

FDC 100[®] FLAT DISPLAY CONNECTION FOR LVDS TO MATE FI-R PCB CONNECTORS

HIGH SPEED DATA TRANSMISSION



CONCEPT

Designed to connect shielded flat cables with a pitch of 0.50 mm for full HD flat screen TV displays, AXON's new connector is characterised by its unique and simple connection system compared to other connectors on the market : the flat cable is used to make the connection into the FI-R receptacle. No need to have an extra metal link between connector and screen.

AXON' CABLE's vertically integrated expertise in the manufacture of precision conductors, wires and flat cables together with their extensive knowledge of overmoulding techniques and EMI protection makes it possible to offer complete solutions tailored to customer requirements.

ADVANTAGES

FDC LVDS high speed cable assembly offers many advantages :

- Small dimensions : low profile, narrow width design.
- Low cost / high reliability.
- Good flexibility.
- 100 ohm impedance.
- Foldable for easy integration mounting.
- Excellent high speed signal transmission.

FFC MANUFACTURING

AXOJUMP[®] Flat Flexible Cable is manufactured by AXON' using the ultimate in high performance mass production technology : AXON' constantly monitors every aspect of production from the wire drawing, gold plating and rolling of conductors through to the application of insulation, shielding, final cutting, inspection and packing. The manufacturing facilities for Flat Flexible Cables are amongst the most sophisticated and largest in Europe.

Gold-plated cables to avoid whiskers

A fine gold coating on the exposed ends of the flat cables guarantees the absence of tin whiskers. (whiskers are metal filaments or knots which can grow from metal such as tin after several months).

The risk is that whiskers can produce short circuits between fine pitch conductors. AXON' can offer stripped gold tipped flat cables in different pitches compatible with a large range of gold contact connectors.

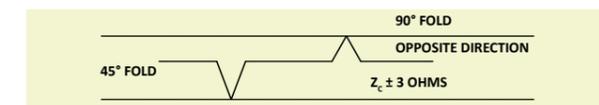
AXON' manufactures flat cables using state-of-the-art mass production technology in it's European, Mexican and Chinese factories.

PERFORMANCES

NUMBER OF CONTACTS	41 OR 51 POSITIONS
SIGNALS	LVDS
CONTACT RESISTANCE	< 40 milliohms max
DIELECTRIC WITHSTANDING VOLTAGE CONDUCTOR TO SHIELD	200 VAC R.M.S. (for 1 minute)
PITCH	0.5 mm
OPERATING TEMPERATURE RANGE	-40°C to +80°C
IMPEDANCE	Assembly 100 ohms ± 5%
VIBRATION	OK (Acc 4g / Shock 6g 10 ms)
HUMIDITY	48 H - 85°C / 95% humidity

INTERCONNECTION WITH FI-R :
20 matings tested : no change of electrical parameters.

FOLDING IMPACT ON PERFORMANCES



CONCLUSION : folding has no adverse effect on the electrical performances, up to a data rate of 2 Gbit/s.

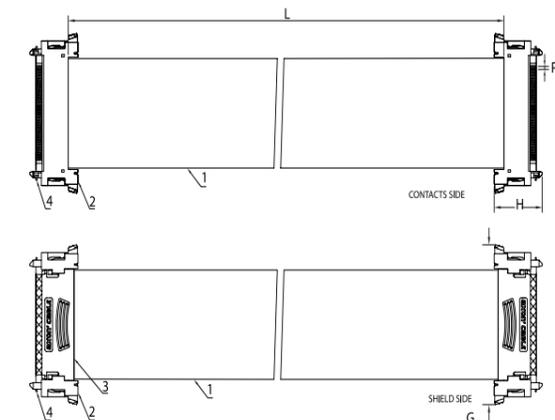
IDENTIFICATION CODE

FDC 100 [®]	XX	XXXX	X
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FOLDING IMPACT ON PERFORMANCES

FFC LVDS - Pitch 0.50 mm.
To be used with a connector compatible with the FI-R PCB.

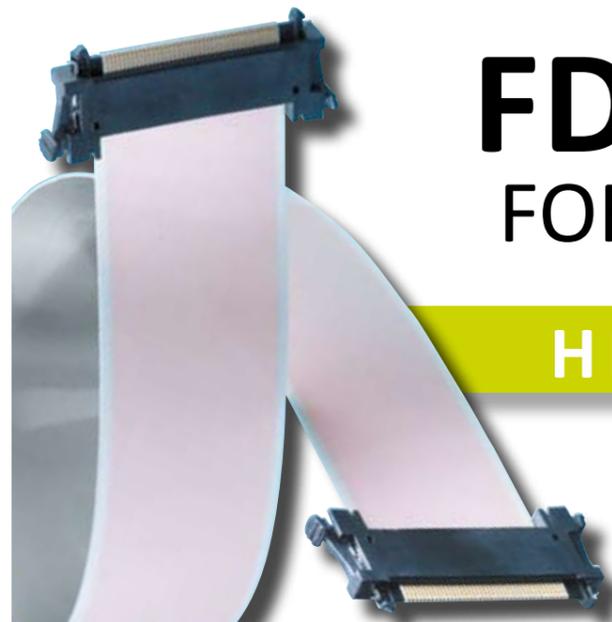
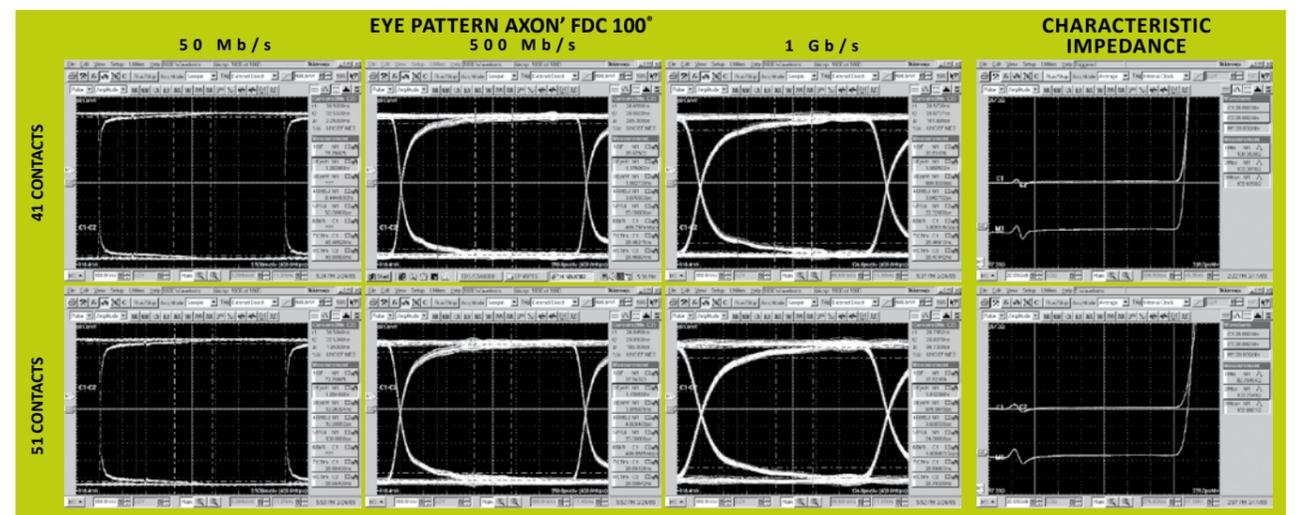


ITEM	MATERIALS & FINISHES	
1	FFC	PET, Copper / Contact / Gold plating
2	CONNECTOR HOUSING PART	AXON' connector mating FI-R
3	CONNECTOR COVER PART	
4	CLIP	

ITEM	SPECIFICATIONS	REP
NUMBER OF CONDUCTORS	41 51	N
PITCH	0.50 ± 0.03	P
LENGTH	L ± 5	L
CONNECTOR HEIGHT	14.95 14.95	H
CONNECTOR WIDTH	35.3 40.3	G

All dimensions are in millimeters.

ELECTRICAL CHARACTERISTICS



AXON' has extended its range of AXOLINK[®] flat cable assemblies destined for flat panel displays. The company is now able to offer impedance controlled 100 ohm flat assemblies, fully compatible with the increasingly widespread FI-R PCB connector. These are the required interconnects for full HD displays based around the LVDS (Low Voltage Differential Signaling) standard. Acting as the primary interconnect between the motherboard and the display itself on larger HD televisions, (32" and greater with resolutions of 1920 x 1080 at 100 Hz) the new AXOLINK[®] assembly consists of a 41 or 51 way 0.50 mm pitch shielded flat cable, terminated with connectors compatible with the FI-R connectors on the boards.

THE NEW HIGH SPEED CONNECTOR IS AN AXON' PATENTED PRODUCT



FDC 100®

Flat display connection for LVDS

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