

SIGMA 333 DIGITAL INPUT MODULE

Sigma 333



- 18 digital input channels
- 2 poles per channel
- Status monitor, frequency, period, count and event timing inputs
- Screw terminal connections with cable glands

SPECIFICATION

The Sigma 333 provides 18 channels of isolated digital inputs to accurately record events as they are detected against a real-time reference.

Number of input channels : 18
Input/output connections : Screw terminals; cable glands
Measurement modes : Status, count, frequency, period, interval, and event timing

Input channels

Input channel isolation : 1500V
Input threshold for logic 1 : >4.5V
Input threshold for logic 0 : <1.5V
Input operational range : 4.5 to 24V
Input current : 2.0mA at 5V
Debounce options : 1 to 200mS

Count function

No of channels : All input channels
Max count value : 65535
Max count rate : 20000 pulses/second channels 1-4
400 pulses/second channels 5-18
aggregate max of 2000

Mark space ratio : 1:1

Event timing

No of channels : All input channels
Event resolution : 1 ms
Event registration : 1 ms
Input state rate of change : 400 Hz max, 800 changes/sec/channel max, with aggregate max of 4000

Frequency

Gate times : 1 or 10 seconds
Max input frequency : 20000 pulse/sec channels 1-4,
400 pulse/sec channels 5-18,
aggregate max 2000 pulse/sec.
Mark space ratio : 1:1
Resolution : 0.1 Hz
Accuracy : 0.05% rdg \pm 1Hz for 1 sec gate
0.05% rdg \pm 0.1Hz for 10 sec gate

Period measurement

Number of channels : 4 (channels 5 to 8)
Max cycle period : 60 seconds
Measurement resolution : 1 ms
Accuracy : 0.05% rdg \pm 1ms

Multiple period measurement

Number of averaged periods : 1 to 100 (channel 1 to 4)
Duration of multiple period : 60 seconds
Period resolution : 10 μ S
Accuracy : 0.05% rdg \pm 1ms

Interval measurement

Number of channels : 4 (channels 5 to 8)
Max pulse duration : 60 seconds
Measurement resolution : 1 ms
Accuracy : 0.05% rdg \pm 1ms

Power requirements

Operating voltage : 12 to 28V
Power consumption : 3W

Note : The DC voltage for this module is provided by the Sigma 381 interface and is supplied over the communication cable. No local power supply is required.

System architecture

Communication interface : RS485
Maximum Baud rate : 153kb
Max number of Sigma modules on network : 99
Maximum length of network : 1Km

General

Connection for comms and power in : 5 pin connector
Connection for comms and power out : 5 pin connector
Connection for local display : 5 pin connector
Status lights : Power & comms

Operating Conditions

Temperature range : -20 to +70°C
Relative humidity (0 to 40°C) : <90%
Vibration (0 to 400Hz) : 3g in 3 planes

Mechanical

Casing : Aluminium sealed to IP55
Size (w x d x h) : 250 x 215 x 68mm
Weight : 1.8 Kg

Accessories

Cable plug for communications and power in
Cable plug for communications and power out
Dust cap for local display socket