

Shielded FFC Cable



Nicomatic's Flat Flexible Cable (FFC)

consists of tin or bare copper conductors laminated between polyester films with a thermal adhesive for durability. With pitch densities down to 0.50 mm and capable of millions of cycles in high flexing environments, FFC cables are used in a wide variety of electronic applications as board to board interconnections.

In more and more applications today, electromagnetic interference is a significant design consideration. Nicomatic now offers a shielded FFC utilizing a thin, highly flexible aluminum foil with a polyester cover layer, eliminating the potential for unwanted ground shorts due to outgassing inherent in spray coatings.

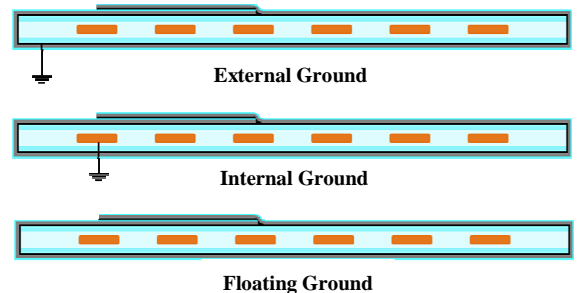
While Nicomatic recommends external grounding at both ends with 360 degree connection for the most effective shielding, we also offer an internal ground and a floating ground for shielded cables to meet your specific requirements. Internal grounds can be made to any number

of conductors as required. External grounds can be made in numerous different locations and manners to suit your design needs.

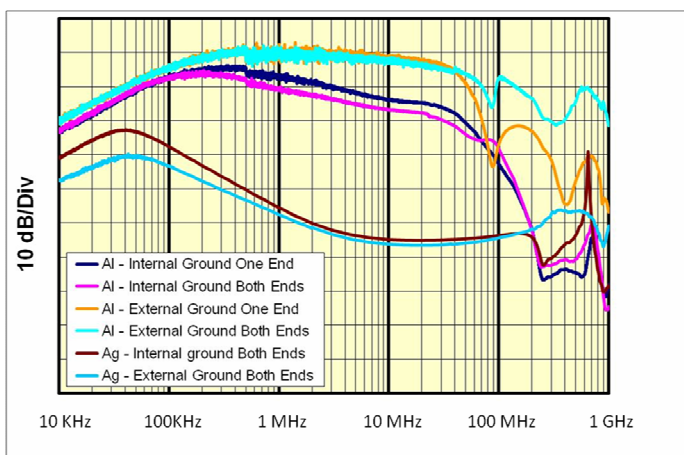
Nicomatic's shielded cable's are primarily used in static applications. For dynamic flexing applications, please contact the factory.

Features/Advantages

- Aluminum (0.025 mm thick) Foil Shield provides effective protection against EMI/RFI
- Polyester Cover Layer eliminates chassis shorts
- Flexible Cable can be routed as needed
- Three types of grounding available, Internal, External, Floating
- Formable cable does not apply excessive stress to joint, specifically in Touch screen applications
- Available with a wide variety of pitches from 0.5 mm and up
- Available with connector terminations in 1.27, 2.00, and 2.54 mm pitches



Shielding Effectiveness



This graph shows the results of testing that Nicomatic has conducted to evaluate the comparative effectiveness of Aluminum foil shield and a typical silver spray on shielding, as well as various methods of grounding the shielding.

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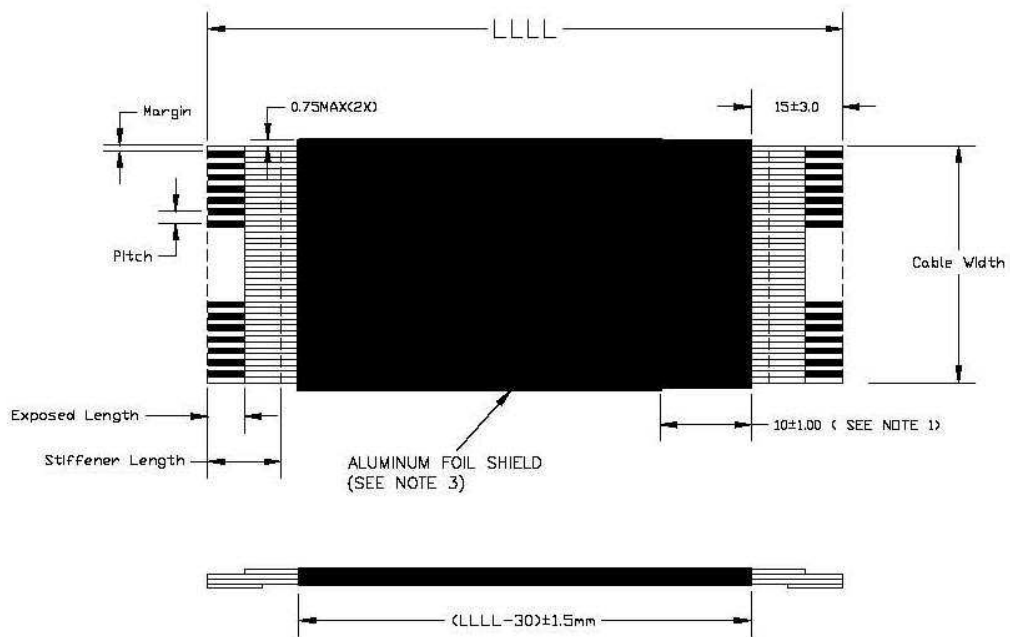
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Shielded FFC Cable

Pitch	0.5mm	1.0mm	1.25mm	1.27mm	2.54mm
Cable Width	(N+1) 0.50	(N+1)	(N+1) 1.25	(N+1) 1.27	(N+1) 2.54
Cable Width with Shield	+1.5 Max	+1.5 Max	+1.5 Max	+1.5 Max	+1.5 Max
Cable Thickness	0.37	0.40	0.40	0.40	0.40
Conductor Width	0.28	0.66	0.80	0.66	1.57
Conductor Thickness	0.035	0.076	0.076	0.076	0.076
Cable Insulation Thickness	0.05	0.05	0.05	0.05	0.05
Aluminum Shield Thickness	0.025	0.025	0.025	0.025	0.025
Shield Insulation Thickness	0.012	0.012	0.012	0.012	0.012
Exposed Length	4	5	5	NA	5
Stiffener Length	6	10	10	NA	10
Mating Thickness	0.30	0.30	0.30	NA	0.30
Insulation	Polyester	Polyester	Polyester	Polyester	Polyester
Voltage	90V	90V	300V	300V	300V
Max. Continuous Operating Temperature w/shield	80°C	80°C	80°C	80°C	80°C
Dielectric Strength of Cable	5,000 V	5,000 V	5,000 V	5,000 V	5,000 V
Dielectric Strength of Shield	2,800 V	2,800 V	2,800 V	2,800 V	2,800 V
Insulation Resistance of Cable	5,000 MΩ	5,000 MΩ	5,000 MΩ	5,000 MΩ	5,000 MΩ

Note: 1. All dimensions in mm, unless otherwise specified.
2. The data presented here is intended for product selection purposes only. Typical properties represent data characteristics of the product, but do not necessarily reflect minimum values during normal testing.



NOTE:

1. EXTERNAL GROUND - POLYESTER COVER LAYER REMOVED. CAN BE BOTH ENDS AND/OR BOTH SIDES AS REQUIRED.
INTERNAL GROUND - LOCATION OF GROUND CONNECTIONS TO CONDUCTORS. CAN BE BOTH ENDS AND MULTIPLE CONDUCTORS
2. PIN 1 MARKED ON ALL INTERNALLY GROUNDED CABLES
3. FOIL THICKNESS 0.025mm AND POLYESTER COVER LAYER 0.012mm



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