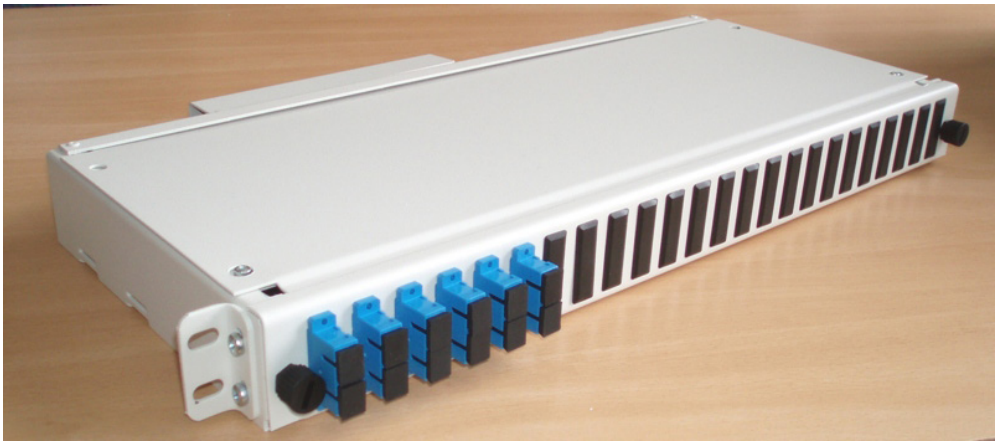
INSTALLATION INSTRUCTION
MO033D

# FIBRE OPTIC PATCH PANEL KB201



Nexans
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# FIBRE OPTIC PATCH PANEL KB201

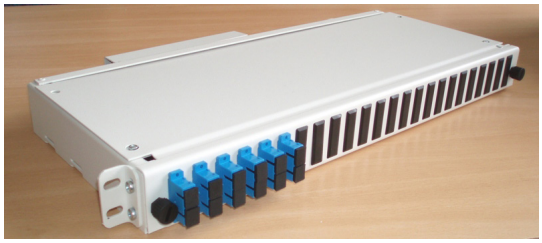
## Content



## To be used for termination and splicing of ribbon or loose tube optical fibre cables

The fibre-optic patch panel KB201 is intended for 48 fibres terminated with SC-duplex connectors. Each KB201 can hold a maximum of 4 splice cassettes corresponding to 48 fibre splices, 12 fibres per cassette.

KB 201 can be mounted in frames or cabinets with a minimum depth of 300 mm.



*Fibre optic patch panel KB201*

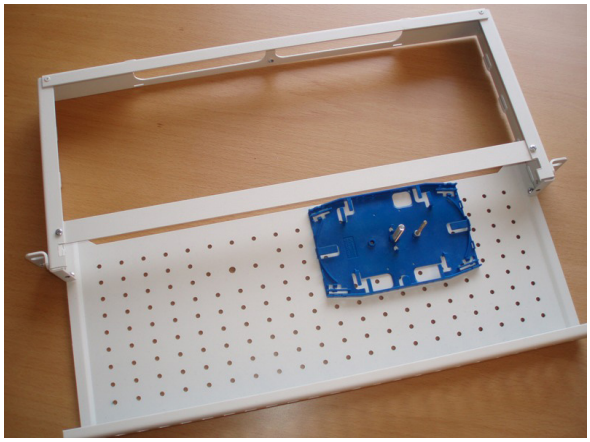
## Technical data:

- Width, w/o angle brackets: 445 mm
- Height: 44.5 mm (1 HU)
- Depth, w/o cable feed-through: 190 mm
- Weight: 2.5 kg

## Preparation of box

The box consists of a support plate, patch panel including bottom-plate, top cover, cable clamp, and angle brackets.

The support plate is an open-fronted frame into which the patch panel slides. The patch panel together with the integrated baseplate slides into the housing.
Upon delivery, the patch panel is attached to the support plate by two screws at the front.
A transverse bar prevents the sides of the support plate from deforming.
**Any handling of the support plate with the patch panel removed should be done with the transverse bar in place.**



*KB201 with splice cassette at the right*

Stop-screws are fitted to the patch panel baseplate to prevent unintentional removal of the support plate.

Splice cassettes are attached by the use of M5 and M3 screws using the holes in the baseplate. The cassette can be placed to the left or right depending on the direction of the incoming cable.

The cable clamp at the rear of the support plate can also be placed to the right or left depending on the direction of the incoming cable. The position of the cable clamp improves the bending radius of the incoming cable.

## Preparation of Fibre tails

After removal from the packing, the tails are numbered according to the corresponding fibre of the cable to be spliced. The length of the tail depends on the incoming direction of the cable and the location of the connector at the patch panel, see appendix 1.

The total length of the tail excl connector is given in the table in appendix 1. When the correct length has been determined, cut off the tail accordingly.

*Fibre tail, SC*

Mark the tail on the basis of the table in Annex 1. The length in brackets is the part to be placed inside the cassette. If the tail is sheathed, a circular cut should be made around the sheath at the mark. The sheath is then carefully slid off and the internal yarns clipped at the edge of the sheath and removed.

## Preparation of incoming cable

Place cable in cabinet or support in which it will be permanently located – make sure you have an extra 1.75 m for splicing. Mark cable where sheath is to be removed; also make a longitudinal mark along the cable sheath to avoid twisting. Cut cable 1.75 m from the first mark.

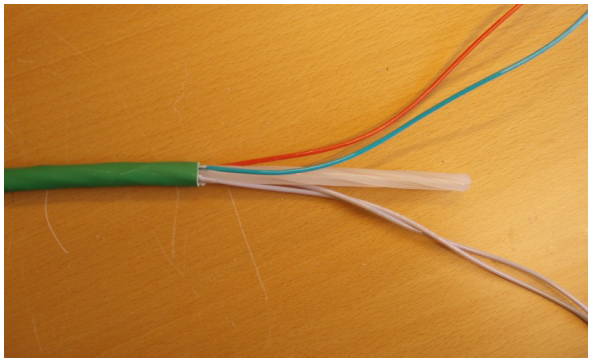
Make a circular cut around the sheath at the first mark. To free the tear thread (eg in Nexans cable) strip the sheath 10-15 cm from the end.  Strip carefully because tear thread is located immediately under the sheath. Slit and remove sheath.

Remove plastic strip and any yarn, and clip off at the sheath edge.

Tubes and yarn are removed from the slotted core. If greased cable is used, clean tubes with isopropanol.
The slotted core is clipped off 10 cm from sheath edge.

If tubes are not colour-coded, mark the correct tube order with e.g. indelible pen.

*Stripping cable using tear thread*



*Prepared cable*

## Installation of cable in box

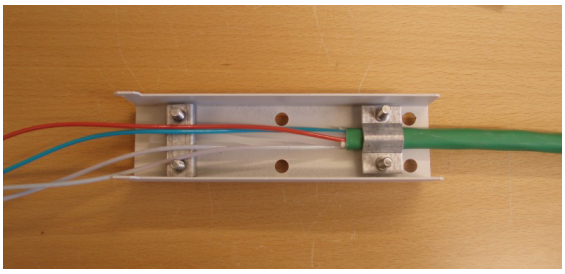
The cable can be fixed in two ways. It can either be fixed to the clamp before the clamp is installed in the box, or the clamp can be installed and the cable fixed afterwards. Before tightening the screws on the centre element, check that the tubes are not pinched but form a suitable radius as work continues.
Ensure that the horizontal line marked previously runs along the box so that no stresses are induced in the cable when it is subsequently fitted permanently.

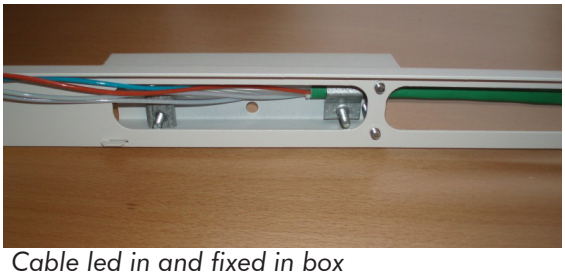
Pull out patch panel until it reaches the stop. Place tube No 1 in the entry of the cassette nearest the panel plate. When in position, the tube should not be under enough tension to cause it to crack.
Mark tube approx 1 cm inside the cassette. Remove tube from cassette and make a circular cut using a Corex cable stripper. Ensure that the stripper is set so that no fibres are damaged. Slide tube off fibres, and then clean the fibres with isopropanol.

Fix tube with binding tape in the chosen entry to the cassette. Wind fibres into cassette and check that length is correct (that fibres reach the splice holder nearest cable entry) and cut if necessary.

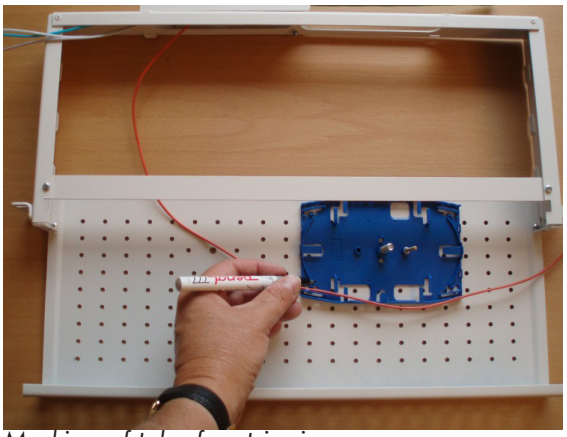
If there are 4 fibres in the tube, cut all of them half a turn shorter to match the splice holder nearest the panel plate. If there are 6 or 8 fibres in the tube, cut fibres 1-4 half a turn shorter. If the tube has 12 fibres, cut 1-6 half a turn shorter.

The fibres are now ready for splicing, which is carried out as in **splicing instructions**.

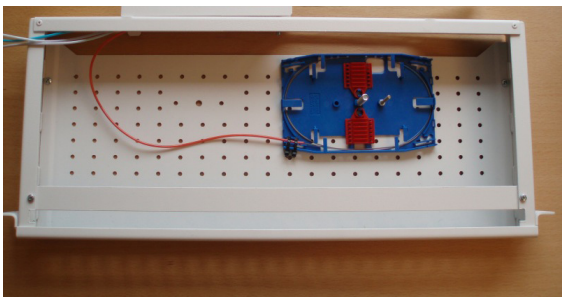




*Cable led in and fixed in box*



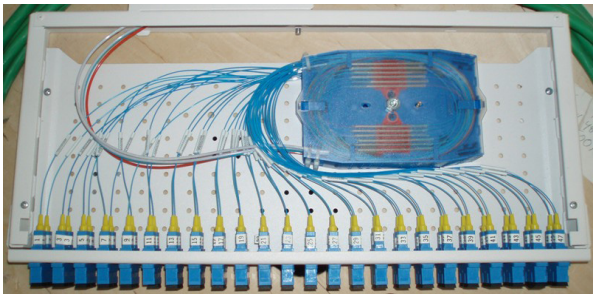
*Marking of tube for stripping*



*Tube fixed in cassette*

After splicing, the fibres are slid down into the cassette. The sheath edge or marking on the fibre tail lies approx 1 cm inside the cassette. When all fibres in the cassette are spliced and wound down, fasten the tails with binding tape or fibre holder at the entry to the cassette.

When tube No 2 is to be terminated, place a new cassette above the first and repeat the procedure. Up to four cassettes can be used in each box.



*Tube and tails located in box*

## Cable with fibre ribbon

The box is prepared with the cassette. (suitable for 4 fan-outs per cassette)

The cable is stripped for 130 cm. The ribbons are removed from the slotted core, cleaned if necessary, and numbered with marker washers e.g. FLEXIMARK. The slotted core is cut to a length of 10 cm.

Fit cable in box as described on 6, where fibre ribbon corresponds to tube. The fibre ribbon part of the fan-out is cut to 60 cm (1.5 turns in the cassette).

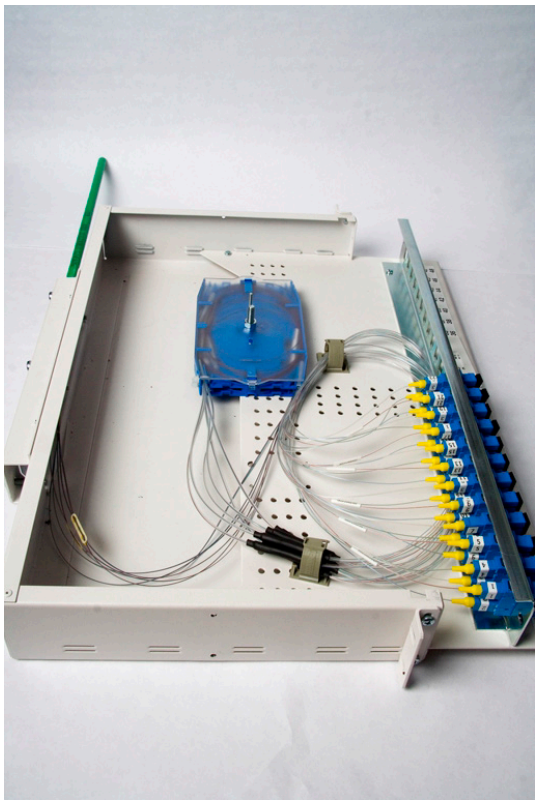
Splice first fan-out to first ribbon in cable. After splicing, wind the ribbon down into the cassette. Ensure sliding board is fully extended during this task.

After it is wound down, the splicing sleeve will land along the long side of the cassette where it lies loosely. Make sure that the ribbon is not twisted inside the cassette. Repeat with the rest of the fibres.

When the ribbons in the first cassette are spliced, the tube over the ribbon part of fan-out is fixed in entry to the cassette with binding strip. Continue with next cassette.

After all fan-outs have been spliced, wounded down and fixed to the cassette locate the first fan-out contact in the respective adaptor. Continue with the remaining fibres and contacts. All fibres are wound into the box so that they lie with a common bending radius.

All fan-out are fastened together with two or more ‘fixed parts’.



*Picture taken from KB112*

## Accessories and ordering information

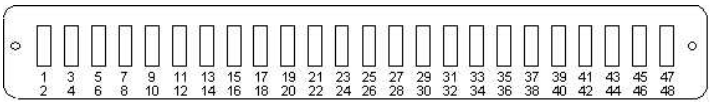
| E-number | Item N.o. | Product |
|---|---|---|
| | | |
| 50 259 29 | 30007709 | KB201 |
| | | |
| 50 842 53 | 30005009 | Universal splicing cassette plastic |
| 50 842 54 | 30006009 | Splicing holder for universal |
| 50 842 55 | 30006109 | Lock for universal cassette |
| | | |
| 50 627 00 | 30903009 | Splicing sleeve 45 mm single fibre |
| 50 627 01 | 30903109 | Splicing sleeve 60 mm single fibre |
| 50 627 02 | 30903409 | Splicing sleeve 40 mm strip fibre |
| | | |
| 50 842 56 | 30004809 | Cable-grip set for KB201 |
| | | |
| 50 254 66 | 30004009 | Blind plug SC duplex |

## Stripping drawing for sheathed (2 mm) and unsheathed (0.9 mm) fibre tails for installation of 48 fibres in a box

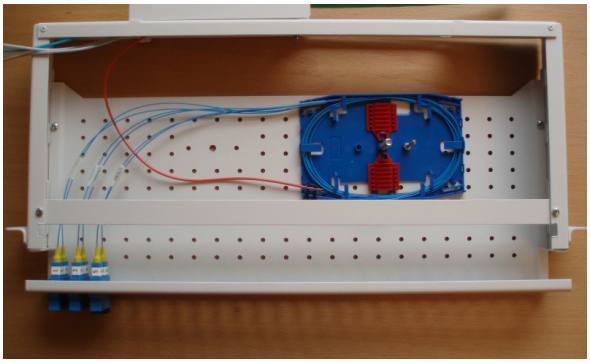
Tail length will be at least 1.5 m. Length depends on cable entry direction and where in the box the contacts are located. Length in brackets shows how many cm of tails will be located in the cassette. The pictures to the right of the table show how fibres will be wound into the box, and also the number of holes the panel plate will contain.

Diagram for 12 fibres and cable entry right (cassette to right).

| Fibre | cm | Fibre | cm |
|---|---|---|---|
| 1-6 | 30(60) | 7-12 | 25(40) |
| 13-18 | 22(60) | 19-24 | 20(40) |
| 25-30 | 25(60) | 31-36 | 30(40) |
| 37-42 | 33(60) | 43-48 | 35(40) |




*Front view of connector panel*

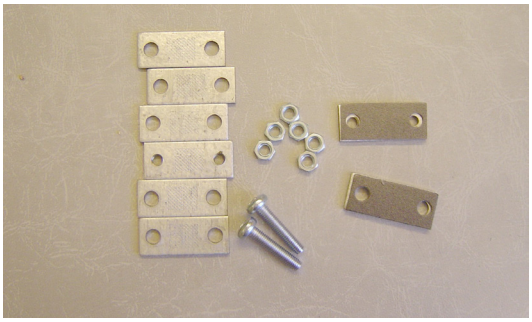


*KB201 fitted with SC contacts*

## Cable-grip set for max 12 cables

The new cable-grip set allows several cables to be connected in one box. The cable fixing that goes into the box is also used for keeping cables load-free.

The clamp has a piece which grips across the top of the cables.
The 6 non-rubberised clamps and nuts are used for gripping. The roughened side of the clamp faces the cable grip.
The two screws supplied can be used to replace the existing screws in the cable fixing if it is too short.

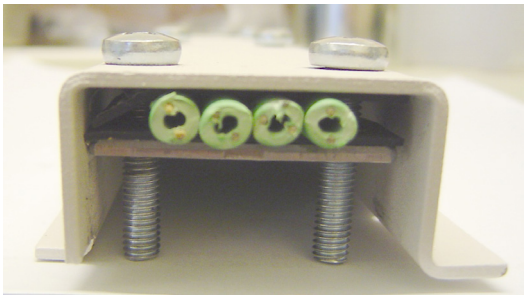


*Cable-grip set*

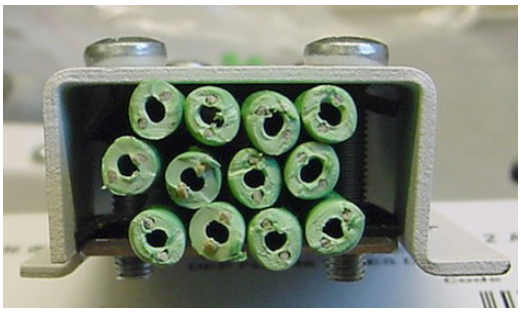
## Fitting

Replace cable clamps that are located in the selected cable entry with one of the rubberised top pieces. If only 1 cable is installed at the first installation case cut 5 cm pieces of the same cable to cover the width between the screws and fill up to one cable height.
Tighten with care.

Because the box is designed for 48 fibres, a maximum of 12 4 fibre cables be installed. Of course there is no reason why fewer cables cannot be used with more fibres per cable.

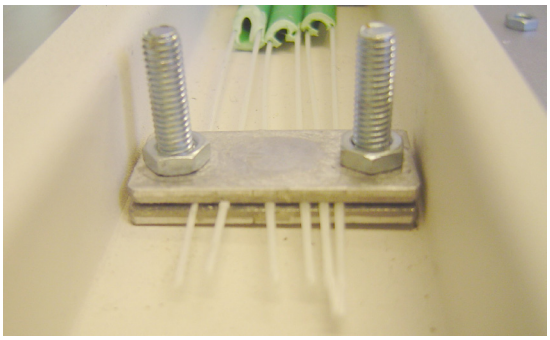


*4 cables*

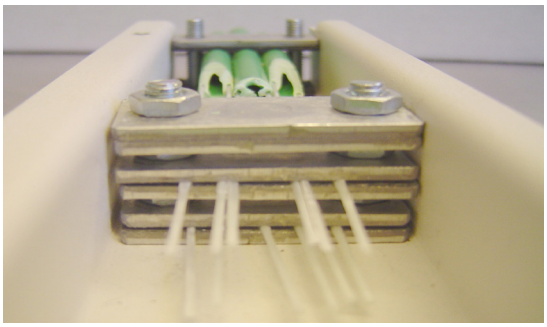


*12 cables*

The cross-pieces used as cable grips can be used in several layers depending on the number of cables to be installed.
Cables in the first layer are laid in place and clamped. Nuts are used both for tightening and as distance pieces between the layers of the cable grip. Cables in layer two are laid in place and clamped, followed by the third and final layer.

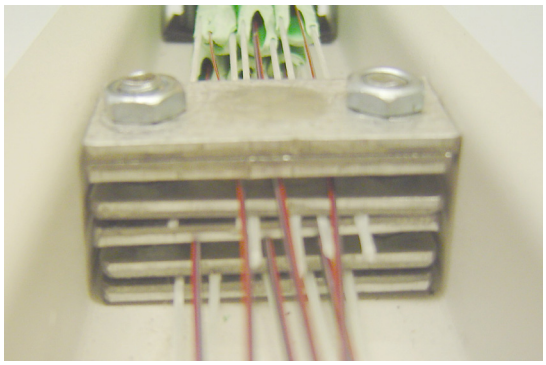


*First layer clamped*



*Second layer clamped*

Between the clamps, fibres from the respective layers are laid so that they will not be clamped between the clamping elements of the cables and will take up a suitable radius inside the box.



*Fibres between clamps*

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