



Optical Fibre Patch Panel

48 fibre LC

INSTALLATION GUIDE

Optical Fibre Patch Panel • 48 fibre LC

Document Information

Release	July 2006
Published by	Nexans Cabling Solutions
Contact address	Alsebergsesteenweg 2, b3 1501 Buizingen Belgium
Phone	+32 2 363 38 00
Fax	+32 2 365 09 99
Website	www.nexans.com/ncs
E-mail	info.ncs@nexans.com

Important Notice

The information contained in this document has been carefully checked and is assumed to be entirely correct and reliable at the time of publishing. However, Nexans Cabling Solutions reserves the right to make such changes to its products or its documentation as it deems necessary, in order to make improvements. Nexans Cabling Solutions rejects all responsibility for the use made of its products or of its documentation.

In this document, no mention is made of rights with respect to trademarks or trade names which may attach to certain words or signs. The absence of such mention, however, in no way implies that there is no protection.

© 2006 Nexans Cabling Solutions

INSTALLATION GUIDE FOR OPTICAL FIBRE PATCH PANEL
96 fibre LC High Density
Passive & LANsense version

TABLE OF CONTENTS	Checking the Contents.....	4
	Preparation of the Panel.....	5
	Fitting the Coupling Adapters.....	6
	Assembly of the Spools.....	9
	Fitment of Splice Holders (if required).....	10
	Fibre Termination.....	11
	- LANmark Pre-Term.....	12
	- Direct Termination.....	13
	- Fusion Splicing.....	15
	Mounting the Panel.....	18

IMPORTANT
Installation is to be performed by qualified service personnel

CHECKING THE CONTENTS

Open the packaging and check the contents.
Remove the top from the panel by removing the screws on the rear.

In the package following items are included:

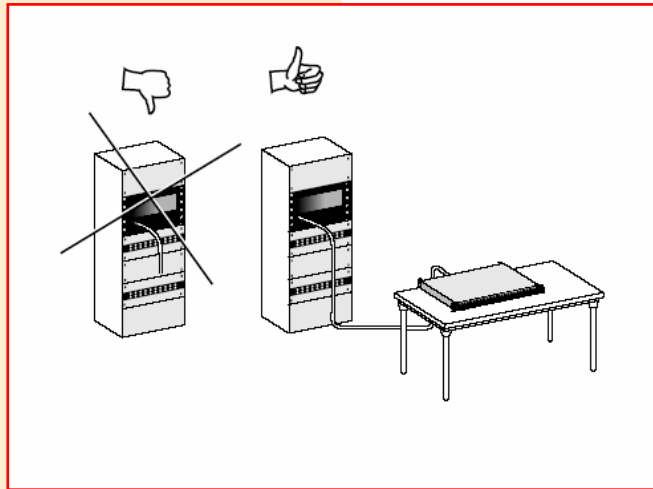


- 1 Empty Patch Panel
 - adapters supplied separately
- 2 fibre spools
- Grommet blanks
- Accessory Kit
- Laser Warning Label

Any additional products such as splice trays, grommets, etc must be purchased separately.
(Nexans product numbers are mentioned where applicable).

PREPARATION OF THE PANEL

The Installation of a fibre patch panel must be carried out with care and precision. Make sure to work on a clean and level work surface.



GENERAL PREPARATION

Leave some surplus cable (>5m) coiled at places in the cable link. This makes it easier to repair in case of a broken cable. A minimum of 5 meters of cable should be foreseen in the cabinet as this will facilitate the termination of the cable in the OF patch panel. Preferably do the termination of the OF in the patch panel on a table before screwing the patch panel into the frame.

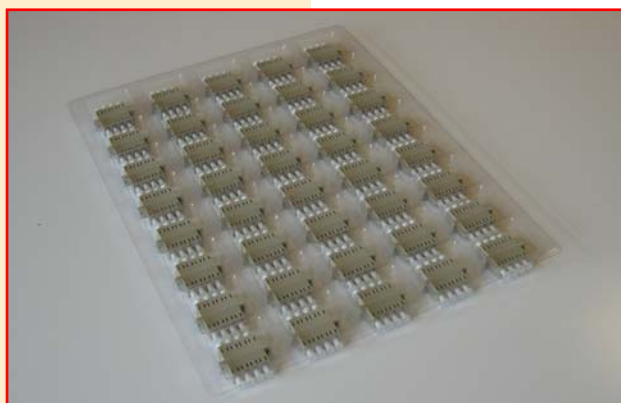
Always cut the first metre of cable as this part can be damaged after pulling the cable, bending, water damage...

More specific installation guidelines on indoor optical fibre cable can be obtained from our "Optical Fibre Indoor Cable INSTALLATION GUIDE" which is available from our NCS website.

FITTING THE COUPLING ADAPTERS

The panel is supplied empty and must be fitted with the correct couplers as follows:

- LC quad multimode Part N205.615
- LC quad singlemode Part N205.625



Remove the adapter mounting plate from inside the panel by undoing the two nuts.

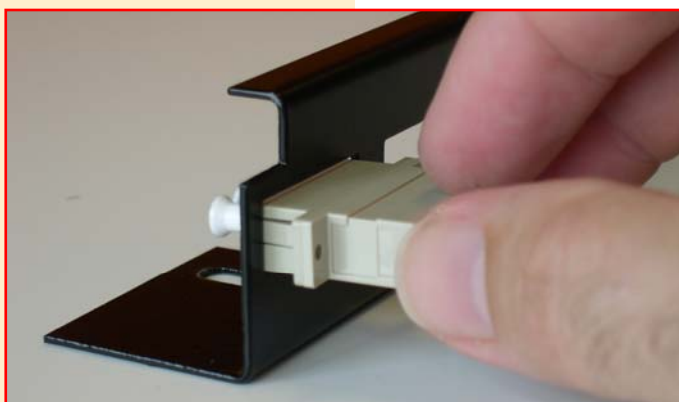


Fitting the coupling adapters continued...

Remove the adapter from the packing. The 'front' of the coupler can be identified by the curved latching section. The adapter can be used with latches up or down according to preference.



Insert the rear of the adapter into the mounting plate.



Repeat for all twelve adapters.



Fitting the coupling adapters continued...

Replace the mounting plate with adapters in the panel.



Ensure the front of the adapters push through the slots on the front of the panel.

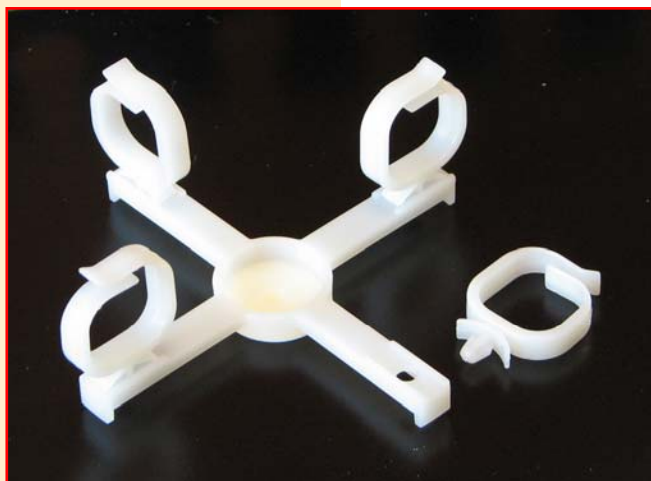


Fix the mounting plate in position using the retaining nuts.



ASSEMBLY OF SPOOLS

Assemble the fibre spools by clicking the rings into the cross piece.



Fix the spools in place in the panel in a suitable location taking into account:

- The cable entry points to be used
- Allow space for splice holders if required

To fix the spools removing the backing from the adhesive pad.

FITMENT OF SPLICE HOLDERS (if required)

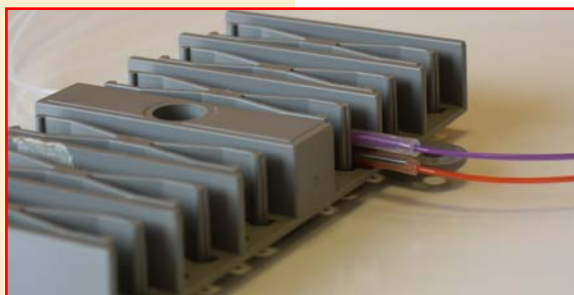
If the cable is to be terminated by fusion splicing of pigtails, then it is necessary to install splice holders to contain and protect the spliced connections.

Nexans splice holder part number FSB00100002400 should be used.



Each splice holder can contain a maximum of 48 splices by inserting 4 splices in each slot.

However it is recommended to use two splice holders, 24 splices in each. This simplifies future management of the fibres.



Fix the splice holders to the panel using the adhesive pads..



FIBRE TERMINATION

Three types of termination can be used:

- Nexans Pre-terminated fibre system
- Direct termination
- Fusion Splice

Tight Buffered or Loose Tube style cables can be accommodated.

In case of loose tube construction we recommend the use of fusion splicing. If direct termination is required a special microtube (Nexans part N890.045) must be used to protect the fragile 250µm fibre.

In case of tight buffered constructions both fusion splicing with pigtails and direct termination are possible.

For all types select the correct size and type of gland suitable for the type of cable being used.

Two versions of the panel have been produced.

- A) Gland aperture size 16mm and 30mm
- B) Gland aperture size 20mm and 25mm

Check the version before ordering glands.



TERMINATION OPTION 1 : Nexans LANmark Pre-Term

Nexans pre-terminated solution may be used.

The correct type of cable and fiber can be ordered made to measure with factory installed connections. The fibre loom comes supplied with a pulling system and glands already in place.



Connect the cable by securing the gland in place, and coil any surplus fibre onto the spool. Finally remove the protection cap and clean the tip of the fibre and coupler with alcohol or compressed air before inserting into position in the coupler, taking care to respect the colour scheme used.



TERMINATION OPTION 2 : Direct Termination

Prepare the cable according to standard termination procedures being sure to leave enough surplus cable (> 1.6m) to work with.

For loose tube designs, the fibre tubes must be removed leaving at least two loops in the loop rings. Make sure to clean any gel from the fibres. The 250 μ fibres should be protected using microtube (Nexans part N890.045).

Depending on the cable used, pass the cable through an appropriate gland.



Fix a permanent label on the fibre for future identification.

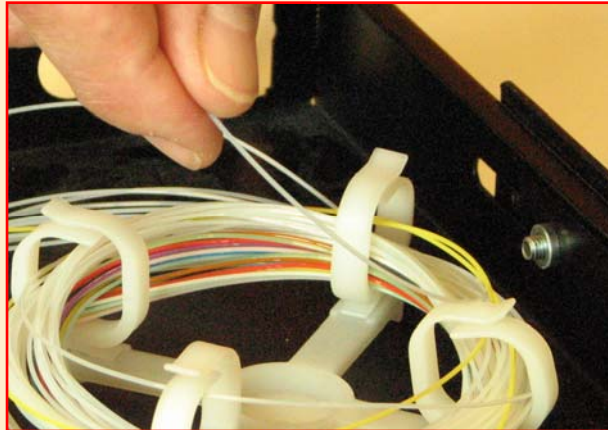


Provide at least two spare loops in the patch panel and put the fibres in the loop rings.

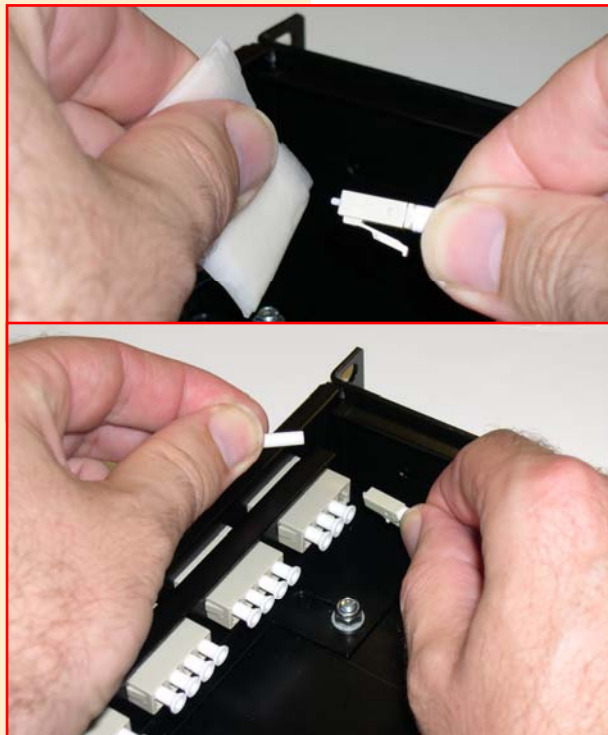
Measure the length of each fibre to the coupler respecting both bending radius and the colour sequence and cut the rest of the fibre.

Direct termination continued...

Take the fibre out of the spool and mount the connectors on the fibre as detailed in the separate instructions.



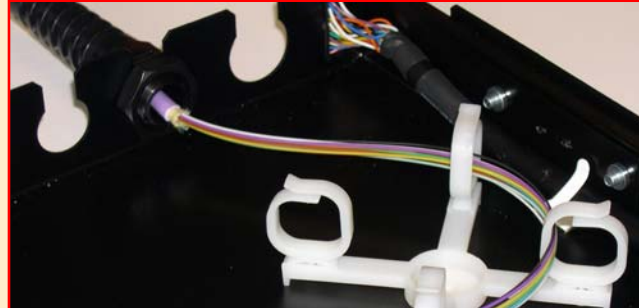
Loop the surplus fibre back in the spool. Remove the protective cap from both the connector and the coupling adapter. Compressed air or alcohol can be used to clean the fibre ends and couplers. Insert the connectors in the couplers taking care to respect the colour code scheme used.



TERMINATION OPTION 3 : Fusion Splicing

Prepare the cable according to standard termination procedures being sure to leave enough surplus cable (> 1.6m) to work with.

Attach a suitable cable gland and secure the cable to the panel.



Ensure splice trays have been installed as described earlier. (Part FSB00100002400)

For loose tube designs, the fibre tubes must be removed leaving at least two loops of fibre spare in the loop rings. Make sure to clean any gel from the fibres.

Prepare the first fibres for fusion splicing to pigtails in accordance with the splicing instructions. Nexans recommend the following parts are used:

- Heat shrink splice protections (FSP00100000000)
- LC pigtails (ref Nexans data sheet for part numbers according to fibre grade)

The "Recommendations to maintain duplex OF channel polarity" technical paper, which is available from our NCS website, should be considered when choosing the colour sequence.

Clearly label each pigtail connection.

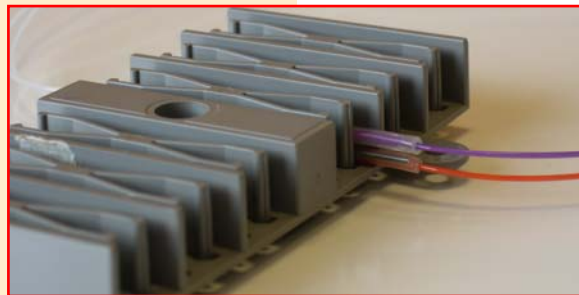


Fusion Splicing continued...

After splicing each individual fibre, careful store the excess fibre on the cable side into the spool wheel.



Insert the splice protector in the splice tray. It is recommended to use 2 splices per slot.



Wind the surplus pigtail fibre into the spool wheel. Remove the protective cap from both the connector and the coupling adapter and clean with alcohol or compressed air before connecting.

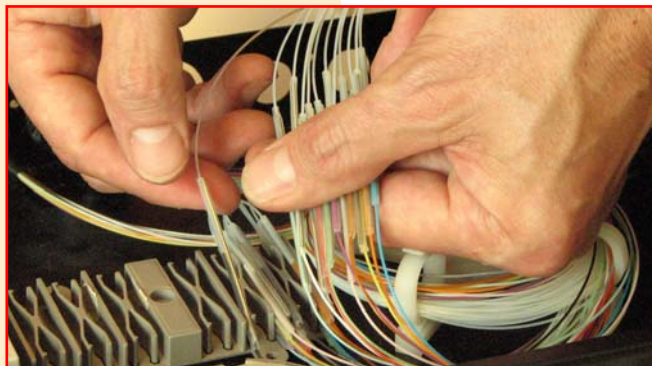


Fusion Splicing continued...

Continue to prepare and splice fibres in an orderly planned sequence.



Load the splices in the splice tray in an orderly and tidy manner.



Once all fibres are installed replace the cover on the splice trays.

Replace the top cover and secure the two screws on the back.



MOUNTING THE PANEL

The position panel can be adjusted so that it can be recessed if required.

Adjust the recess depth by use of the adjusting screws each side and sliding the bracket to the position required.

Ensure the brackets are fully tightened before installation in the cabinet.



Finally mount the panel in the rack or cabinet using the 4 bolts provided.

Ensure suitable labeling is provided.