

ADSL Distributed Filter



Ref Tyco: **0-0136959-1**

1	Purpose	2
2	General information	2
3	Features	2
4	Standards	2
4.1	Abbreviations	2
5	Installation	3
6	Product configuration	3
7	Specification	4
8	Compliance	4
9	Labeling Specification	5

1 Purpose

This specification is for distributed filters for ADSL that is integrated in a French telephone plug, in order to separate POTS and ADSL signals. The Product described is intended to fulfill the France Telecom specification ST/FT R&D/6955.

2 General information

Tyco/Electronics ADSL Distributed Filter 0-0136959-1 is an ADSL/POTS distributed filter is constructed to be plug into a conventional wall jack, thereby, it provides a simple installation of splitter for POTS and ADSL DataStream over telephone copper lines. This splitter is designed for Complex Harmonized Impedance (Z_c).

This product includes a low pass filter that prevents the high frequency signal from reaching the telephone device the Low Pass Filter also provides insulation from impedance effects of the POTS device on the ADSL modem, to prevent de-synchronization of the modem during POTS device transitions.

3 Features

- Packaged in a standards French telephone plug
- Includes only passive elements
- Includes on POTS low pass filter

4 Standards

- **ST/FR R&D/6955**
- ETSI TS 101 952
- ITU-T G992.1 Annex E1

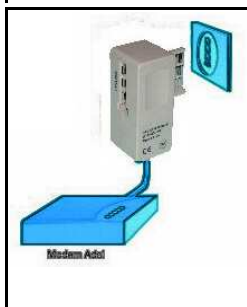
Abbreviations

ADSL:	Asymmetric Digital Subscriber Line
POTS:	Plain Old Telephone Service
CO:	Central Office (local exchange)
Z_c	Complex Harmonized Impedance $270\Omega + (750\Omega//150nF)$
LCL:	Longitudinal Conversion Loss
DC:	Direct Current
TE:	Terminal Equipment

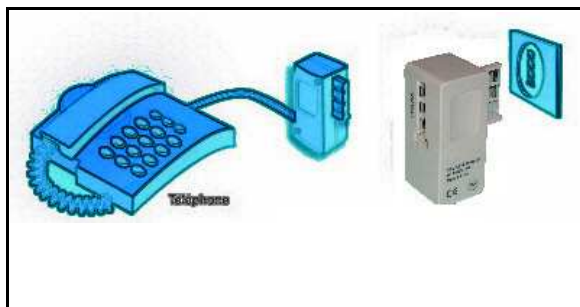
5 Installation



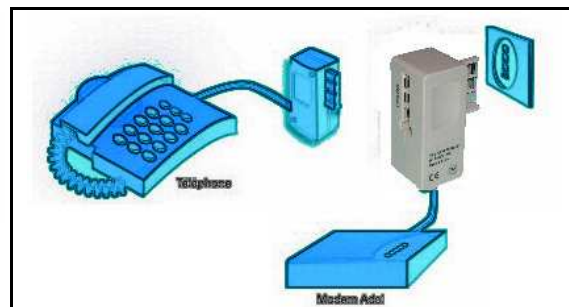
A telephone line generally includes a number of wall jacks, in order to access to telephone line it is necessary to plug an ADSL Distributed Filter into the jack, this device will be able to receive a telephone or a fax, as shown below.



Modem Alone

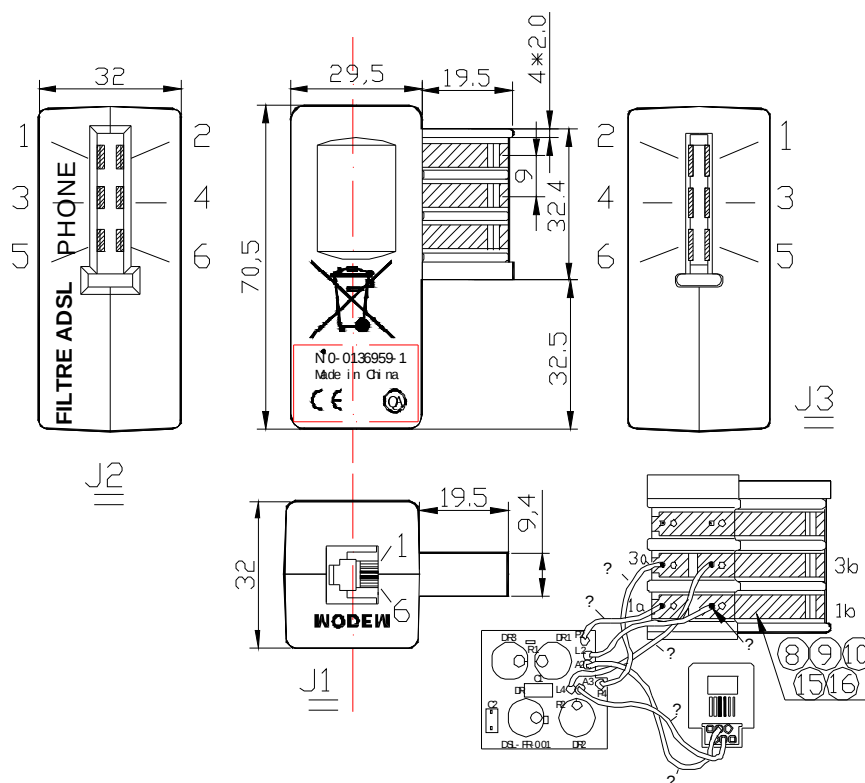


telephone/fax alone



Both Telephone/fax on the same filter

6 Product configuration



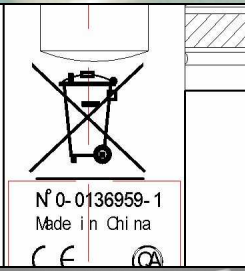
7 Specification

Requirement description	Parameter range	Requirement value
HIGH PASS FILTER REQUIREMENTS		
Impedance Zcomplex(1)		270 Ω + (750 Ω // 150 nF)
Insulation resistance branch-earth	100 Vdc	> 100 M Ω
Isolation resistance branch-branch	100 Vdc	> 25 M Ω
DC resistance		< 50 Ω
Loop current		< 100 mA
Transient current withstanding	400ms	150mA
LCL	50-600Hz / 600 Ω	> 40 dB
	600-3400Hz / 600 Ω	> 46 dB
LOW PASS FILTER REQUIREMENTS		
Insertion loss	1000 Hz	< 1 dB
Insertion loss distortion	200Hz to 4000Hz	$\pm$ 1 dB
TELE port Return loss with ZHP-r	300 to 500 Hz	> 14dB
	500 to 2000Hz	> 18dB
	2000 to 3400 Hz	> 14dB
POTS & LINE impedance	25Hz & 50Hz	> 40 k Ω
Filter noise w/o signal		< -70 dBV
Harmonic distortion	2nd order	> 57 dB
	3rd order	> 60 dB
Insertion loss in ADSL band	32-100kHz	> 15 dB
	100k-1,1MHz	> 25 dB
Line impedance	26-100kHz	> 1 kOhm

8 Compliance

Certification UNE 133.001-2
Certification UNE 133.001 -2 /1 M
Certification UNE - TBR 38
ST/FTR&D/6955 – Technical Specification – Distributed filters
ETSI TR 101 952-1-3 v 1.1.1
MDF Access Services 2001.3.0, Technical Manual, 21 September 2001
EMC 89/336/CEE
EMC 1999/5/CE
EMC EN 55022 Class B
EMC EN 55024
73/23/CEE
EN 60950
EN 41003
Compliance with G992.1 Annex E Type 1 European

9 Labeling Specification

MBM			Rev 01
Tyco Label 20 x 14 mm Color: Pantone 2945CV Printed on Filter Body (File Contact-logo.jpg)	A		
Product identification S/Number / Batch Number Made in Country CE Label	B	0-0136961-1 N° xxxxxxxx Made in xxxx CE	
QC label (or Marking)	C	QA	
WEEE Marking	D		
	E	FILTRE ADSL PHONE	