

Legrand cabling system LCS²

Compliance of the LCS² systems with standards and certifications

LCS² systems and components (de-embedded) conform to the following standards:

- TIA/EIA 568C
- EN 50173-1 and EN 50173-2
- ISO/IEC 11801 version 2

The LCS² system supports 10G applications Base-T up to 100 m in a transmission channel. Conforms with standards ISO/IEC 24750, TIA TSB 155 and IEEE 802.3 an

The EA link class of the LCS² system also conforms with amendment 1 (04/2008) of standard ISO 11801 and its components conform with amendment 2

LCS² systems are certified by expert independent laboratory 3P



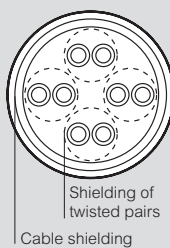
Main characteristics of the LCS² systems

	LCS ² 6A		LCS ² 6		LCS ² 5e
Frequency	500 Mhz		250 Mhz		100 Mhz
Speed	10 Gbit/s		1 Gbit/s		1 Gbit/s
Wiring	Copper	FO	Copper	FO	Copper
Connectors	RJ 45	SC-LC...	RJ 45	SC-LC...	RJ 45
Length cable max.	100 m	variable	100 m	variable	100 m

New names for LAN cables (according to ISO 11801-2)

They correspond to: "type of cable shield" / "type of twisted pair shield" TP monitoring (for twisted pairs)

Type of cable old name	Type of cable new name	Shield of the cable	Shield of pairs twisted
SSTP	S/FTP	S: screen made up	F: screen formed of a metal braid of a ribbon alumin/polyester
SFTP	SF/UTP	SF: combination of ribbon + braid	U: no screen
STP	U/FTP	U: no screen	F: screen formed of a ribbon alumin/polyester
FTP	F/UTP	F: screen formed of a ribbon alumin/polyester	U: no screen
UTP	U/UTP	U: no screen	U: no screen



Area distribution boxes

Compliance with standards:

- Area distribution box: TIA/EIA 568
- UTE C 15-900
- NF C 15-100 - NF C 20-730
- EN 50-174.2
- ISO 11801
- EN 50173
- IEC 60950

Cords and cables: ISO 11801 id.2.0, EN 50173-1, TIA/EIA 568

General characteristics:

- 6 or 12 incoming ports (depending on Cat.No) RJ 45 wiring
- 4 to 8 or 12 outgoing ports (depending on Cat.No) maximum Connection of mixed cords via RJ 45 connector (RJ 45/stripped)
- UTP, FTP and STP versions
- Cat. 6A, 6 and 5e
- for computer applications; telephone, access control etc.

Technical characteristics:

- material: Polycarbonate PC hood
- Polypropylene PP base
- colour: RAL 7035
- Weatherproofing protection index: IP 21
- Mechanical shock protection index: IK 07
- hold connector units in place in the box: 100 N
- Cables anchored on support using Colring cable ties

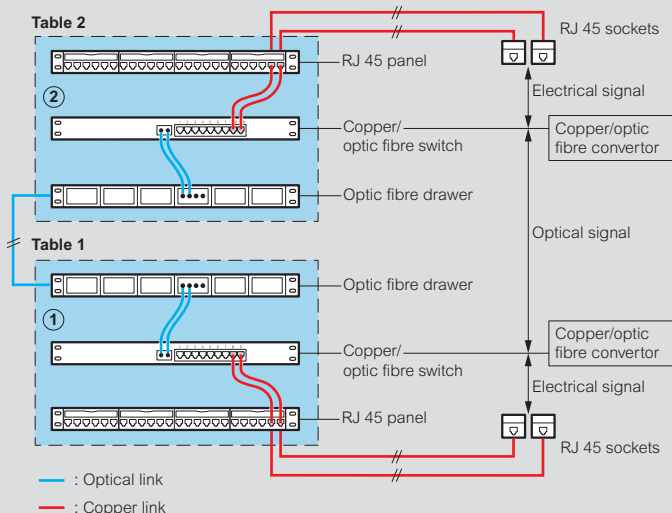
Fibre optic

New optical classes ISO 11801 2nd Ed.

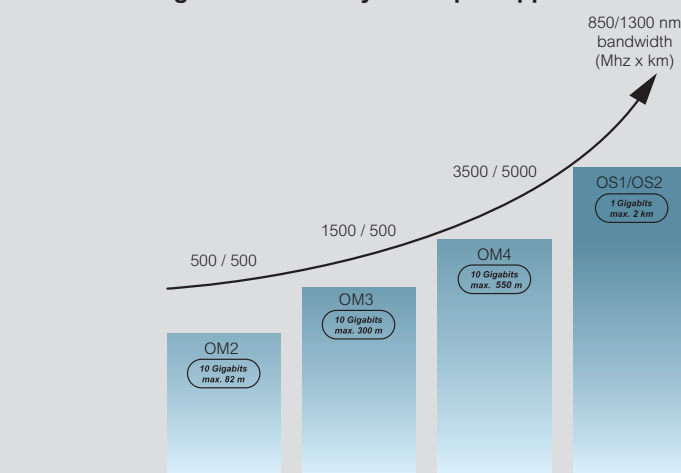
Parameters of the optical link (ISO 11801/EN 50173)

Parameter	Multimode		Monomode	
	850 nm	1 300 nm	1 310 nm	1 550 nm
Fibre attenuation dB/km	3.5 max.	1.5 max.	1.0	1.0
Bandwidth MHz.km	200 min.	500 min.	n/a	n/a
Connector attenuation dB	0.75 max.	0.75 max.	0.75 max.	0.75 max.
Return loss dB	20 min.	20 min.	26 min.	26 min.

Typical layout of an optical link between 2 distribution blocks



Maximal length of channel by fibre optic application



Applications	Multimode			Monomode
	OM2	OM3	OM4	OS1/OS2
10 Gigabits Ethernet (S/R base)	82 m	300 m	550 m ⁽¹⁾	NA
Giga Ethernet (LX base)	550 m	550 m	550 m	2 km
Giga Ethernet (SX base)	550 m	550 m	1100 m	NA

⁽¹⁾ Applications IEEE 802.3
1: Engineered solution using a max. cabled fibre attenuation of 3.0 dB/km. If not distance is of 400 m

Flush-mounting Ethernet 10/100 base T switches

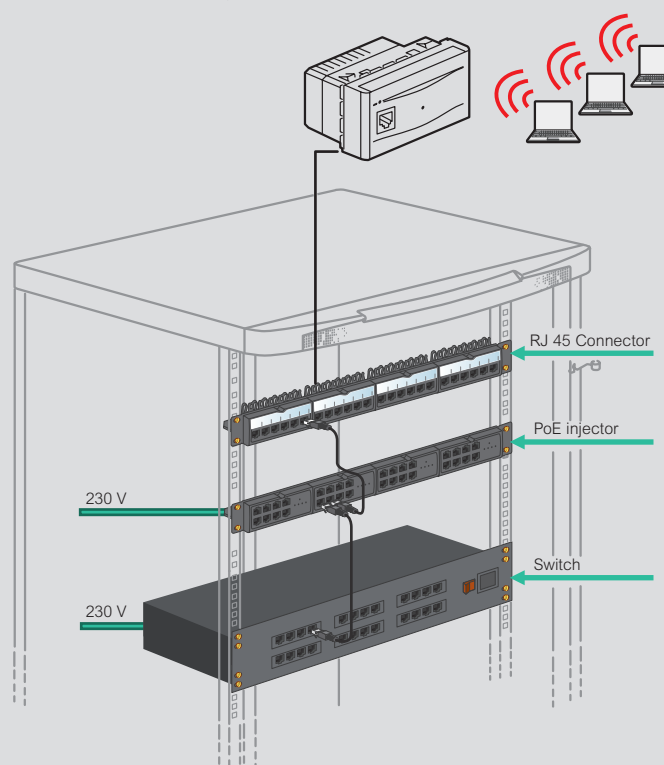
	779 00	779 01
Power supply	230 V	PoE
Speed	100 Mbps	
Standards	802.3 / 802.3u	802.3u 802.3 af
Common technical characteristics	<ul style="list-style-type: none"> • Operating temperature: from 0°C to +40°C • Max. humidity level permissible: 95 % • Auto MDI-X (takes crossed and straight cords) • Orange LED: - on: speed of 100 Mbps - off: speed 10 Mbps • Green LED on traffic 	

Mosaic Wi-Fi access points

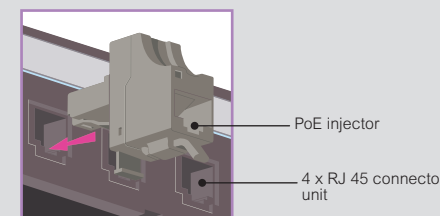
An 802.11 a and b/g solution

	MOSAIC WiFi Access Point Cat. Nos 77913/14	LCS ² Cat. Nos 335 21/22
Radio communication standard	802.11 b/g	802.11 a 802.11 b/g/n or 802.11 a/n
Power supply standard	Power over Ethernet 802.3 af	
Frequency band	2.4 GHz	5 GHz 2.4 GHz or 5 GHz
Channel width	20MHz	40MHz or 20MHz
Max. gross speed	54 Mbps max	54 Mbps 300 Mbps

Installation principle for a Wi-Fi access point with Power over Ethernet injector



Particular case of the 1 port PoE: Clips directly onto a port on any patch panel. A single cord is necessary to connect to a port on the switch



Benefits of a Legrand Wi-Fi access point

- Possibility of simultaneous operation on 2 frequencies, a and b/g
- New products: invited access: used to allocate a network dedicated to visitors. Provides a max. gross speed of up to 2 x 54 Mbps in simultaneous mode
- Very high security level: WPA2 encryption (802.11i) and authentication (802.1x)
- Possibility of roaming (moving from one access point to another without breaking the link)
- Quality of service (priority automatically given to voice, then video and finally data)
- Easy to configure and make secure: using the CD supplied with the access point

Installation

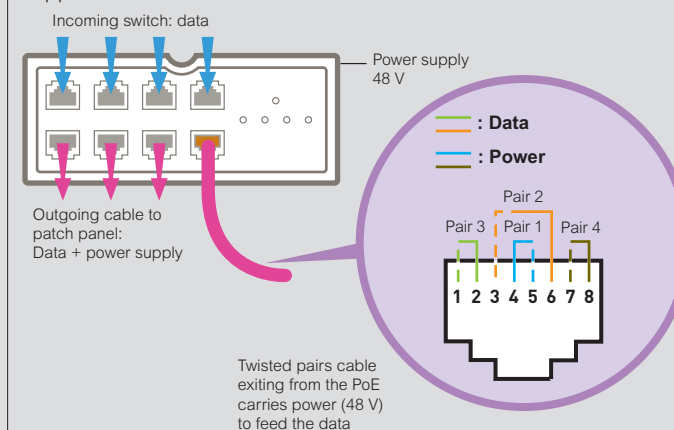
In all supports able to take a Mosaic mechanism (trunking, columns, flush-mounting boxes, floor boxes, etc.)
Do not place access points behind anything that could limit the antenna's range
Access points are connected tool-free via an RJ 45 connector

Sizing

- Provide 1 access point for 1 localised requirement (in entrance hall)
- Provide 1 access point per 100 m² for overall coverage and a maximum gross speed
- Provide 1 access point with an RJ 45 socket for a desk used by visitors

Operation of PoE injector

A PoE injector has one input and one output per access point to be supplied



Twisted pairs cable exiting from the PoE carries power (48 V) to feed the data