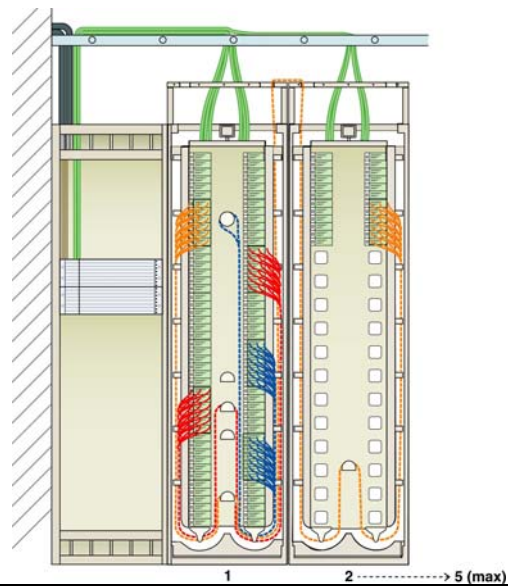




PRODUCT DESCRIPTION

N3S



Nexans N3S ODF system

NEXANS N3S ODF SYSTEM

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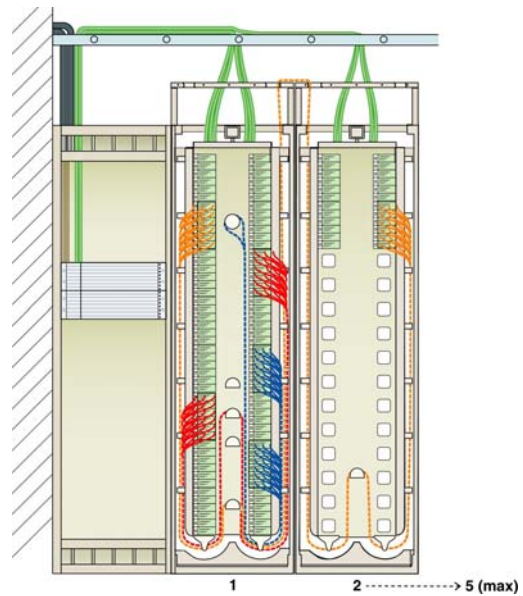
Nexans Space Saving Solution = N3S

N3S is a modular system for terminating a large number of optical fibres in a small floor space. The system consists of patching frame, splice frame (not a splice box on the wall), splice module, patch modules and a complete solution for handling patch cords and cables.

Three different sizes of frame are available, 2200 mm, 2000 mm and 1800 mm (the height of the cable ladder is to be added). The 600 mm width and the 300 mm depth are the same for all three heights.

Two alternative systems solutions are available. (1) N3S-system S with integrated splice frame and (2) N3S-system TS with separately located splice frame.

1. The patching frame is equipped with a patch cord ladder (patch cord ladder S, page 10) for patch cords and cables exiting the frame. The splice frame is connected directly to the patch modules, and is fitted with a cable ladder for cables from the patch modules. Other cables to the splice frame are installed on ladders located in the distribution rooms.
2. The patching frame is fitted with a patch cord ladder (patch cord ladder TS, page 10) for patch cords emerging from the frames. Cables emerging from the frames in the patching modules are positioned in cable ladders located in the distribution room. In this solution, the splice frame is located in another place (e.g. an adjoining room/cellar). A cable support is attached to the splice frame, and this is used to support



One splice frame + 2 patch frames.

cable clamps which relieve the load on cables emerging from the patch modules

The patching module, which is pre-contacted, is available in two sizes, 48 and 96 fibres.

The splicing module consists of 8 fold-out cassettes. 96 fibres (fibre ribbons) or 48 single fibres can be spliced in each cassette

Patching frame

The inner frame in the patching frame can be pulled out and twisted, for access to work on cables and patch cords.

The patch cords are run from the patch module to the side of the inner frame in special guides. The diagram shows an inner frame pulled out and twisted.

A specific system must be observed, to avoid creating a tangle of patch cords in the guides.

Outgoing patch cords should always be put in the rear compartments of the guides (yellow marking). The patch cords for the two uppermost modules must always be run into the fourth compartment in the guide, counted from the front (red marking) etc.

This means that a module can be removed from the inner frame with patch cord without any need to interrupt traffic.

The open design of the top of the frame means that patch cords never need to be threaded through anything at any point.

There is a radius restrictor with a spring mechanism on the top sides of the inner frame, which ensures that the patch cords are not damaged when the inner frame is pulled out and rotated.

Each patching modules can be installed or removed from a frame by itself, independently of all other patching modules.

One or more patching modules can be pulled out of the frame during operation (during fault-finding etc.) thanks to the cable arrangement on the rear of the frame. The cable is laid in a W, using hangers, before it is run out of the patching frame and up onto the patch cord ladder/cable ladder.

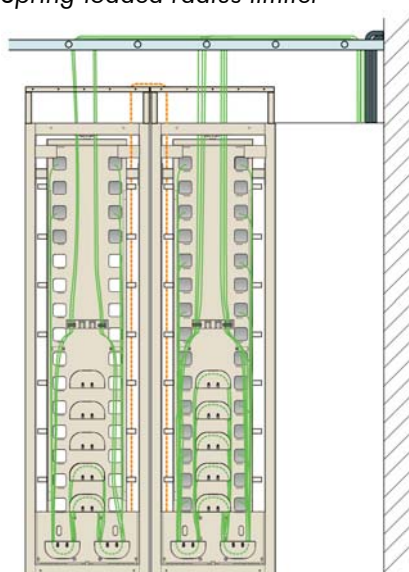
All outgoing cables and patch cords exit the frame from above.



Patching frame pulled out and twisted



Spring-loaded radius limiter



Patching frame seen from rear

There are holes in the top and bottom frames of the frame so that frames can be fixed to walls, side to side, or back to back. No fixing points are needed in the ceiling.

All patching frames can be delivered with doors.

2200 mm

Depending on the installation system used, the total height of the frame is 2450 mm (TS) or 2550 mm (S), when the patch cord ladder has been fitted.

Each patching frame can handle 16 patching modules which contain 96 fibres each. This makes a total of 1536 fibres/frame.

Internal patch cords (blue and red) are always 5 metres long, and should be coiled as in the diagram.

The length of the orange (external) patch cords depends on where the patching frames are located in relation to each other. In this diagram, the length is 11 metres, add an additional 1 metre when modules in the adjoining frame are to be patched, and so on. When active equipment is to be connected, the length depends on where the active frame is located in relation to the N3S frame. In the N3S frame, 5.5 metres is required to reach all patching modules irrespective of where in the frame they are located, and to reach the patch cord ladder. The length required to reach the active equipment is then added.

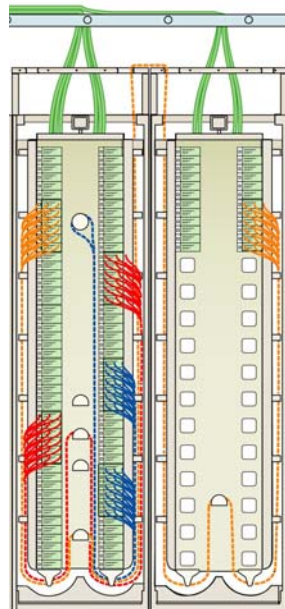
2000 mm

Depending on the installation system used, the total height of the frame is 2250 mm (TS) or 2350 mm (S), when the patch cord ladder has been fitted.

Each patching frame can handle 14 patching modules which contain 96 fibres each. This makes a total of 1344 fibres/frame.



With doors without doors



Patching frame seen from front

Internal patch cords (red and blue) are always 4.5 metre long should be coiled as in the diagram.

The length of the orange (external) patch cords depends on where the patching frames are located in relation to each other. In this diagram, the length is 10 metres, add an additional 1 metre when modules in the adjoining frame are to be patched, and so on. When active equipment is to be connected, the length depends on where the active frame is located in relation to the N3S frame. In the N3S frame, 5 metres is required to reach all patching modules irrespective of where in the frame they are located, and to reach the patch cord ladder. The length required to reach the active equipment is then added.

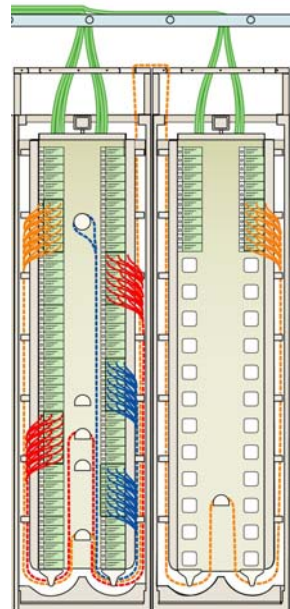
1800 mm

Depending on the installation system used, the total height of the frame is 2050 mm (TS) or 2150 mm (S), when the patch cord ladder has been fitted

Each patching frame can handle 12 patching modules which contain 96 fibres each. This makes a total of 1152 fibres/frame.

Internal patch cords (red and blue) are always 4 metres long should be coiled as in the diagram.

The length of the orange (external) patch cords depends on where the patching frames are located in relation to each other. In this diagram, the length is 9 metres, add an additional 1 metre when modules in the adjoining frame are to be patched, and so on. When active equipment is to be connected, the length depends on where the active frame is located in relation to the N3S frame. In the N3S frame, 4.5 metres is required to reach all patching modules irrespective of where in the frame they are located, and to reach the patch cord ladder. The length required to reach the active equipment is then added.



Splice frame

A splice frame can handle the fibres and cables to cover 5 patching frames. This means that a maximum of 40 connection cables (192 fibres) + 80 cables from the patching modules on the patching frames can be handled in one frame.

No cable slings are used in the frame. The cables finish off at the top or bottom of the frame, using a cable clamp. The cable clamp for connection cables is fastened in special holders in the frame, see diagram 2.

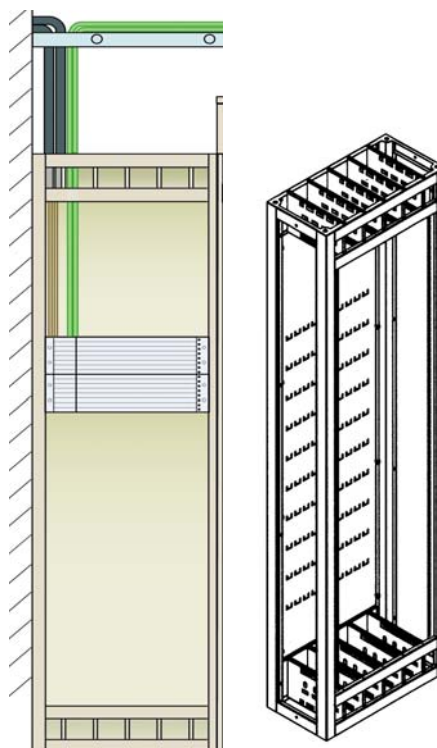
The ribbons from the cable are protected in tubes which each contain 96 fibres/tube. The tubes are fixed by their respective cables' cable clamp.

If systems solution S is used, a cable ladder is screwed to the splice frame to lead the cables from the patch modules to the correct attachment point in the rear of the frame. The cables are attached using cable ties.

If systems solution TS is used, a cable support is screwed to the splice frame to which small cable clamp are fitted (max 80 clamps) to relieve the load on cables from the patch modules. In this case, the ribbon is protected in tubes which are attached to the cable clamp.

All the tubes are bundled together with the cables from the patching modules, using Velcro tape, and fixed to the frame back panel. Each splicing module is given its own row of tubes which run along the frame back panel. Since the splice module cassettes can be swung out, there is always access to the tubes in the frame.

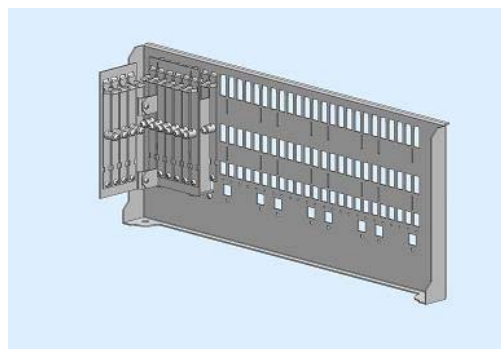
The first splicing module is located 350 mm above/below the holder for the cable grips for outgoing cables.



Splice frame, diagram 1 Diagram 2



Cable clamp for connection cables



Cable support with 16 cable grips

2200 mm

Depending on the installation system used, the total height of the frame is 2450 mm (TS) or 2550 mm (S) when the cable ladder has been fitted

The frame has space for 10 splice modules, each of which can handle 768 splices (96 divisible 8-fibre ribbons). The total number of fibres which can be spliced in the frame is 7680.

2000 mm

Depending on the installation system used, the total height of the frame is 2250 mm (TS) or 2350 mm (S) when the cable ladder has been fitted

The frame has space for 9 splicing modules, which can handle 768 splices each (96 divisible 8-fibre ribbons). The total number of fibres which can be spliced in the frame is 6912.

1800 mm

Depending on the installation system used, the total height of the frame is 2050 mm (TS) or 2150 mm (S) when the cable ladder has been fitted

The frame has space for 8 splicing modules, which can handle 768 splices each (96 divisible 8-fibre ribbons). The total number of fibres which can be spliced in the frame is 6144.

All splice frames can be delivered with doors.



With doors

without doors

Patching modules

The connectors are located in pull-out units.

Each pull-out unit has a swing-out adapter holder, for access to the inner connectors.

Each adapter plate has punched holes so that damaged adapters can easily be changed.

If repairs are needed, the entire patching module is pulled out of the frame without needing to undo the frame without needing to undo the patch cords or the indoor cables. If necessary, one side of the patching module can be unscrewed.

96 fibres

The 96-fibre module consists of 6 pull-out units, each with 8 duplex adapters for 16 contacts.

48 fibres

The 48-fibre module consists of 3 pull-out units, each with 8 duplex adapters for 16 contacts (half the height of the 96-fibre module).

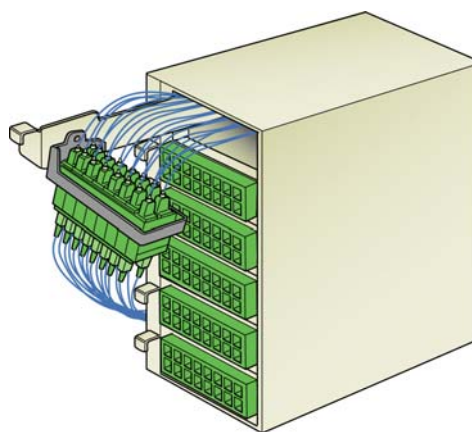
In systems solution S, the patch module is supplied pre-contacted with 20 metres of indoor cable (GAQDBU).

In systems solution TS, the module is supplied with a standard length of 20 metres. Longer lengths are available to order. Type GASQBUDUV cable is used.

Splicing module

The splicing module consists of 8 swing-out cassettes. Each cassette can handle 96 splices (12 divisible 8-fibre ribbons) or 48 single fibres.

The ribbons in the splicing module are long enough to allow splicing to be done with the box still installed in the frame.



Patching modules 96 fibres



Splicing module

Accessories

Cover

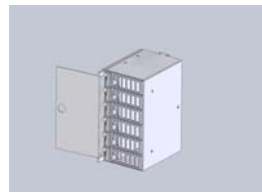
When doors are not used, a cover can be fitted, on which any type of marking can be placed. The cover is installed on the patching module and is designed as a hatch.



Cover

Marking list

A permanently attached pull-out marking list can be fastened to the side of the module. Markings can be made on the pull-out part.



Marking list pulled out and rotated

Hangers

Hangers can be purchased ready-installed in the frame, but can also be retrofitted as necessary. A frame with few patching modules needs a small number of hangers.



Hangers

Roll-out ramp

A roll-out ramp is required to withdraw the inner frame from the outer frame. There are two rectangular holds at the front of the ramp that act as a stop for the inner frame when it is pulled out. The roll-out ramp should be screwed onto the floor, which means 1 ramp/frame.



Roll-out ramp

Cable clamp for outgoing cable

Connection cable terminates in cable grips. The cable grips are mounted either at the top or the bottom of the splice frame.



Cable clamp

Cable clamp for cable associated with patch modules

The cable clamp is used in the cable support for systems solution TS.



Doors

All frames can be installed with doors.



Doors

Patch cord ladder S

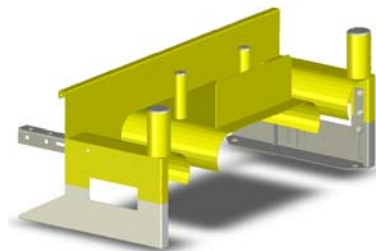
In systems solution S, patch cord ladder 1 is mounted on the frames. The patch cord ladder is used both for outgoing patch cords and for cables associated with the patch modules.



Patch cord ladder S

Patch cord ladder TS

In systems solution TS, patch cord ladder TS is mounted on the frames. The patch cord ladder is used for outgoing patch cords only. In this case, the cables from the patch modules are taken directly to cable ladders located in the distribution room.



Patch cord ladder TS

Cable ladder

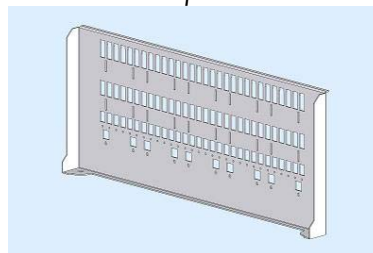
When systems solution S is used, the cable ladder is mounted on the splice frame for the cables from the patch modules. No other cables going to the splice frame are positioned on the cable ladder.



Cable ladder splice frame

Cable support

Cable support is used to attach cable grips for cables coming from patch modules in systems solution TS. 80 cable grips can be attached to the cable support.



Cable support



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