from 5Vdc source and current output). Additional 9mA with VM card fitted or additional 3mA with PWM card fitted
REVERSE POLARITY PROTECTION	Yes – indefinitely
SENSOR EXCITATION	5Vdc ± 0.15 (up to 30mA)
SENSOR OUTPUT PULL DOWN RESISTOR	1 M Ω
LINEARITY (CIRCUIT ONLY)	$< \pm 0.01$ full stroke
OUTPUT SIGNALS (JUMPER SECTION)	0.5 - 4.5Vdc 4 – 20mA (and 5 - 19)
WITH ADDITIONAL VM CARD WITH ADDITIONAL PWM CARD	0 to 5 & -5 to 0, 0 -10 & -10 to 0, ± 2.5 , ± 5 , ± 7.5 , ± 10 Vdc TTL level compatible signal with a 10 - 90% duty cycle. User selectable frequencies of 100, 130, 310 and 1000Hz. Logic Signals: LOW < 0.4 Vdc HIGH 4.5 ± 0.5 Vdc
OUTPUT NOISE – VOLTAGE RANGE CURRENT RANGE	< 5 mVrms < 10 μ Arms
OUTPUT LOAD	10k Ω minimum (resistive to 0V line) for nominal 0.5 – 4.5Vdc range only Output current with VM card ranges from 250-750 μ A (sourcing and sinking) depending on supply voltage. Refer to Penny & Giles where more than 250 μ A is required
OUTPUT COMPLIANCE VOLTAGE	Vsupply -4V
OUTPUT LAG	< 2 ms
INFLUENCE OF VARIATION IN SUPPLY VOLTAGE ON OUTPUT	$< 0.001\%$ span
TEMPERATURE STABILITY	< 100 (-40 to +70°C) ppm/°c < 300 (-40 to +100°C) ppm/°c
ZERO ADJUSTMENT	0% -75% of range
SPAN ADJUSTMENT	25% - 100% of range (Turn down = 4)
OUTPUT DIRECTION	Normal or reversed - jumper selected

MECHANICAL

ENCLOSURE	Powder coated aluminium alloy
WEIGHT	250g
MOUNTING	Bulkhead mounting via M5 fixing holes
CABLE EXIT	Via glands – cable diameter must be between 3.0 and 8.0mm diameter to seal to IP68

ENVIRONMENTAL

PROTECTION CLASS	IP68 to 2m for 1 hour duration
OPERATIONAL TEMPERATURE	-40 to +100°C
EMC IMMUNITY LEVEL	> 100 V/m with 1m maximum distance to sensor