



CONNECTOR FUNDAMENTALS

Co-Sponsored By
Contech Research and connNtext associates

DAY 1

Session 1: Connector Overview/Structure of Contact Interfaces:

Provides functional and structural definitions of connectors. Describes the microstructure of contact interfaces and how that structure determines the mechanical and electrical characteristics of connectors.

Session 2: Electrical Overview:

Provides discussion of characterization for signal and power applications. Includes the dependence of functional interactions and requirement levels desired that will impact end-of-life performance. Signal integrity issues will also be discussed.

Session 3: Contact Finishes:

Discusses design, structure and functional characteristics of the major contact finishes, both noble (gold) and non-noble (tin). Palladium and palladium alloy finishes are also discussed.

Session 4: Plating Considerations:

Provides insight and consideration to the selection process for finishes, plastic and base metal and their interaction. Includes discussion of basic properties and their impact on function and performance stability.

Session 5: Separable Interfaces:

Reviews materials and design considerations for separable interfaces. The role of contact normal force is emphasized. Mating mechanics and wiping effectiveness are also discussed.

DAY 2

Session 6: Metal and Polymer Evaluation:

Discusses evaluation practices as applied to the an interconnect housing and contact systems. Subject matter includes normal force, resistance to solvents, etc.

Session 7: Permanent Connections:

Discusses materials and design considerations for permanent connections. Crimped and Insulation Displacement connections are emphasized.

Session 8: Testing Strategies:

Examines the “what to do” and “what not to do” in the creation of a test plan, including rationale for test selection. Solderability issues and “sanity” type evaluation techniques are discussed. Evaluation and testing trends are also included.

Wrap Up / Questions and Answers

Day 1		Day 2	
Session 1	8:30 - 9:30	Session 6	8:30 - 10:00
Session 2	9:45 - 10:45	Session 7	10:15 - 11:45
Session 3	11:00 - 12:00	Lunch	12:00 - 1:30
Q&A		Session 8	1:30 - 2:45
Lunch	12:00 - 1:30	Wrap Up and Q&A 3:00 to as time allows	
Session 4	1:30 - 2:45		
Session 5	3:00 - 4:30		
Q&A			

Workbook is included, including copies of the presentation.

Presentations will be given by:

Dr. Bob Mroczkowski of connNtext associates and Tom Peel of Contech Research.

POWER CONTACTS/CONNECTORS

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DAY 1

Session 1: Power Application Overview:

Provides an overview of power application from a system viewpoint. Input conductors connectors, applications and current rating practices are introduced.

Session 2: Input Conductors:

Current ratings of conductors are reviewed in terms of materials and design parameters. The basics of heat generation and dissipation are reviewed. Millivolt drop requirements are addressed.

Session 3: Contact Interface Fundamentals:

The structure of the contact interface is reviewed with emphasis on how that structure influences connector performance in power applications. The concept of Super-temperature and its role in current rating is introduced. Current types, transient, overload and steady state, and their impact on current rating are discussed.

Session 4: Contact/Connector Design/Materials:

The effect of design and materials choices on connector resistance and current rating are reviewed. Bulk, termination and contact resistances are differentiated in terms of their effects on current rating. Design/materials options to minimize connector resistance are discussed.



POWER CONTACTS / CONNECTORS

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DAY 2

Session 5: Power Applications:

Power distribution can be accomplished using discrete “power” contacts/connectors with current ratings in the tens of amperes, or by using multiple “signal” contacts with current ratings of a few amperes in parallel. Derating requirements for and limitations of the two approaches are reviewed.

Session 6: Current Rating Practices:

The fundamental parameters affecting current rating practices are reviewed. An End of Life (EOL) approach to current rating is offered.

Wrap Up / Questions and Answers

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Session 3	11:15 - 12:30	Wrap Up and Q&A 3:00 to as time allows	
Q&A			
Lunch	12:45 - 2:00		
Session 4	2:00 - 3:30		
Q&A			

Workbook is included, including copies of the presentation.

Presentations will be given by:
Dr. Bob Mroczkowski of connNtext associates

Seminar will be held at the:

Colonel Blackinton Inn
203 North Main Street
Attleboro, MA 02703
Phone: 508-222-6022

Price:

Connector Fundamentals - \$975.00 per attendee
Power Contacts/Connectors - \$975.00 per attendee

A limited number of rooms are available at the Colonel Blackinton Inn with other hotels near by (Hotels are not included in the above cost).

For additional hotel information or other seminar information, contact:

Contech Research, Inc.

Tom Peel

T: 401-865-6440

F: 401-383-0336

E: tpeel@contechresearch.com

www.contechresearch.com

To attend fill out registration form and return to Contech Research no later than November 23rd.





CONTECH RESEARCH

An Independent Test and Research Laboratory

REGISTRATION FORM

CONNECTOR FUNDAMENTALS \$975.00

POWER CONTACTS/CONNECTORS \$975.00

Site information

The Colonel Blackinton Inn
203 Main Street
Attleboro, MA 02703
Phone: 508-222-6022

Attendee Information

Name: _____

Title: _____

Company: _____

Company address: _____

City: _____ State: _____ Zip: _____

Daytime Phone: _____

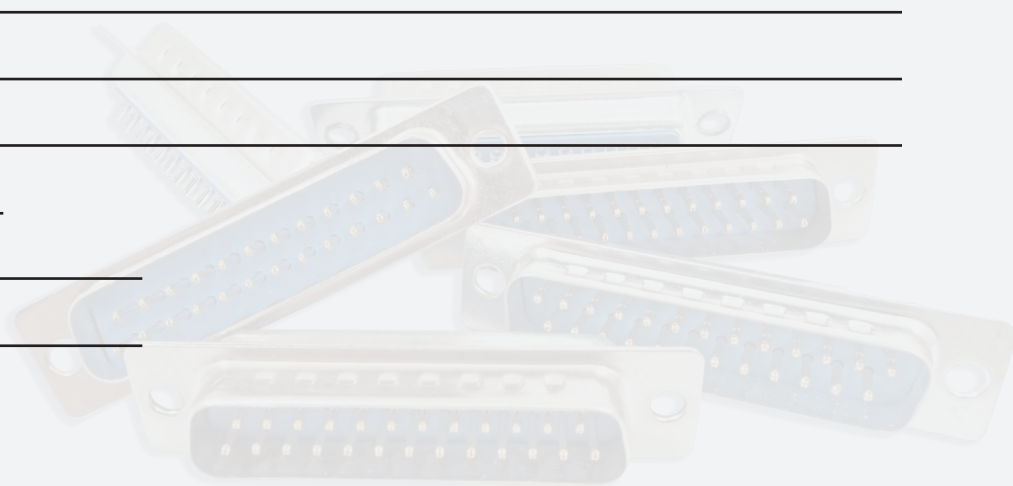
Fax: _____

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Seminar Fee(s) _____

Late Registration Fee* \$ _____

TOTAL ENCLOSED \$ _____



REGISTRATION FORM (cont.)

One attendee per form please. Make copies of this form for additional attendees.

*Payments not received prior to November 23rd will be charged an additional \$50.00 late fee per seminar.

Cancellations for full refund will be accepted in writing up to and including 14 days prior to seminar dates. No refund will be given after that time. Substitutions may be made at any time prior to the seminar dates.

PAYMENT INFORMATION

Check payable to Contech Research enclosed

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If paying by credit card, please fill out the Authorization form and fax it to:
401-383-0336

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Contech Research, Inc.
750 Narragansett Park Drive
Rumford, RI 02916-1035



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