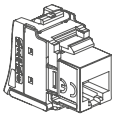
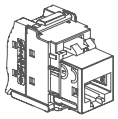
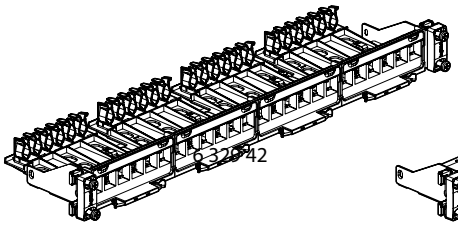
128, av. du Maréchal-de-Lattre-de-Tassigny - 87045 LIMOGES Cedex
Tel : 0 (+33) 5 55 06 87 87
www.legrand.com

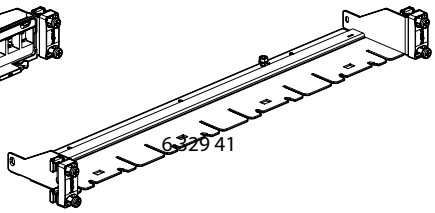
Panel to be equipped with blocks for RJ45 connectors or cassettes for fibre optic installation - Linkeo C Series

Cat.No(s) : 6 329 41/42/43/44/95/96/97/98
2 600 37/38/39/48/49/50/51/52/53
0 321 10/11/12/13/14/16/17/20/21/27/36/37/58/
HVBL12


6 329 96/97/98 (UTP)


6 329 95 (STP)


6 329 42


6 329 41

CONTENTS **Page**

1. GENERAL CHARACTERISTICS

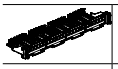
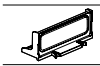
Panel system equipped with blocks up to 24 RJ45 Keystone connectors or panels without blocks to be equipped with copper or fibre optic cassettes.

19″ - 1U panel:
Universal mounting in all racks or cabinets with automatic earthing on unpainted uprights. Painted uprights can be connected to earth with a cord and a screw connection.

Equipped with rear cable guide to hold cable during maintenance

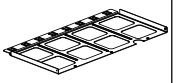
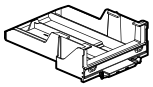
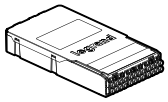
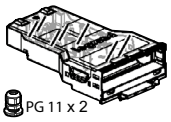
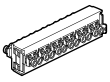
100% compatible with the Keystone format as defined in IEC 60603-7. This guarantees interoperability with all other market products compliant with the standard.

Compatible connectors and accessories

	Description	Cat.No	Weight (g)
	Panel equipped with blocks	6 329 42	754.24
	Panel without block	6 329 41	505.28
	Panel block to be equipped	6 329 43	317.8
	Blank block for panel	6 329 44	18.81
	Set of 24 Cat 5e UTP RJ45 connectors	6 329 98	228
	Set of 24 Cat 6 UTP RJ45 connectors	6 329 97	228
	Set of Cat 6_A UTP RJ45 connectors	6 329 96*	498
	Set of 24 Cat 6_A STP RJ45 connectors	6 329 95*	693

* Only permanent link certified

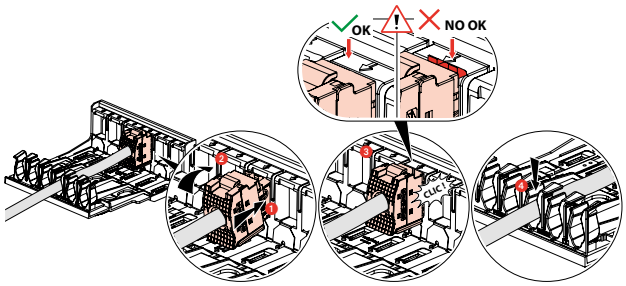
Fibres compatible products

	Description	Cat.No	Weight (g)
	Rear management	**2 600 39**	**669.23**
	Support cassette	**2 600 38**	**55.63**
	**Preterminated fibre cassettes** MTP LC 12F OM4 HD MTP LC 24F OM4 HD MTP LC 12F OS2 HD MTP LC 24F OS2 HD MTP SC 12F OM4 HD MTP SC 12F OS2 HD	 **2 600 48** **2 600 49** **2 600 50** **2 600 51** **2 600 52** **2 600 53**	**128.22**
 PG 11 x 2	Splice cassette	**2 600 37**	**129.90**
	**Fibre blocks to be used with the cassettes housing** SC HD 12 singlemode fibres SC HD 12 multimode fibres SC 6 singlemode fibres SC APC 6 singlemode fibres SC 6 multimode fibres LC 6 singlemode fibres LC 6 multimode fibres (aqua) LC 12 singlemode fibres LC APC 12 singlemode fibres LC 12 multimode fibres (aqua) LC 12 multimode fibres (lime) LC 12 multimode fibres (violet) ST for 6 singlemode fibres ST for 6 multimode fibres	 **0 321 11** **0 321 21** **0 321 10** **0 321 12** **0 321 20** **0 321 13** **0 321 36** **0 321 14** **0 321 16** **0 321 37** **0 322 58** **HVBL12** **0 321 17** **0 321 27**	**50**

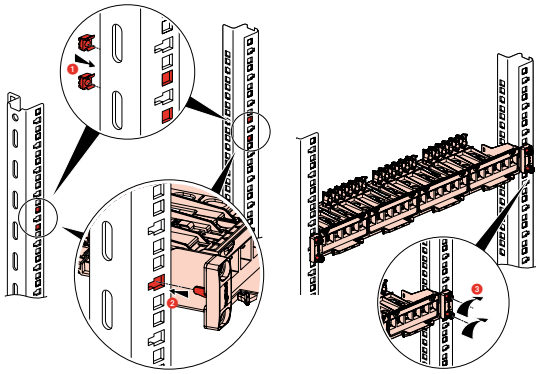
2. COPPER INSTALLATION

The connectors are mounted from the rear without any special tools. The connector is clipped onto the block individually.
Each connector can be removed individually.
RJ45 Keystone connectors for toolless mounting (Cat 5e UTP, Cat 6 UTP, Cat 6A UTP/STP).
Each RJ45 connector is suitable for flush-mounted and surface-mounted boxes with a minimum depth of 40 mm.
No need to fix with a cable tie : the cable stays in the cable guide on the panel.

Connector mounting



Panel mounting



Ingenious: the system allows the panel to be pre-positioned and held in place without the need for screws.

Once inserted in the uprights, it holds firmly in place.

Now you can easily assemble the panels.

Screw each panel in place once everything is connected up correctly.

3. INSTALLATION

Maximum length of Permanent Link based on architecture

	Maximum cord length[1]	Maximum Permanent Link	Total Channel
2 Connector Channel	10m	89m	99m
3 Connector Channel [2]	10m	88m	98m
4 Connector Channel [2]	10m	87m	97m

[1] = sum of 2 cords

[2] Not applicable to LK61 and LK63.

Note: calculations based on ISO/IEC 11801. Legrand products support the 100m 2-connector channel, confirmed by laboratory testing

4. PANEL TECHNICAL CHARACTERISTICS

■ 4.1 Material characteristics

- Galvanised sheet steel
- Steel (screw)
- Polycarbonate

■ 4.2 Electrical characteristics

Panel automatically earthed to the uprights via an unpainted contact area.

Earthing lug on the panel if an additional earth is needed.

Ground terminal on cassette if necessary.

■ 4.3 Mechanical characteristics

Fixing to the uprights with M6 screws and 9.5x9.5 cage nuts (supplied).
IK03
IP20

■ 4.4 Climate characteristics

Operating temperatures: -10°C to +60°C
Storage temperatures: -10°C to +70°C
Humidity: 5% to 85% (non-condensing)

5. BLOCK AND BLANK BLOCK TECH. CHARACTERISTICS

5.1 Material characteristics

- Block : Polycarbonate / Nickel/Laiton / ABS for the rear cable guide
- Blank block : Polycarbonate

Black (RAL 9017)

6. CONNECTOR TECHNICAL CHARACTERISTICS

■ 6.1 Material characteristics

- Contacts: Bronze, gold/nickel coating, minimum gold thickness 0.8 µm
- Nickel/bronze
- ABS
- Polycarbonate
- Shielding (STP version): ZAMAK metal alloy, copper/nickel coating

■ 6.2 Electrical characteristics

Breakdown voltage: 1000 V
Contact resistance: 20 mΩ
Insulation resistance: 500 MΩ at 100 VDC
Compatible with “PoE” remote powering

■ 6.3 Mechanical characteristics

Maximum number of connections/disconnections operations :
- AWG 23 to AWG 26 : compliant with ISO/ IEC 11801 IEC 60352-4 (20 terminations)
- AWG 22 : compliant with 5 re-terminations*

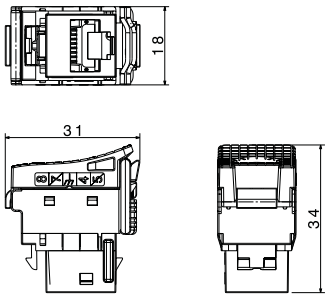
* with cables 0 328 52 and 0 328 77.
With any other AWG 22 cable not qualified by Legrand, the IDC is compliant with 2 re-terminations.
Endurance: 2500 movements (plug insertion/withdrawal) according to ISO/IEC 11801-1 PL2.
IK03
IP20

■ 6.4 Climate characteristics

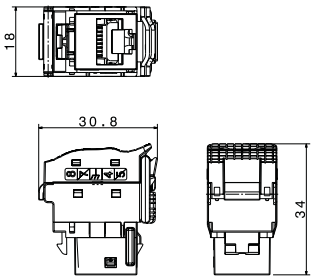
Operating temperatures: -10°C to +60°C
Storage temperatures: -10°C to +70°C
Humidity: 5% to 85% (non-condensing)

7. DIMENSIONS

UTP connector dimensions

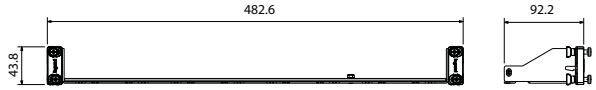


STP connector dimensions

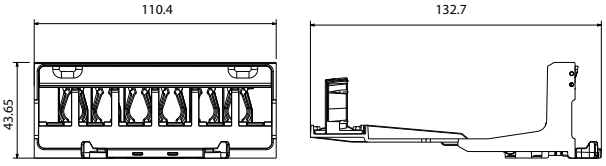


Panel dimensions 6 329 42

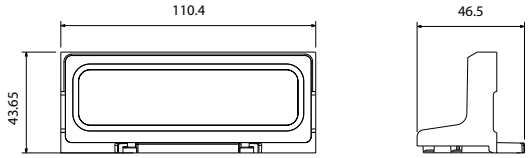
Panel dimensions 6 329 41



Block dimensions 6 329 43



Blank block dimensions 6 329 44

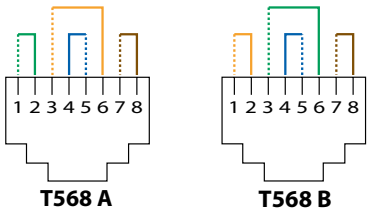


8. TYPICAL RJ45 CONNECTION

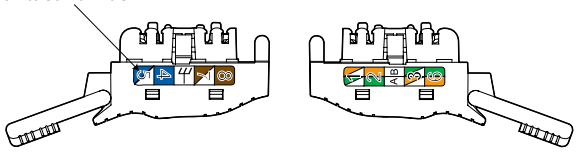
Connectors accept the following plug types:
RJ11 (4 contacts), RJ12 (6 contacts), RJ45 (9 contacts).
Connectors accept the following cable types:

Connector type	Cable type
UTP	UTP, U/UTP
FTP	FTP, STP, F/UTP, U/FTP, F/FTP, S/FTP, SF/UTP, SF/FTP

T568 A and B dual colour code:
- UTP (8 contacts)
- STP (9 contacts)

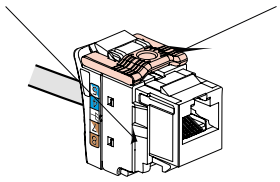


Colour code and contact number



Identification number

Colour code category:



Identification number

Category	Lock colour	UTP	STP
Cat 5e	White	LK01	LK03
Cat 6	Light Grey	LK51	LK53
Cat 6_A	Charcoal grey	LK61	LK63

Permissible conductors:

- Solid/Stranded: 0.4 to 0.642 mm, AWG 26 to 22
- Polyethylene conductor insulation: Ø 0.85 to 1.7 mm on insulation

Number of wires to be connected per connection: 1

RJ45 connectors are equipped with a locking tab. They do not require a special tool and can be re-terminated if a mistake is made.

9. STANDARDS

ISO/IEC 11801 series: International standard for generic cabling systems
ANSI/TIA 568 series: North American standard for generic cabling systems
EN 50173 series: European standard for generic cabling systems
IEC 60603-7 series: International specification standard for plugs and bases

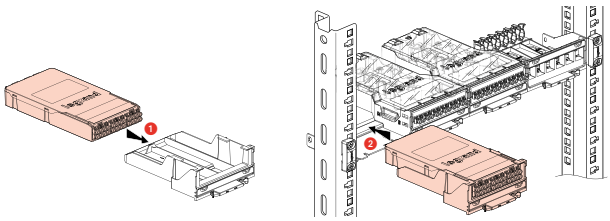
Connectors have earned the UL Listed Mark and are compliant to UL 1863.

Connectors comply with the requirements of remote powering applications
IEEE 802.3af, IEEE 802.3at, IEEE 802.3bt: "Power over Ethernet" Types 1 to 4, up to 90 W.

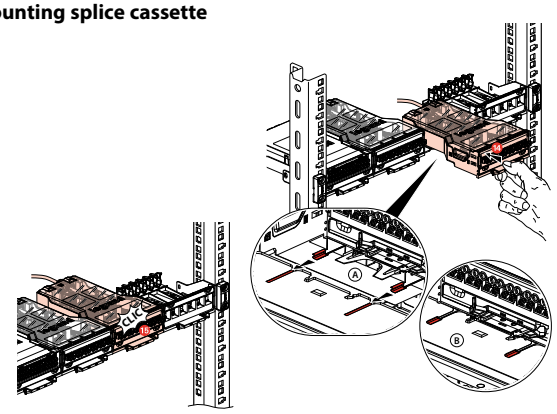
10. FIBRE OPTIC INSTALLATION

Preconnectorised fibre optic cassette or splice cassette are installed in the panel Ref. 6 329 41.

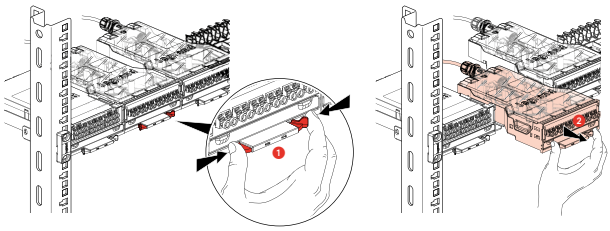
Mounting a preconnectorised fibre optic cassette



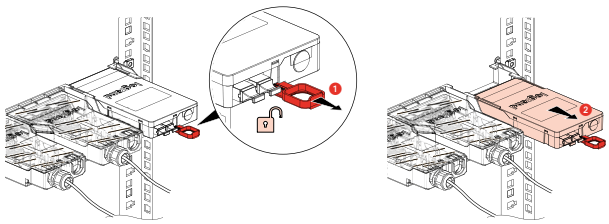
Mounting splice cassette



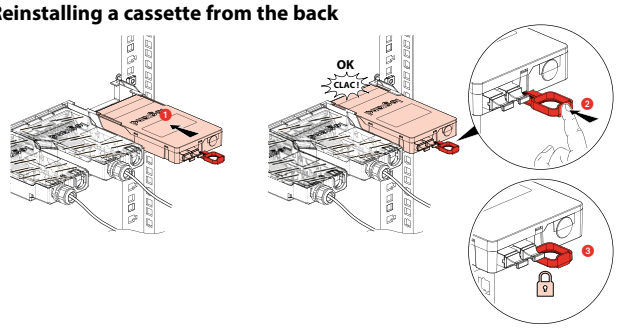
Removing a cassette from the front



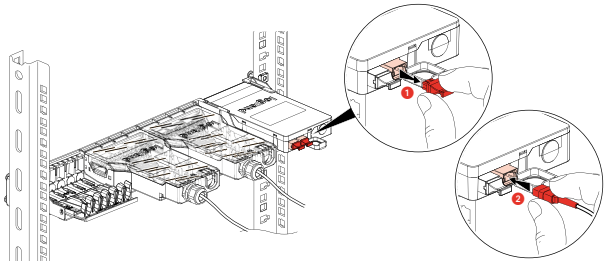
Removing a cassette from the back



Reinstalling a cassette from the back



Connecting a préconnectorised cassette



11. TECHNICAL CHARACTERISTICS

Cassette

MTP high density Cassette (compatibles with MPO)
Install in panel Ref. 6 329 41 with support Ref. 2 600 38.
Front and rear removal for easy installation and maintenance.
Already equipped with preterminated fibres, directly connectible to female MTP connector with 12 fibres (compatible with MPO).
Ultra performance cassette, low insertion loss < 0.5 dB. Factory tested and detailed on the test report provided on the cassette.

Fibre optic cassette to be spliced
Connectible cassette, supplied with removable pigtail holder, with coiling area. Sold with 2 PG11
Takes any modular fibre optic block and MTP high density adaptor

Material : polycarbonate
Black (RAL 9017)
IP40

Connector

The Legrand core, ultra and quantum connectivity performances are far superior than standard. They provide the following benefits for the user :
- Wider range of applications
- More flexibility in the design
- Energy saving on the active (transceivers)

All connectors have a durability of 500 connection/disconnection cycles (IEC 61300-2-2)
- MPO/MTP connectors comply with IEC 61754-7Les connecteurs MPO/-
- LC connectors comply with IEC 61754-20
- SC connectors comply with IEC 61754-4
- ST connectors comply with IEC 61754-2

11. TECHNICAL CHARACTERISTICS *(continued)*

Optical performance

- MTP® connectors

	Multimode Ultra Performance*	Singlemode Ultra Performance*
IL/Master	0.1 dB typical (all fibres) 0.35 dB maximum (single fibre) [2.3]	0.1 dB typical (all fibres) 0.35 dB maximum (single fibre) [1.4]
IL Max/ Random*	0.35 dB (single fibre)	0.35 dB (single fibre)
Optical return loss [5]	> 20 dB	> 60 dB (8° angle-polished)

[1] As tested in accordance with ANSI/TIA-455-171 Method D3 / IEC 61300-3-4

[2] As tested in accordance with ANSI/TIA-455-171 Method D1 / IEC 61300-3-4

[3] As tested on 50µm fibres at a wavelength of 850 nm in accordance with IEC 61280-4-1

[4] Complies with IEC 61755-3-31/GRADE B

[5] As tested in accordance with IEC 61300-3-6 and ANSI/TIA-455-107A

* Performance is guaranteed only with other components of the same Legrand range (Core, Ultra and Quantum). Mixing ranges or use of components of other brand may lead to a different performance of the system. The uncertainty value for field measurement with LSPM testing using a reference cord defined in ISO/IEC 14763-3 applies to field testing with proposed Legrand testing cords. Refer to the Fiber Optic Testing Guide for Legrand Solutions.

- LC, SC, LC APC, SC APC connectors

Optical performance	Singlemode Ultra Performance	Multimode Ultra Performance
IL Max/Master *	0.15 dB	0.15 dB
IL Max/Random ** ***	0.25 dB	0.2 dB
Typ. IL/Master *	0.12 dB	0.08 dB
Typ. IL/Random ** ***	0.12 dB	0.10 dB
Return loss (UPC/APC)	> 55/65 dB	> 25 dB

* IEC 61300-3-4

** IEC 61300-3-34

*** Performance is guaranteed only with other components of the same Legrand range (Core, Ultra and Quantum). Mixing ranges or use of components of other brand may lead to a different performance of the system. The uncertainty value for field measurement with LSPM testing using a reference cord defined in ISO/IEC 14763-3 applies to field testing with proposed Legrand testing cords. Refer to the Fiber Optic Testing Guide for Legrand Solutions.

Storage and operating temperature: -10°C to +60°C

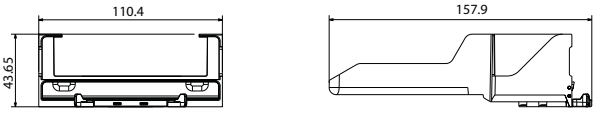
- Production quality control

For MTP :
Optical performance: 100% factory tested
3D endface geometry (interferometry): 100% factory products controlled

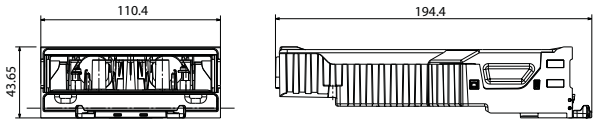
For LC, SC, LC APC, SC APC :
Optical performance: 100% factory tested.
3D endface Geometry (interferometry): sampling quality control.

12. DIMENSIONS

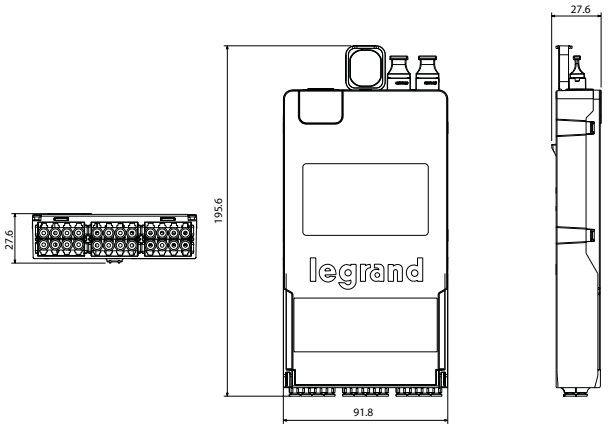
Support cassette dimensions 2 600 38



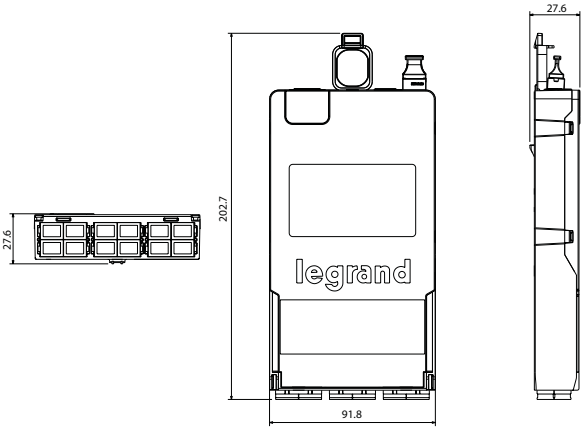
Splice cassette dimensions 2 600 37



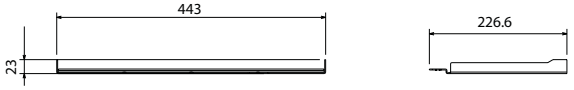
Preterminated cassette dimensions 2 600 48/49/50/51



Preterminated cassette dimensions 2 600 52/53



Rear management dimensions 2 600 39



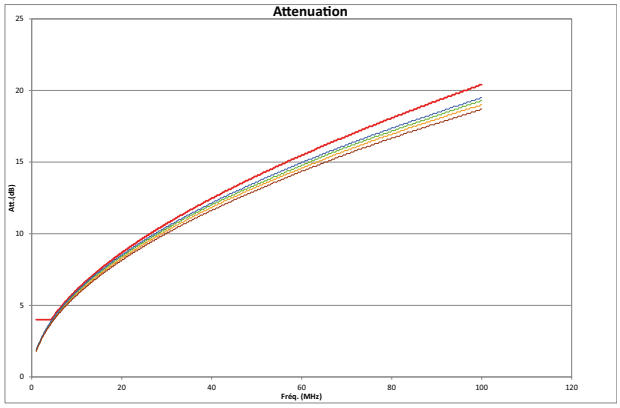
13. PERFORMANCES

■ 13.1 Permanent link performances with Cat 5e UTP connector and Cat 5e U/UTP cable

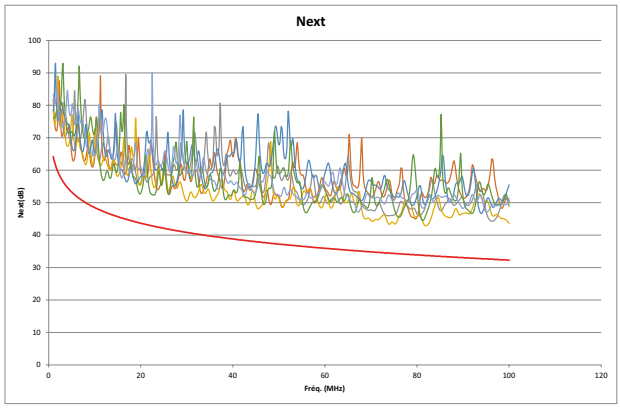
The red line represents the limit line of standard.

Return loss

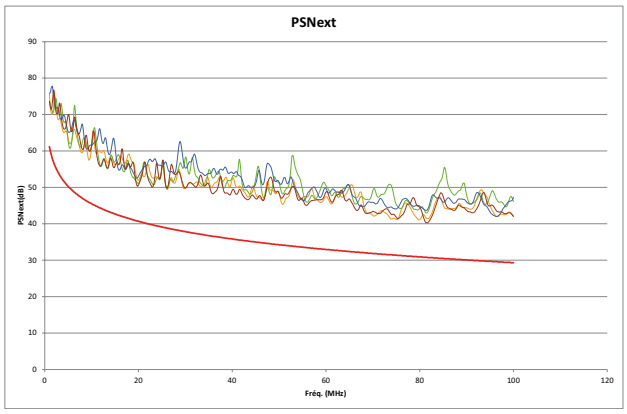
Atténuation



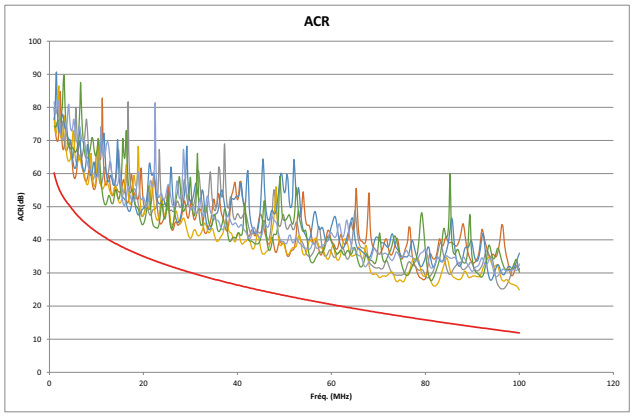
NEXT (Near end Crosstalk Attenuation)



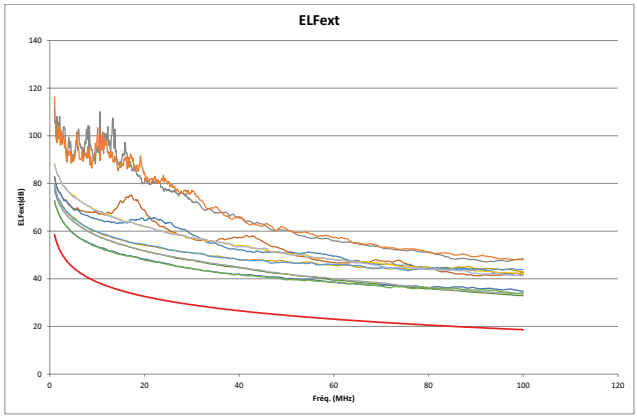
PS NEXT (Power Sum NEXT)



ACR -N



ACR-F

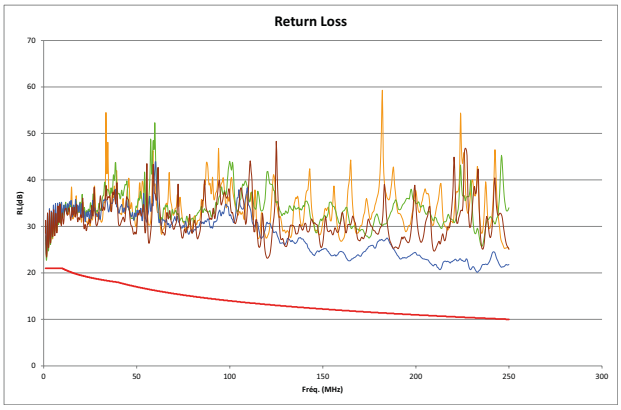


13. PERFORMANCES *(continued)*

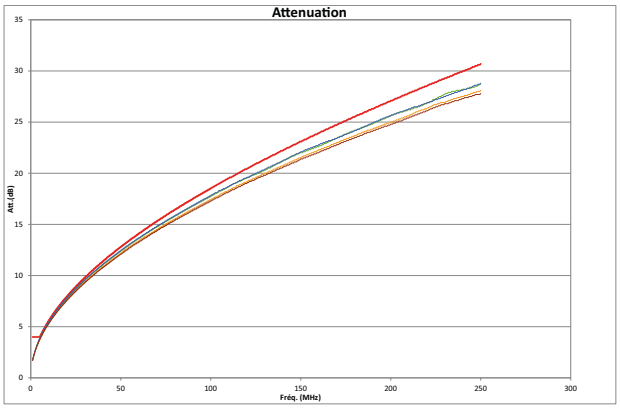
■ 13.2 Permanent link performances with Cat 6 UTP connector and Cat 6 U/UTP cable

The red line represents the limit line of standard.

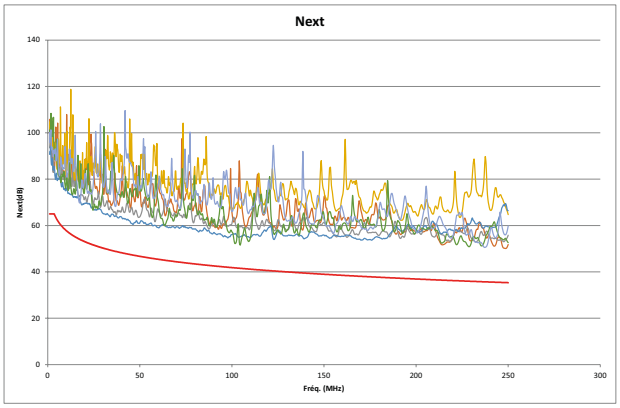
Return loss



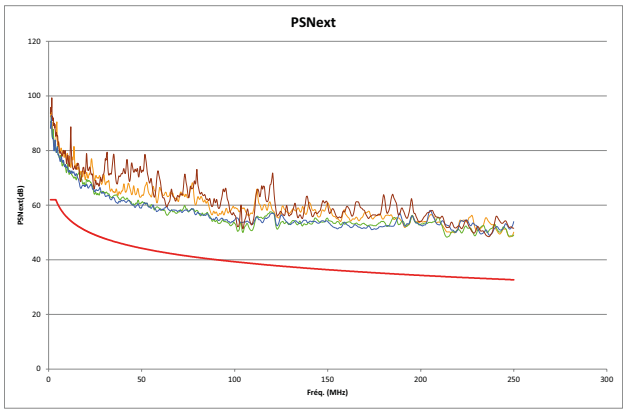
Atténuation



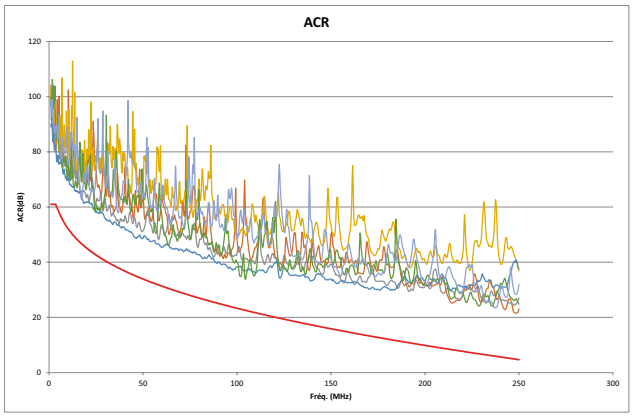
NEXT (Near end Crosstalk Attenuation)



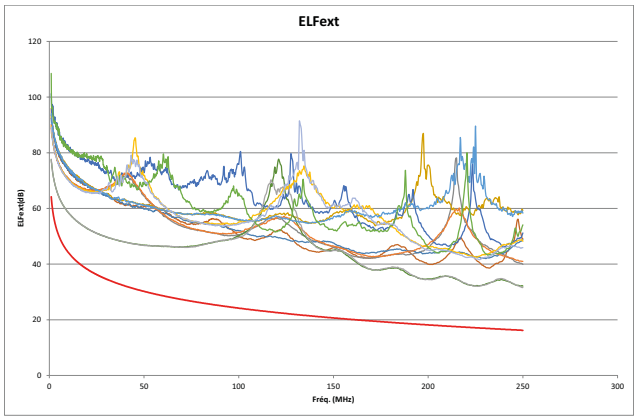
PS NEXT (Power Sum NEXT)



ACR -N



ACR-F

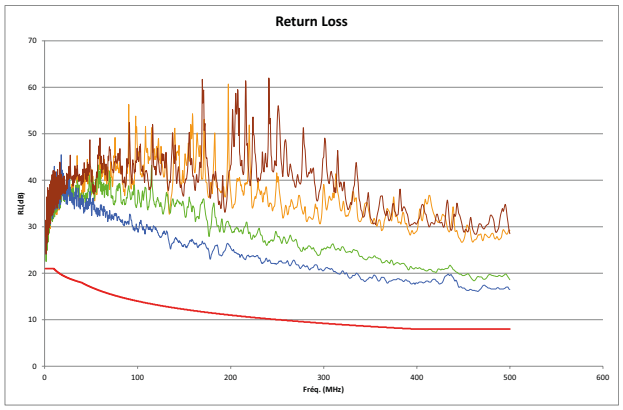


13. PERFORMANCES *(continued)*

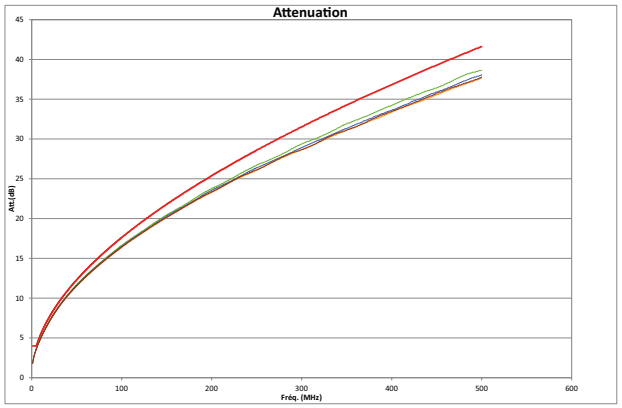
■ 13.3 Permanent link performances with Cat 6_A STP connector and Cat 6_A U/FTP cable

The red line represents the limit line of standard.

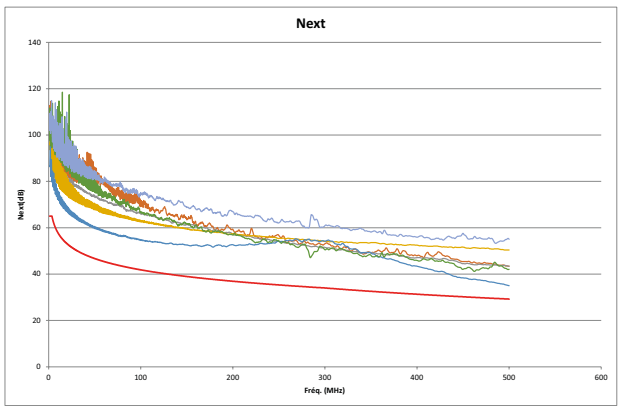
Return loss



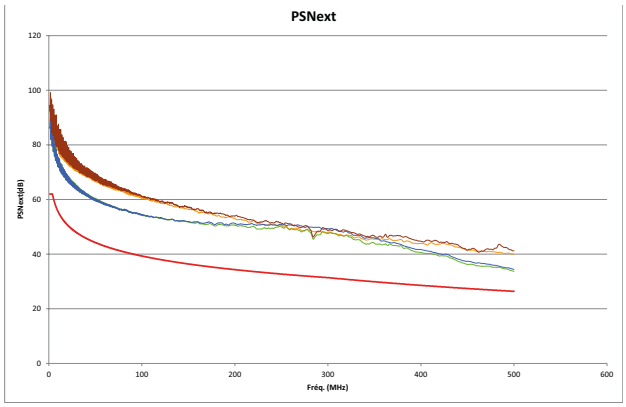
Atténuation



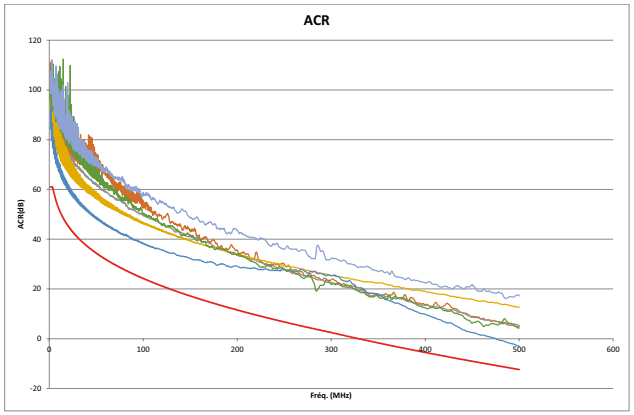
NEXT (Near end Crosstalk Attenuation)



PS NEXT (Power Sum NEXT)



ACR -N



ACR-F