

Industrial Series Amplifiers and Transmitters



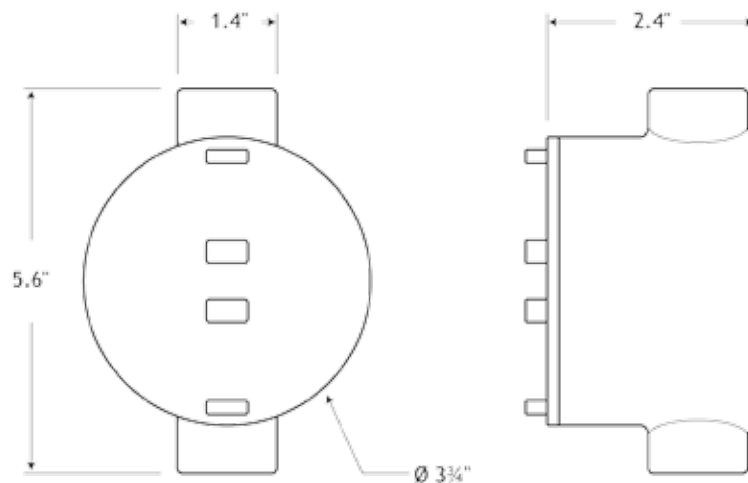
Features

- Output proportional to flow
- Mounts directly to meter
- Low cost
- 1.7 lbs
- Explosion-proof enclosure
- FM Approved
- CSA Certified
- Class I, Groups B, C, D
- Class II Groups E, F, G

General Information

Sponsler Industrial Series Amplifiers and Transmitters amplify, condition, or convert the output signal of a flowmeter into another output format that matches the demands of your specific application. In order to cover a wide variety of inputs and outputs, there are seven models available, including frequency to voltage, frequency to current, pulse shaping, modulated carrier to pulse, modulated carrier to current, and modulated carrier to voltage conversions. Liquid Controls Sponsler designs and builds each each model to function unhindered in severe industrial conditions and to provide a long service life. Each model is housed in the same explosion-proof enclosure and comes complete with connectors and unions. Sponsler amplifiers and transmitters can be mounted directly onto a meter or used as a stand-alone device.

Dimensions



SP711-3 3-Wire Analog Transmitter

The SP711-3 linearly converts frequency output to an equivalent voltage output. The voltage output switch can be set at 0-5VDC or 0-10VDC. To discriminate between noise and signal input, sensitivity to the signal input can be adjusted in the field. Internals are protected against reverse polarity.

Power Input

- 12 - 28VDC
- 50mA minimum

Environmental**Operating**

- -40° to 185° F (-40° to 85° C)

Storage

- -85° to 257° F (-65° to 125° C)

Signal Input**Frequency**

- 0 - 10kHz

Amplitude

- 20mV - 35V sine or square wave

Impedance

- 10k Ω

Analog Output

- 5 or 10V @ desired full scale frequency (0V @ 0Hz)

Analog Output**Full Scale Range**

- 75Hz - 10kHz selectable
Consult factory for other ranges

Response Time

- 95% of change in 1 second

Linearity

- 0.3% full scale

Temperature Coefficient

- < 2% of reading over entire temperature range

Minimum Load Resistance

- 250 Ω

SP712-2 Loop Powered 4-20 mA Transmitter

The SP712-2 linearly converts frequency input to an equivalent 4-20 mA current output. The SP712-2 is ideal for transmitting data over long distances, and it exhibits excellent noise immunity. To discriminate between noise and signal input, sensitivity to the signal input can be adjusted in the field. There is a "Test" S2 button on the upper left of the CPU board. When S2 is pressed and both voltage and an input signal are present, a LED indicator underneath the S2 button will illuminate. Internals are protected against reverse polarity.

Power Input

- 7V + (20mA x R_L) minimum
- 28V + (4mA x R_L) maximum

Environmental**Operating**

- -40° to 185° F (-40° to 85° C)

Storage

- -85° to 257° F (-65° to 125° C)

Signal Input**Frequency**

- 0 - 10kHz

Amplitude

- 50mV - 35V sine or square wave

Impedance

- 50k Ω

Analog Output

- 20mA @ desired full scale frequency (4mA @ 0Hz)

Analog Output**Full Scale Range**

- 100Hz-10kHz selectable

Response Time

- 95% of change in 1 second

Linearity

- 0.3% full scale

Temperature Coefficient

- < 2% of reading over entire temperature range

SP714 Pulse Amplifier

The SP714 linearly converts sinewave output to a square wave. The SP714 has a built-in test oscillator that can verify amplifier operation without a signal source. There are two LED indicators on the CPU board—one to signal the presence of power and the other to mark an output signal. To discriminate between noise and signal input, sensitivity to the signal input can be adjusted in the field. Internals are protected against reverse polarity.

Power Input

- 6 - 28VDC
- 5mA @ 24VDC

Environmental**Operating**

- -40° to 185° F (-40° to 85° C)

Storage

- -85° to 257° F (-65° to 125° C)

Signal Input**Frequency**

- 0 - 10kHz

Amplitude

- 20mVp-p minimum sine or square wave

Impedance

- 10k Ω

Output

- 6 - 28VDC squarewave
- Proportional to input voltage

Minimum Load Resistance

- 250 Ω

SP717 Modulated Carrier Amplifier

The SP717 produces a carrier frequency (in conjunction with an RF pickup coil), detects the shift in the carrier frequency (modulation) that occurs with the passage of magnetic material, and generates a squarewave output pulse with each shift in the carrier frequency. There are two LED indicators on the CPU board—one to signal the presence of power and the other to mark an output signal. Internals are protected against reverse polarity and short circuits.

Power Input

- 6 - 28VDC
- 100mA maximum

Environmental

Operating

- -40° to 185° F (-40° to 85° C)

Storage

- -85° to 257° F (-65° to 125° C)

Signal Input

Frequency

- 0 - 3500Hz with 50kHz carrier
Requires pickup coil 1-1.3mH

Impedance

- 10kΩ

Output

- 6 - 28VDC squarewave
- Proportional to input voltage

Minimum Load Resistance

- 1kΩ

SP718-mA 4-Wire Modulated Carrier Analog 4-20mA Transmitter

The SP718-mA linearly converts the carrier frequency shift rate to an equivalent 4-20mA current output. The SP718-mA is ideal for transmitting data over long distances because it exhibits excellent noise immunity. A LED indicator on the CPU board signals the presence of power.

Power Input

- 12 - 16.5VDC or 110VAC @ 60Hz
Observe polarity
- 100mA maximum

Environmental

Operating

- 32° to 158° F (0° to 70° C)

Storage

- -4° to 185° F (-20° to 85° C)

Signal Input

Frequency

- 0 - 3500Hz with 50kHz carrier
Requires pickup coil 1-1.3mH

Analog Output

- 20mA @ desired full scale frequency (4mA @ 0Hz)

Full Scale Range

- 25Hz - 3500Hz selectable
Consult factory for other ranges

Analog Output

Response Time

- 95% of change in 1 second

Linearity

- 0.3% full scale

Temperature Coefficient

- < 2% of reading over entire temperature range

Maximum Load Resistance

- 500Ω

SP718-V 4-Wire Modulated Carrier Amplifier 0-5V and 0-10V Transmitter

The SP718-V linearly converts the carrier frequency shift rate to an equivalent voltage output. A LED indicator on the CPU board signals the presence of power. The analog voltage output can be set at 0-5VDC or 0-10VDC.

Power Input

- 12 - 16.5VDC or 110VAC @ 60Hz
Observe polarity
- 50mA maximum

Environmental

Operating

- 32° to 158° F (0° to 70° C)

Storage

- -4° to 185° F (-20° to 85° C)

Signal Input

Frequency

- 0 - 3500Hz with 50kHz carrier
Requires pickup coil 1-1.3mH

Analog Output

- 5 or 10V @ desired full scale frequency (0V @ 0Hz)

Full Scale Range

- 60Hz - 3500Hz selectable
Consult factory for other ranges

Analog Output

Response Time

- 95% of change in 1 second

Linearity

- 0.3% full scale

Temperature Coefficient

- < 2% of reading over entire temperature range

Maximum Load Resistance

- 1kΩ

SP720-2 Loop Powered 2 Wire Modulated Carrier Amplifier 4-20mA Transmitter

The SP720-2 is a modulated carrier amplifier with the convenience and accuracy of a 4-20 mA transmitter. There is a LED indicator on the CPU board to signal the presence of an output signal. Internals are protected against reverse polarity.

Power Input

- 7V + (20mA x R_L) minimum
- 28V + (4mA x R_L) maximum

Environmental

Operating

- -40° to 185° F (-40° to 85° C)

Storage

- -85° to 257° F (-65° to 125° C)

Signal Input

Frequency

- 0 - 3500Hz with 50kHz carrier
Requires pickup coil 1-1.3mH

Analog Output

- 20mA @ desired full scale frequency (4mA @ 0 Hz)

Full Scale Range

- 35Hz - 3500Hz selectable

Analog Output

Response Time

- 95% of change in 1 second

Linearity

- 0.3% full scale

Temperature Coefficient

- < 2% of reading over entire temperature range

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