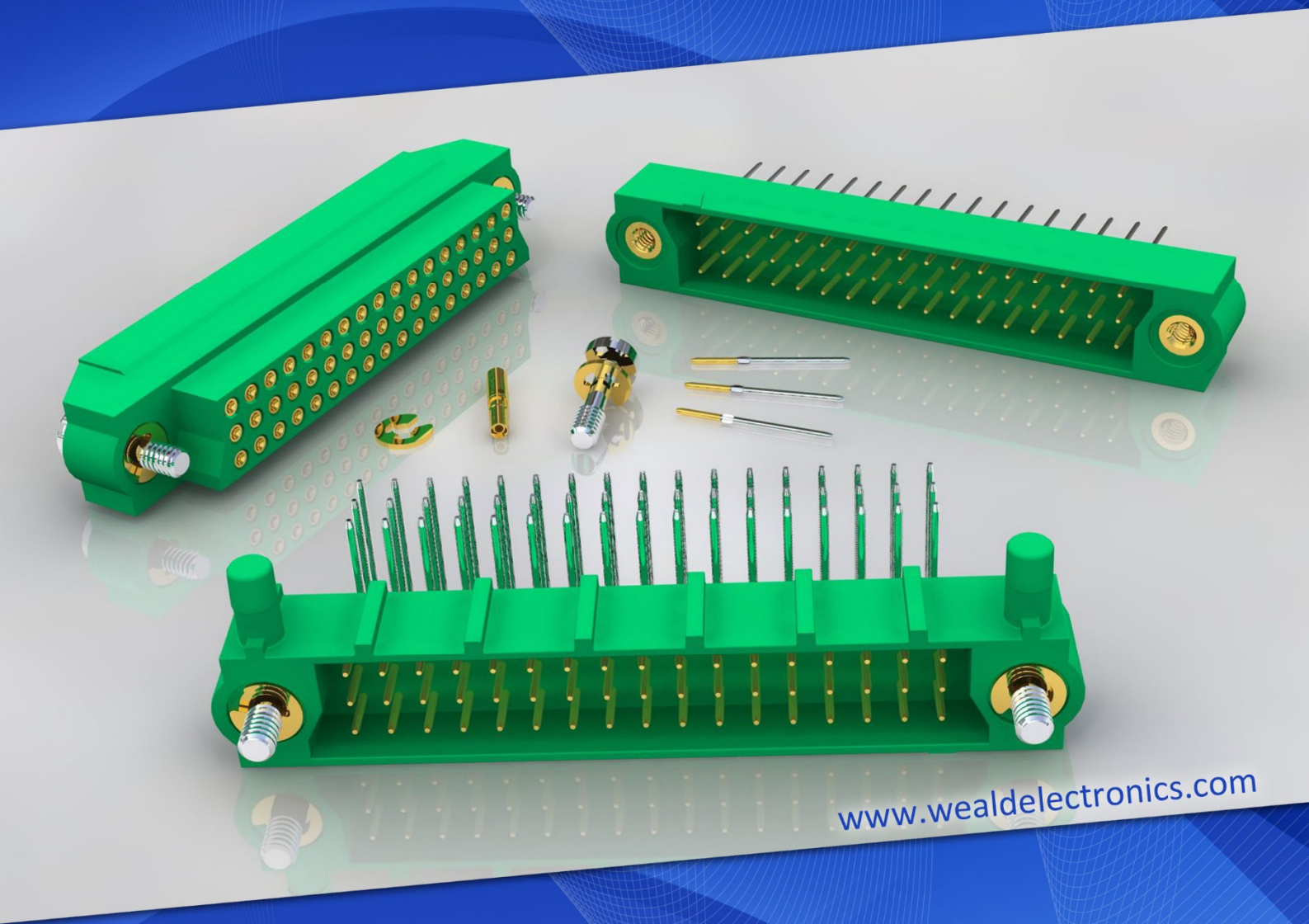
# Micronector 300

## High Density 2mm Pitch PCB Connectors



www.wealdelectronics.com

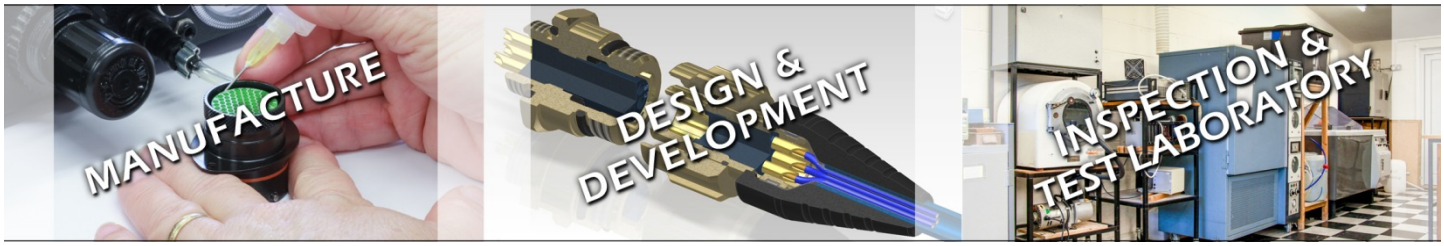
Weald ELECTRONICS

MANUFACTURERS OF HIGH QUALITY MILITARY CIRCULAR CONNECTORS

Issue 6 Date: 23.12.15

***WEALD ELECTRONICS / LANE ELECTRONICS***
***ABOUT US***

## THE CONNECTION SOLUTION PROVIDER




WEALD ELECTRONICS LTD, established in 1976 & also part of the Lodge Group, is a manufacturer of high quality connector ranges as detailed in this publication. Weald products are currently only available from Lane Electronics through whom all quotations are issued & all sales processed. With its own in-house design office, development workshop, environmental test laboratory & over 30 years experience, Weald Electronics offers a fast design & development service for customer specials or non standard connectors.

A dedicated policy of maintaining huge stocks of connector piece parts will often enable Weald Electronics to offer lead times better than the industry standard. Full details of all Weald products can be found at

www.wealdelectronics.com

Approval held: BS EN ISO9001:2008 (FM 588537)

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## FRANCHISED CONNECTOR DISTRIBUTOR


LANE ELECTRONICS LTD, part of the privately owned Lodge Group, was established in 1966 with a single goal - to become the premier supplier of connector products to the commercial & military electronic equipment industries. Well over four decades on, Lane Electronics continues to supply connectors, adaptors & RF cable products from many of the world's leading connector manufacturers.

We have a dedicated policy of maintaining huge stocks of an extensive range of connector types which allows us to generally deliver to you from stock. Further details of all ranges can be found at

www.fclane.com

Approvals held: BS EN 9120 (RS 00100), BS EN ISO9001: 2008 (FM 588537), CECC (D2000 IECQ-CECC & P4000 IECQ-CECC), CECC 200 024 (E003/PA) & QPL Cat 'C' DSCC-VQ (VQP-97-0763).

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## MAIN FEATURES

- 2mm pitch
- Small footprint for increased packing density
- Optional Jackscrews will fit either male or female
- Sizes from 27 to 78 way
- Male straight p.c., 90° p.c. and crimp termination s
- Female straight p.c., flexi circuit and crimp terminations

# *MICRONECTOR 300*
# *GENERAL INFORMATION*

## CHARACTERISTICS

| MATERIALS | |
|---|---|
| Insulator | Glass filled thermoplastic UL94V-0 |
| Contact | Copper alloy plated hard acid gold |
| Termination | Hard acid gold or tin |
| Jackscrews | Stainless steel |

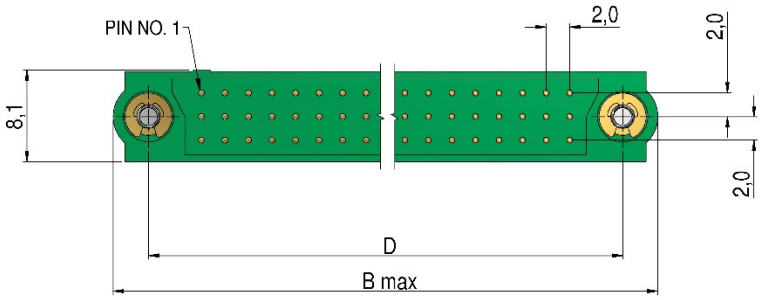
| ELECTRICAL | | |
|---|---|---|
| Current | Individual contacts (in insolation) | at 25℃ Tamb. 3.3A max.<br>at 85℃ Tamb. 2.6A max. |
| | All contacts (simultaneously) | at 25℃ Tamb. 3.0A max.<br>at 85℃ Tamb. 2.2A max. |
| Working voltage | | 120V d.c. or a.c. peak |
| Proof voltage | | 360V d.c. or a.c. peak |
| Contact resistance | initially | 10mΩ max. |
| | after conditioning | 13mΩ max. |
| Insulation resistance | initially | 1000MΩ min. |
| | after conditioning | 100MΩ min. |

| MECHANICAL | |
|---|---|
| Mechanical operations | 500 |
| Insertion and withdrawal force (par contact pair) | 0.8N max., 0.2N min. |
| Contact retention | 10N min. |
| Crimp barrel accommodation | 22 AWG – 28AWG to BS G 210 Type A |

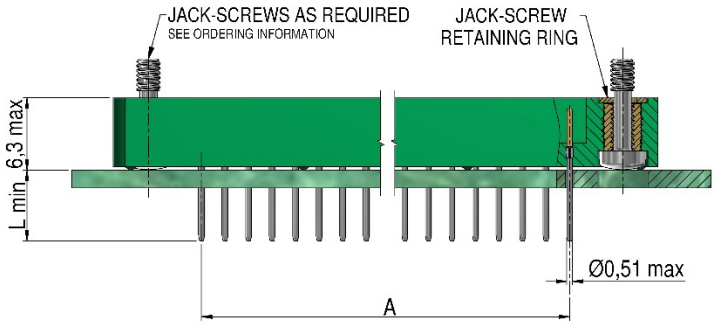
| ENVIRONMENTAL | |
|---|---|
| Climatic category | 55/125/56 |
| Vibration severity General | 10Hz to 2000Hz<br>0.75mm/98m/s² (10$g_n$) duration 6h |
| Vibration severity Additional | 13.3Hz to 2000Hz random with superimposed sinusoids, duration 15min each of 4 planes. No intermittencies measured when using an H.S.L.I. (High Speed Logic Interrupt) detector with a trip threshold of 2ns |
| Bump severity | 390m/s² (40$g_n$) 4000 ± 10 bumps |
| Shock severity | 981m/s² (100$g_n$) for 6ms |
| Acceleration severity | 490m/s² (50$g_n$) |

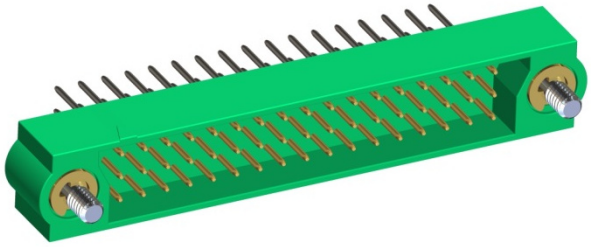
# *MICRONECTOR 300*
# *STYLES AVAILABLE*

## MALE STRAIGHT P.C. TERMINATION TYPE T, N, X, Y & Z

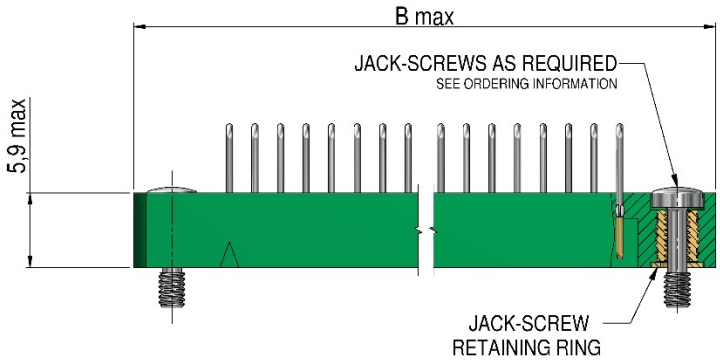


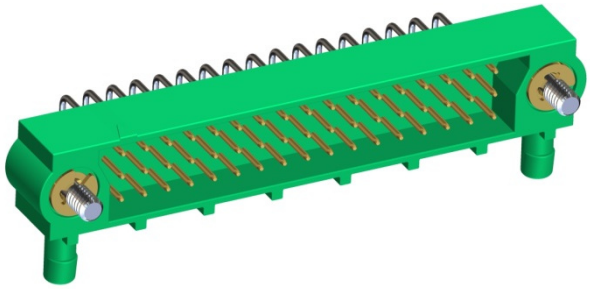

| Type | L (min) |
|---|---|
| T | 3.1 |
| N | 7.4 |
| X | 9.5 |
| Y | 5.7 |

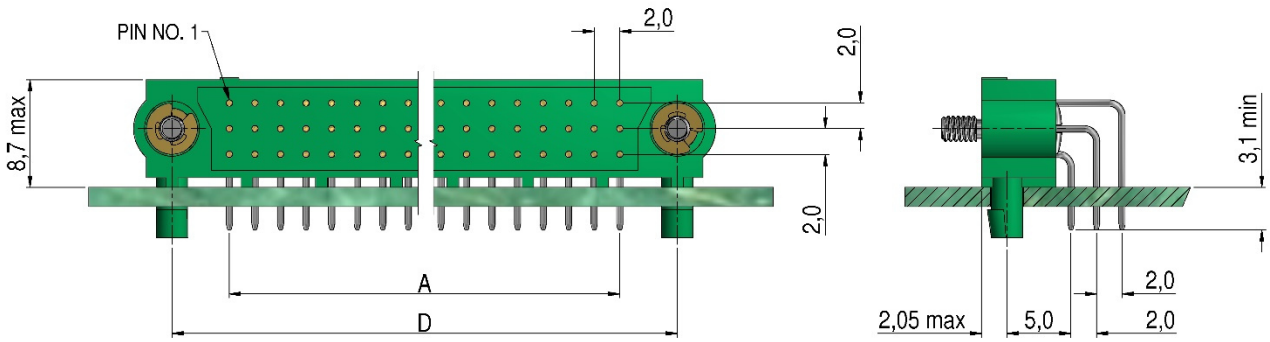


## MALE 90° P.C. TERMINATION TYPE L

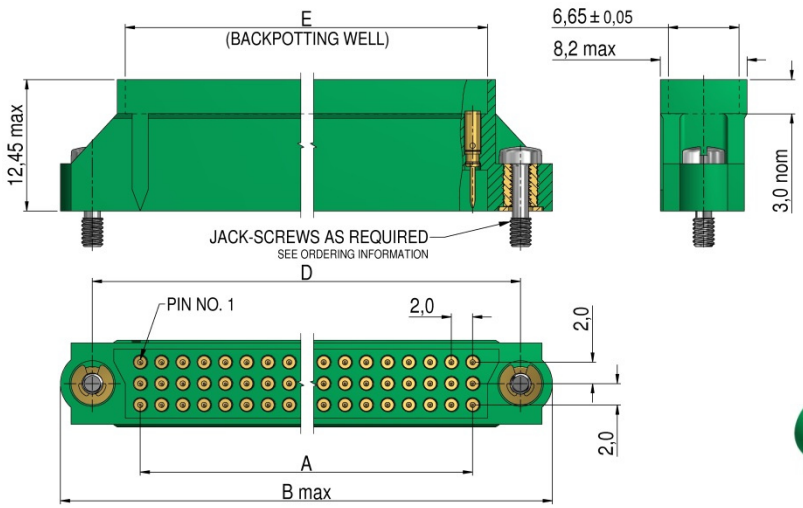


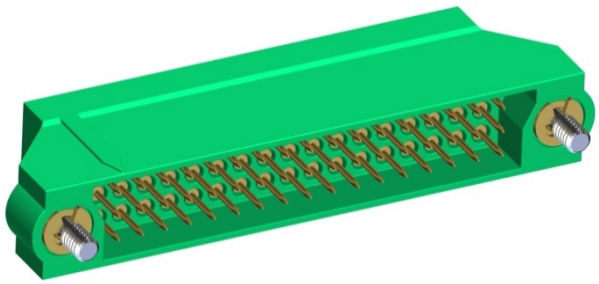





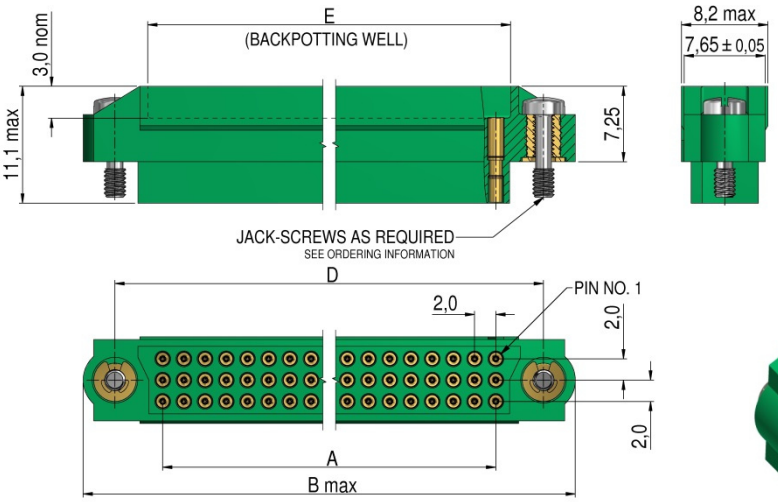
# *MICRONECTOR 300*
# *STYLES AVAILABLE*

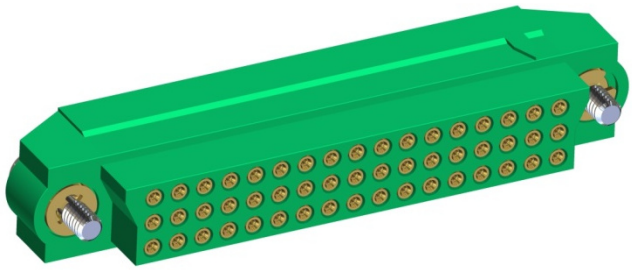
## MALE CRIMP TERMINATION TYPE C



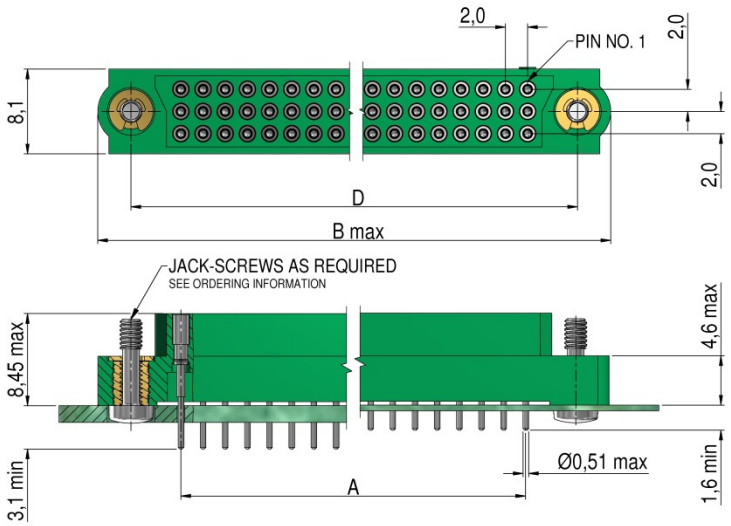



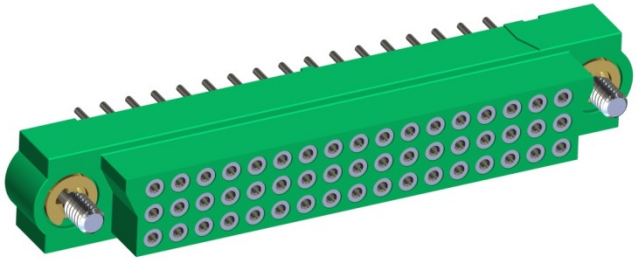
## FEMALE CRIMP TERMINATION TYPE C & D



## FEMALE STRAIGHT P.C. TERMINATION TYPE T & N

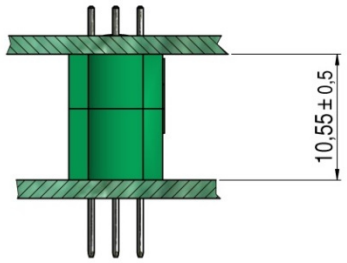


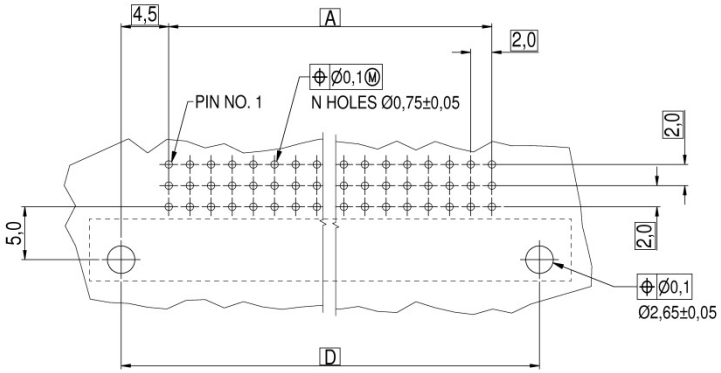
# *MICRONECTOR 300*
# *COMMON DIMENSIONS / MOUNTING DETAILS*

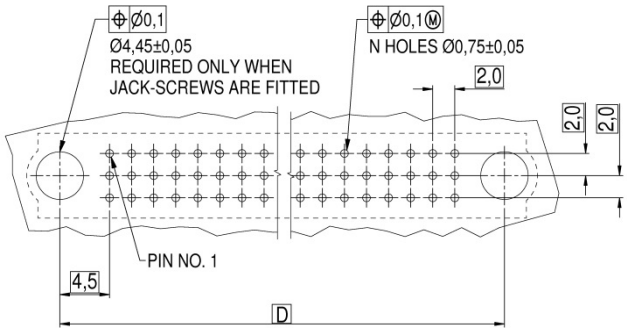
| CONTACT ARRANGEMENT | | | |
|---|---|---|---|
| **Dimensions** | **27** | **51** | **78** |
| **A** | 16 | 32 | 50 |
| **B max** | 31.1 | 47.1 | 65.1 |
| **D** | 25 | 41 | 59 |
| **E±0.1** | 19 | 35 | 53 |

## SPACING BOARD - BOARD



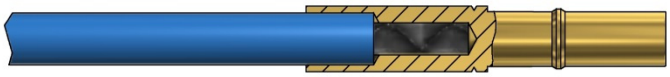

## MOUNTING DETAILS TERMINATION TYPE T & L

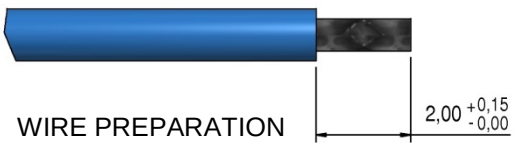



## CRIMP DETAILS

| Termination type | Crimp barrel accommodation | Wire Size/Crimp Tool Setting | | | |
|---|---|---|---|---|---|
| | | **22 A.W.G.** | **24 A.W.G** | **26 A.W.G.** | **28 A.W.G.** |
| **C*** | 24-28 A.W.G. | - | 7 | 6 | 6 |
| **D** | 22 A.W.G. | 6 | - | - | - |






WIRE PREPARATION

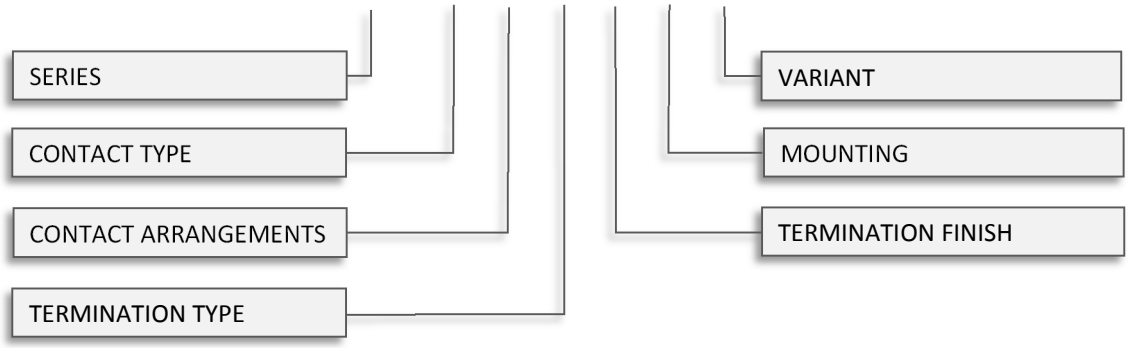
Preferred wire type BS G 210 (Type A)

* Also suitable for use with 24 A.W.G DEF-STAN 61-12 (Part 6 Type 1) PVC

Note: A crimp contact withdrawal tool (MP6808) is available as an optional extra for the removal of contacts from the moulding. However, if any contacts are removed, the moulding MUST be replaced.

# *MICRONECTOR 300*
# *ORDERING INFORMATION*

*PART NO. EXAMPLE* **301 M 27 T 03 A 00**




| SERIES |
|---|
| 301 – Three row |

| CONTACT TYPE |
|---|
| M – Male |
| F – Female |

| CONTACT ARRANGEMENT |
|---|
| 27 – 51 – 78 |

| TERMINATION TYPE |
|---|
| L – 90°p.c. (male only) |
| T – Straight p.c. |
| N – Straight p.c. (short for flexi circuits) |
| X – Straight p.c. (male only) |
| Y – Straight p.c. (male only) |
| C – Crimp 24 – 28 A.W.G. |
| D – Crimp 22 A.W.G. (female only) |

| TERMINATION FINISH |
|---|
| 01 – Gold (standard for crimp) |
| 03 – Tin alloy (standard for p.c.) |

| MOUNTING |
|---|
| A – p.c.b |
| C – Cable |

| VARIANT |
|---|
| 00 – Standard |
| 01 – With Jack-Screws |
| Jack-Screw Assy (pair) – Part No. MP 6822 |

| TOOLS | |
|---|---|
| **Tool name** | **Order code** |
| Hand Crimp Tool 8 Indent Die Set | MP22520/2-01 (BS Style 5310-3A-300) |
| Contact Insertion Tool | MP 6811 (BS Style T5748-19) |
| Contact Withdrawal Tool | MP 6808 (Female)<br>MP 6809 (Male) |
| Crimp Tool Positioner | MP 6823 |

# *MICRONECTOR 300*
# *PRODUCT SAFETY INFORMATION*

These notes are intended to be used in conjunction with the Product Catalogue and Product Specification. Products may be safely used in the applications for which they have been designed and within the specified rating and environments. If products are exposed to conditions outside the performance ratings or specified environments they may constitute a hazard. In particular it should be noted that:-

## 1. Material Content

Circular Connectors generally use metalwork parts made of brass, aluminium, phosphor-bronze or steel, which, dependant on the particular application, may be passivated and protected with cadmium or zinc plate – in conjunction with chromated or anodised surface finishes. The insulating materials can either be natural or synthetic rubber, together with plastic or glass-filled plastic moulded parts. Contact materials vary but are usually made of brass, phosphor-bronze, alumel or chromel.

## 2. Electric Shock, Burns and Fire

Hazard can occur if the product is used outside the specified parameters or if the product is damaged, wrongly wired, poorly assembled, poorly integrated into larger equipments, or contaminated with conductive fluids. Live circuit terminations must be protected and live circuits never broken by disconnecting products.
Hot spots may be created when resistance is increased due to damage or incorrect integration particularly soldering, or loose terminations. Overheating can cause breakdown of insulation, electric shock, burns or, ultimately, fire. In the event of fire noxious and/or toxic fumes may be released and, in these circumstances, any fire involving the product should be dealt with by personnel properly equipped. Connectors with exposed terminations or contacts should not be used on the current supply side of a circuit with exposed contacts on an unmated product. Before making a circuit live, the product and wiring should be checked to ensure there is no electrically conducting debris present. Circuit resistance checks should also be conducted before making the circuit live. Always ensure that connectors are assembled and wired by properly trained personnel.

## 3. Use, Transport and Storage of Products

Care must be exercised to avoid damage to any part of the products during transporting, storage or use. Abnormal transit or storage conditions and abuse during installation can give rise to damage. Products should not be used in a damaged condition.
Improper storage (particularly of damaged products) can give rise to additional hazards particularly corrosion. Attention is specifically drawn to the need for proper storage of products containing cadmium and you are advised to see the Guidance Note from the Health and safety Executive on Cadmium – Health and Safety Precautions.

## 4. Disposal of Products

Product should not be burnt.

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## SAFETY RULES

1. FOLLOW THE GUIDELINES GIVEN.
2. ALWAYS PROTECT LIVE CIRCUITS AND NEVER DISCONNECT A LIVE CONNECTOR.
3. NEVER USE A DAMAGED CONNECTOR.
4. NEVER BURN DISCARDED CONNECTORS.