

SIGMA 381A NETWORK INTERFACE AND POWER SUPPLY

Sigma 381a



- RS 485:RS232 converter
- Connects Sigma network to PC
- Supplies 24 Vdc power for Sigmas on network
- 2 RS485 outputs for positional flexibility

SPECIFICATION

The Sigma 381a module converts the RS485 communication link from the sigma measurement modules on the network into a RS232 signal that is suitable for connection to the COM port of a standard PC.

The Sigma 381a also supplies the 24Vdc power supply required by the Sigma modules using the communication cable.

All communication and power connections are made via standard plugs and sockets on the front panel of the 381a unit.

Inputs

Input : Standard RS232 port
Input connection : 9 pin D type plug
Power requirement : 90 -260Vac
125-370Vdc
Power connection : IEC 3 pin power socket

Outputs

Outputs : Sigma RS485 network
No of outputs : 2
Output connection : 5 pin circular socket

Network cable details

Cable spec : 2 pair cable 7/0.2 strands
Sigma network (pair 1) : RS485 communications
Sigma power (pair 2) : 24Vdc power
RS485 baud rate: 9K6, 19K2 or 38K4

Power requirements

Operating voltage : 90 - 260Vac 50/60Hz
125-370Vdc

Note : The AC input voltage to the 381a module is converted to 24Vdc to supply the Sigma modules on the RS485 network. The number of Sigma modules that can be powered from a single 381a unit depends on the length and size of cable between each module. For standard 2 pair 7/0.2 stranded wire cable the number (N) of Sigma modules is approximately

$$N = (14-L/100)/0.8$$

where L is the total network cable length. If more Sigma modules are required, then a 381b slave power supply unit must be inserted into the network to boost the supply voltage.

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
Status lights : Power on

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 : 2.2 Kg

Accessories

RS232 cable 2m
Network terminator
Cable plug - communications and power out
AC power cable 2m