SIGMA 381B SLAVE POWER SUPPLY

Sigma 381b

- ● **Supplementary power supply**

- ● **Boosts 24 Vdc power supply to Sigma modules**

- ● **Allows an increased number of Sigma modules on a network**

SPECIFICATION

The Sigma 381b module provides a supplementary 24Vdc power supply for Sigma modules where either the network cable is very long or a large number of Sigma modules are installed on a network. The 24Vdc power is supplied using the communication cable as in the 381a module.

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

Inputs

Input :	Sigma RS485 network
Input connection :	5 pin circular plug
Power requirement :	90 - 260Vac
	125 - 370Vdc
Power connection :	IEC 3 pin power socket

Outputs

Output :	Sigma RS485 network
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 - 370 Vdc

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 +70ºC
Relative humidity (0 to 40ºC) :	<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

Cable plug - communications and power out
Cable socket - communications and power in
AC power cable 2m