

Pulse Duration and Pulse Frequency to Analog Converters

The () 5100 is available in several variations - 1) Pulse Duration to Analog, 2) High Frequency (> 30 Hz full-scale) to Analog, and 3) = < than 30 HZ full-scale (() 5107)). The converters use digital and analog circuitry to convert the pulse duration or frequency to a proportional analog signal. Various drivers are used to create the desired output analog type. The inputs and outputs are isolated from the power source. All converters have adjustments for offset, span, and output loop compensation. The frequency to analog converter also has a filter adjustment for smoothing.

The converter is powered by an external 24 VDC source. 115 and 220 VAC powered assemblies are available.

These options are denoted by the number 5100/5107 suffix as described under Product Description in the AGM 'Product Index'.

1) The pulse duration input may be ordered as a voltage pulse of dry contact input. Isolated and non-isolated input options are available. Also, an optional input repeater relay or second analog output is available. When ordering, specify input type, zero/full scale range (EG 3/12 sec, 15 sec), output (EG 4/20 mADC), power and mounting.

2) Virtually any type of pulse and frequency range can be specified. Typical pulse types include AC, 5-Volt TTL, 10 to 30-volt pulse, etc. Options include 12 VDC excitation voltage and fixed divide output. When ordering, specify input type, zero/full scale range (EG 0/1000 Hz), output (EG 4/20 mADC), power and mounting.

3) The third option is preferred for low speed application when fast response without ripple is required. Typical applications include electrical power company demand meter and older flow meter pulse rate to analog conversion.

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General Specifications

Input - any instrumentation type of pulse signal can be stipulated.

*Output - Any stipulated instrumentation type of analog signal. e.g. 0/10 vdc. 4/20madc, etc. Any input to output scaling can be specified.

Accuracy - +/-0.10% calibration, repeatability and linearity. Over ambient temperature range, 0/50 deg C and supply regulation is +/-0.25%.

Adjustments - Twenty turn pots for typical +/-15% field variation of input signal offset and span.

Power - 4-wire only. Module power requirements are 24vdc +/- 10% regulation with a maximum of 3 watts. Input and output signals are isolated from 24 vdc by an internal DC/DC power supply.

AGM Electronics, Inc
Product Documentation
Description and Theory of Operation

DTO () 5100

DTO () 5107

Physical - EIA rack, TA panel, PTA dust enclosure, HPM, DIN, AUX or NEM mounting options are available. Refer to the Enclosure/assembly data sheet' for dimensions.

*Open circuit output voltages for current outputs:

600 ohm loop drive is 18.5 vdc max

1500 ohm loop drive is 42.6 vdc max