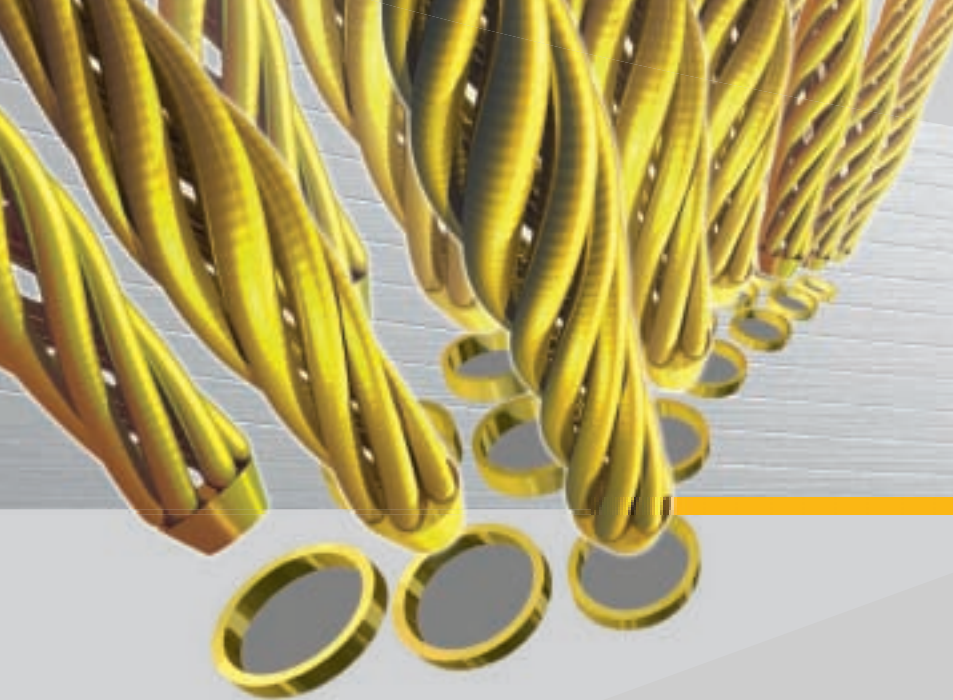


Short Form Catalogue

SOLUTIONS THAT CONNECT

2010 EDITION





GET CONNECTED

Delivering innovative interconnect

Cinch Connectors is a multi-national manufacturer of a broad range of interconnect products. With over 90 years' experience Cinch satisfies the needs of customers across the globe with products proven in the most demanding applications.

We are a supplier of reliable, high quality standard products for use in a variety of industries and possess a range of enabling technologies and expertise with which to provide innovative bespoke solutions and products. Our highly sophisticated electrical interconnect products are used in automotive systems, telephony switches, transmitters, receivers, commercial aircraft fuel monitoring systems, and complex computer systems. We have successfully and continually met the needs and expectations of the markets we serve because we listen to our customers, and provide reliable state-of-the-art products and solutions.

Meeting our customers' expectations is no accident. The process begins with our rigorous product development process which adheres closely to the APQP process adapted for all Cinch products. The most critical features of this process are:

- Defining customer/marketplace needs and expectations
- Empowerment of multi-functional development teams
- Verification that designs and processes are capable
- On-time product launch
- Production follow-up

Cinch has initiated dock-to-stock programs with many major OEM's, is qualified to many customer-specific specifications, and over the years improved our quality systems from MIL-Q-9858, to ISO 9001, AS9100 and DI9000.



We point with pride to our history of continual improvement, and we constantly strive to improve even further our effectiveness in the market place by developing better methods with which to measure and provide customer satisfaction.

Our mission is to always exceed our customers' expectations and to continually provide innovative solutions to the rapidly changing needs of the markets and customers we serve.



We believe our commitment to quality is evidenced by a century of customer satisfaction and look forward to the centuries to come.



ect solutions to a global market

Market applications include:

MILITARY/AEROSPACE

Airlines

Fuel systems
Engine Management
Countermeasures
Radar

Missiles

Guidance
Seeker
Umbilical
Rocket motor

Radar Equipment

RF
Power

Unmanned Vehicles

UAV
UGV
USV
Counter Measure

TRANSPORTATION

On/Off Highway, Agriculture, Construction, Marine, Hydraulics, Industrial Electronic Controls

Powertrain

Engine
Emissions
Transmission

Chassis

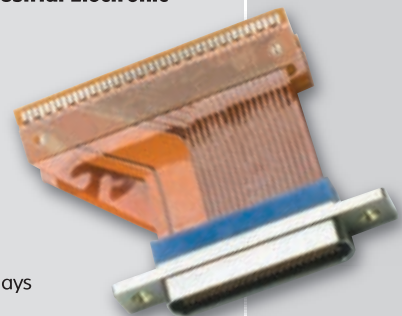
Suspension
Tyre pressure monitoring

Vehicle Management

Can Bus
Instrumentation and displays

Telematics

Asset tracking
Fleet management
Remote vehicle monitoring and diagnostic
M2M communication



ELECTRONIC & COMMUNICATION SYSTEMS

Computers/Servers

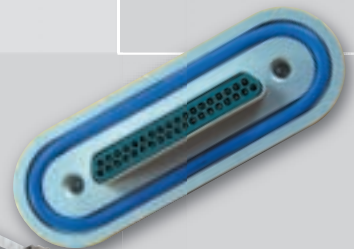
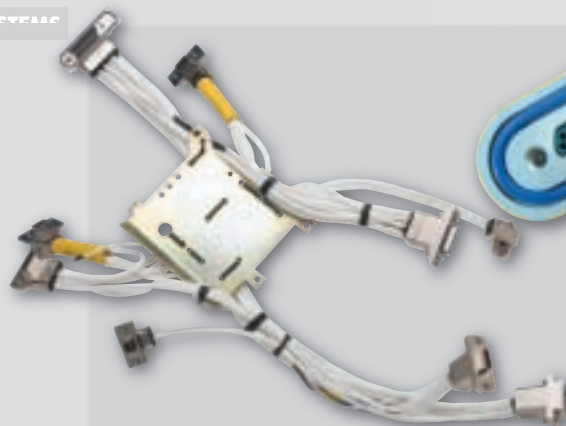
Board to board
High speed mezzanine
Chip to board
Flex to board
ATCA/Micro TCA
I/Os for AMC.0

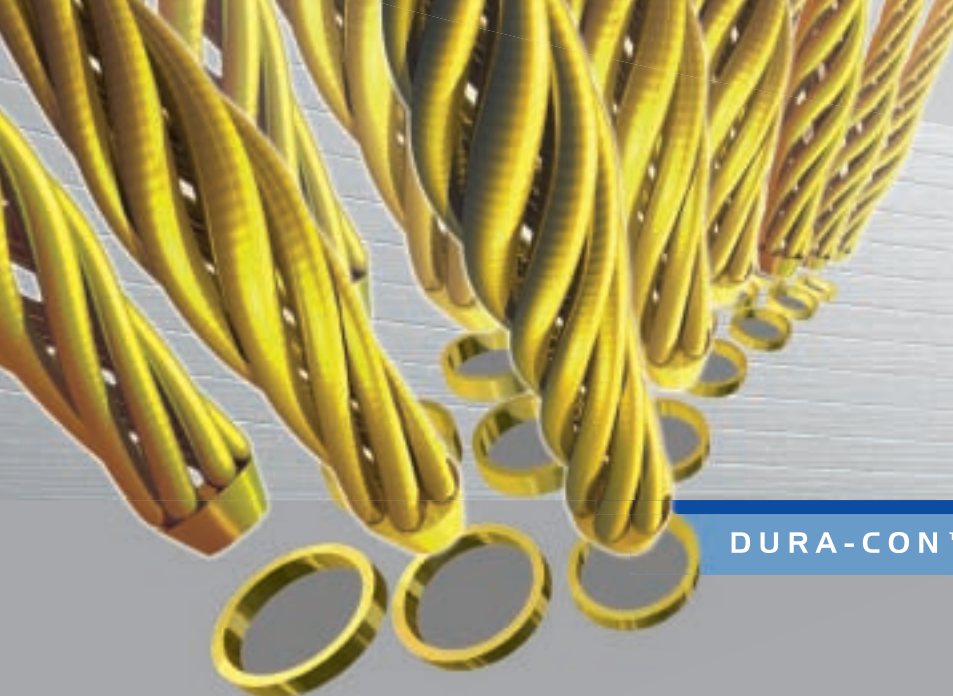
Data Com/ Networking

InfiniBand
CX4, 10Gigabit Ethernet
SAS
QSFP

Industrial

Controls
Instrumentation
Power supplies
Vending/amusement machines





DURA-CON™ PRODUCTS

Dura-Con™

Cinch Dura-Con connectors are designed for applications that require a rugged, durable, and high-performance interconnect solution. The Dura-Con line of connectors, qualified (QPL) to MIL-DTL-83513, is one of the most widely used .050 inch (1.27mm) pitch connectors for military and high-end commercial applications. It is the ideal connector for applications where weight and space must be kept to a minimum while maintaining maximum reliability. The heart of the Dura-Con System is the unique wire form pin that provides seven points of contact when mated to the socket.

Applications include electronics in missiles, aircraft, launch vehicles, satellites and computers.

Dura-Con™ Combi Connectors

VARYING CONTACT ARRANGEMENTS FOR USE IN HARSH ENVIRONMENTS

Dura-Con Combi connectors offer both plug and socket in a variety of contact arrangements to suit your specific needs. Available as solder pot connector, PC tail connector and flying leads, all connections offer resistance to shock and vibration and are the perfect choice for harsh environments. Our engineers will be delighted to come and talk to you about the combination best suited to you.

Features:

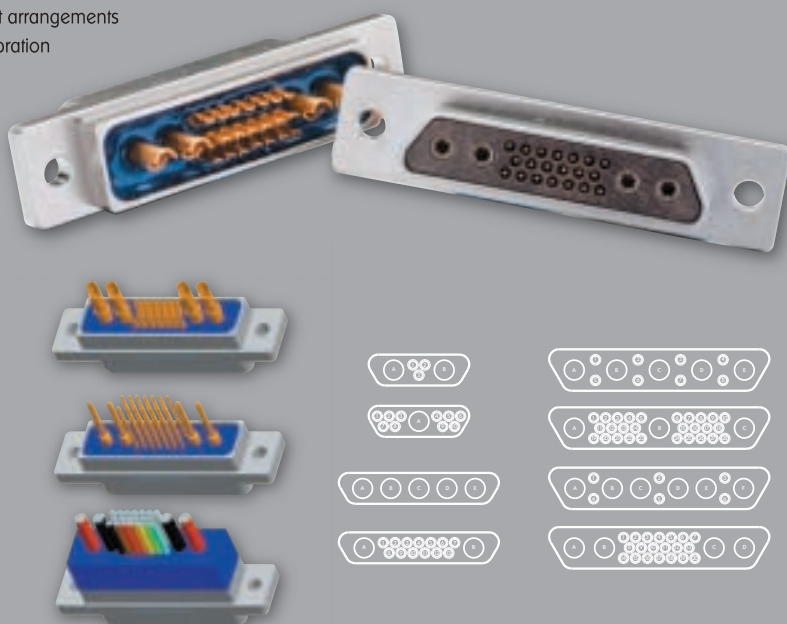
- Both plug and socket available in varying contact arrangements
- Rugged contacts offer resistance to shock and vibration
- Tested to Mil-DTL-83513
- Power contacts rated at 15 amps

Technical:

- Temperature range : -55°C to +135°C
- Current rating : 3A – signal contacts
- Current rating : 15A – power contacts
- DWV 600VAC @ sea level

Contact Arrangement:

Custom





Dura-Con™ Hermetic Connectors

STANDARD DURACON™ CONNECTORS WITH HIGH PERFORMANCE HERMETIC SEALS

DuraCon's hermetic compound potting process passes rigorous helium leakage requirements. This process is adaptable to many connector styles and can also be applied to feed through headers. These interconnects function reliably under extreme environmental conditions such as high pressure, temperature and exposure to propellants. Duracon hermetic solutions can be 50-70% cheaper than traditional fired glass or ceramic solutions.

Features:

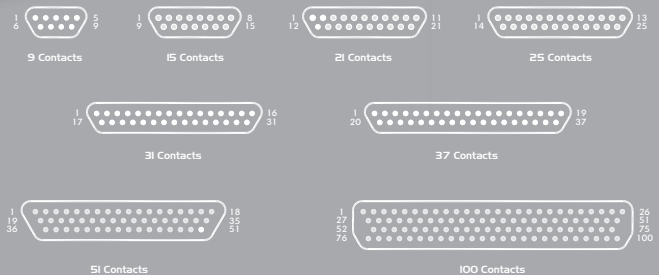
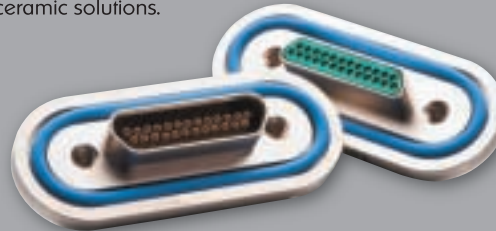
Rugged design resistant to shock and vibration
Seal achieved through Cinch hermetic compound
'O' Ring sealing to bulk head
Tested to Mil-DTL-83513

Technical:

Temperature range : -55°C to +135°C
DWV 600VAC @ sea level
Current rating : 3A
Hermetic Seal 1 x 10-8cc/sec @ 1 atmosphere helium
Fluoro Silicone 'O' ring seal

Contact Arrangement:

9, 15, 21, 25, 31, 37, 51



Dura-Con™ Nano Connectors

NANO-MINIATURE, DUAL ROW, 180° CONNECTOR WITH DUAL LOBE POLARISED SHELL

DuraCon's Nano connector provides the optimum miniaturisation in a range of contact arrangements to the Military standard Mil-DTL-32139. The contact technology provides enhanced electrical and mechanical performance in contact tail, solder cup terminations. A low compressive mating action is accompanied with a self-ejecting action on withdrawal.

Features:

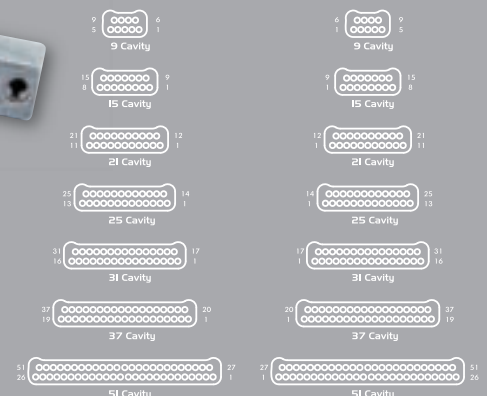
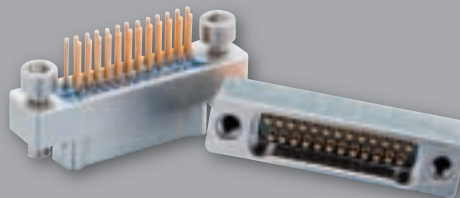
0.762mm pitch (0.030")
Compression mating
Low mating force
Mechanical wipe contact action

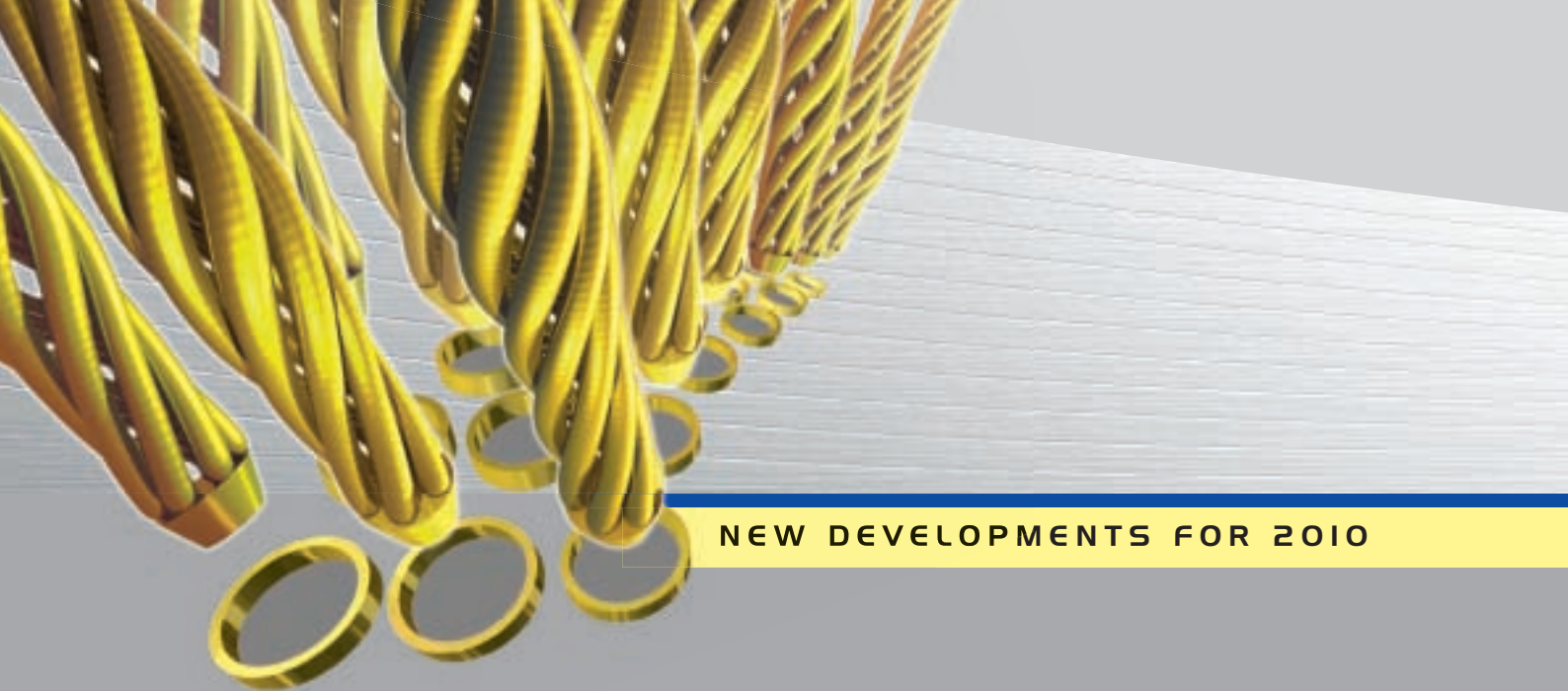
Technical:

Temperature range : -55°C to +135°C
Current rating : 3 amps max in isolation
Current rating : 1.8 amps fully loaded @ 30 awg wire
DWV 600VAC @ sea level
Mil-DTL 83513 rated
Mil-DTL-32139 style

Contact Arrangement:

9, 15, 21, 25, 31, 37, 51





NEW DEVELOPMENTS FOR 2010

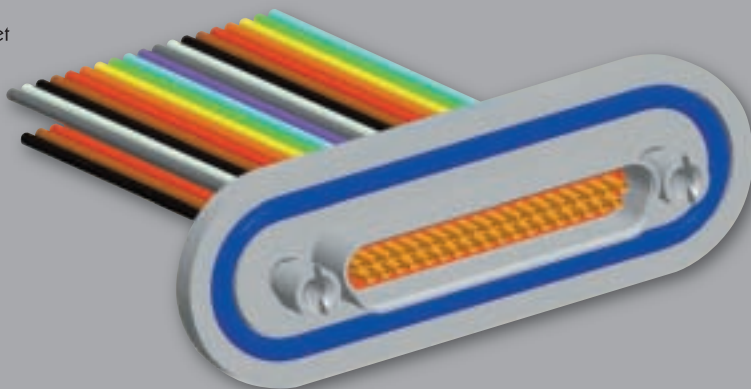
We deal in an industry that is dynamic, ever-evolving and product-led. So when we're asked by a customer to solve a problem we call upon our wealth of experience and knowledge to achieve that goal. This means that we're continually pushing the boundaries of design in order to attain the best possible solutions.

The new products featured in this catalogue are a direct result of this intuitive understanding of the technology and the demands of this industry. Our portfolio features products that have been developed to satisfy the needs of this ever-changing market and in doing so are well in advance of many customers' needs.

Our connectors have been developed to be smaller, lighter and faster than anything else in the marketplace because we're already well ahead of the game. Cinch – developing the future today.

Hermetic Flying Lead Connector

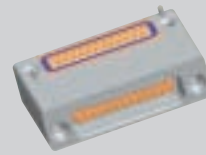
Standard Duracon pitch
Low profile compound compared with the market
Hermetic Seal to 1×10^{-6} Torr



Nano T'Block Connector

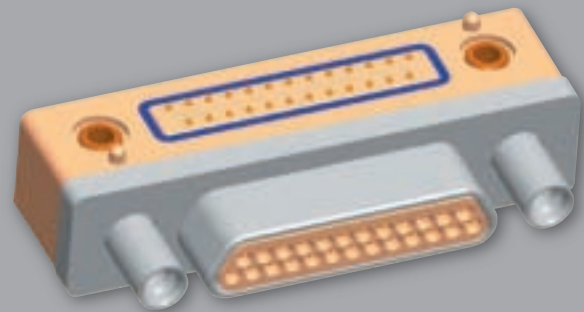
30 thou pitch
Solderless SMT
Compression Technology





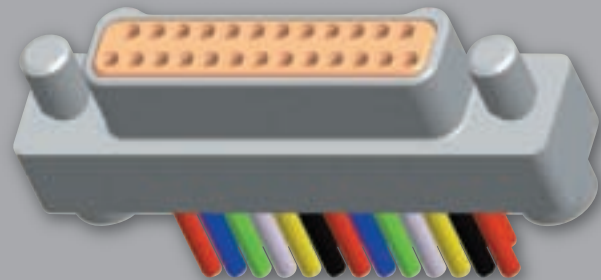
MicroD' T'Block Connector

Standard Duracon pitch
Solderless SMT
Compression Technology



Nano Flying Lead Connector

30 thou pitch
30AWG wire
Compression Technology

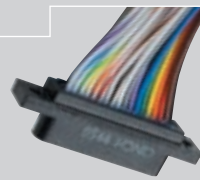


Nano Circular Connector

30 thou pitch
30AWG wire
Compression Technology
Product Launch 2011

Nano Hermetic Connector

30 thou pitch
30AWG wire
Compression Technology
Hermetic Seal to 1 x 10°C



Sub Assemblies

Custom Interconnects



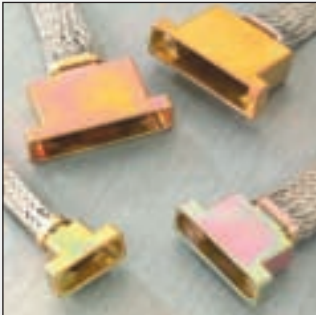
Cinch brings you years of experience and knowledge to your custom application. We pride ourselves in working with the customer to provide a custom solution and developing a prototype and modified assemblies to fit your unique needs. Whether it is simple change or a one of a kind connector, you can count on Cinch to work with you to solve your interconnect requirements.

Harness Assemblies



Should your harness requirement simple point to point or complex with many branches, full 360° screening or filtered we can assist you in the design all the way through to production. Cinch has been building harnesses for military and commercial applications for over 20 years.

Micro Miniature Backshells



Features:
 EMC screened backshell
 Various cable entry sizes
 Available in Cadmium & Electroless Nickel finish
 Pre-terminated braid attachment
 Available with 45°, 180°, 90° & side cable entry
 Hex head jackscrews & retaining clips supplied with each backshell
 RoHS Compliant available

Sizes Available:
 9, 15, 21, 25, 31, 37, 51, 100

Micro Miniature Strip



Features:
 Provides a dense, reliable interconnect device in minimum profile package
 Available up to 60 contacts in length
 Guide pin option is available for polarization
 Light weight
 High-reliability Dura-con twist pin contact system for extreme shock & vibration applications.
 Solder Cup & Wire termination options available
 RoHS Compliant available

Technical:
 Temperature range: -55°C to +135°C
 Housing: GF Polyester
 Contact material: Copper Alloy
 Current Rating: 3A
 DWV 600VAC @ Sea level

Dura-Con™ Connectors

Metal Shell "D" Micro Miniature



Features:
Lightweight
High Contact density
Rugged, reliable contacts
Shock & vibration resistant
Aluminium alloy shell
Interfacial gasket seal
RoHS Compliant available

Technical:
Temperature range: -55°C to +135°C
DWV 600VAC @ sea level
Current rating: 3A
Contact material: Copper Alloy
Insulator material: DAP or GF Polyester

Contact Arrangement:
9-15-21-25-31-37-51-100

Metal Terminal Block



Features:
3 styles: Straight termination, 90°
Termination, 90° narrow termination
Standard shell
Use with flat cable, flex circuits, printed & multilayer boards
Interfacial gasket seal
RoHS Compliant available

Technical:
Temperature range: -55°C to +135°C
DWV 600VAC @ sea level
Current rating: 3A
Contact material: Copper Alloy
Insulator material: DAP or GF Polyester

Contact Arrangement:
9-15-21-25-31-37-51-100

Plastic Shell "D" Micro Miniature



Features:
Lightweight
Corrosion resistant
High Performance
Approved to Mil-PRF-83513
RoHS Compliant available

Technical:
Temperature range: -55°C to +135°C
DWV 600VAC @ sea level
Current rating: 3A
Contact material: Copper Alloy
Insulator material: GF Polyester

Contact Arrangement:
9-15-21-25-31-37-51-100

Microedge



Features:
High reliability
Space / weight savers for aircraft, space, avionics
Control systems
High contact density
aluminium alloy shell
Meets applicable requirements of Mil-C-55302
Available in surface mount, PCB & wired options
Additional connector serials to be added & micro strip connector
RoHS Compliant available

Technical:
Temperature range: -55°C to +135°C
DWV 900VAC @ sea level
Current rating: 3A
Contact material: Copper Alloy
Insulator material: DAP

Contact Arrangement:
128-152-184



JackMate

J-Microminiature



Features:

High reliability interconnect for board to board, cable to board applications
High performance Micro miniature twist pin contact
Termination style: gold plated solid wire and insulated stranded wire
Stainless steel central Jackscrew locking system
RoHS Compliant available

Technical:

Temperature range: -55°C to +125°C
Withstanding voltage: 600VAC RMS @ sea level
Current rating: 3A
Contact material: Copper Alloy
Insulator material: GF Polyester UL 94 V0 rated

Connector Savers



Features:

Available in metal & plastic shells
Reduces possible damage to the connector & test equipment
Connectors are wired point to point
Locking hardware is sold separately
RoHS Compliant available

Technical:

Temperature Range: -55°C to +135°C
DWV 600VAC RMS @ Sea level
Current rating 3A
Contact material: Copper Alloy
Insulator material: DAP or GF Polyester

Contact Arrangement:

9-15-21-25-31-37-51-100

D Sub Connectors

Standard



Features:

Solder bucket
Flow solder straight
Flow solder right angle
Wire wrap
RoHS Compliant

Technical:

Temperature range: -55°C to +125°C
Working voltage: 750V
Current rating: 5A
Contact material: Copper Alloy
Insulator material: GF Thermo-plastic UL 94 V0 rated
Machined contacts

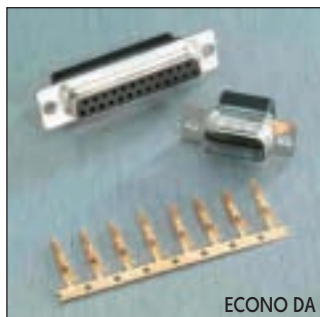
Contact Arrangement:

9-15-25-37-51

DIN41652-HE 501

D Sub Connectors

Crimp Contact - ECONO DA



Features:

Crimp contact with insulation grip for wires from 20 to 28 AWG
RoHS Compliant

Technical:

Temperature range: -55°C to +125°C
Withstand voltage: 1000V
Current rating: 5A
Contact material: Copper Alloy
Insulator material: GF Thermo-plastic UL 94 VO rated
Stamped (reels) or machined contacts

Contact Arrangement:

9-15-25-37-50

Crimp Contact - Density and Half D Sub



Features:

Crimp & solder contacts for wires AWG 22-28
Flow solder right angle
RoHS Compliant

Technical:

Temperature range: -55°C to +125°C
Working Voltage: 350V
Current rating: 5A
Contact material: Copper Alloy
Insulator material: GF Nylon UL 94 VO rated
Stamped contacts (delivered on reels or strips)

Contact Arrangement:

15-26-44-62-78

IDC



Features:

IDC for discrete wire (24-26 AWG)
IDC for flat cable (26-28 AWG)
RoHS Compliant

Technical:

Temperature range: -55°C to +125°C
Working voltage: 350V
Current rating: 1 and 3A
Contact material: Copper Alloy
Insulator material: GF Thermo-plastic UL 94 VO rated

Contact Arrangement:

9-15-25-37

Filter



Capacitance 1000pF or 330pF (other values on request)

Features:

Solder bucket
Flow solder straight
Flow solder right angle
Adapters
Custom filtering available
RoHS Compliant

Technical:

Temperature range: -25°C to +125°C
Withstand voltage: 200V
Current rating: 5A
Contact material: Copper Alloy
Insulator material: GF Thermo-plastic UL 94 VO rated
Machined contacts

Contact Arrangement:

9-15-25-37-50



D Sub Connectors

High Density Filter



Capacitance 1000pF or 330pF

Features:

Flow solder straight
Adapters
Custom filtering available
RoHS Compliant

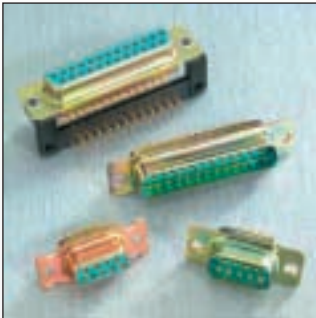
Technical:

Temperature range: -25°C to +125°C
Withstand voltage: 200V
Current rating: 5A
Contact material: Copper Alloy
Insulator material: GF Thermo-plastic UL 94 VO rated
Machined contacts

Contact Arrangement:

15-26-44-62

Military - MIL-DTL-24308-HE508-Pattern II O



Features:

Solder bucket
Flow solder straight
Flow solder right angle (pitch 2.54mm or 2.84mm)
Commercial variant available (RoHS Compliant)

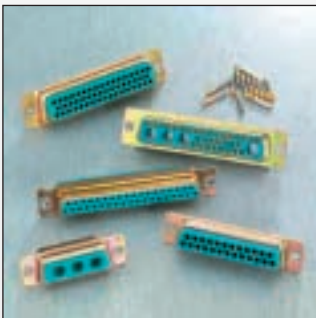
Technical:

Temperature range: -55°C to +155°C
Working voltage: 750V
Current rating: 5A
Contact material: Copper Alloy
Insulator material: DAP
Meets dimensional requirements of
MIL-DTL-24308 / BS9523 F0013

Contact Arrangement:

9-15-25-37-50

Military - MIL-DTL-24308-HE507



Features:

Series 3 Awg 20-28
Solder braid coax contacts
Crimp braid coax contacts
High power solder contacts (10A, 20A & 40A)
Various mixed layout options

Technical:

Temperature range: -55°C to +125°C
Working voltage: 750V
Current rating: 5A (signals contacts)
Contact material: Copper Alloy
Insulator material: DAP
Meets dimensional requirements of
MIL-DTL-24308

Contact Arrangement:

9-15-25-37-50

Accessories



Features:

Plastic hoods straight or right angle
Metalized plastic hoods
Metal hoods straight outlet
Metal hoods right angle outlet
Overmouldable shielding kit
Screw locks & retainers
Dust caps
RoHS Compliant

Sizes available:

9, 15, 25, 37, 100
Application tooling available on request

Industrial Products

"J" Type Multipole Connectors

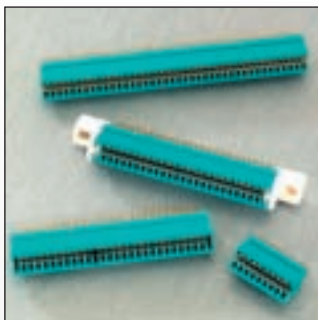


Features:
Multipoint contacts
Low contact resistance
High working voltage
Backshell with cable clamp
Polarised
RoHS Compliant

Technical:
Temperature range: -40°C to +100°C
Working voltage: 700V DC
Current rating: 5A
Contact material: Copper Alloy,
Tin Plated
Insulator material: GF Polyester

Contact Arrangement:
4-8-12-20

Printed Circuit Board Edge Connectors



Features:
Multipoint contacts
Low contact resistance
High working voltage
Backshell with cable clamp
Polarised
RoHS Compliant

Technical:
Temperature range: -40°C to +100°C
Working voltage: 700V DC
Current rating: 5A
Contact material: Copper Alloy, Tin Plated
Insulator material: GF DAP

Contact Arrangement:
4-8-12-20

Mini D Cables



Features:
Plug pre-assembled with standard cable lengths
Moulded in stain relief
Shielding meets FCC EMI/RFI requirements
UL Recognised
Components available for third party
Termination
RoHS Compliant

Technical:
Temperature range: -40°C to +70°C
Voltage rating: 500V RMS
Current rating: 2A
Contact material: Copper Alloy
Insulator material: Nylon UL 94 VO rated
Overmould material: PVC

Contact Arrangement:
3-4-5-6-7-8



Transportation Products

Electronic Control Module Header



Features:
 Epoxy Sealed Terminal
 Post plated PCB contact tail
 Silicon interface seal & Panel Mounting Gasket
 Varying polarisation & key configurations
 Centre Thread, mating bushings
 Ferrite Filter option available
 Rated to IP65, IP66, IP67 & IP69k
 Resists to most fluids used in industrial applications
 RoHS Compliant Available

Technical:
 Operating Temperature -40°C to +125°C
 Temperature Life 1008 Hrs @ 125°C
 Temperature Humidity Cycling 320 Hrs
 Current Cycling 500 Hrs @ 10 Amps
 Contact resistance <10mΩ
 Insulation Resistance >1000MΩ
 Salt Spray 96 Hrs
 Shock 50g's - 20 pulses
Contact Arrangement:
 18, 30, 48 & 60 I/O

5mm Mating Harness Connectors



Features:
 Push to Seat terminal
 Terminal secondary lock
 Integral grommet wire seal
 Protective Backplate
 Centre threaded jackscrew mating
 Multiple keyed configurations
 Tangless terminals
 Rated to IP65, IP66, IP67 & IP69k
 Resists to most fluids used in industrial applications
 RoHS Compliant

Technical:
 Operating Temperature -40°C to +125°C
 Temperature Life 1008 Hrs @ 125°C
 Temperature Humidity Cycling 320 Hrs
 Current Cycling 500 Hrs @ 10 Amps
 Contact resistance <10mΩ
 Insulation Resistance >1000MΩ
 Salt Spray 96 Hrs
 Shock 50g's - 20 pulses
Contacts Arrangements:
 18 & 30 position

Modular Integrated Circuit Enclosures



Features:
 Rugged Enclosure System
 Enclosure / Header Modularity
 Simple Assembly
 Heat Sink & Ferrite Filtering Options available
 Customisation options include
 Customer Logo
 LED Windows
 Breather system
 Rated to IP65, IP66, IP67 & IP69k
 Resists to most fluids used in industrial applications
 RoHS Compliant

Technical:
 Operating Temperature -40°C to +85°C
 Temperature Life 1008 Hrs @ 125°C
 Temperature Humidity Cycling 320 Hrs
 Current Cycling 500 Hrs @ 10 Amps
 Contact resistance <10mΩ
 Insulation Resistance >1000MΩ
 Salt Spray 96 Hrs
 Shock 50g's - 20 pulses
Contact Arrangement:
 18, 30, 48 & 60 I/O

Engineer's Check List

SECTOR

- ☐ Sea
- ☐ Aerospace
- ☐ Sub-Terrain
- ☐ Ground Support
- ☐ Armoured Vehicle
- ☐ Rail
- ☐ Space
- ☐ Radar
- ☐ Avionics
- ☐ Munitions / Missile

CONNECTOR STYLE

- ☐ Rectangular
- ☐ Circular
- ☐ Z Axis Compression
- ☐ Power & Signal
- ☐ Hermetic
- ☐ IPC Rated
- ☐ Filtered
- ☐ Edge Connector
- ☐ Multipole
- ☐ High Speed
- ☐ Rugged Enclosure

WIRE TYPE

- ☐ Stranded
- ☐ Solid
- ☐ Twisted pairs
- ☐ Co-Axial
- ☐ Colour Code Single / Multi
- ☐ Multi Core
- ☐ Shielded
- ☐ Wire AWG
- ☐ Custom Cable

ENVIRONMENT

- ☐ Dust
- ☐ Moisture Resistant
- ☐ Full Water Immersion
- ☐ Chemical Compatibility
- ☐ RoHS
- ☐ Low Smoke / Zero Halogen
- ☐ Extreme Temperature Tolerance
- ☐ Flame Retardant

MARKET SEGMENT

- ☐ Oil Petroleum Gas (OPG).
- ☐ Renewable Energy
- ☐ Military & Defence
- ☐ Commercial
- ☐ Computer
- ☐ Industrial
- ☐ Telecommunications
- ☐ Medical

CONSTRUCTION

- ☐ Male ☐ Female
- ☐ Crimp
- ☐ Solder
- ☐ PC Tail ☐ 90° ☐ 180°
- ☐ RF Signals
- ☐ Number Contact Points
- ☐ Contact Pitch
- ☐ Housing Material
- ☐ Plastic ☐ Metal

CUSTOM INTERCONNECT

- ☐ Single Ended
- ☐ Double Ended
- ☐ Multi Limb Cable Assembly
- ☐ Strain Relief Backshell
- ☐ Environmental Backshell / Boot
- ☐ 3600 Screened Backshell
- ☐ Moulded Strain Relief
- ☐ Woven
- ☐ Flexible Circuit

SPECIFICATION

- ☐ Operating Temperature Range
- ☐ Mating Cycles
- ☐ Electrical
- ☐ Voltage Rating
- ☐ Current Rating
- ☐ Filtration Rating
- ☐ Materials / Finish
- ☐ Contact Plating
- ☐ Housing Plating

At Cinch our philosophy is that anything is possible.

With over 70 years' experience as a global supplier we offer simple, effective solutions to our customers' interconnect and integration needs. From basic interconnect to complex integration requiring bespoke design, we focus primarily on quality, ingenuity and reliability, meeting the high performance demands of industries such as Defence, Aerospace, Space, Telecom, High Speed Data Servers and Industrial Transportation.

**TOGETHER
WE STIMULATE.
WE INNOVATE.
WE CREATE.**



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Email: info@cinch.com

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