GOODBURN

DATA ACQUISITION SYSTEMS

SIGMA 381U NETWORK INTERFACE AND POWER SUPPLY

Sigma 381u

- ● **RS 485 : USB converter**
- ● **Connects Sigma network to PC via USB input**
- ● **Supplies 24 Vdc power for Sigmas on network**
- ● **2 RS485 outputs for positional flexibility**

SPECIFICATION

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

The Sigma 381u also supplies the 24Vdc power supply required by the Sigma modules using the communication cable and can be used as a slave power supply to boost the supply voltage on long networks

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

Inputs

Input type :	USB cable
Input connection :	5 pin circular plug
Power requirement :	90 - 260Vac, 125 - 370Vdc
Power connection :	3 pin IEC 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 381u 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 381u 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 slave power supply unit must be inserted into the network to boost the supply voltage. Another 381u module will perform this function.

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 65mm
Weight :	2.2 Kg

Accessories

USB cable 2m
Network terminator
2 x cable plugs - RS485 communications and power out
AC power cable 2m