



FDX60 Series



Transmitting X-Bus RS485 over Fibre Links

The purpose of this document is to show the correct method to extend the X-Bus RS485 beyond the current limit of 400m using ComNet FDX60 fibre converters.

- SPC X-Bus Configuration
- Fibre Connection Limits
- SPC Limits

Table of Contents

1.	SPC X-Bus configuration	2
2.	System Limitations	2
2.1.	Fibre Limitations	2
2.2.	SPC Limitations	2

1. SPC X-Bus configuration

The SPC X-Bus communications is RS485. Connected from the SPC control panel to several expanders in open or closed loop (SPC4xxx supports a single loop, while SPC 5xxx and 6xxx support two open loops or one closed loop)

2. System Limitations

2.1. Fibre Limitations

The documentation supplied with the FDX60 series devices, specifies the distance limits for individual fibre links.

2.2. SPC Limitations

When using the system configured as two separate buses (Spur) (or only one in the case of SPC4xxx), then you can have a maximum of three fibre paths in each spur

When using a looped or closed configuration, there can be a total of three fibre paths in the entire loop.

Images shown are for reference purposes only, and do not include the maximum number of possible SPC expanders. You should consult the SPC specification documents for more information.

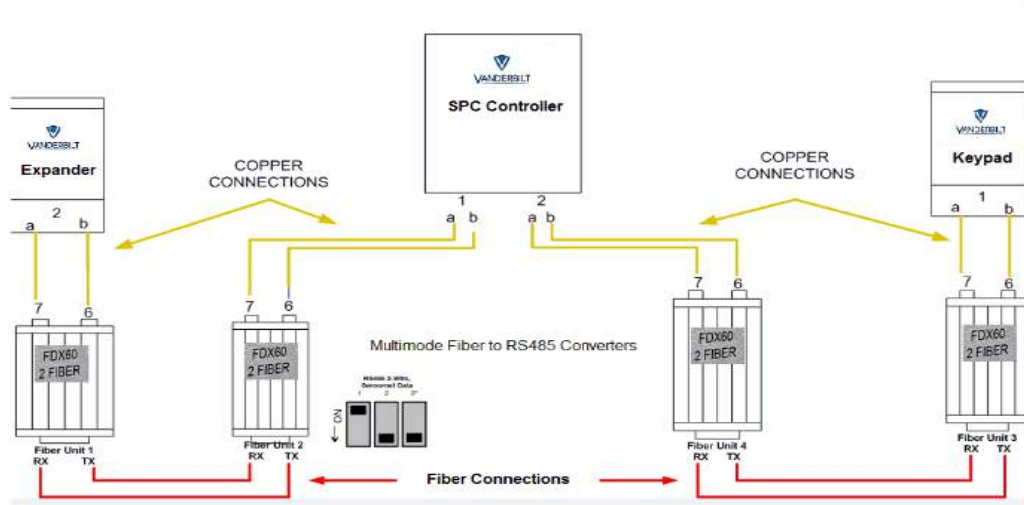


Fig.1

Fig.1 above shows the basic topology for adding a fibre link to extend the X-Bus RS485 on both connections.

You should always keep method 1A and 1B to 2A and 2B on both spurs.

Of course, you can add more SPC expanders between the SPC panel and FDX60 devices, as well as after the fibre link - see panel limits for more information.

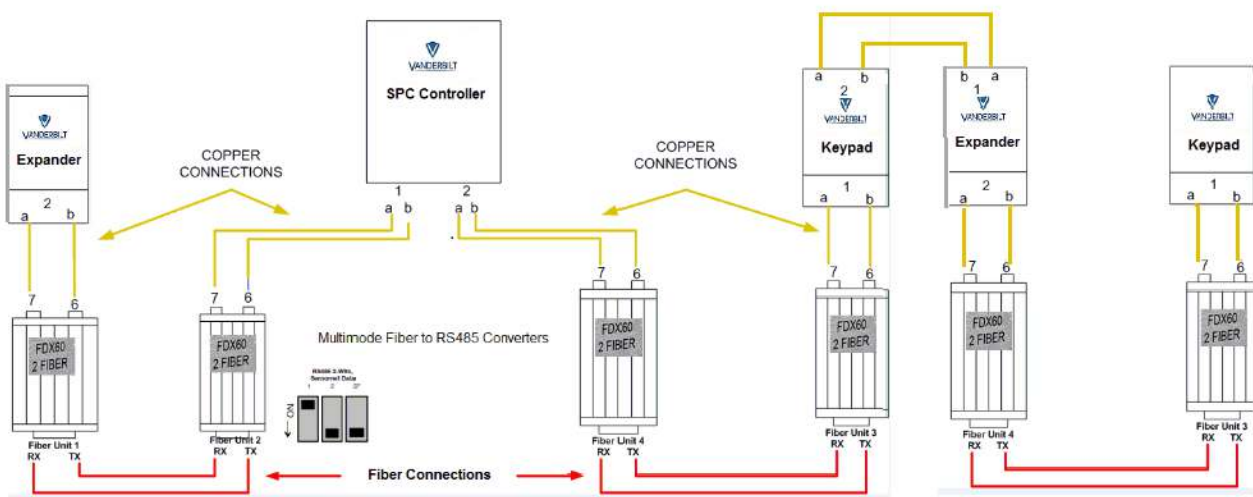


Fig.2

Fig.2 above shows the correct way to continue the spur with another fibre link. The limit is three fibre links per spur on the X-Bus.

Notice that 1A and 1B to 2A and 2B.

Another fibre link can also be applied to the spur shown to the right, following the same method.

Fig.3 below shows the X-Bus loop topology when using three fibre links. This is the maximum number of supported FDX60 fibre pairs that can be used in this configuration due to latency in the converters.

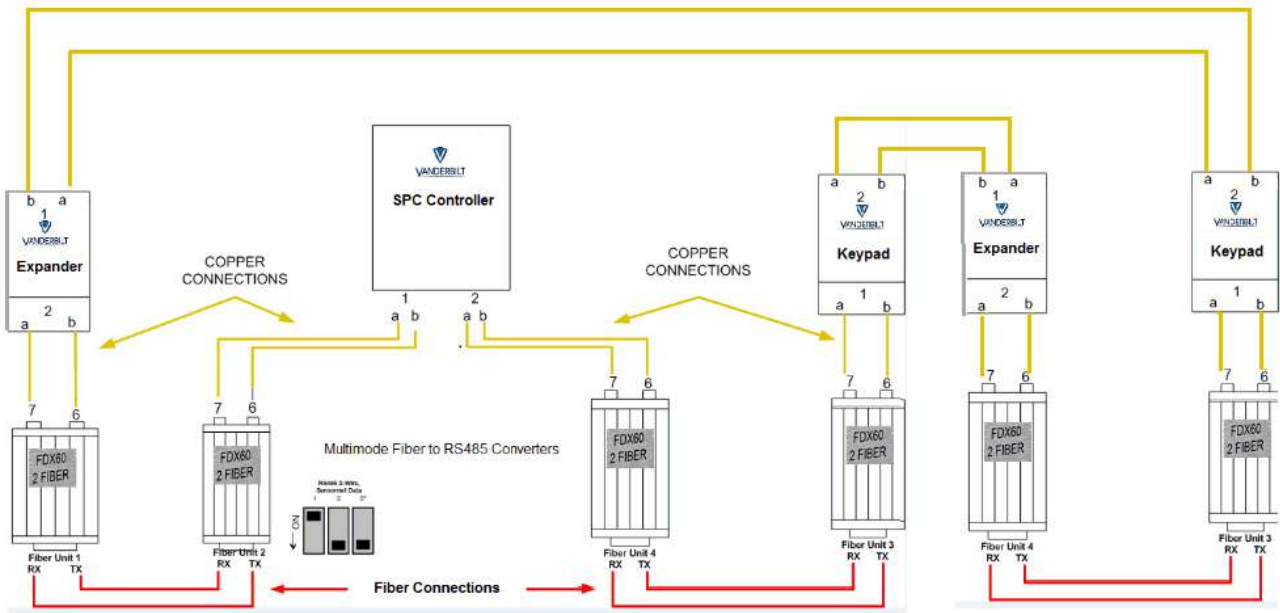


Fig.3



If you have any questions, please contact our Global Technical Services.
Contact details can be found on our website.