

**tyco**

Electronics

## FLEXSTRIP® JUMPERS

flexible  
interconnection  
system

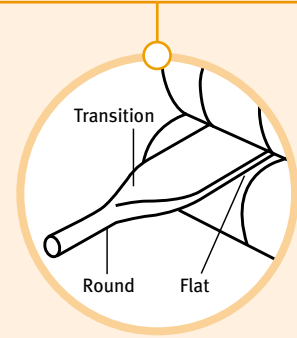
flexstrip

- One product - a 1000 solutions
- No added assembly required
- Space saving
- Low cost

# Flexstrip® - The Meaning of High Performance Interconnection

- One piece construction
- High flexibility
- Stress and vibration resistant
- Four insulation options
- Choice of conductor pitches

Utilising industry leading improvements in contact reliability, low height profile, compatibility with auto insertion equipment, and ease of assembly, Flexstrip provides an optimal solution for a diverse range of applications that require a reliable high performance interconnect.



Flexstrip jumpers provide multi conductor board-to-board connection without wire stripping, cutting to length or solder preparation. As an alternative to conventional point-to-point wiring, Flexstrip offers a comprehensive family of board-to-board jumpers that can be repeatedly flexed without failure.



Key to the performance benefit of Flexstrip is the flat conductor construction achieved by a special manufacturing process. Round conductors rolled flat provide unrivalled flexibility and resistance against vibration and high flexing cycles. Conventional round pins at each end ensure simplified assembly and soldering.

# flexstrip

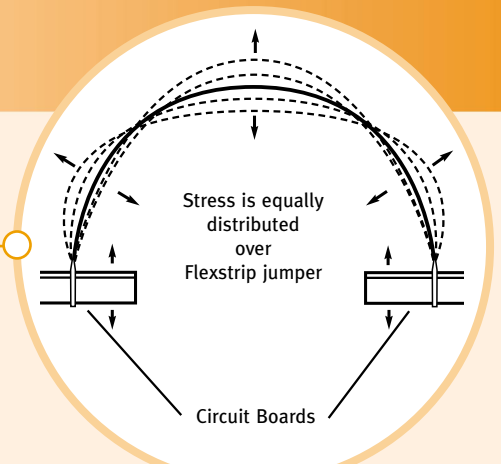
## Reliability in Vibration and Flexing Cycles

The smooth notchless transition from the flat conductor to the round contact pin guarantees a termination area that is break-proof and free of stress.

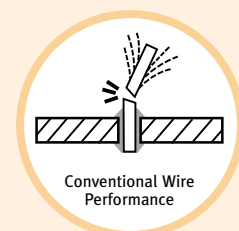
With strong vibrations, frequencies occur that can lead to resonance in the structure of equipment and the printed circuit board. For this reason, a high degree of stress often occurs at

the termination points in particular, which are typically the weakest links in the system. Such stresses are frequently the cause of wire fracture in the contact area leading to costly equipment failures.

With its flat conductor construction, Flexstrip performs reliably in vibration situations due to its special flat to round transition zone that transfers the stress uniformly across the entire length of the jumper. In addition, Flexstrip acts as a vibration absorber ensuring that any vibration is quickly dissipated and not transferred to other areas of the equipment where additional problems may occur.



stress free





# Optimum Functionality for Normal and High Temperatures

With Flexstrip jumpers, there is a choice of four insulation materials, ensuring an optimal and reliable solution for all applications.

## 1. Nomex

An economic material for general purpose applications where a change in direct current resistance due to humidity is not critical.

## 2. Polyester

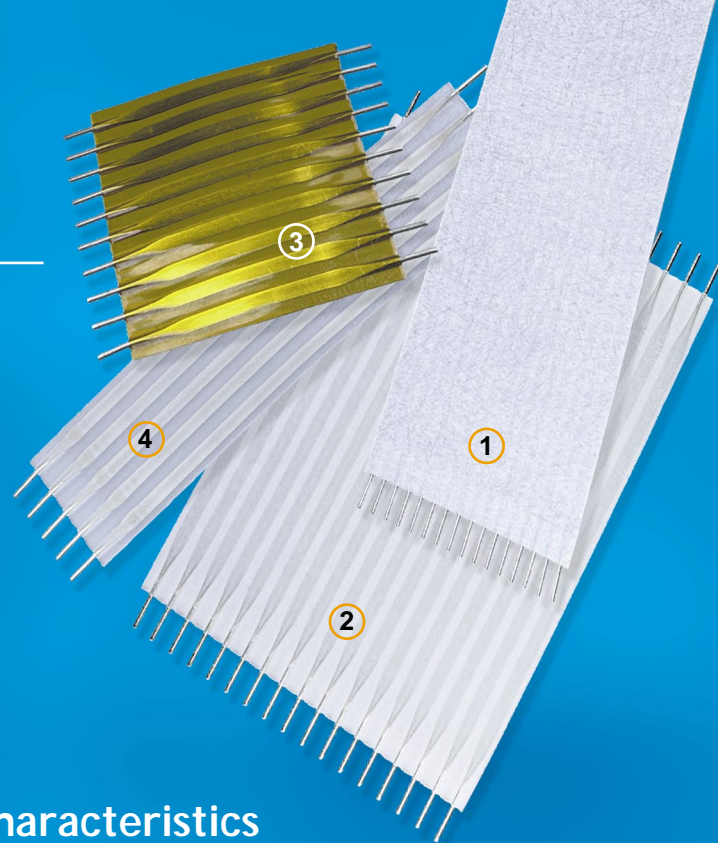
A lower temperature material with excellent electrical and mechanical properties. Suitable for use in high humidity applications.

## 3. Kapton

The unsurpassed mechanical properties of Kapton, especially at very high temperatures, make this the ideal solution for applications in aerospace and military engineering, and in critical parts of vehicles.

## 4. Teflon

Superior electrical, mechanical and chemical properties for demanding situations. Particularly suitable for applications where there is moisture or changing climatic conditions.



## Insulation Characteristics

Insulation Material	Nomex	Polyester	Kapton	Teflon
Conductor Pitch	2.54mm (.100")			
Flammability Rating	UL94V-0			
Equivalent Conductor Size	24 AWG			
Insulation Resistance (gnd, sig, gnd) 12 inch. sample @ 500 Vdc	2 x 10 <sup>12</sup> Ω	1 x 10 <sup>12</sup> Ω	2 x 10 <sup>12</sup> Ω	2 x 10 <sup>12</sup> Ω
Capacitance (gnd, sig, gnd)	29.2 pF/mtr	33.5 pF/mtr	29.9 pF/mtr	34.4 pF/mtr
Characteristic Impedance (gnd, sig, gnd)	123 Ω	118 Ω	112 Ω	101 Ω
Temperature Rating	125°C	105°C	150°C	150°C
Current Rating	3 A			
Voltage Rating	300 Vac			
Dielectric Strength	1500 Vac			
Minimum Bend Radius	3.18mm (.125")			

## A versatile and highly flexible board to board jumper system

### Conductor Pitches

A wide range of conductor pitches ensure compatibility with all standard PCB layouts.

#### Standard pitches

- 1.27mm (.050")
- 2.54mm (.100")

#### Other pitches available:

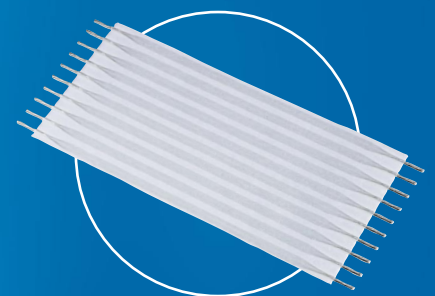
- 1.00mm (.039")
- 1.25mm (.049")
- 1.90mm (.075")
- 2.00mm (.079")
- 3.18mm (.125")
- 3.81mm (.150")
- 5.08mm (.200")

### Insulation Lengths

Available in lengths from 12.7mm (.50") to 863.6mm (34") in 2.54mm (.10") increments.

#### Standard lengths

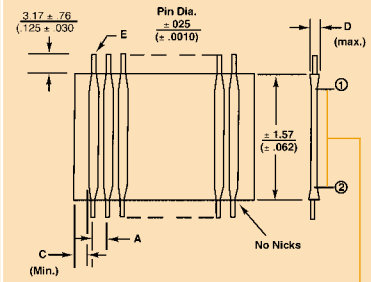
- 25.4mm (1.00")
- 50.8mm (2.00")
- 76.2mm (3.00")
- 101.6mm (4.00")
- 127.0mm (5.00")
- 152.4mm (6.00")



**FREE SAMPLE**  
Try for yourself the unique versatility of Flexstrip

# Technical Data

Pitch A	Margin C	Thickness Wire Gauge	Pin End D	Pin Dia. E	For PCB with the Following Diameter (±.001) Holes and (±.005) Centre Tolerance	Number of Conductors Recommended (Min - Max.)
1.00 (.039)	.25 (.010)	28	.64 (.025)	.320 (.0126)	-	2 - 70
1.25 (.049)	.25 (.010)	28	.64 (.025)	.320 (.0126)	.71 (.028)	2 - 70
1.27 (.050)	.25 (.010)	28	.64 (.025)	.320 (.0126)	.71 (.028)	2 - 70
1.90 (.075)	.25 (.010)	26	.84 (.033)	.404 (.0159)	.79 (.031)	2 - 60
2.00 (.079)	.25 (.010)	26	.84 (.033)	.404 (.0159)	.79 (.031)	2 - 60
2.54 (.100)	.25 (.010)	24	.84 (.033)	.511 (.0201)	.94 (.037)	2 - 45
3.18 (.125)	.51 (.020)	24	.84 (.033)	.511 (.0201)	.94 (.037)	2 - 35
3.81 (.150)	.51 (.020)	24	.84 (.033)	.511 (.0201)	.94 (.037)	2 - 30
5.08 (.200)	.51 (.020)	24	.84 (.033)	.511 (.0201)	.94 (.037)	2 - 22



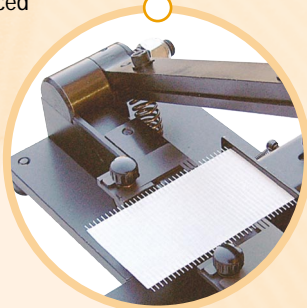
Mid pin jumper thickness between points 1 & 2

.254 (.010)	Nomex
.254 (.010)	Kapton
.406 (.016)	Teflon
.254 (.010)	Polyester

All dimensions shown are mm (inches)

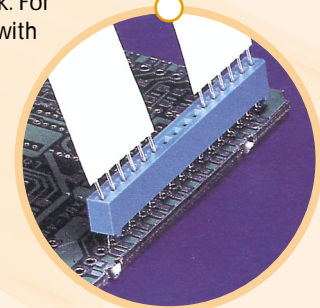
## Enhanced Service

Supported and stocked by a network of professional distributors, the unique manufacturing method of Flexstrip allows many combinations of finished product to be produced from a single base material. As a result, Flexstrip distributors are able to offer delivery of most standard products within a few days.



## PCB Socket Connector

Further enhancing the application opportunities of Flexstrip, a range of PCB mount sockets are available to allow a disconnect option at one or both ends of the jumper link. For use with Flexstrip jumpers with 2.54mm (.10") conductor pitch, the dedicated dual beam socket provides a secure connection with consistent insertion and extraction force.



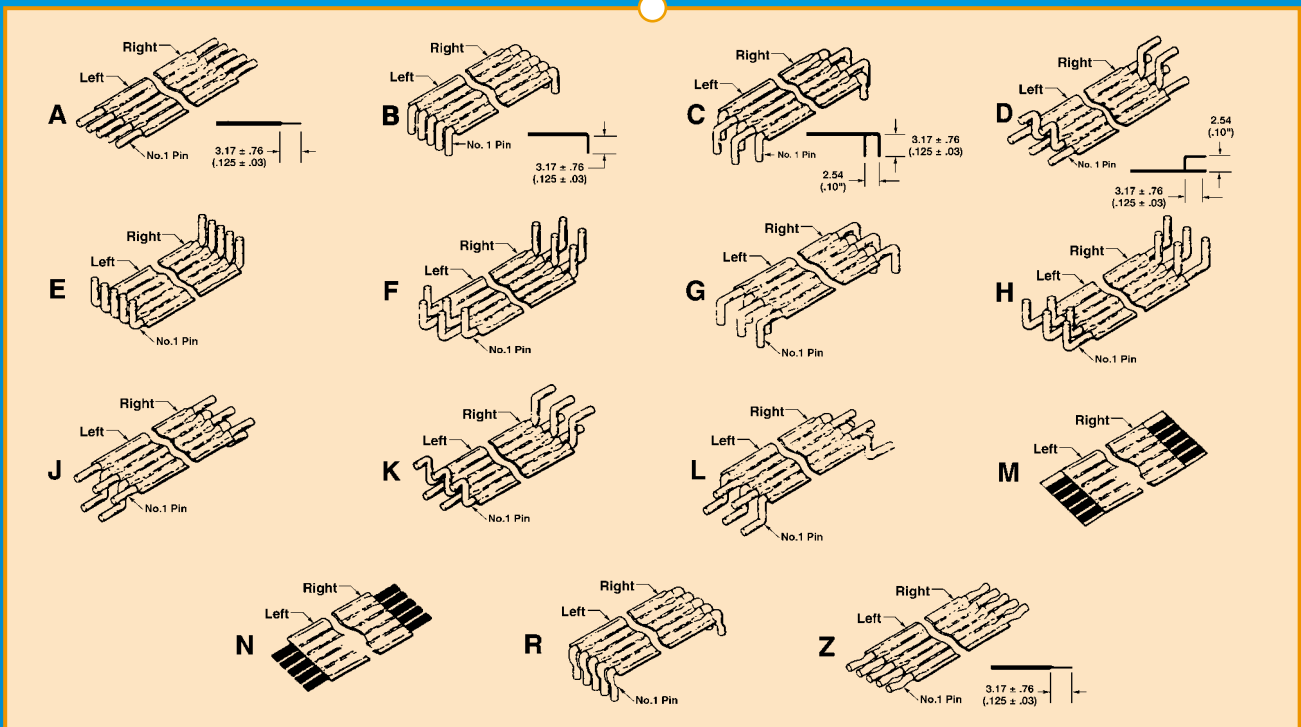
## Flexpac™ System

The Flexpac System provides a versatile interconnection solution for a host of high performance applications. The system combines flat conductor cable technology with a variety of contact and connector termination styles. Coupled with a range of PCB headers, they enable the specification of custom designed assemblies tailored to the specific board-to-board application.

- Choice of 2.00mm (.079") or 2.54mm (.100") conductor pitch
- Conductor counts from 2 - 64 position
- Single and double row assemblies
- Secure cable connection with triple clamping
- Three termination options; solder pin, female socket connector, or male connector



# Termination Styles



All dimensions shown are mm (inches)

# Ordering Information

**FS N - 1 2 A - 20**

Product Group



Number of Conductors



Insulation Material

- N = Nomex
- T = Teflon
- P = Polyester
- K = Kapton



Termination on both sides

- A = Straight
- B = Right angle down
- C = Right angle staggered
- D = Straight staggered



Pitch

- 1 = 1.27 mm (.050")
- 2 = 2.54 mm (.100")
- 3 = 3.18 mm (.125")
- 4 = 3.81 mm (.150")
- 5 = 5.08 mm (.200")
- 6 = 1.90 mm (.075")
- 7 = 2.00 mm (.079")
- 8 = 1.25 mm (.049")
- 9 = 1.00 mm (.039")



See diagrams above for other pin arrangements. Mixed left/right end terminations available on request.

Other insulation lengths from 12.7mm (.50") to 863.6mm (34") in 2.54mm (.10") increments are available



Insulation Length

- 1 = 25.4 mm (1.00")
- 2 = 50.8 mm (2.00")
- 3 = 76.2 mm (3.00")
- 4 = 101.6 mm (4.00")
- 5 = 127.0 mm (5.00")
- 6 = 152.4 mm (6.00")



Highlighted parts are standard preferred types

Special pin lengths are available on request for jumper lengths up to 152.4mm (6.00") in 2.54 mm (.10") and 5.08 mm (.20") pitches.

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