

# Flat Flexible Cable

## 0.5mm, 1mm and 1.25mm Pitch

pro-POWER



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.

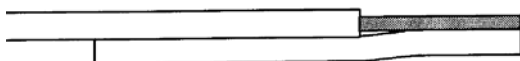
### Features:

- 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

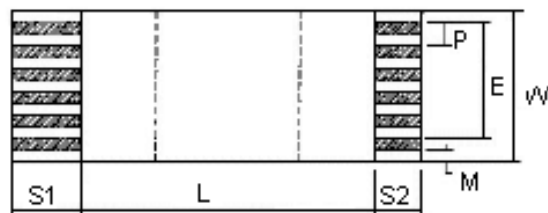
### Type Of End:

#### 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         | 1.25       |
| Type                                            |              | A*        |           |            |
| Number of Conductor (N)<br>Type A (min. / max.) |              | 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<br>Flexible                 | : F (Type A) | 0.05      |           |            |

Dimensions : Millimetres

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

# Flat Flexible Cable

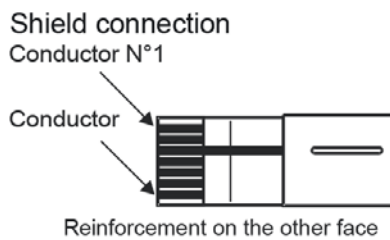
## 0.5mm, 1mm and 1.25mm Pitch

pro-POWER

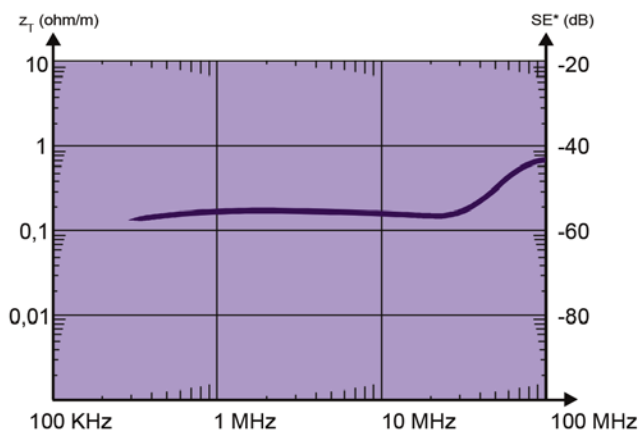
### Shielding:

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.

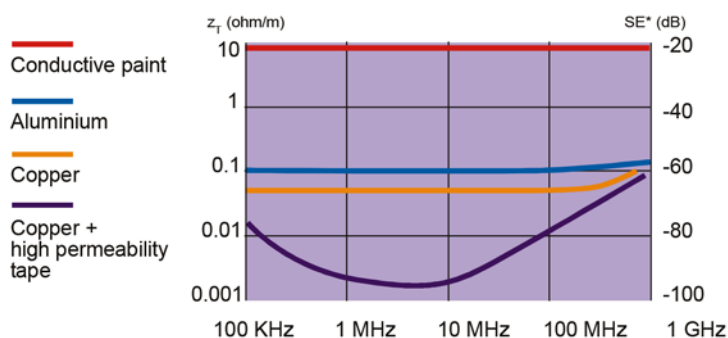
For the shielding of flat cables, the best compromise between good electromagnetic protection, light weight, good flexibility and a reasonable cost has been achieved with 10 $\mu$ m Aluminium foils which are wrapped around the flat cable to assure 360° coverage. This shield is grounded to one or several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



### Typical Shape Of The Transfer Impedance



### Comparison Of The Transfer Impedance



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

# Flat Flexible Cable

## 0.5mm, 1mm and 1.25mm Pitch

pro-POWER

### 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:

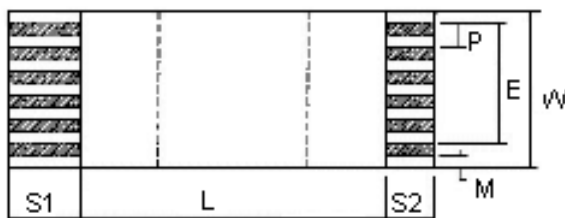
The following table summarises flex tests which have been carried out on a 1.00mm pitch FFC sample on a bend radius of 5mm. The sample was fitted between two plates, the bottom plate and the top plate fixed. Flexing is repeated until one conductor breaks.

### Specifications:

| Type of FFC      | Type of Tape | Min. Number of cycles (for a 5mm bend radius) |
|------------------|--------------|-----------------------------------------------|
| Flexible version | L            | 30,000                                        |

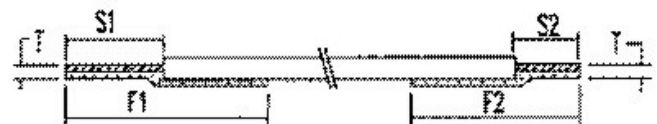
### Stripping / Connection:

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.

# Flat Flexible Cable

## 0.5mm, 1mm and 1.25mm Pitch

pro-POWER

Part Number Table

| Description                               | Part Number       |
|-------------------------------------------|-------------------|
| Ribbon Cable, Flat, 0.5mm, 10 way         | AXO-00005         |
| Ribbon Cable, Flat, 0.5mm, 14 way         | AXO-00006         |
| Ribbon Cable, Flat, 0.5mm, 16 way         | AXO-00007         |
| Ribbon Cable, Flat, 0.5mm, 20 way         | AXO-00008         |
| Ribbon Cable, Flat, 0.5mm, 24 way         | FFC0.50A24/0202L4 |
| Ribbon Cable, Flat, 0.5mm, 30 way         | AXO-00010         |
| Ribbon Cable, Flat, 0.5mm, 35 way         | FFC0.50A35/0202L4 |
| Ribbon Cable, Flat, 0.5mm, 40 way         | FFC0.50A40/0202L4 |
| Ribbon Cable, Flat, 0.5mm, 45 way         | FFC0.50A45/0202L4 |
| Ribbon Cable, Flat, 0.5mm, 50 way         | FFC0.50A50/0202L4 |
| Ribbon Cable, Flat, 1mm, 10 way           | AXO-00015         |
| Ribbon Cable, Flat, 1mm, 14 way           | AXO-00016         |
| Ribbon Cable, Flat, 1mm, 16 way           | AXO-00017         |
| Ribbon Cable, Flat, 1mm, 20 way           | AXO-00018         |
| Ribbon Cable, Flat, 1mm, 26 way           | AXO-00019         |
| Ribbon Cable, Flat, 1mm, 30 way           | AXO-00020         |
| Ribbon Cable, Flat, 1.25mm, 4 way         | AXO-00021         |
| Ribbon Cable, Flat, 1.25mm, 6 way         | AXO-00022         |
| Ribbon Cable, Flat, 1.25mm, 8 way         | AXO-00023         |
| Ribbon Cable, Flat, 1.25mm, 10 way        | AXO-00024         |
| Ribbon Cable, Flat, 1.25mm, 14 way        | AXO-00025         |
| Ribbon Cable, Flat, 1.25mm, 16 way        | AXO-00026         |
| Ribbon Cable, Flat, 1.25mm, 20 way        | AXO-00027         |
| Ribbon Cable, Flat, 1.25mm, 30 way        | AXO-00028         |
| Ribbon Cable, Flat, 1.25mm, 210mm, 40 way | AXO-00029         |

**Important Notice :** This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. pro-POWER is the registered trademark of the Group. © Premier Farnell plc 2012.

[www.element14.com](http://www.element14.com)  
[www.farnell.com](http://www.farnell.com)  
[www.newark.com](http://www.newark.com)  
[www.cpc.co.uk](http://www.cpc.co.uk)

pro-POWER