Serial Data Distribution Model No’s RS004, RS008 and RS016

Three products are covered in this manual, the RS004, RS008 and RS016.

The **RS004** desk mounted data distributor with a single RS232 input, and two RS485 inputs. The data signal is internally buffered and distributed to four independent RS485 outputs. The unit is power via a 12VDC 500mA power supply.

Fig 1.1

The **RS008** is a 1 RU rack mounted data distributor with a single RS232 input, and two RS485 inputs. The data signal is internally buffered and distributed to eight independent RS485 outputs. The unit is power via a 12VDC 500mA power supply.

Fig 1.2

The **RS016** is a 1 RU rack mounted data distributor with a single RS232 input, and two RS485 inputs. The data signal is internally buffered and distributed to sixteen independent RS485 outputs. The unit is power via a 12VDC 500mA power supply.

Fig 1.3

The data distributors can be used for a number of purposes and applications.
The RS232 input will convert the RS232 level to a RS422/485.
The RS422/RS485 input is in parallel with the converted RS232 input.
The 4, 8 and 16 outputs are independent from each other and are used for data distribution.

Typical application

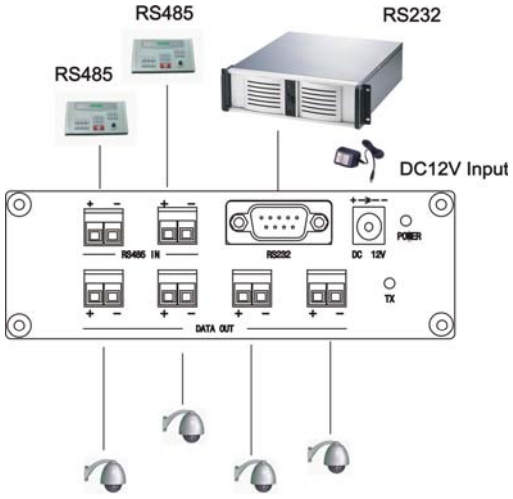


Fig 1.4

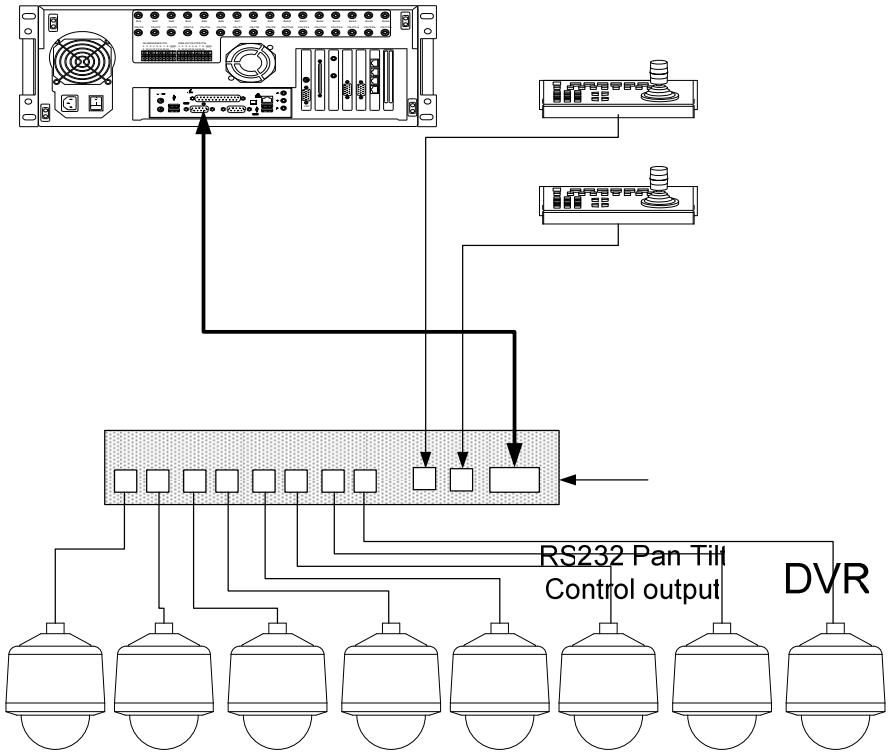


Fig 1.5

RS232 Cable

As per figure 1.4 and 1.5 the RS004 / RS008 is converting the RS232 signal to RS422 and then distributes the data signal to the 8 PTZ dome cameras.
A keyboard is also connected to the input of the RS008 and is distributed to the 8 PTZ serial outputs.
The RS008 allows each control device, the DVR and the Keyboard, to connect to the outputs in turn based on signal only being transmitted by the DVR and keyboard as required.

If only one control device is required, the DVR or a keyboard, the unit will function as a simple RS422/RS485 data distributor for use where you have multiple cameras on long cables runs in a star configuration. This can overcome intermittent control signals where data reflection is interfering with the data signal.

Another application is where you have to send multiple signals to multiple devices, like fibre Transmitters, which have fixed data terminations. The data distributor will allow the correct data to be sent to all devices

Installation,

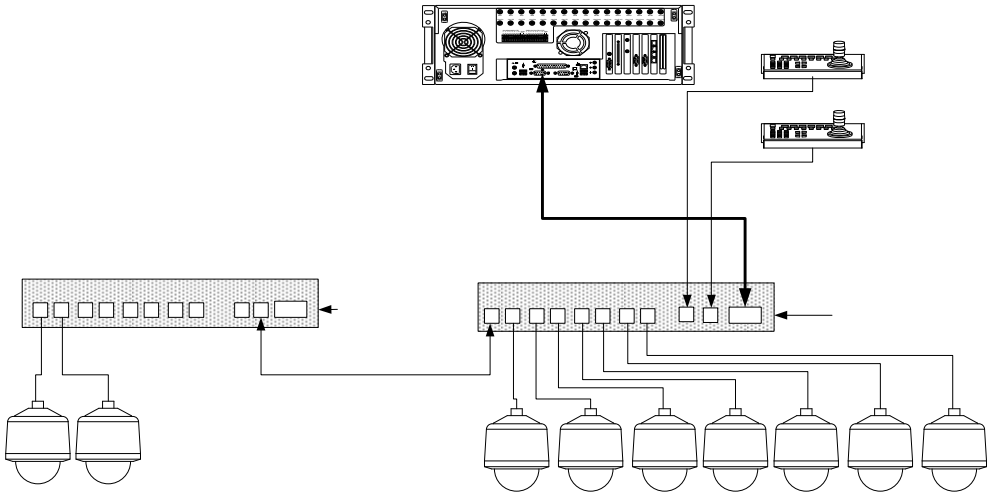
When installing the Data distributors be sure to observe theRS422/ RS 485 data polarity. While it will not cause damage to units connecting the data in the reverse direction the data will not be received correctly and therefore will not be transmitted.
Be sure to identify the Transmit data pair from the Keyboard or device and connect the transmit pair to the receive pair of the input of the Data Distributor.

The RS232 uses a straight thought cable, Pin to pin. Note RS232 is limited to the length of the cable and the cable between the DVR and the Data distributor should not exceed more than 5 metres.

If you are to use the Data distributor in a high electrical storm area it is highly recommended that lightning protection principles be implemented to avoid damage to the line drives of the data distributor.

When connecting multiple PTZ devices to a single output of the data distributor unit please note that all connections on each output should be perform in a daisy chain configuration where the last device on the daisy chain is terminated. If all cables are run in a star configuration, then each run should be connected to a separate output of the data distributor.
Multiple RS004, RS008 and RS016 units can be daisy chained from an output of one data distributor to the input of another RS004, RS008 and RS016 via the RS422/RS485 input.

Example of two RS008 connected together



RS232 Pan Tilt Control output

DV

The units are supplied with 12VDC power supplies. If a central power supply or power supply other than the unit supplied is to be used please note that the power supply must be fully regulated at 12VDC capable of delivery 500mA continuous.
The Centre pin of the power jack is connected to Positive voltage.

Trouble shooting

12VDC Power Input

No power light

Check Power supply

Interconnection between two RS008 units

No data through the Data distributor

Check that the connections from the Keyboards and DVR's are in and are the correct way around, + to + , - to –
If you still do not have success, try connecting each dome in turn to the keyboard and bypassing the Data Distributor.

Data works through one input and not through another input

Disconnect all inputs and try one at a time. If one input has noise or is continuously transmitting this will lock the unit to the input with noise or signal.

Note: RS422 is Simplex data only (Send only no receive).

Specifications

RS004

Input option: 1 x RS232 or 2x RS485, 4 x RS485/RS422 Output.

4 X RS485/RS422 serial outputs.

Max connection range up to 1200 meters on Twisted Pair cable.

Ability to cascade connection to other units RS008/RS016.

DATA Input: RS232 / RS485 (Terminal Block)

Data Output Port: 4 Port (Terminal Block)

Data Output Signal: RS485

Power Supply: DC12V

Dimension W x H x D mm:133X76X44

Weight: 425

Material: Metal Black

RS008

Input option: 1 x RS232 or 2x RS485, 8 x RS485/RS422 Output.

8 X RS485/RS422 serial outputs.

Max connection range up to 1200 meters on Twisted Pair cable.

Ability to cascade connection to other units RS008/RS016.

DATA Input: RS232 / RS485 (Terminal Block)

Data Output Port: 8 Port (Terminal Block)

Data Output Signal: RS485

Power Supply: DC12V

Power Consumption: 350mA

Dimension W x H x D mm: 482x100X44 (1U)

Weight: 1060 g

Material: Metal Black

RS016

Input option: 1 x RS232 or 2x RS485/RS422, 16 x RS485 Output.

16 X RS485/RS422 serial outputs.

Max connection range up to 1200 meters on Twisted Pair cable.

Ability to cascade connection to other units RS008/RS016.

DATA Input: RS232 / RS485 (Terminal Block)

Data Output Port: 16 Port (Terminal Block)

Data Output Signal: RS485

Power Supply: DC12V

Power Consumption: 350mA

Dimension W x H x D mm: 482x100X44 (1U)

Weight: 1100 g

Material: Metal Black