

SIGMA 311B DC CURRENT INPUT MODULE

Sigma 311b



- 20 input channels
- 2 poles per channel
- DC current inputs
- Connector inputs for fast set-up

SPECIFICATION

Full signal conditioning is provided in the Sigma 311b module, enabling 20 channels DC current channels to be connected via miniature connectors on the front panel.

Number of channels : 20
 Poles per channel : 2
 Input connections : 2 pin miniature copper connectors
 Measurement modes : DC Current

DC Current

Ranges : 4 to 20mA (0-100%)
 0 to ±20mA
 Measurement accuracy : +/- 0.015%rdg + 0.01%rng + 6uV
 Temperature coefficient : 0.0035% per °C (35ppm)
 Shunt resistor : 62Ω (Internal)
 Resistor accuracy : +/- 0.1%
 Resistor stability : 3ppm/°C

A-D Converter

Resolution	Channels per second	SMR
19 bits	10	>60dB
18 bits	20	>60dB
17 bits	40	>60dB
15 bits	100	0dB
13 bits	200	0dB

Interference rejection

AC common mode rejection ratio (channel group) : >140dB
 AC single channel common mode rejection ratio : >120dB
 DC channel common mode rejection ratio : >108dB
 AC series mode rejection ratio 50 or 60Hz (±0.05%) : >60dB

Maximum operating voltages

Max voltage between any + and all - inputs : 12V
 Max voltage between any two - inputs : 11V
 Max voltage between any two terminals : 22V
 Channel overload protection (continuous) : 50V
 Isolation between channel group and RS485 : 1500V

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.

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