LANmark-OF Patch Panel Snap-In Sliding

PRODUCT INSTALLATION GUIDE

November 2024 v3.04

aginode

LANmark-OF Patch Panel Snap-In Sliding
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Product References

Part Number	Description
N439.4SNW	LANmark-OF Patch Panel Snap-In Sliding White
N439.4SNB	LANmark-OF Patch Panel Snap-In Sliding Black

Document information

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Important Notice

General

Installation is to be performed by qualified service personnel.

The installation of the LANmark-OF Patch Panel Snap-In Sliding must be carried out with care and precision.

Prior to panel installation in a cabinet, preparation work should be carried out on a clean and level work-surface.

Each patch panel is supplied with:

- 4 cage-nuts with screws
- 3 loop rings
- 2 screws and washers for optional splice tray fixing

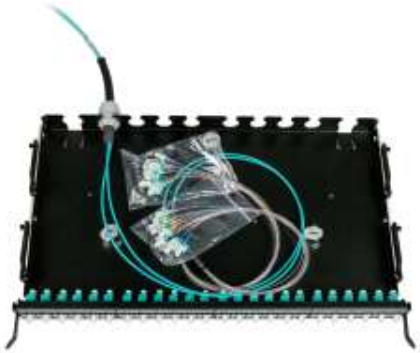
All other ancillaries (e.g. splice trays) must be purchased separately.
The product part numbers are mentioned where applicable in the following.

Possible configurations

1. **Installation with pre-terminated cable:**

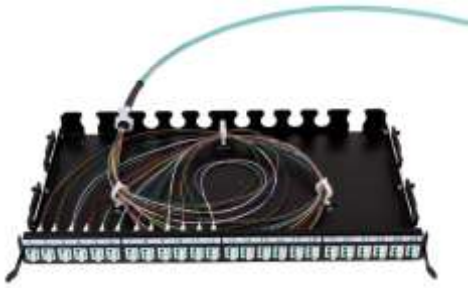
This is selected for ease of installation, particularly where the following elements are determining factors:

- the installation time window is short, and /or
- where there are a large number of connectors to be installed, and/or
- where minimum link loss performance is required



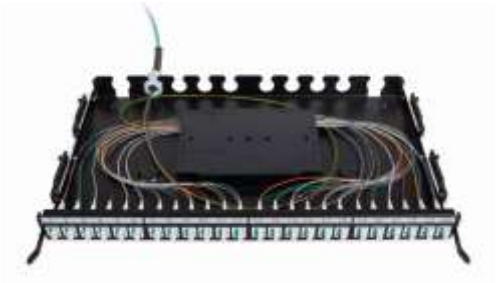
2. **Installation with direct connectorisation:**

This is suited primarily to multimode fibres. Direct termination on singlemode fibres is restricted to specific connector types (see table below).



3. **Installation with splicing system:**

This is suitable for both tight buffered and loose tube (including Micro-Bundle) constructions, with appropriate use of splice protectors and splice management.



LC / SC	Loose Tube / Microbundle 250µm fibres	Tight Buffer 900µm fibres
Fusion splicing MM	**Yes**	**Yes** *Using heat shrink splice protectors*
Connectorisation MM	**Yes with microtube**	**Yes**
Fusion splicing SM	**Yes (preferred)** *Using heat shrink or aluminium splice protectors*	**Yes (preferred)** *Using heat shrink splice protectors*
Connectorisation SM	**Yes with microtube** *(available but not preferred)*	**Yes** *(available but not preferred)*

Snap-In Adaptors

1. LC Duplex

Up to 24 duplex LC adaptors can be installed into the panel.

Part Number	*Description*
N205.617	LANmark-OF Duplex LC Snap-In Adaptor Multimode Aqua
N205.627	LANmark-OF Duplex LC Snap-In Adaptor Singlemode
N205.628	LANmark-OF Duplex LC Snap-In Adaptor Singlemode APC

2. SC Duplex and Simplex

Up to 12 duplex SC adaptors or 24 simplex SC adaptors can be installed into the panel.

N205.619	LANmark-OF Duplex SC Snap-In Adaptor Multimode Aqua
N205.624	LANmark-OF Duplex SC Snap-In Adaptor Singlemode
N205.625	LANmark-OF Duplex SC Snap-In Adaptor Singlemode APC
N205.618	LANmark-OF SC Snap-In Adaptor Multimode Aqua
N205.623	LANmark-OF SC Snap-In Adaptor Singlemode
N205.626	LANmark-OF SC Snap-In Adaptor Singlemode APC

Unused positions can be populated with blank fillers.

Part Number	*Description*
N420.655	LANmark Snap-In Blank White 24x
N420.655BK	LANmark Snap-In Blank Black 24x

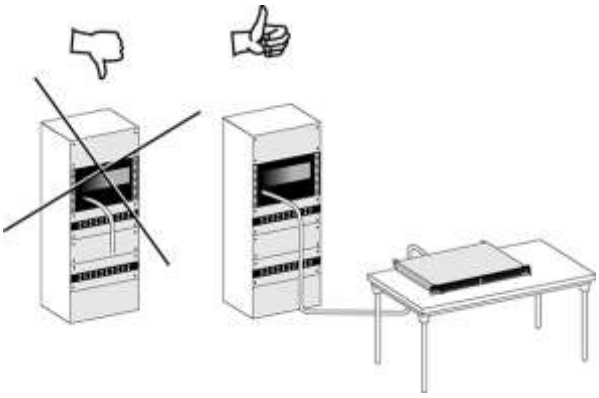
Phase 1 - Preparation of the patch panel

1.1 Installing the cable

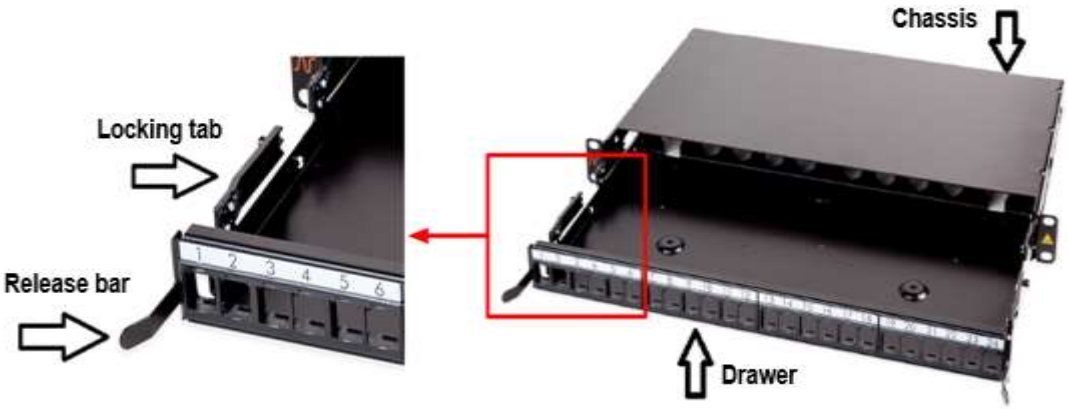
Ensure a length of spare cable (slack) is provided within the cabinet (6m recommended). As well as being required to facilitate the termination of the cable in the OF patch panel, spare cable will allow the ability to relocate the panel if required in the future.

NB1. Spare cable may require special stowage requirements in the installation.

NB2. When using fusion splicing, 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.



1.2 Elements of the patch panel



1.3 Installing the patch panel into the cabinet

1. Remove the sliding drawer from the chassis (fixed part).
    a. Lift-up the release bars on the left and right-hand side of the panel to release the drawer from the chassis

b. Whilst pressing the locking tabs inwards on either side of the drawer, pull the drawer out of the chassis until the second locking position is engaged.

c. Then press the second locking tabs and pull the drawer fully out of the chassis.

2. Position the chassis into the rack.

Remember to complete earthing requirements for metallic items using a suitable earthing cable and the screw / washer provided on the chassis.

NB. Screw holes are located at the rear of the panel on the left and right-hand side of the chassis. The panel is delivered with the screw fitted in the left-hand screw hole (see phase 4).

Thread the Pre-Term or cable through the chassis of the patch panel.
Make sure to respect the cable's minimum bending radius while handling the cable.

Selection and installation of snap-in adaptor

The advantage of the Snap-In patch panel is the flexibility to accept different types of adaptors and connectors. There are currently nine LANmark Snap-In adaptor variants that can be installed These adaptors must be purchased separately.

NB. Please be aware that patch cords with a DSC connector are not compatible with two separate SC adaptors as the orientation of the keyway is different.

The adaptors are fitted into the patch panel by first hooking the top of the adaptor into the plastic moulding (rear of the front mounting plate) and then lowering the adaptor into its aperture – pushing fully down to snap the adaptor into position.

When using LC Duplex or SC Duplex adaptors make sure to remove the dust caps on the front part before fitting the adaptor.

DO NOT discard ferrule dust caps!
If removed in order to insert adaptors, always re-fit afterwards. This is essential in order to maintain cleanliness and integrity of the fibre channel.

Visually check that correct adaptors (MM Aqua / SM blue or green) are being used for the fibre being terminated.

Blanks (N420.655 or N420.655BK) can also be obtained and fitted to unused positions for aesthetics and to help reduce dust/debris ingress into the chassis.

If an adaptor needs to be removed place a small screwdriver blade (or equivalent) in the opening under the adaptor to unlock it and then pull the adaptor up – reverse process of installation

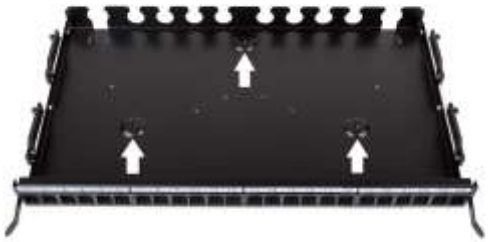
Phase 2A - Installation with Pre-Terminated assemblies

For pre-terminated OF cable general pulling rules and pulling part removal procedure, please refer to the Aginode FO installation guide and pre-terminated cable supplement. These documents can be viewed when logged into the AGINODE website.

1. Sliding drawer preparation for pre-term installation

Install the 3 loop rings, provided with the panel.

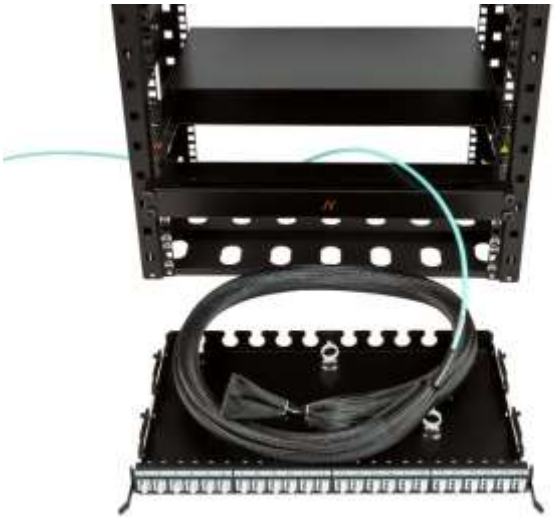
Arrows indicate loop ring fixing points.



2. Installation process in the patch panel

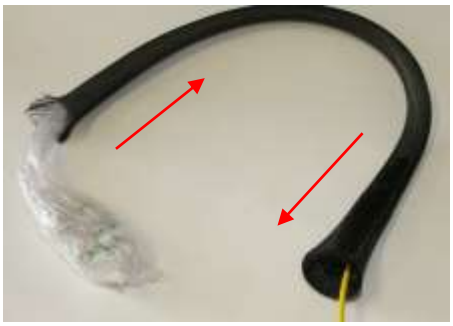
1. Install up to 24 LC Duplex adaptors onto the drawer.
   As per instructions page 8

2. With the black net sleeve, or only the bubble wrap sleeve at the other end of the pre-term still in place, insert the cable end from the rear of the chassis.

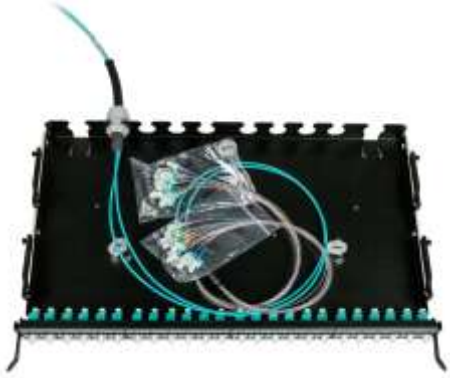


3. Carefully remove the black net sleeve and/or bubble wrap sleeve to access the cable gland.
   Do not yet remove the plastic bags around each bundle of 12 connectors, this to avoid mixing them up.

   The full removal process is described in the Pre-terminated cable supplement which is available on the Aginode website.

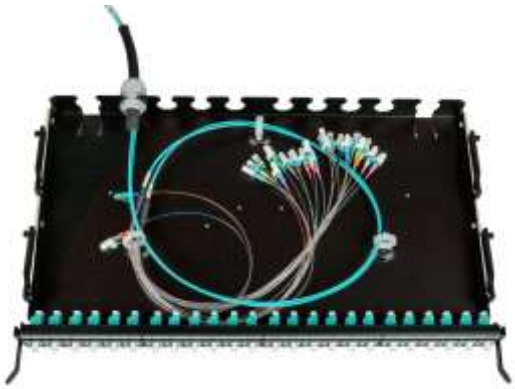


4. The gland fixing locations on the LANmark-OF patch panels are open at the top and are therefore suitable for use with pre-terminated assemblies.
   Slide in and fasten the gland in an appropriate slot.

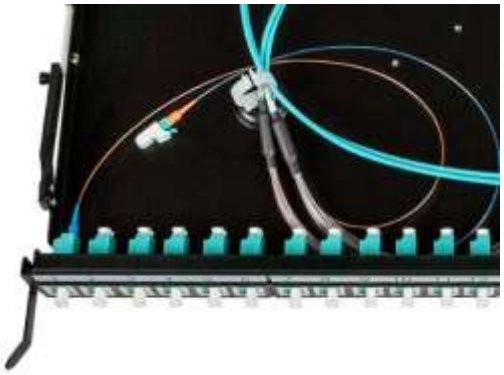


5. Select the leg to be terminated. A label (B) is located on every leg at the rear of the fan-out

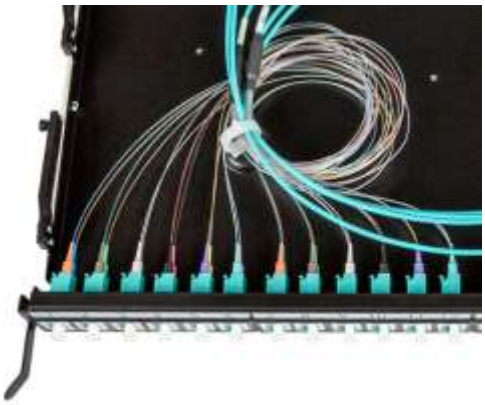
6. Remove the plastic bag from the connectors.
   Coil the first leg into the loop rings.
   Remove the dust protection caps on the inside of the adaptors where connectors will be inserted.



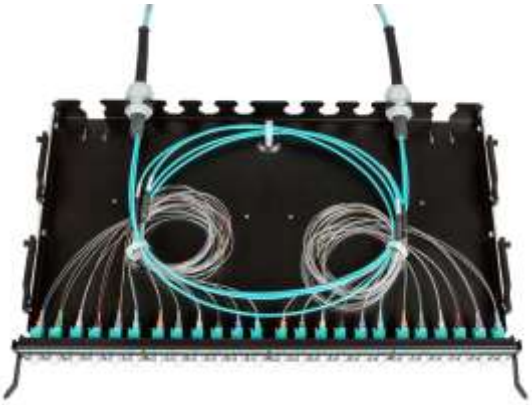
7. A check for the cleanliness of the adaptors and connectors is required prior to the insertion of the connectors into the adaptors – see Important Note below.
   Insert connectors according to the colour coding/position sequence of the adaptors (see Annex C).



8. Repeat steps 5, 6 and 7 for every leg of the pre-term.



9. See page 21 for finalisation of the installation.



Important note

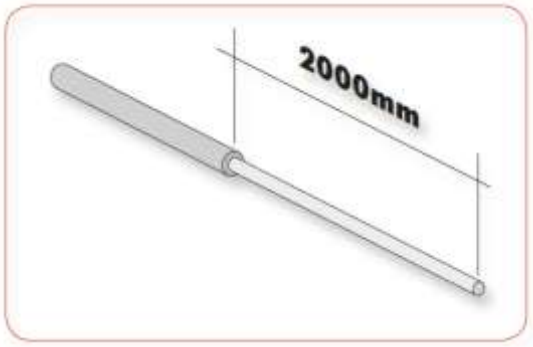
The inspection and appropriate cleaning of all the optical fibre connectors (pigtails, patch cords etc) prior to mating is a critical process that needs to be followed at all times.

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.

See Annex A

Phase 2B - Installation with direct connectorisation

Remove approximately 2 meters of the outer sheath and the aramid/glass yarns from the cable.
In addition, for 250µ fibres, the tube must also be removed. At least two loops of fibre will be required to be provided in the loop rings.
Consult the guideline documents for specific jacket removal requirements regarding the cable type being installed.
These documents can be viewed when logged into the AGINODE website.
Special consideration may be required for grounding corrugated metal jacket constructions. Refer to customer / site installation specifications.
Avoid damaging the fibres while cutting the outer jacket and yarns.
Collect all waste and dispose of correctly – always use appropriate safety procedures and adhere to regional and "local" requirements.
Use the correct tools in order not to damage the fibres while cutting the tube (Loose tube or Micro-Bundle structures).
Make sure to clean the fibres (with appropriate and approved cleaning solvents) to remove gel where present.



Secure the outer jacket of the cable onto the base at the back of the patch panel by means of a cable gland or by tie-wraps.

Cable glands are preferred, cable gland (20mm / PG11-13,5 or 25mm / PG16- 21) has to be used to affix the cable to the patch panel.
If no cable gland is used, then tie wraps can be used. Ties shall not be installed such that they significantly deform the cable sheath – ties should be hand tight.

20mm hole

Part Number	*Description*
N890.148	LANmark-OF Cable gland rubber boot 20 mm 10x

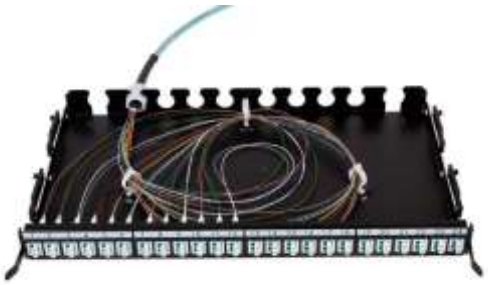
Suitable for cable diameters 4.0 – 7.8 mm

25mm hole: PG16-21

Part Number	*Description*
N890.146	LANmark-OF Cable gland 25 mm

Suitable for cable diameters 12.0 – 18.0 mm

Apply a permanent label on the cable just behind the gland for identification purposes. Provide at least 1 spare loop of fibre in the patch panel and arrange them in the loop rings.



Install appropriate adaptors – see page 8.

Measure the length of each fibre to the adaptor respecting both bending radius and the colour sequence, then cut off the surplus and dispose of it correctly.
Refer to "Recommendations to maintain OF duplex channel polarity"- a technical paper, which is available from the AGINODE website under "File Library". Knowledge of this document content will assist in efficient preparation and storage of the fibres within the rings (see annex B).

Take the fibre out of the loop rings and mount the connectors on 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.

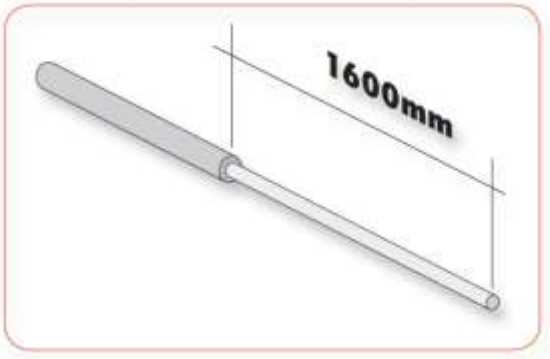
Loop the fibres back in the loop rings and insert connectors according to the colour coding / position sequence of the adaptors.

A check for the cleanliness of the adaptors and connectors is required prior to the insertion of the connectors.
Refer to the 'OF connector Inspection cleaning and testing general guidelines' AGINODE technical paper for detailed information.
NB. Always maintain installation cleanliness practice! Close the drawer whenever you finish working on the panel and keep dust caps fitted.

See page 21 for finalization of the installation.

Phase 2C - Installation with fusion splicing

Strip at least 1.6 meters of cable sheath to allow enough spare fibre for later maintenance purposes. Consult the guideline documents for specific jacket removal requirements regarding the cable type being installed.
These documents can be viewed when logged into the AGINODE website.
Special consideration may be required for grounding corrugated metal jacket constructions. Refer to customer / site installation specifications.
Avoid damaging the fibres while cutting the outer jacket and yarns. Collect all waste and dispose of correctly – always use appropriate safety procedures and adhere to regional and "local" requirements. Use the correct tools in order not to damage the fibres while cutting the tube (Loose tube or Micro-Bundle structures).
Make sure to clean the fibres (with appropriate and approved cleaning solvents) to remove gel where present.



Secure the outer jacket of the cable onto the base at the back of the patch panel by means of a cable gland or by tie-wraps.

Cable glands are preferred, cable gland (see page 14) has to be used to affix the cable to the patch panel.
If no cable gland is used, then tie wraps can be used. Ties shall not be installed such that they significantly deform the cable sheath – ties should be hand tight.

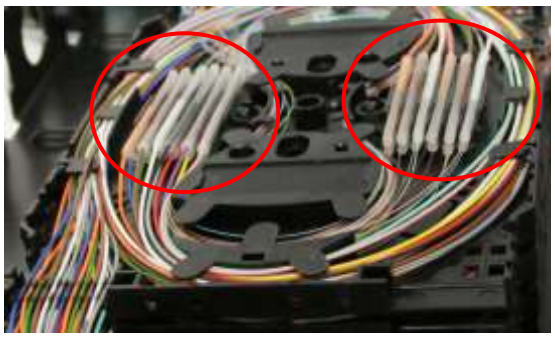
Install the first splice cassette on the drawer using the 2 long screws and associated locking washers from the screw kit. The additional cassettes will be installed at a later stage. To connect the additional splice cassettes the hinges at the back of the splice cassettes will be used.
Up to 4 splice cassettes can be installed according to the number of fibres to be terminated.
Splice cassettes must be ordered separately.
2 types of splice cassettes are available:

The splice cassette for aluminium protection (N890.091) can accommodate 24 splices.
2 splice cassettes are needed to cover the maximum of 48 splices per patch panel.
Aluminium splice protectors - N890.003 (pack of 150 pieces)
NB. Tool N890.004 must be used with aluminium splice protectors.

Important Note: N890.091 can only be used with maxistrip pigtails and cables with 250µm coated fibres. The aluminium protection is not suitable for use with 900µm coated fibres.

The splice cassette for heat shrink protection (N890.090) can accommodate 12 splices when using Tight Buffer pigtails of 900 µm or 24 splices when using Maxistrip pigtails of 250µm (see picture below).

As highlighted on the picture, two heat shrink protected splices shall be installed on top of each other in each of the 2x 6 splice holders of the cassette to accommodate 24 splices on a single cassette.



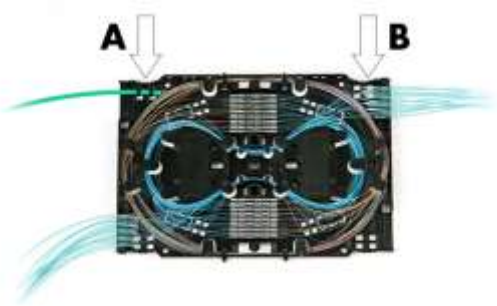
Respectively 2 or 4 splice cassettes are needed to cover the maximum of 48 splices per patch panel.
Heat shrink splice protectors - N890.021 (pack of 100 pieces)

For both type of splice cassette only one cover (N890.092) is required to close the last splice cassette at the top.
Additional splice cassettes are fixed with hinges to the cassette below it. With such an arrangement the additional splice cassettes can be lifted and tilted for improved access to the splices beneath them.

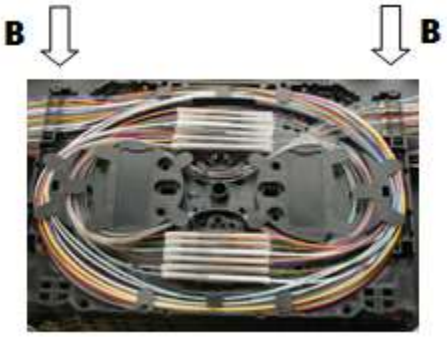
Arrows indicate cassette fixing points.

Install appropriate adaptors – see page 8.

Metallic splice protectors



Heat shrink splice protectors

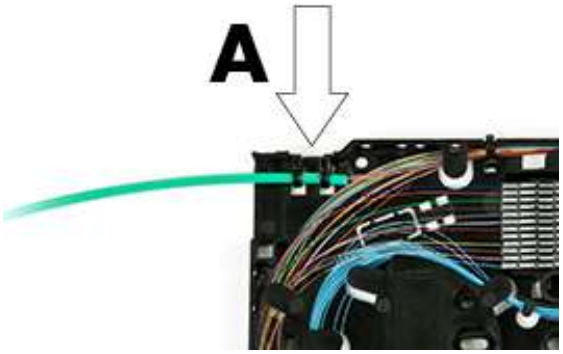


Apply a permanent label on the cable just behind the gland for identification purposes.

Up to 4 splice trays may be installed to accommodate 48 heat-shrink fibre splices. Only 2 splice trays are needed to accommodate 48 metallic protected fibre splices.

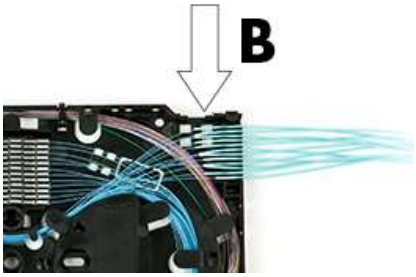
900µm coated fibres shall be fixed in the entry combs of the splice trays (B).

For Loose Tube and Micro-Bundle cable structures remove surplus tube from the fibre to allow the remaining tube to be fixed on the splice tray (A) by means of tie wraps. The tie wraps are not intended to provide strain relief but are to keep the tube in the right position. Do not over-tighten the tie wraps on the tube especially when working with Micro-Bundle cables.

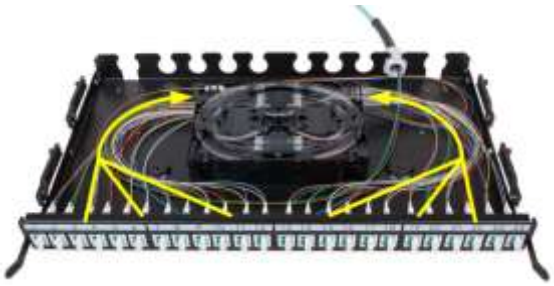


Clean the fibres with an approved and suitable solvent to remove the gel. Make sure that there are at least 2 loops of fibres in the splice tray.

A check for the cleanliness of the couplers and connectors is required prior to the insertion of the connectors.
Refer to the 'OF connector Inspection cleaning and testing general guidelines' AGINODE technical paper for detailed information.

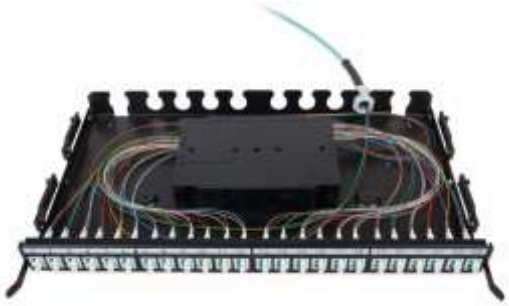


Insert the pigtails connectors in the adaptors. Measure the length of the 900µm buffer needed to fix the pigtail in the comb (B) of the splice tray keeping in mind the bending radius. Make sure to use the entry comb on the side of the connectors you have just installed as shown in the picture.



The fibres from the pigtails should make 2 loops in the opposite direction.
Aginode Maxistrip pigtails allow the removal of the 900µm buffer in one operation after being cut to the right length.

Cut the fibres to the right length, slide the heat shrink protections tubes onto the fibres and joint them by fusion splicing with pigtails following the correct colour sequence.
The "Recommendations to maintain duplex OF channel polarity" technical paper, which is available from our AGINODE website (under the File Library), should be considered when choosing the colour order. (See Annex B)



Note: Only one cover is needed on top of the last cassette whatever the number of cassettes installed in the panel.

See page 21 for finalisation of the installation.

Important Note

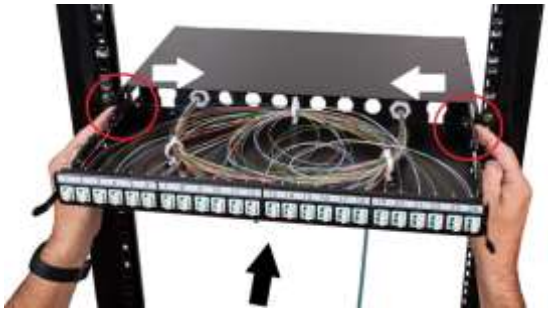
The inspection and appropriate cleaning of all the optical fibre connectors (pigtails, patch cords etc) prior to mating is a critical process that needs to be followed at all times.

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.

See Annex A

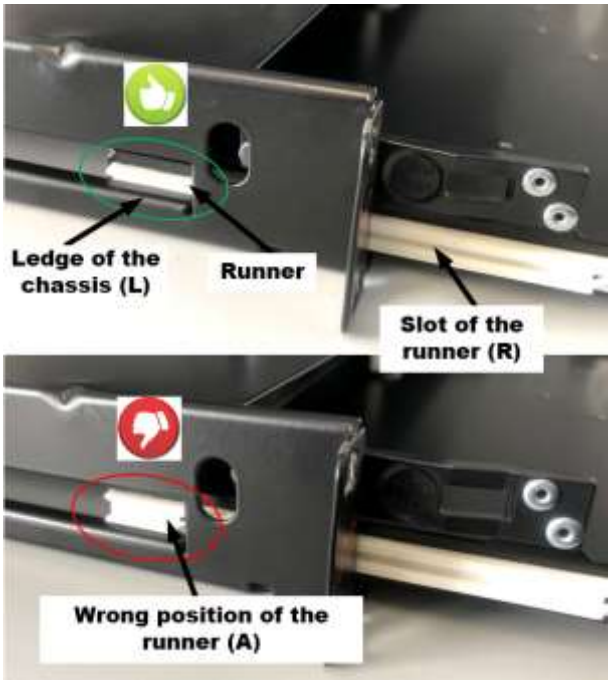
Phase 3 - Finalisation of the installation

The drawer assembly can now be refitted to the chassis.
Press in the second set of locking tabs and slide the drawer into the chassis until the next locking point.

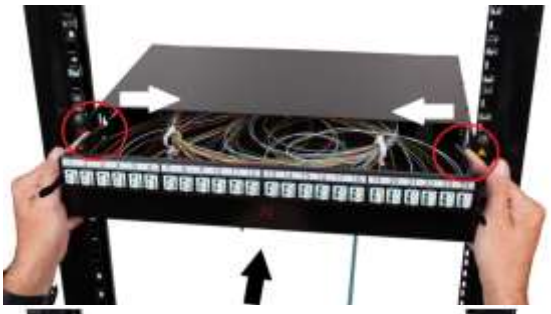


Important note
To correctly re-install the drawer, ensure that it is initially placed flat on the chassis base before sliding it back horizontally into the chassis body.

When sliding the drawer in, the ledge (L) must be within the slot of the runner (R) on both sides – the runners should not sit on top of the ledge as per picture (A).



Repeat the above step and slide the drawer until the last locking point.



Lift-up the release bars and slide the drawer completely into the chassis.

Label the ports conform to the site labeling scheme.

The rear side of the L shaped support bracket is unpainted (1) to ensure automatic earth connection with Aginode cabinets' frames or other unpainted 19" frames.
If the frames are painted, an earth connection must be made to the chassis using an earth lead (2).
Spare / slack cable should then be appropriately secured depending on the installation requirements of the site.

The patch panel installation is now complete. Testing must be carried out in accordance with client requirements and Aginode requirements for warranty submission.

Patch cords can now be installed.

On completion the installation must be handed over to the customer with all dust caps fitted to
unpatched adaptors.
Any dust caps that have been removed must be stored appropriately for potential re-use.
Optical Power / Safety levels warning labelling, and security procedures must have been implemented on completion of the installation.
An example is where the optical hazard requires identification labels to be fitted and security procedures for racks and doors to be fitted and closed/ locked.

Annex A

IMPORTANT NOTE – INSPECTION, CLEANING & TESTING

The inspection and appropriate cleaning of all the optical fibre connectors (pigtails, patch cords etc) prior to mating is a critical process that needs to be followed 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 Aginode **OF connector Inspection, Cleaning & Testing general guidelines** can be downloaded from the Aginode website.

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

Please note: The Aginode warranty may be invalidated if the cables have not been properly stored or handled according to Aginode requirements.

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

Annex B

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.

Side A			Side B		
Port Number	Fibre Number	Colour of the fibre	Colour of the fibre	Fibre Number	Port Number
1	1	Blue	Orange	2	1
2	2	Orange	Blue	1	2
3	3	Green	Brown	4	3
4	4	Brown	Green	3	4
5	5	Grey	White	6	5
6	6	White	Grey	5	6
7	7	Red	Black	8	7
8	8	Black	Red	7	8
9	9	Yellow	Violet	10	9
10	10	Violet	Yellow	9	10
11	11	Pink	Aqua	12	11
12	12	Aqua	Pink	11	12

To be repeated 2 or 4 times for a fully loaded patch panel (24 or 48 fibres)

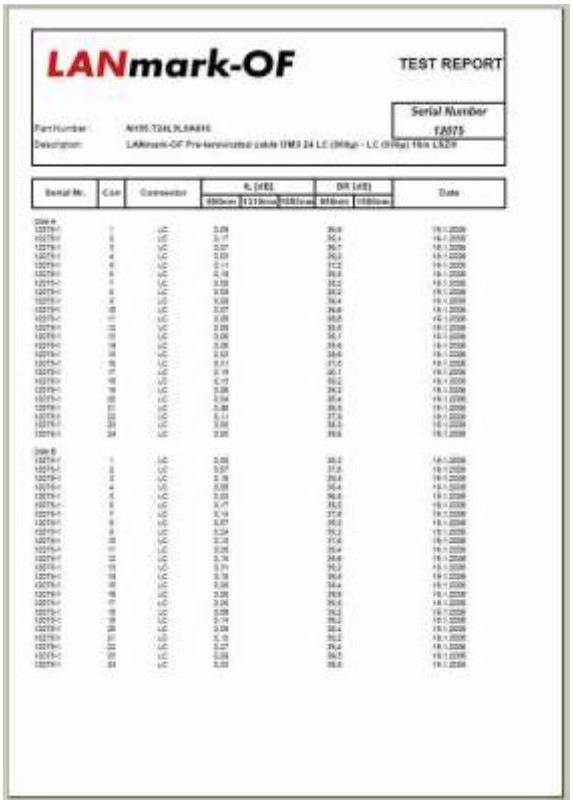
LC pre-terminated assemblies

The connectors of the 900 µm pre-terminated assemblies are loaded with coloured boots as shown on the pictures (i.e. page 11).
The insertion has to be realised according to the colour coding sequence of the boots and NOT according to the colour of the fibres.
Indeed, the colours of the boots are swapped over at one end of the pre-terminated assembly to facilitate error free implementation of the required fibre pair-flip.

Side A				Side B			
Port Number	Fibre Number	Colour of the boot	Colour of the fibre	Colour of the fibre	Colour of the boot	Fibre Number	Port Number
1	1	Blue	Blue	Orange	Blue	2	1
2	2	Orange	Orange	Blue	Orange	1	2
3	3	Green	Green	Brown	Green	4	3
4	4	Brown	Brown	Green	Brown	3	4
5	5	Grey	Grey	White	Grey	6	5
6	6	White	White	Grey	White	5	6
7	7	Red	Red	Black	Red	8	7
8	8	Black	Black	Red	Black	7	8
9	9	Yellow	Yellow	Violet	Yellow	10	9
10	10	Violet	Violet	Yellow	Violet	9	10
11	11	Pink	Pink	Aqua	Pink	12	11
12	12	Aqua	Aqua	Pink	Aqua	11	12

Testing recommendations

Each pre-terminated assembly is 100% factory tested and a test report is always included in the packaging.



However, all fibres should be tested to ensure that the fibres and the connectors have not been affected by the installation process.

It will also ensure that

- the system polarity has been correctly managed
- all the connectors are clean

Note: if the Aginode 25-year system warranty is required, testing and submission of results for certification is a mandatory requirement.

Testing has to be performed according to the Aginode OF field testing procedure which is available from our website.

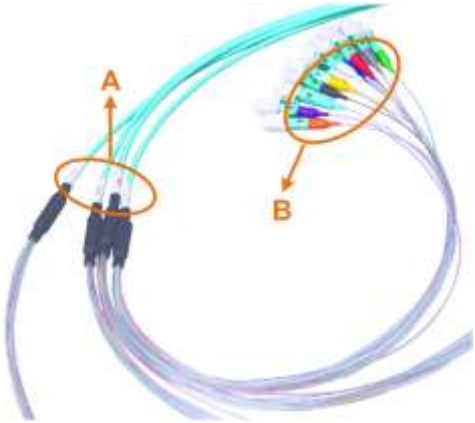
Annex C

Connection scheme of the pre-terminated assemblies

LC/LC pre-terminated assemblies with 900µm fan-outs on both ends

A label (A) is located on every leg at the rear of the fan-out. Corresponding numbers are printed on the labels at both ends.

The LC connectors are loaded with coloured boots (B). The colours of the boot have been swapped over at one end of the assembly during manufacture.



Side A				Side B			
Leg Number	Fibre Number	Colour of the boot	Colour of the fibre	Colour of the fibre	Colour of the boot	Fibre Number	Leg Number
From 1 to 8	1	Blue	Blue	Orange	Blue	2	From 1 to 8
	2	Orange	Orange	Blue	Orange	1	
	3	Green	Green	Brown	Green	4	
	4	Brown	Brown	Green	Brown	3	
	5	Grey	Grey	White	Grey	6	
	6	White	White	Grey	White	5	
	7	Red	Red	Black	Red	8	
	8	Black	Black	Red	Black	7	
	9	Yellow	Yellow	Violet	Yellow	10	
	10	Violet	Violet	Yellow	Violet	9	
	11	Pink	Pink	Aqua	Pink	12	
	12	Aqua	Aqua	Pink	Aqua	11	

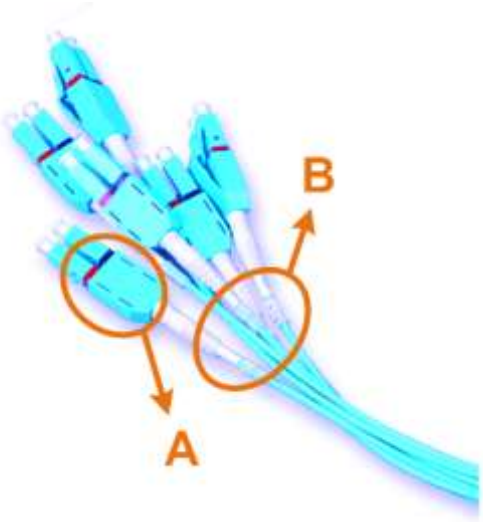
LC/LC pre-terminated patching assemblies (with 1x 900µm fan-out and 1x 2mm fan-out)

At the 900µm fan-out end the identification of the fibre is done using labels on the legs and coloured boots on the connector as it is for the previous type of pre-term (900µm fan-out on both ends) – see previous page.

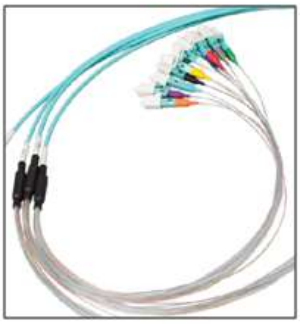
At the 2mm fan-out end the fibres are grouped by pairs in legs terminated with a uniboot duplex LC connector.

A label (B) is located on every leg at the rear of the fan-out.

Each fibre is identified with a red or a black ring located on every duplex connector (A).



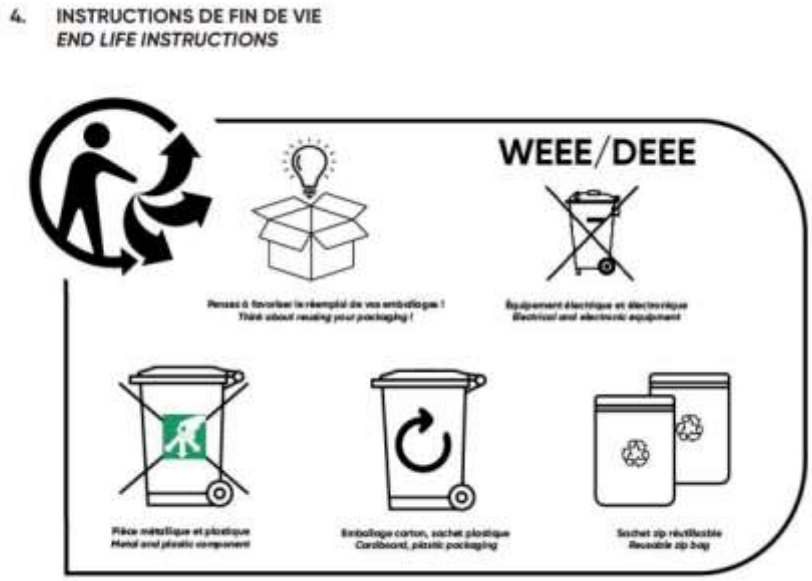
48 fibre pre-terminated assembly



900µm end				2mm end		
Leg number	Fibre number	Colour of the fibre	Colour of the boot	Colour of the fibre	Fibre number	Connector number
1	1	Blue	Blue	Orange	A	1
	2	Orange	Orange	Blue	B	
	3	Green	Green	Brown	A	2
	4	Brown	Brown	Green	B	
	5	Grey	Grey	White	A	3
	6	White	White	Grey	B	
	7	Red	Red	Black	A	4
	8	Black	Black	Red	B	
	9	Yellow	Yellow	Violet	A	5
	10	Violet	Violet	Yellow	B	
	11	Pink	Pink	Aqua	A	6
	12	Aqua	Aqua	Pink	B	
2	1	Blue	Blue	Orange	A	7
	2	Orange	Orange	Blue	B	
	3	Green	Green	Brown	A	8
	4	Brown	Brown	Green	B	
	5	Grey	Grey	White	A	9
	6	White	White	Grey	B	
	7	Red	Red	Black	A	10
	8	Black	Black	Red	B	
	9	Yellow	Yellow	Violet	A	11
	10	Violet	Violet	Yellow	B	
	11	Pink	Pink	Aqua	A	12
	12	Aqua	Aqua	Pink	B	
3	1	Blue	Blue	Orange	A	13
	2	Orange	Orange	Blue	B	
	3	Green	Green	Brown	A	14
	4	Brown	Brown	Green	B	
	5	Grey	Grey	White	A	15
	6	White	White	Grey	B	
	7	Red	Red	Black	A	16
	8	Black	Black	Red	B	
	9	Yellow	Yellow	Violet	A	17
	10	Violet	Violet	Yellow	B	
	11	Pink	Pink	Aqua	A	18
	12	Aqua	Aqua	Pink	B	
4	1	Blue	Blue	Orange	A	19
	2	Orange	Orange	Blue	B	
	3	Green	Green	Brown	A	20
	4	Brown	Brown	Green	B	
	5	Grey	Grey	White	A	21
	6	White	White	Grey	B	
	7	Red	Red	Black	A	22
	8	Black	Black	Red	B	
	9	Yellow	Yellow	Violet	A	23
	10	Violet	Violet	Yellow	B	
	11	Pink	Pink	Aqua	A	24
	12	Aqua	Aqua	Pink	B	

Annex D

End of life management



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