## Product References

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
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<tbody>
<tr>
<td>LANmark Ruggedised Lockable ZD Box White</td>
<td>N521.612</td>
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<tr>
<td>LANmark Ruggedised Lockable ZD Box Foot White</td>
<td>N521.6121</td>
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## Document information

<table>
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<th>Release</th>
<th>November 2015</th>
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<td>Published by</td>
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Installation is to be performed by qualified service personnel. The Installation of the Ruggedised Lockable Zone Distribution box (RLZD box) must be carried out with care and precision. Preparation work should be carried out on a clean and level work-surface.

Each LANmark Ruggedised Lockable ZD Box White (N521.612) is supplied with:

- 1 RLZD box
- 1 screw and washer kit for optional splice tray fixing
- 1 key to lock the hinged lid for access to the Snap-In ports
- 1 special screwdriver bit to open and close the cabling area of the ZD box
- 1 sticker with Laser warning sign
- 1 labelling strip

Each LANmark Ruggedised Lockable ZD Box Foot White (N521.6121) is supplied with:

- 1 RLZD foot plate
- 1 screw and washer kit to fix the foot to the RLZD box

The foot has to be ordered separately. This part is designed to raise the RLZD box (N521.612) up by approximately 50mm to provide protection against water ingress from potential leaks and to aid installation.

Other ancillaries (e.g. splice trays) must also be purchased separately. The product part numbers are mentioned where applicable in the following text.
Phase 1 Preparation of the RLZD box

Open the hinged lid to gain access to the front part of the box and get the plastic bag containing the accessories.

The cover is fastened with tamper-resistant screws. Use the specific screwdriver bit located in the plastic bag to remove the top cover.

*Note:* The bit holder is not provided.
Stick the Laser warning sign on the cover (See note 3).

Stick the labelling strip on the base in front of the ports.

Notes

1. More specific installation guidelines on optical fibre cable can be obtained from the “Installation Guide for OF cables” document which is available from the NCS website.

2. The Ruggedised ZD box can be equipped with both copper and fibre Snap-Ins. Mixed copper/fibre RLZD boxes can also be created.

3. The laser warning sticker is not needed when the RLZD box is only equipped with copper cables and RJ45 connectors.
Phase 2 Fitting of the RLZD box

The RLZD box is easy to install on walls, under raised floors or in ceiling voids, due to its multiple mounting features. Use the 4 mounting holes located in the corners of the base to fix the box on walls or other locations. Fixing screws are not provided.
Alternatively the optional foot plate can be fitted to the RLZD box using the screw and washer kit provided with the foot.

![Diagram of foot plate installation](image)

Use the 4 mounting holes present in the corners of the foot to first fix the assembly on the slab or other locations.

**Note:** Fixing screws are not provided. (see mounting dimensions on previous page)
Phase 3 Choosing couplers and/or connector types

The advantage of the ruggedised Snap-in ZD box is the flexibility to accept different types of OF couplers and copper connectors. Three versions can be created by using the LANmark Snap-In couplers. These couplers must be purchased separately.

Available optical fibre couplers are: duplex SC and duplex LC (SM and MM).

Note: The RLZD box can be loaded with up to 6 duplex SC or 12 duplex LC.

**Important note**
Please be aware that dual patch cords terminated with duplex SC connectors are not compatible with two single SC couplers. The orientation of the key is different on SC and duplex SC Snap-In couplers.

### OF couplers

- N205.617: LANmark-OF Duplex LC Snap-In Adaptor Multimode (Aqua)
- N205.627: LANmark-OF Duplex LC Snap-In Adaptor Singlemode (Blue)
- N205.628: LANmark-OF Duplex LC Snap-In Adaptor Singlemode APC (Green)

- N205.619: LANmark-OF Duplex SC Snap-In Adaptor Multimode Aqua
- N205.624: LANmark-OF Duplex SC Snap-In Adaptor Singlemode (Blue)
- N205.625: LANmark-OF Duplex SC Snap-In Adaptor Singlemode APC (Green)
Copper connectors

Note: The RLZD box can be loaded with up to 12 copper connectors.

- N420.550 : LANmark-5 Evo Snap-In Connector Category 5 Unscrened
- N420.555 : LANmark-5 Evo Snap-In Connector Category 5 Screened
- N420.660 : LANmark-6 Evo Snap-In Connector Category 6 Unscrened
- N420.666 : LANmark-6 Evo Snap-In Connector Category 6 Screened
- N420.66A: LANmark-6A Evo Snap-In Connector Category 6A 500MHz Screened
- N420.730: LANmark-7 GG45 12C Snap-In Connector Cat 7 600MHz Screened
- N420.735: LANmark-7A GG45 12C Snap-In Connector Cat 7A 1000MHz Screened
Phase 4 Installing couplers and/or connector types

The installation process is identical for both Snap-In OF couplers and Snap-In copper connector.

First remove the protective caps on the front of the OF couplers.
Snap the couplers/connector into the ZDBox by hooking the top of the coupler under the front mounting plate and then lowering the coupler into its aperture until it is locked (you will hear a click when it is locked).

Make sure to keep the protective caps in place on the back of the couplers during installation to avoid ingress of dust. Do not remove the shutters.

To remove a coupler or a connector, carefully insert a small screwdriver blade in the opening below it, to unlock it.

Coloured shutters for Snap-In structural hardware

The white shutters supplied with the RLZD box are removable and can be replaced with coloured versions. These shutters are available in 8 different colours.

N421.701BLA   LANmark shutter black 100 x
N421.701BLU   blue
N421.701DGR   dark grey
N421.701ORA   orange
N421.701RED   red
N421.701WHI   white
N421.701YEL   yellow
N421.701GRE   green
**Copper connector termination**

EVO Snap-In copper RJ45 connectors have to be terminated before installation in the front plate of the RLZD box.

Refer to the EVO product installation sheet provided with the connectors and also available from the NCS web library.

Snap the connectors into the ZD box.

Secure the data copper cables using the tie wrap upstands located at the rear of the base. Ties shall not significantly deform the cable sheath - This should be hand tight.

*Note:* Tie wraps are not provided.

Patch cords can also be secured using the front tie wrap upstands.
Fibre connector termination

Ensure a length of spare cable (slack) is provided. As well as being required to facilitate the termination of the cable in the RLZD box, spare cable will allow for the possibility of re-termination, repair and ability to relocate the RLZD box if required in the future.

Notes

Spare cable may require special stowage requirements in the installation.
Before termination, always cut off the first meter of cable as this part can be damaged after pulling the cable, bending etc. The removal of this 1m section should be taken into consideration in respect to the final amount of cable slack provided.

1. Direct termination

This is suited primarily to Multimode fibres. Direct termination on Singlemode fibres is restricted to specific connector types (see table next page).

2. Pre-terminated solutions

This is selected for ease of installation, particularly where the following elements are determining factors:

- the installation time window is short, and/or
- where there is a large number of connectors to be installed, and/or
- where minimum link loss performance is required (see reduced loss and warranty benefits with Nexans pre-term solutions)

3. Splicing

This is suitable for both tight buffered and loose tube constructions, with appropriate use of splice protectors and splice management.
Splicing can be used to terminate standard cables or to terminate extractable-bundle cables (FTTO specific solution).
Both installation types are described in the following chapters.
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<table>
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<td><strong>Connectorisation SM</strong></td>
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**LANmark-OF Microtube P/N:** N890.045
Phase 5A Termination with Direct Connectorisation

Please consult the Nexans Installation Guide For OF Cable document which is available from the NCS website. For detailed information related to the process of removal of the outer jacket, see the various supplements produced for the different cable constructions (Loose Tube, Tight Buffer or Micro Bundle).

When logged into the NCS site, all these documents and also others relating to design and installation testing etc. can be found here.

Note: Special consideration may be required for grounding corrugated metal jacket constructions. Refer to customer / site installation specifications.

Remove approximately 2 metres of the outer sheath and the aramid/glass yarns from the cable.

Avoid damaging the fibres while cutting the outer jacket and yarns. Collect all waste and dispose of correctly.

For 250μ fibres the tube must be removed leaving at least two loops in the loop rings. Make sure to clean the fibres (with appropriate and approved cleaning solvents) to remove the gel.

Note: A cable gland (20mm / PG11-13.5) which is available separately has to be used to fix the cable to the patch panel.

20mm hole: PG11 - 13,5

LANmark-OF Cable gland 20mm (N890.147)
Suitable for cable diameters 4.3 - 11.9mm

Note: 2 fibre organisers which are available separately (bag of 10 pieces) have to be used to support the spare fibre. The screw kit is provided with the organisers.
LANmark-OF Fibre Organiser 10x (N890.070)
Install the 2 support bases using 2 small screws, washers (both locking (1) and flat (2)) from the screw kit provided with the organisers and insert 4 loop rings on every support base, with the loop ring opening facing inwards. They will be used later to support the fibres.

Arrows indicate fibre organisers fixing points.

Fix the cable to the RLZD box.
Fix a permanent label on the fibre cable for future identification. Provide at least 2 spare loops of core in the patch panel and locate in the loop rings.

Measure the length of each fibre core to the coupler respecting both bending radius and the color sequence, then cut off surplus and dispose of correctly.

Refer to “Recommendations to maintain OF duplex channel polarity” which is available from the NCS website under “File Library”. Knowledge of this document content will assist in efficient preparation and storage of the cores within the rings (see annex).

Take the fibre out of the loop rings and mount the connectors on the fibre. When mounting connectors on 250 μ fibre, you will need to use microtube (N890.045) to reduce risk of damaging the fibre.

It is advisable to label the fibres for easy identification. Labels must not compromise bend radius of the fibre cores. Remove the dust protection caps on the inside of the couplers where connectors will be inserted.

A check for the cleanliness of the couplers and of the connectors is required.

Refer to the ‘OF connector Inspection cleaning and testing general guidelines’ NCS technical paper for detailed information.

Loop the fibres back in the loop rings and insert connectors according to the colour coding / position sequence of the couplers.

**Note:** Always maintain installation cleanliness practice! Close the box whenever you finish working on it and keep dust caps fitted.

Continue with Phase 6
Phase 5B Termination with Pre-Terminated assemblies

The gland holes of the panel are open at the side and are therefore suitable for use with pre-terminated assemblies.

Note: 2 fibre organisers available separately (bag of 10 pieces) have to be used to support the spare fibre. The screw kit is provided with the organisers. LANmark-OF Fibre Organiser 10 x (N890.070)

Install the 2 support bases using 2 small screws, washers (both locking (1) and flat (2)) from the screw kit provided and insert 4 loop rings on every support base, with the loop ring opening facing inwards. They will be used later to support the fibres (see picture on page 15).

Insert the cable from the rear end of the panel. Partially remove the protective tube to access the cable gland. Slide and fasten the gland in one of the gland hole and remove the protection tube.

Coil the fibre using loop rings.
Remove the dust protection caps on the inside of the couplers where connectors will be inserted. A check for the cleanliness of the couplers and of the connectors is required.

Refer to the ‘OF-connector Inspection cleaning and testing general guidelines’ NCS technical paper for detailed information.

Loop the fibres back in the loop rings and insert connectors according to the colour coding / position sequence of the couplers.

Refer to “Recommendations to maintain OF duplex channel polarity” which is available from the NCS website under “File Library”. Knowledge of this document content will assist in efficient preparation of the cores and storing within the spindle or rings. (see Annex).

Note: Always maintain installation cleanliness practice! Close the box whenever you finish working on it and keep dust caps fitted.

Continue with Phase 6
Please consult the Nexans Installation Guide For OF Cable document which is available from the NCS website. For detailed information related to the process of removal of the outer jacket, see the various supplements produced for the different cable constructions (Loose Tube, Tight Buffer or Micro Bundle).

When logged into the NCS site, all these documents and also others relating to design and installation testing etc. can be found there.

**Note:** Special consideration may be required for grounding corrugated metal jacket constructions. Refer to customer / site installation specifications.

Remove approximately 2 metres of the outer sheath and the aramid/glass yarns from the cable.

Avoid damaging the fibres while cutting the outer jacket and yarns. Collect all waste and dispose of correctly.

Install the first splice cassette on the base using the 2 screws and associated locking washers from the screw kit. Arrows indicate cassette fixing points. The additional cassettes will be installed at a later stage. To connect the additional splice cassettes, optional hinges (N890.098) have to be fitted at the back of the splice cassettes. Up to 2 optional splice cassettes can be installed according to the number of fibres to be terminated. With such an arrangement the additional splice cassettes can be lifted and tilted for improved access to the splices beneath them.
Splice cassettes must be ordered separately.

The splice cassette for heat shrink protection can accommodate 12 splices allowing a maximum of 24 splices per RLZD box.

- LANmark-OF Splice Cassette Heat Shrink Protections Small (N890.095)
- LANmark-OF Splice Cassette Cover Small (N890.097)
- LANmark-OF Fusion Splice Heat Shrink Protection 45 mm - 100x (N890.021)
- LANmark-OF Splice Cassette Hinges 16x (N890.098)

Note: 2 hinges are needed to connect an additional splice cassette to the first one.

Not recommended but possible:

The splice cassette for aluminium protection can accommodate 24 splices. There is no need for additional splice cassettes.

- LANmark-OF Splice Cassette Aluminum Protectors Small (N890.096)
- LANmark-OF Fusion Splice Aluminium Protection 150x (N890.003)

Note: Tool N890.004 must be used with aluminium splice protectors.

Note: N890.003 can only be used with maxistrip pigtails and cables with 250 μm coated fibres. The aluminium protection is not suitable for use with 900μm coated fibres.

For both type of splice cassette only one cover (N890.097) is required to close the last splice cassettes at the top.

An optional cable gland (20mm / PG11-13.5) has to be used to secure the cable to the patch panel.

12 x heat shrink protectors

24 x aluminium protectors

20mm hole: PG11-13.5
LANmark-OF Cable gland 20mm
N890.147
Suitable for cable diameters 4.3 – 11.9 mm
For 250μ fibres (Loose Tube and Micro-Bundle cable structures) the tube / the bundle must be removed to expose at least two loops of slack fibres in the splice tray. Make sure to clean the fibres (with appropriate and approved cleaning solvents) to remove the gel.

Fix the end of the remaining tube on the splice tray (A) by means of tie wraps. It is not advised to tie the tie wraps tightly as they are not used for strain relief but to keep the tube in the right position.

Do not overtighten the tie wraps on the tube especially when working with Micro-Bundle cable.

For 900μm fibres (Tight Buffer cable structure) measure the length of the 900μ buffer needed on the splice tray and fix the fibres in the comb (B) of the splice tray.

The fibres from the pigtails should make 2 loops in the opposite direction.

For 900μm pigtails proceed as for fibres from TB cable structure to fix the fibre on the splice tray.

For maxi-strip pigtails, measure the length of 250μm buffered fibre needed on the splice tray and strip the 900μ buffer and fix the end of 900μ buffer in the comb (B) of the splice tray.
Slide the heat shrink protections tubes (not needed when using metallic splice protection) onto the fibres and joint them by fusion splicing with pigtailed following the correct colour sequence.

In case of using a fibre cable with more than 12 x 250μm fibres using heat shrink splice protectors, an additional splice tray will be required.

If the 24 fibres are contained into a single tube, a duplex splitter (A) and two pieces of bend limiting tube (B) are needed to split the 24 fibres into two groups of 12 fibres.

Each group of 12 fibres will be routed to one of the two splice trays.

LANmark-OF Duplex Splitter (N890.144)
LANmark-OF Bend Limiting Tube (N890.145)

It is advisable to label the fibres for easy identification. Labels must not compromise bend radius of the fibre cores.

Remove the dust protection caps on the inside of the couplers where connectors will be inserted.

A check for the cleanliness of the couplers and the connectors is required.
Refer to the ‘OF connector Inspection cleaning and testing general guidelines’ NCS technical paper for detailed information.

Insert connectors according to the colour coding / position sequence of the couplers.

The “Recommendations to maintain duplex OF channel polarity” technical paper, which is available from the NCS website (under the File library) should be considered when choosing the colour order. (see Annex)

Continue with Phase 6
Extractable-bundle cables are selected to create networks based on FTTO ring cabling topology. (see LANactive section of the NCS website).

**Description of the extraction process**

1 or 2 bundles of 12 fibres have to be extracted from the cable and be terminated in the Ruggedised Lockable Zone Distribution (RLZD) box.

First of all, the jacket of the cable has to be opened and a piece of 30 to 40 millimetres removed a few metres away from the RLZD box or in between two RLZD boxes if the same bundle will be terminated in two consecutive boxes.

The OGCL stripping tool (NCS part number: N890.131) shall be used to perform this task to ensure that the bundles and the fibres will not be affected by this process (see picture below).

The bundle(s) to be terminated in the RLZD box(es) will then be cut.

Using the same OGCL stripping tool the cable jacket will also need to be opened at the location where the RLZD box will be installed. A piece of the jacket having the length needed to fully expose the bundle inside the RLZD box has to be removed (see detailed splicing process description page 25).

The appropriate bundle(s) will be extracted of the cable.
The fibres will then be spliced on LC pigtails and these will be connected to the LC adaptors in the RLZD box. Patch cords will be connected between the RLZD box and the micro-switches. The exposed bundles located between the two RLZD boxes will be covered with a cable protection box N890.170 - LANmark-OF Mini Rootfloor 5mm (see picture below).

**Termination process in the RLZD box**

Install the first splice cassette on the base using the 2 screws and associated locking washers from the screw kit. The additional cassettes will be installed at a later stage. To connect the additional splice cassettes, optional hinges (N890.098) have to be fitted at the back of the splice cassettes. Up to 2 optional splice cassettes can be installed according to the number of fibres to be terminated. With such an arrangement the additional splice cassettes can be lifted and tilted for improved access to the splices beneath them (see picture on page 19).

**Splice cassettes must be ordered separately.**

The splice cassette for heat shrink protection can accommodate 12 splices allowing a maximum of 24 splices per RLZD box.

- LANmark-OF Splice Cassette Heat Shrink Protections Small (N890.095)
- LANmark-OF Splice Cassette Cover Small (N890.097)
- LANmark-OF Fusion Splice Heat Shrink Protection 45 mm - 100x (N890.021)
- LANmark-OF Splice Cassette Hinges 16x (N890.098)

**Note:** 2 hinges are needed to connect an additional splice cassette to the first one.
Not recommended but possible:

The splice cassette for aluminium protection can accommodate 24 splices. There is therefore no need for additional splice cassettes.

- LANmark-OF Splice Cassette Aluminium Protectors Small (N890.096)
- LANmark-OF Fusion Splice Aluminium Protection 150x (N890.003)

**Note:** Tool N890.004 must be used with aluminium splice protectors.

**Note:** N890.003 can only be used with maxistrip pigtails and cables with 250 um coated fibres. The aluminium protection is not suitable for use with 900μm coated fibres.

For both type of splice cassette only one cover (N890.097) is required to close the last splice cassettes at the top.

**Note:** First cut the bundles to be terminated in the ZD box a few meters away as explained on page 23.

To remove the cable jacket use the procedure described below on a length of 30 to 40 mm.

Using the OGCL stripping tool remove the jacket of the cable on a length of 170 to 190 mm to fully expose the bundle inside the RLZD box.

1. Mark the location of the piece of cable to be remove on the cable jacket.
2. Adjust the blade of the tool according to the thickness of the cable sheath.

We recommend first testing the tool setting on a spare piece of cable.

3. Set the tool in longitudinal cutting mode using D (pull + turn).
4. Cut the jacket longitudinally between the two marks using the part of the tool dedicated to this operation. 

**Note:** the blade first has to be set into the right position to adjust the penetration into the jacket and then locked using E.

5. Set the tool in the circular cutting mode using D (pull + turn).

6. Place the tool on the cable with the blade located at the end of the longitudinal cut (on the first mark) and rotate the tool around the cable to cut the jacket.
7. Repeat the process to cut the jacket at the other end of the longitudinal cut (on the second mark).

8. Gently remove the jacket.
Install the cable in the RLZD box and fix it on both sides using tie-wraps as shown on the following picture
Do not over-tighten the tie wraps.

Pull the appropriate bundle(s) out of the cable

Guide the bundle(s) to the splice tray leaving at least one loop of slack bundle around the tray and cut off the surplus length leaving at least two loops of slack fibres in the splice tray.
Strip the bundle using the appropriate tool ((Multi-Wire stripper 821 - Ripley / Miller or equivalent).
Make sure to clean the fibres (with appropriate and approved cleaning solvents) to remove the gel (see Micro Bundle supplement of the Nexans Installation Guide).

Fix the end of the remaining bundle on the splice tray (A) by means of tie wraps. It is not advised to tie the tie wraps tightly as they are not used for strain relief but to keep the bundle in the right position (see page 21). Do not over-tighten the tie wraps on the bundle/tube.

The fibres from the pigtails should make 2 loops in the opposite direction.

For 900µm pigtails measure the length of the 900µ buffer needed on the splice tray and fix the fibres in the comb (B) of the splice tray.

For maxi-strip pigtails measure the length of 250µm buffered fibre needed on the splice tray and strip the 900µ buffer and fix the end of 900µ buffer in the comb (B) of the splice tray.
Slide the heat shrink protection tubes (not needed when using metallic splice protection) onto the fibres and joint them by fusion splicing with pigtailed following the correct colour sequence.

It is advisable to label the fibres for easy identification. Labels must not compromise bend radius of the fibre cores. Remove the dust protection caps on the inside of the couplers where connectors will be inserted.

A check for the cleanliness of the couplers and of the connectors is required.
Refer to the ‘OF connector Inspection cleaning and testing general guidelines’ NCS technical paper for detailed information.

Insert connectors according to the colour coding / position sequence of the couplers.

The “Recommendations to maintain duplex OF channel polarity” technical paper, which is available from the NCS website (under the File library) should be considered when choosing the colour order. (See Annex)

Continue with Phase 6
Phase 6 Finalisation of the installation

The RLZD Box can now be gently closed. Fix the top lid with the 4 screws on the top. Loop the extra fibre cable back in a safe place while respecting minimum bending radius. Label the ports to conform with the installation requirements.
The RLZD Box installation is now completed.

Do not remove the closed shutters on the front plate of the RLZD Box because they prevent ingress of dirt into the couplers. To connect patch cords open the front lid and connect the cords. It is recommended to fix it using tie wraps as shown.

Close and lock the lid.
IMPORTANT NOTE – INSPECTION, CLEANING & TESTING

The cleaning of all the optical fibre connectors prior to the installation (pigtail, patch cords etc) is a critical factor that needs to be applied at all times.

Latest applications have stringent link loss requirements and in order to ensure that the required performances levels are achieved during commissioning and operation, the cleanliness of all fibre interfaces needs to be maintained.

The Nexans OF connector Inspection, Cleaning & Testing general guidelines can be downloaded here.

In addition, there is also a General Installation guide (for both copper and fibre) which includes further information.

Please note: The Nexans warranty may be invalidated if the cables have not been properly stored or handled according to Nexans Cabling Solutions (NCS) requirements. When logged into the NCS site, all these documents and also others relating to design and installation testing etc can be found here.
### OF system polarity

The only way to automatically maintain the duplex polarity without having to think about it, is to include a crossover into all the OF link segments.
In other words, fibres pairs have to be swapped over (interchanged) into the patch panel on one side of every link segment.

### Reverse-pair wiring - OF Cable termination scheme

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<thead>
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<th>Fibre coding</th>
<th>Front panel position</th>
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<td>4b</td>
<td>Red</td>
</tr>
<tr>
<td>Yellow</td>
<td>9</td>
<td>5a</td>
<td>Violet</td>
</tr>
<tr>
<td>Violet</td>
<td>10</td>
<td>5b</td>
<td>Yellow</td>
</tr>
<tr>
<td>Pink</td>
<td>11</td>
<td>6a</td>
<td>Turquoise</td>
</tr>
<tr>
<td>Turquoise</td>
<td>12</td>
<td>6b</td>
<td>Pink</td>
</tr>
<tr>
<td>Blue + 1 r.</td>
<td>13</td>
<td>7a</td>
<td>Orange + 1 r.</td>
</tr>
<tr>
<td>Orange + 1 r.</td>
<td>14</td>
<td>7b</td>
<td>Blue + 1 r.</td>
</tr>
<tr>
<td>Green + 1 r.</td>
<td>15</td>
<td>8a</td>
<td>Brown + 1 r.</td>
</tr>
<tr>
<td>Brown + 1 r.</td>
<td>16</td>
<td>8b</td>
<td>Green + 1 r.</td>
</tr>
<tr>
<td>Grey + 1 r.</td>
<td>17</td>
<td>9a</td>
<td>White + 1 r.</td>
</tr>
<tr>
<td>White + 1 r.</td>
<td>18</td>
<td>9b</td>
<td>Grey + 1 r.</td>
</tr>
<tr>
<td>Blue + 2 rings</td>
<td>19</td>
<td>10a</td>
<td>Orange + 2 r.</td>
</tr>
<tr>
<td>Orange + 2 r.</td>
<td>20</td>
<td>10b</td>
<td>Blue + 2 rings</td>
</tr>
<tr>
<td>Green + 2 r.</td>
<td>21</td>
<td>11a</td>
<td>Brown + 2 r.</td>
</tr>
<tr>
<td>Brown + 2 r.</td>
<td>22</td>
<td>11b</td>
<td>Green + 2 r.</td>
</tr>
<tr>
<td>Grey + 2 r.</td>
<td>23</td>
<td>12a</td>
<td>White + 2 r.</td>
</tr>
<tr>
<td>White + 2 r.</td>
<td>24</td>
<td>12b</td>
<td>Grey + 2 r.</td>
</tr>
</tbody>
</table>

(*): To be repeated twice for a fully loaded patch panel (48 fibres)
Disclaimer

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