

# Flat Flexible Cable

0.5mm, 1.0mm and 1.25mm Pitch



Flat Flexible Cables consist of flat tin plated copper conductors insulated between Polyester based tapes. Depending on the type of interconnection used, reinforcement tapes can be added to the cable ends to allow for connector compatibility.

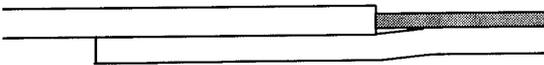
## Features:

- Flat flexible cable for use with FFC/FCP range of connectors.
- Reinforcing tape bonded to underside for cable to ensure easy and accurate insertion into the connector.
- Overall length 210mm.

## TYPE OF END:

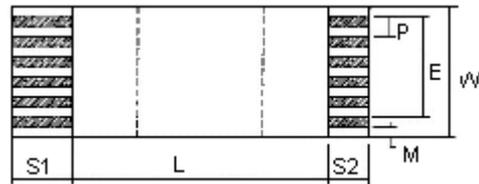
TYPE OF REINFORCEMENT

Standard Polyester reinforcement tapes (blue or red) for termination with connectors.



## STRIPPING/CONNECTION:

GENERAL SCHEMATIC (TYPE A)



## General Characteristics (Standard Products)

Pitch	: P	0.5	1.0	1.25
Type		A*		
Number of Conductor (N)				
Type A (minimum/maximum)		10 to 50	10 to 30	4 to 40
Cable width	: W	(N+1) 0.5	(N+1) 1.0	(N+1) 1.25
Margin	: M	0.35	0.65	0.85
Conductor width	: C	0.30	0.70	0.80
Strip length	: S	4		
Insulated length	: L	202		
Conductor thickness		0.05		
Flexible	: F (Type A)			

Dimensions : Millimetres

\* stripped at both ends on two sides with reinforcements on the same side.



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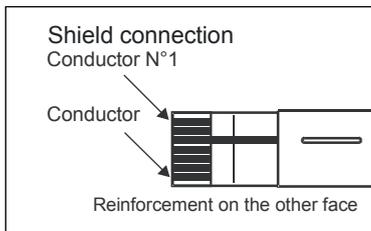
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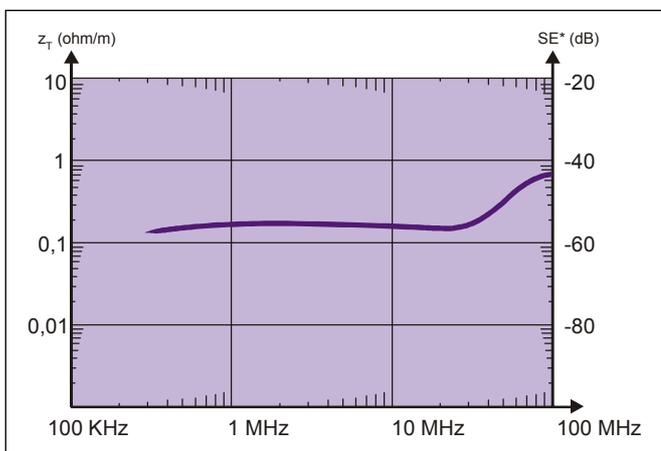
## Shielding:

The parameter of Transfer Impedance  $Z_T$  given in ohms/meter is used to characterise the shielding of flat cables. As this notion is dependant on the type of product, rather than on the application, it is better suited than the alternative notion of "Shielding Efficiency", given in dB, for accurately defining shield specifications.

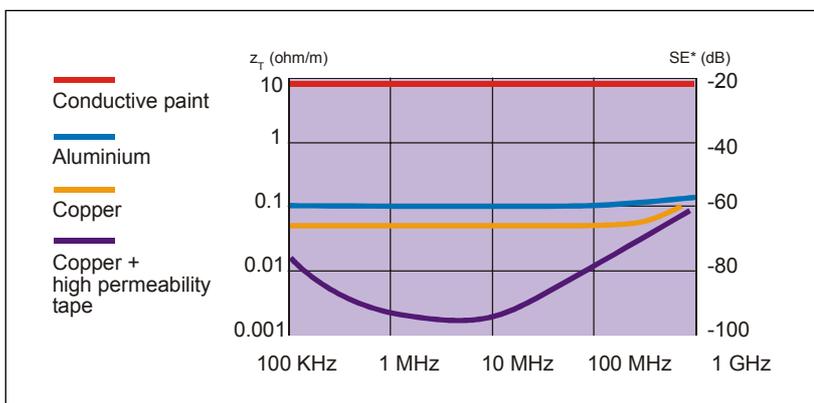
For the shielding of flat cables, the best compromise between good electromagnetic protection, light weight, good flexibility and a reasonable cost has been achieved with  $10\mu\text{m}$  Aluminium foils which are wrapped around the flat cable to assure  $360^\circ$  coverage. This shield is grounded to one or several conductors by welding.



## TYPICAL SHAPE OF THE TRANSFER IMPEDANCE



## COMPARISON OF THE TRANSFER IMPEDANCE



\*SE = Shielding efficiency : equivalent to a  $50\Omega$  load.



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## Specifications

Transfer impedance value	Electromagnetic protection of the flat cable
1Ω/m	Poor
0.1Ω/m	Fair
0.01Ω/m	Good
0.001Ω/m	Excellent

## Applications:

Flat Flexible Cables are used for board-to-board interconnections in numerous applications including CD players, VCRs, printers, laptop and handheld computers, LCD displays, car, radios, TVs, telephones, facsimile machines, hifi equipment, satellite receivers and decoders.

## Advantages:

- **Small dimensions** : low profile and narrow width design for higher packaging densities.
- **Low cost / high reliability** : compatible with ZIF/LIF connectors (Zero/Low Insertion Force).
- **Flexlife** : greater flexlife than equivalent PVC products.

## FFC Flexlife:

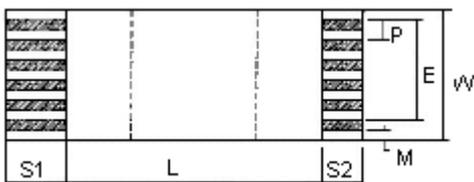
The following table summarises flex tests which have been carried out on a 1.00mm pitch FFC sample on a bend radius of 5mm. The sample was fitted between two plates, the bottom plate and the top plate fixed. Flexing is repeated until one conductor breaks.

## Specifications

Type of FFC	Type of Tape	Minimum number of cycles (for a 5mm bend radius)
Flexible version	L	30,000

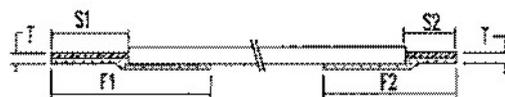
## STRIPPING/CONNECTION:

GENERAL SCHEMATIC (TYPE A)



## TYPE A:

2 reinforcements F1 and F2 on the same side



## Removable connection (connector/connector):

- Use of 2 blue (B), red (R) or "easy-to-insert" (E) reinforcement tapes.



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## Specifications

Pitch	Number of Ways	Part Number
0.5	10	AXO-00005
	14	AXO-00006
	16	AXO-00007
	20	AXO-00008
	24	AXO-00009
	30	AXO-00010
	35	AXO-00011
	40	AXO-00012
	45	AXO-00013
	50	AXO-00014
1.0	10	AXO-00015
	14	AXO-00016
	16	AXO-00017
	20	AXO-00018
	26	AXO-00019
	30	AXO-00020
1.25	4	AXO-00021
	6	AXO-00022
	8	AXO-00023
	10	AXO-00024
	14	AXO-00025
	16	AXO-00026
	20	AXO-00027
	30	AXO-00028
	40	AXO-00029

Dimensions : Millimetres



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### Notes:

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