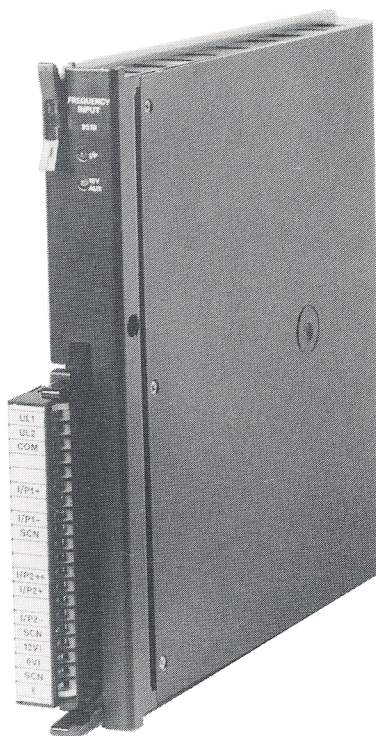




Speed/Frequency Input Module

9510



DESCRIPTION

The 9510 Frequency Input Module is a single width module which plugs into the Basic I/O Highway of a GEM 80 Controller.

The module provides a record of a number of input events which, when compared with an internal crystal controlled oscillator, can be used to derive speed or frequency measurement.

The 9510 appears to the GEM 80 Controller as a 32 bit module with one 16 bit word holding the input count and the second 16 bit word holding the oscillator count.

One of three crystal oscillator frequencies are selected by adding links on the plant connector.

FEATURES

- Suitable for industrial applications in an electrically noisy environment.
- Wide input voltage range.
- Separate input terminals for square wave or sine wave inputs.
- Optical isolation of plant signals.
- Isolated supply for pulse counting probes.
- On board crystal oscillator.
- Lamp indication of input pulses present and availability of isolated supply.

SPECIFICATION

Power Supplies.

Power Requirements : +15V @ 80mA from the host GEM 80 Controller + 1.6mA for each 1mA drawn from the isolated 12V d.c. supply.

Aux. Power : Isolated 12V d.c @ 100mA maximum available. 500V isolation from GEM 80 supply.

Inputs.

Number of input channels : 1 (1 x 16-bit counter).

Type of input. : 1 - Sine wave (4-150V peak to peak)
: 2 - Square wave/Pulsed signals (4-66V peak)
: 3 - Square wave/Pulsed signals (50-150V peak)

SPECIFICATION

Input voltage :
Input type 1. : Special application for magnetic sensing probes. See User Information T475
Input type 2. : Logical 1.
4V minimum to 66V maximum for ON state
Logical 0.
0V nominal to 3V maximum for OFF state
Input type 3. : Logical 1.
55V minimum to 150V maximum for ON state
Logical 0.
0V nominal to 45V maximum for OFF state
Input current. : Input type 2.
4mA typical @ 4V
10mA typical @ 66V
: Input type 3.
4mA typical @ 55V
13mA typical @ 150V
Indication : LED indication of pulses present.
LED indication of 12V auxiliary power available.
Internal counter capacity : 32768.
Input counting rate. : 35Hz(min) to 55kHz(max).
Voltage withstand. : All inputs are capable of $\pm$ 150V continuous series mode.
Isolation. : Opto-isolation between inputs and Basic I/O highway.
Input common mode isolation voltage. : 2000V peak transient.

Counter read time. : 10ms max 2MHz oscillator
20ms max 1MHz oscillator
40ms max 0.5MHz oscillator
Automatic reset if no input pulses received : 15.5ms 2MHz oscillator
31.0ms 1MHz oscillator
62.0ms 0.5MHz oscillator
Crystal Oscillator.
Accuracy. : $\pm$ 20ppm @ 25°C
Stability. : $\pm$ 50ppm (0-60)°C
Drift. : $\pm$ 5ppm
Mechanical.
Weight. : 0.64kg.
Temperature. : 0 to 60°C operating.
-20 to 70°C storage.
Humidity. : 10 to 90% RH non-condensing.
Flame retardancy. : UL94 Class V0.
Environment and Tests. : GEM 80 Standard Tests.
CEGB EES 1980 Class Y.

ORDERING CODES

Module and 16-way plantside wiring connector. 9510-4001
Module only. 9510-4002

ADDITIONAL INFORMATION

Further information and help on GEM 80 products or applications can be obtained from;

Your local GEM 80 representative,
or GEM 80 Customer Services Dept.
Tel. 0782 783511. Ext. 2651 or 2574.

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