

# Customer Information Sheet

DRAWING No.: M80-400000FR-XX-XXX-00-000

SHEET 5 OF 8

IF IN DOUBT - ASK

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NOT TO SCALE

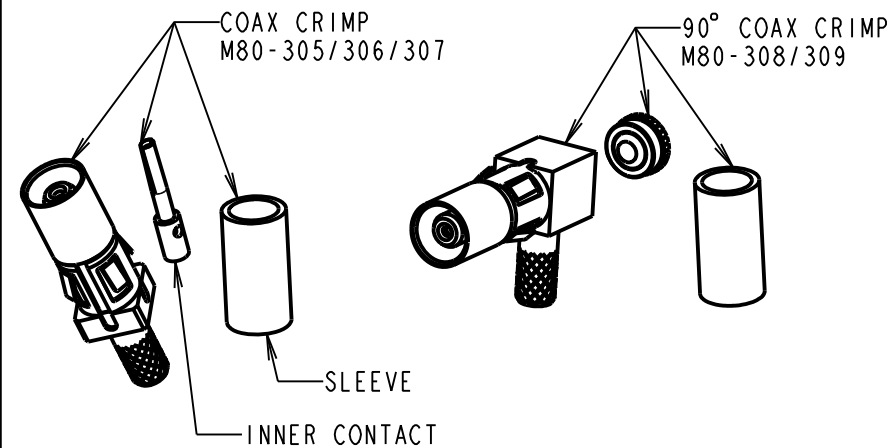
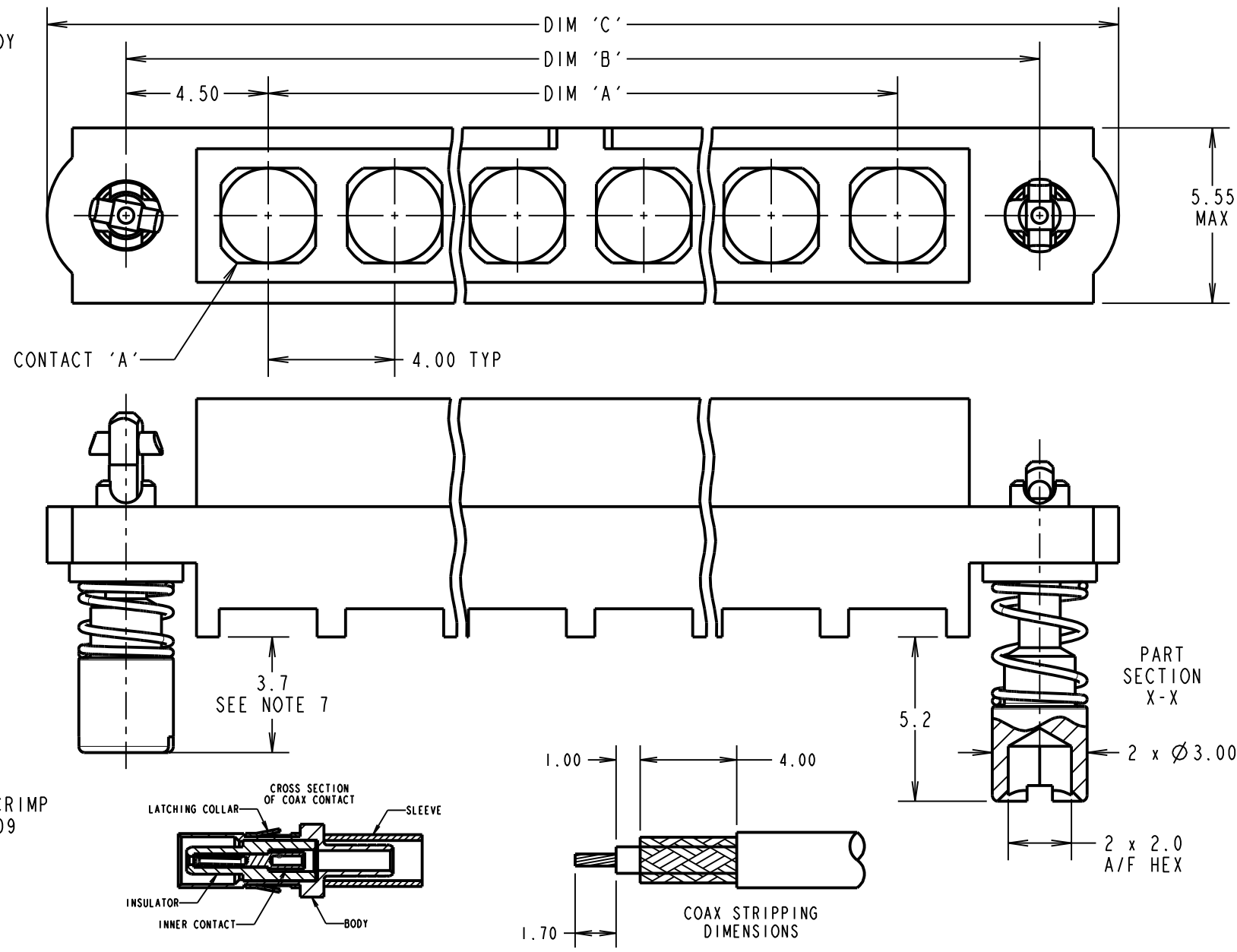
THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

## SPECIFICATIONS:

**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
**COAX CONTACT:**  
 BODY, SLEEVE, INNER CONTACT, END PLUG = COPPER ALLOY  
 LATCHING COLLAR = BERYLLIUM COPPER  
 INSULATOR = PTFE  
 IOILOK SCREW, COLLAR = STAINLESS STEEL  
**FINISH:**  
**COAX CONTACT:**  
 BODY, SLEEVE, INNER CONTACT, END PLUG = GOLD  
 LATCHING COLLAR = NICKEL  
**ELECTRICAL:**  
 WORKING VOLTAGE = 800V AC/DC  
 VOLTAGE PROOF = 1200V AC/DC  
 INSULATION RESISTANCE = 100MΩ MIN  
**COAX CONTACT:**  
 FREQUENCY RANGE = 6GHz  
 IMPEDANCE = 50Ω  
 V.S.W.R = 1.05 + (0.04 x FREQUENCY) GHz MAX  
 CONTACT RESISTANCE = 6mΩ MAX  
 INSULATION RESISTANCE = 10<sup>6</sup>MΩ @ 250V AC  
 OPERATING VOLTAGE = 180V AC @ 500mA  
 MAXIMUM VOLTAGE = 1000V AC  
**MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
**COAX CONTACT:**  
 INSERTION FORCE = 8N MAX  
 WITHDRAWAL FORCE = 0.5N MIN  
**ENVIRONMENTAL:**  
 TEMPERATURE RANGE = -55°C TO +125°C  
**PACKING:**  
 BAG  
 FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

## COAX CRIMP CONTACTS ONLY



### CRIMP/SOLDER NOTES:

- CONNECTORS ARE SUPPLIED WITH CONTACTS NOT ASSEMBLED.
- COAX CONTACT IS SUPPLIED AS A KIT OF PARTS: BODY, MAIN INSULATOR, INNER CONTACT AND LATCHING COLLAR ARE PRE-ASSEMBLED AND SLEEVE AND INSULATED END PLUG ASSEMBLY ARE SEPARATE.
- FOR EXTRA COAX CONTACTS, USE PART NUMBERS M80-305/~~306~~/307/308/309.
- COAX CONTACT EXTRACTION TOOL = Z80-290.
- RECOMMENDED HAND CRIMP TOOL FOR INNER COAX CONTACT = Z80-292 WITH POSITIONER Z80-291. RECOMMENDED HAND CRIMP TOOL AND DIE SET FOR SLEEVE = Z80-293.
- INSTRUCTION SHEETS ARE AVAILABLE.
- LENGTH WILL BE 3.7mm WHEN IOILOK SCREWS ARE ENGAGED WITH RETAINERS IN MATING CONNECTOR.
- SPRING LOAD WHEN SOLID = 2.642N. SPRING RATE = 1.32N/mm.
- RECOMMENDED PANEL/PCB THICKNESS = 1.3 - 1.6mm.

ORDER CODE: (COAX CRIMP CONTACTS ONLY)

**M80-400000FR-XX-XXX-00-000**

TOTAL No. OF CONTACTS \_\_\_\_\_  
 02 TO 12

### SPECIAL CONTACTS

- 305 = COAX CONTACT 2.00mm CRIMP M80-305
- ~~306 = COAX CONTACT 2.40mm CRIMP M80-306~~
- 307 = COAX CONTACT 2.70mm CRIMP M80-307
- 308 = COAX CONTACT 2.00mm HORIZ' CRIMP M80-308
- 309 = COAX CONTACT 2.70mm HORIZ' CRIMP M80-309

DIMENSION	CALCULATION
DIM 'A'	4 x No. OF CONTACTS - 4.00
DIM 'B'	4 x No. OF CONTACTS + 5.00
DIM 'C'	4 x No. OF CONTACTS + 10.0

EXAMPLE 1: CONNECTOR WITH 08 COAX CONTACTS,  
 M80-400000FR-08-305-00-000  
 DIM 'A' = 28.00mm, DIM 'B' = 37.00mm, DIM 'C' = 42.0mm

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**TOLERANCES**  
 X. = ±1mm  
 X.X = ±0.50mm  
 X.XX = ±0.10mm  
 X.XXX = ±0.01mm  
**ANGLES = ±5°**  
 UNLESS STATED

**MATERIAL:**  
 SEE ABOVE  
**FINISH:** SEE ABOVE  
**S/AREA:** mm<sup>2</sup>

**TITLE:** DATAMATE MIX-TEK FEMALE ASSEMBLY WITH HEX SOCKET IOILOK

**DRAWING NUMBER:** M80-400000FR-XX-XXX-00-000

MGP	5	17.01.18	21020
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: SB			
DRAWN: C.PENROSE			
CUSTOMER REF.:			
ASSEMBLY DRG:			

# Customer Information Sheet

DRAWING No.: M80-400000FR-XX-XXX-00-000

SHEET 6 OF 8

IF IN DOUBT - ASK

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NOT TO SCALE

THIRD ANGLE PROJECTION

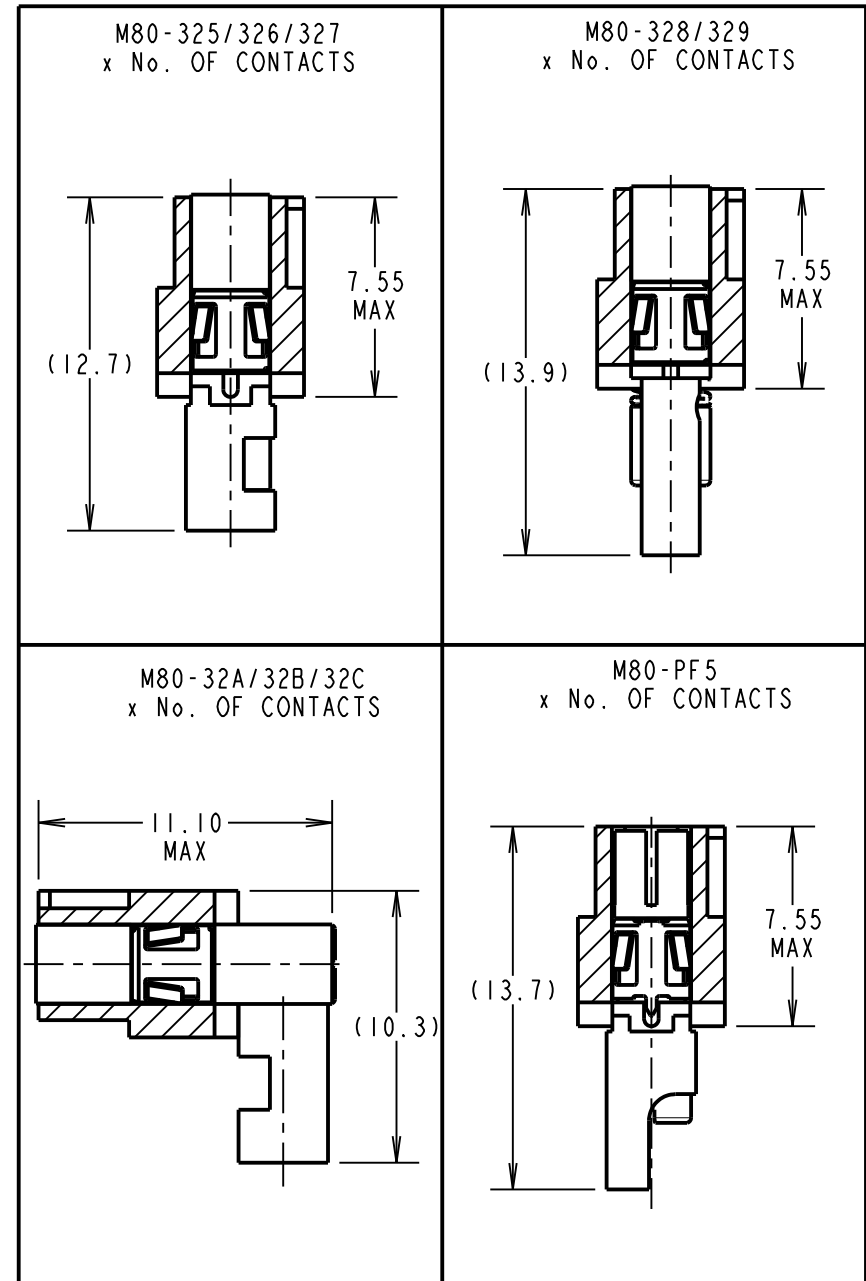
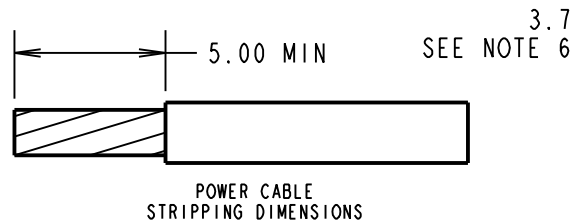
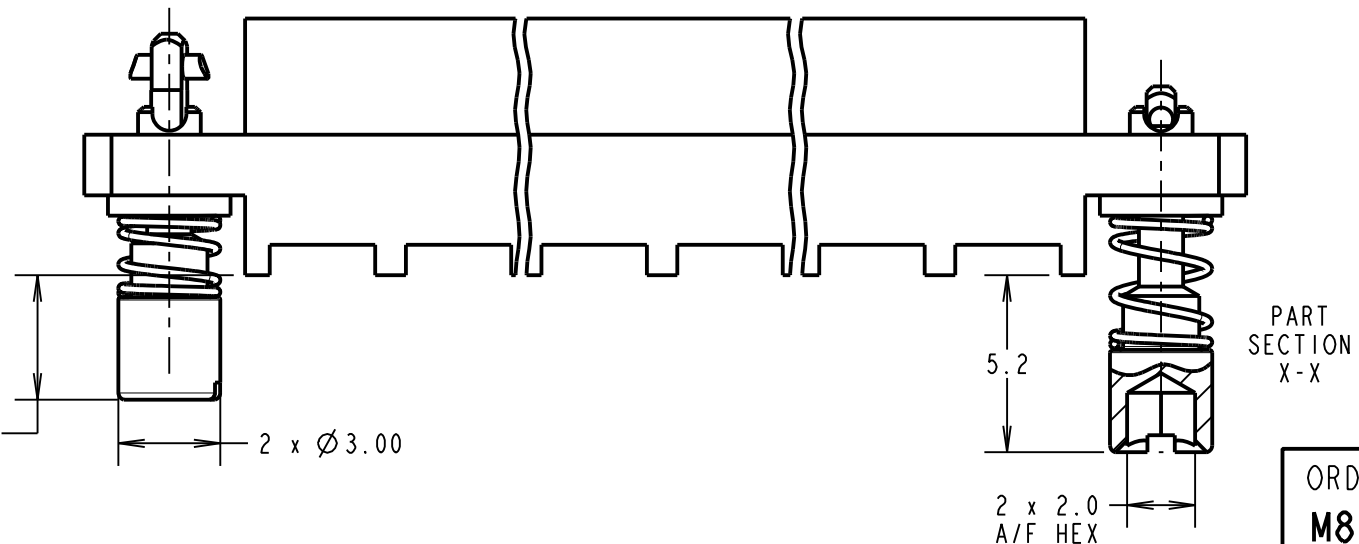
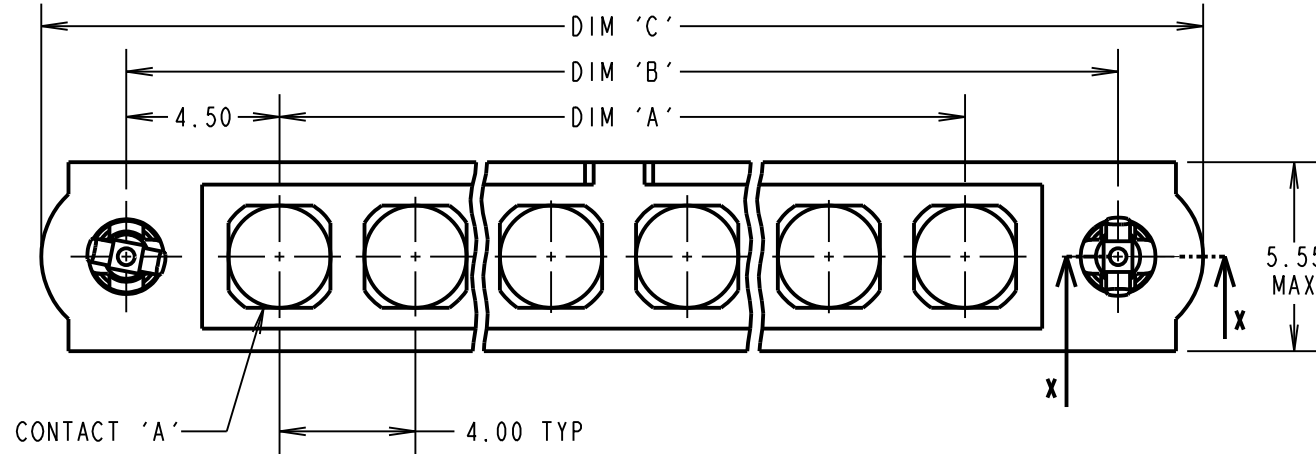
ALL DIMENSIONS IN mm

## SPECIFICATIONS:

**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
**POWER CONTACT:**  
 BODY, SLEEVE, INNER CONTACT, END PLUG = COPPER ALLOY  
 LATCHING COLLAR = BERYLLIUM COPPER  
 INSULATOR = PTFE  
 IOILOK SCREW, COLLAR = STAINLESS STEEL  
**FINISH:**  
**POWER CONTACT:**  
 BODY, SLEEVE, INNER CONTACT, END PLUG = GOLD  
 LATCHING COLLAR = NICKEL  
**ELECTRICAL:**  
 WORKING VOLTAGE = 800V AC/DC  
 VOLTAGE PROOF = 1200V AC/DC  
 INSULATION RESISTANCE = 100MΩ MIN  
**POWER CONTACT:**  
 CONTACT RESISTANCE = 6mΩ MAX  
 CURRENT RATING = M80-325 = 20A MAX WITH 12AWG  
 M80-326 = 15A MAX WITH 14AWG  
 M80-327 = 10A MAX WITH 16AWG  
 M80-328 = 8A MAX WITH 18AWG  
 M80-329 = 5A MAX WITH 20AWG  
 M80-32A = 20A MAX WITH 12AWG  
 M80-32B = 15A MAX WITH 14AWG  
 M80-32C = 10A MAX WITH 16AWG  
 M80-PF5 = 40A MAX WITH 10AWG  
 CONTACT AS SPECIFIED

**MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
**POWER CONTACT:**  
 INSERTION FORCE:  
 M80-325/326/327/328/329/  
 32A/32B/32C = 8N MAX  
 M80-PF5 = 15N MAX  
 WITHDRAWAL FORCE = 0.5N MIN  
**ENVIRONMENTAL:**  
 TEMPERATURE RANGE:  
 M80-325/326/327/328/329/  
 32A/32B/32C = -55°C TO +125°C  
 M80-PF5 = -55°C TO +150°C  
**PACKING:**  
 BAG  
 FOR COMPLETE SPECIFICATION SEE COMPONENT  
 SPECIFICATION C005XX (LATEST ISSUE)

## POWER CRIMP & SOLDER CONTACTS ONLY



- CRIMP/SOLDER NOTES:**
- CONNECTORS ARE SUPPLIED WITH CONTACTS NOT ASSEMBLED.
  - FOR EXTRA POWER CONTACTS USE PART NUMBERS M80-325/326/327/328/329/32A/32B/32C/PM5.
  - POWER CONTACT EXTRACTION TOOL = Z80-290.
  - RECOMMENDED HAND CRIMP TOOL FOR CONTACTS 328/329 = Z80-294 AND POSITIONER Z80-295.
  - INSTRUCTION SHEETS ARE AVAILABLE.
  - LENGTH WILL BE 3.7mm WHEN IOILOK SCREWS ARE ENGAGED WITH RETAINERS IN MATING CONNECTOR.
  - SPRING LOAD WHEN SOLID = 2.642N. SPRING RATE = 1.32N/mm.
  - RECOMMENDED PANEL/PCB THICKNESS = 1.3 - 1.6mm.

ORDER CODE: (POWER CRIMP/SOLDER CONTACTS ONLY)  
**M80-400000FR-XX-XXX-00-000**

TOTAL No. OF CONTACTS \_\_\_\_\_  
 02 TO 12

**SPECIAL CONTACTS**

- 325 = POWER CONTACT 12AWG SOLDER M80-325
- 326 = POWER CONTACT 14AWG SOLDER M80-326
- 327 = POWER CONTACT 16AWG SOLDER M80-327
- 328 = POWER CONTACT 18AWG SOLDER/CRIMP M80-328
- 329 = POWER CONTACT 20AWG SOLDER/CRIMP M80-329
- 32A = POWER CONTACT 12AWG HORIZ' SOLDER M80-32A
- 32B = POWER CONTACT 14AWG HORIZ' SOLDER M80-32B
- 32C = POWER CONTACT 16AWG HORIZ' SOLDER M80-32C
- PF5 = POWER CONTACT 10AWG SOLDER M80-PF5

MGP	5	17.01.18	21020
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: SB			
DRAWN: C.PENROSE			
CUSTOMER REF.:			
ASSEMBLY DRG:			

DIMENSION	CALCULATION
DIM 'A'	4 x No. OF CONTACTS - 4.00
DIM 'B'	4 x No. OF CONTACTS + 5.00
DIM 'C'	4 x No. OF CONTACTS + 10.0

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS,  
 M80-400000FR-10-325-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.0mm



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**TOLERANCES**  
 X. = ±1mm  
 X.X = ±0.50mm  
 X.XX = ±0.10mm  
 X.XXX = ±0.01mm  
**ANGLES = ±5°**  
 UNLESS STATED

**MATERIAL:**  
 SEE ABOVE  
**FINISH:** SEE ABOVE  
**S/AREA:** mm<sup>2</sup>

**TITLE:** DATAMATE MIX-TEK FEMALE ASSEMBLY WITH HEX SOCKET IOILOK  
**DRAWING NUMBER:** M80-400000FR-XX-XXX-00-000  
 SHT 6 OF 8

# Customer Information Sheet

DRAWING No.: M80-400000FR-XX-XXX-00-000

SHEET 7 OF 8

IF IN DOUBT - ASK

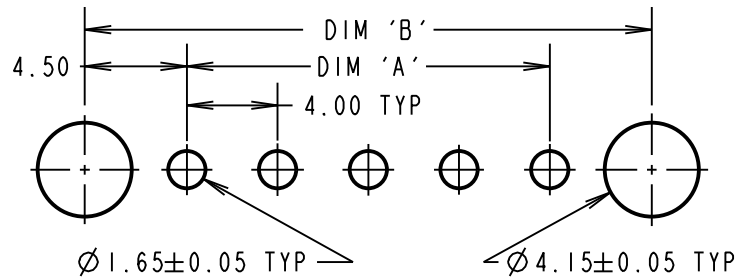
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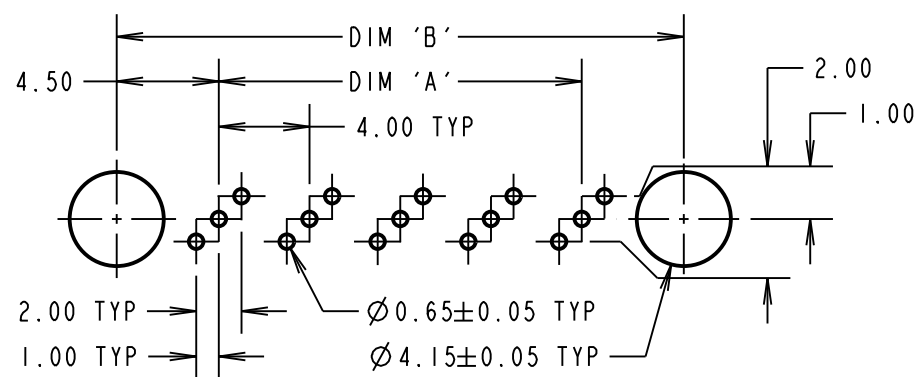
THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-321/322

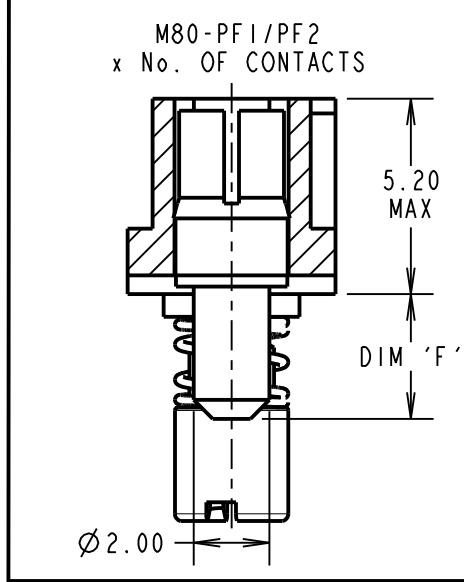
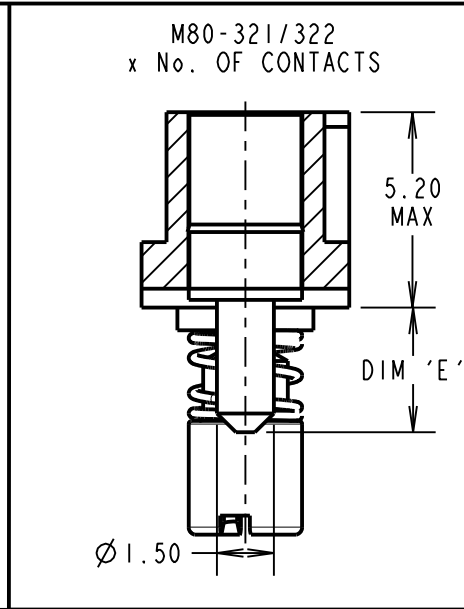
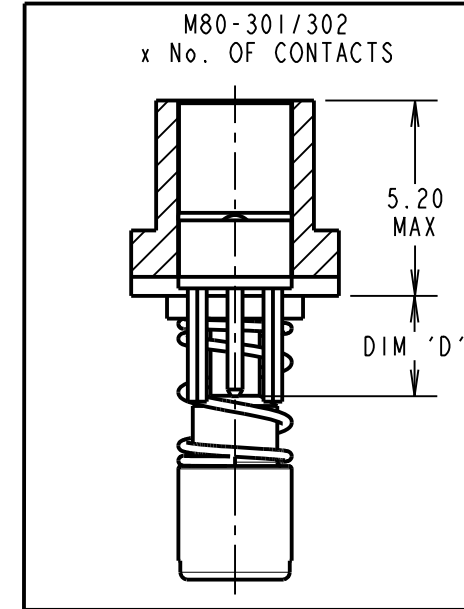
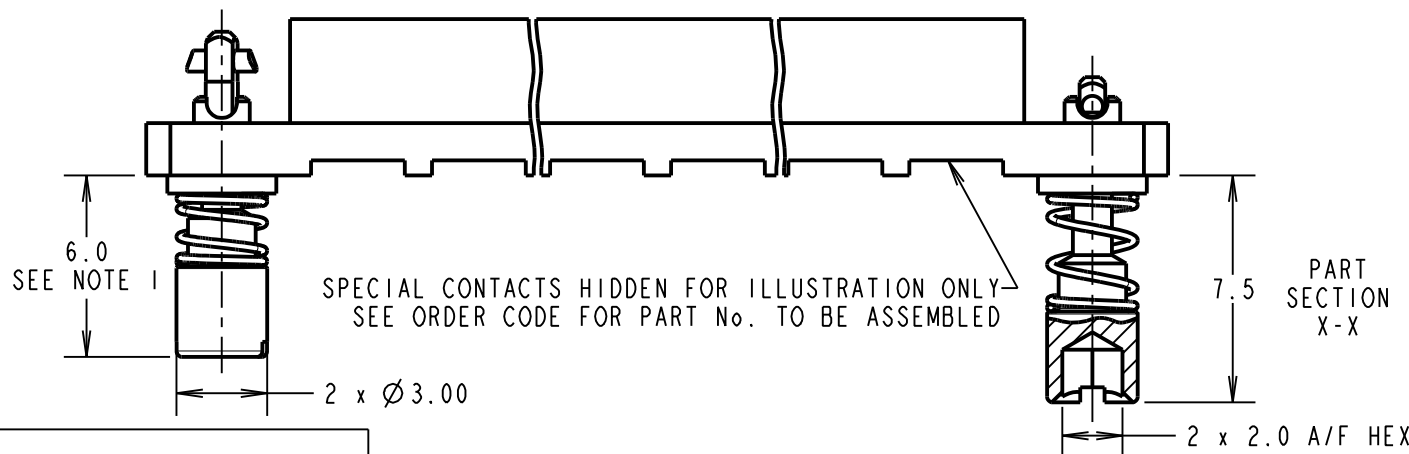
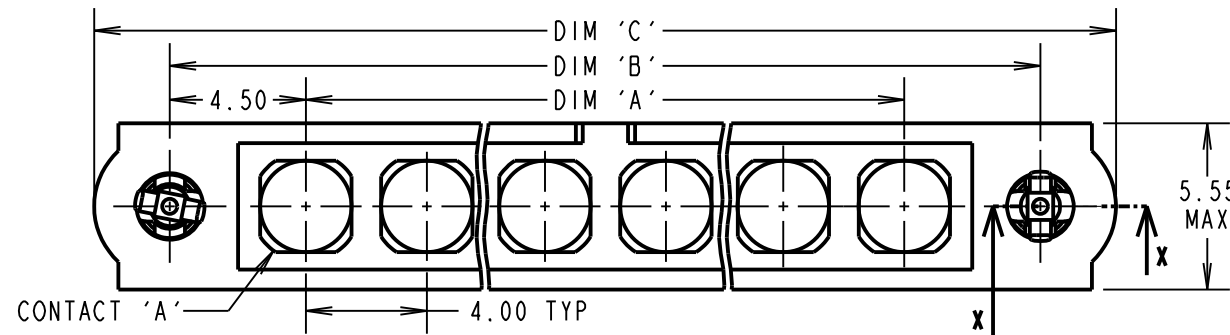


RECOMMENDED PCB LAYOUT FOR COAX CONTACTS: M80-301/302

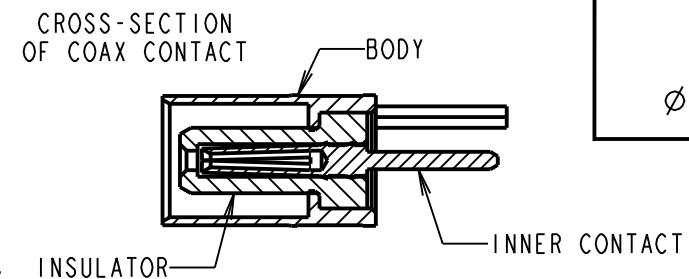


- SPECIFICATIONS:**  
**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
 POWER CONTACT: COPPER ALLOY  
 COAX CONTACT:  
 BODY = COPPER ALLOY  
 INNER CONTACT = COPPER ALLOY  
 INSULATOR = PTFE  
 IOILOK SCREW, COLLAR = STAINLESS STEEL  
**FINISH:**  
 POWER CONTACT: GOLD  
 COAX CONTACT: BODY, INNER CONTACT = GOLD  
**ELECTRICAL:**  
 WORKING VOLTAGE = 800V AC/DC  
 VOLTAGE PROOF = 1200V AC/DC  
 INSULATION RESISTANCE = 100MΩ MIN  
 POWER CONTACT:  
 CONTACT RESISTANCE = 6mΩ MAX  
 CURRENT RATING:  
 M80-321/322 = 20A MAX  
 M80-PF1/PF2 = 40A MAX  
 COAX CONTACT:  
 FREQUENCY RANGE = 6GHz  
 IMPEDANCE = 50Ω  
 V.S.W.R = 1.05 + (0.04 x FREQUENCY) GHz MAX  
 CONTACT RESISTANCE = 6mΩ MAX  
 INSULATION RESISTANCE = 10<sup>6</sup>MΩ @ 250V AC  
 OPERATING VOLTAGE = 180V AC @ 500mA  
 MAXIMUM VOLTAGE = 1000V AC  
**MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
 POWER CONTACT:  
 INSERTION FORCE:  
 M80-321/322 = 8N MAX  
 M80-PF1/PF2 = 15N MAX  
 WITHDRAWAL FORCE = 0.5N MIN  
 COAX CONTACT:  
 INSERTION FORCE = 8N MAX  
 WITHDRAWAL FORCE = 0.5N MIN  
**ENVIRONMENTAL:**  
 TEMPERATURE RANGE:  
 M80-301/302/321/322 = -55°C TO +125°C  
 M80-PF1/PF2 = -55°C TO +150°C  
**PACKING:**  
 TUBE  
 FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

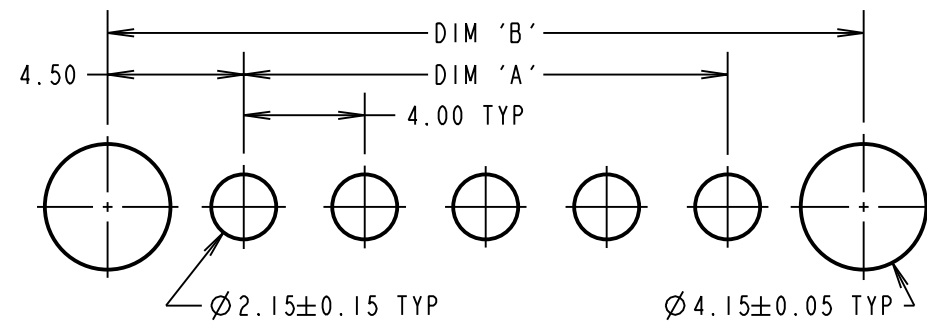
## VERTICAL PC TAIL CONTACTS ONLY



- NOTES:**  
 1. LENGTH WILL BE 6.0mm WHEN IOILOK SCREWS ARE ENGAGED WITH RETAINERS IN MATING CONNECTOR.  
 2. SPRING LOAD WHEN SOLID = 2.642N. SPRING RATE = 1.32N/mm.



RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-PF1/PF2



DIMENSION	CALCULATION
DIM 'A'	4 x No. OF CONTACTS - 4.00
DIM 'B'	4 x No. OF CONTACTS + 5.00
DIM 'C'	4 x No. OF CONTACTS + 10.0
DIM 'D'	M80-301 = 3.0mm, M80-302 = 4.5mm
DIM 'E'	M80-321 = 3.5mm, M80-322 = 5.0mm
DIM 'F'	M80-PF1 = 3.5mm, M80-PF2 = 5.0mm

ORDER CODE: (PC TAIL CONTACTS ONLY)  
**M80-400000FR-XX-XXX-00-000**  
 TOTAL No. OF CONTACTS \_\_\_\_\_  
 02 TO 12 \_\_\_\_\_  
 SPECIAL CONTACTS \_\_\_\_\_  
 301 = COAX CONTACT 3.0mm PC TAIL M80-301  
 302 = COAX CONTACT 4.5mm PC TAIL M80-302  
 321 = 20A POWER CONTACT 3.5mm VERT' PC TAIL M80-321  
 322 = 20A POWER CONTACT 5.0mm VERT' PC TAIL M80-322  
 PF1 = 40A POWER CONTACT 3.5mm VERT' PC TAIL M80-PF1  
 PF2 = 40A POWER CONTACT 5.0mm VERT' PC TAIL M80-PF2

EXAMPLE 1: CONNECTOR WITH 08 COAX CONTACTS,  
 M80-400000FR-08-301-00-000  
 DIM 'A' = 28.00mm, DIM 'B' = 37.00mm, DIM 'C' = 42.0mm  
 DIM 'D' = 3.0mm

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS,  
 M80-400000FR-10-PF1-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.0mm  
 DIM 'F' = 3.5mm

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**TOLERANCES**  
 X. = ±1mm  
 X.X = ±0.50mm  
 X.XX = ±0.10mm  
 X.XXX = ±0.01mm  
 ANGLES = ±5°  
 UNLESS STATED

**MATERIAL:**  
 SEE ABOVE  
**FINISH:**  
 SEE ABOVE  
**S/AREA:**  
 mm<sup>2</sup>

**TITLE:**  
 DATAMATE MIX-TEK FEMALE ASSEMBLY WITH HEX SOCKET IOILOK  
**DRAWING NUMBER:**  
**M80-400000FR-XX-XXX-00-000**  
 SHT 7 OF 8

MGP	5	17.01.18	21020
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: SB			
DRAWN: C.PENROSE			
CUSTOMER REF.:			
ASSEMBLY DRG:			

# Customer Information Sheet

DRAWING No.: M80-400000FR-XX-XXX-00-000

SHEET 8 OF 8

IF IN DOUBT - ASK

©

NOT TO SCALE

THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

## SPECIFICATIONS:

### MATERIAL:

MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
POWER CONTACT: COPPER ALLOY

### COAX CONTACT:

BODY = COPPER ALLOY  
INNER CONTACT = COPPER ALLOY  
INSULATOR = PTFE

10ILOK SCREW, COLLAR = STAINLESS STEEL

### FINISH:

POWER CONTACT: GOLD  
COAX CONTACT: BODY, INNER CONTACT = GOLD

### ELECTRICAL:

WORKING VOLTAGE = 800V AC/DC  
VOLTAGE PROOF = 1200V AC/DC  
INSULATION RESISTANCE = 100MΩ MIN

### POWER CONTACT:

CONTACT RESISTANCE = 6mΩ MAX

### CURRENT RATING:

M80-323/324 = 20A MAX  
M80-PF3/PF4 = 40A MAX

### MECHANICAL:

DURABILITY = 500 OPERATIONS

### POWER CONTACT:

INSERTION FORCE:  
M80-323/324 = 8N MAX  
M80-PF3/PF4 = 15N MAX  
WITHDRAWAL FORCE = 0.5N MIN

### ENVIRONMENTAL:

TEMPERATURE RANGE:  
M80-323/324 = -55°C TO +125°C  
M80-PF3/PF4 = -55°C TO +150°C

### PACKING:

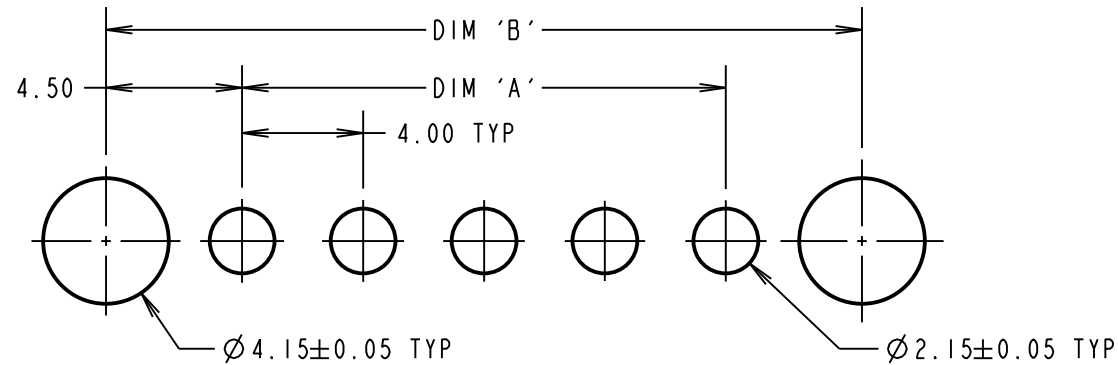
TUBE

FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

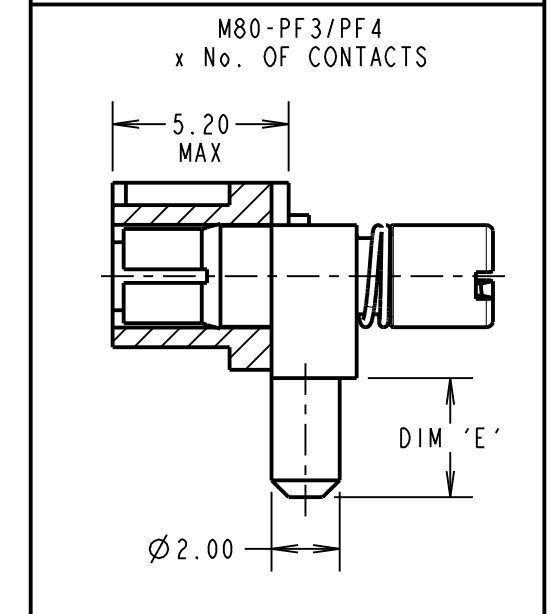
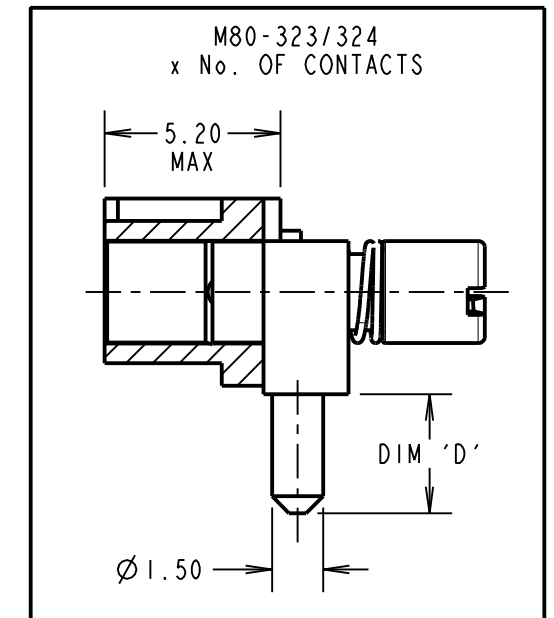
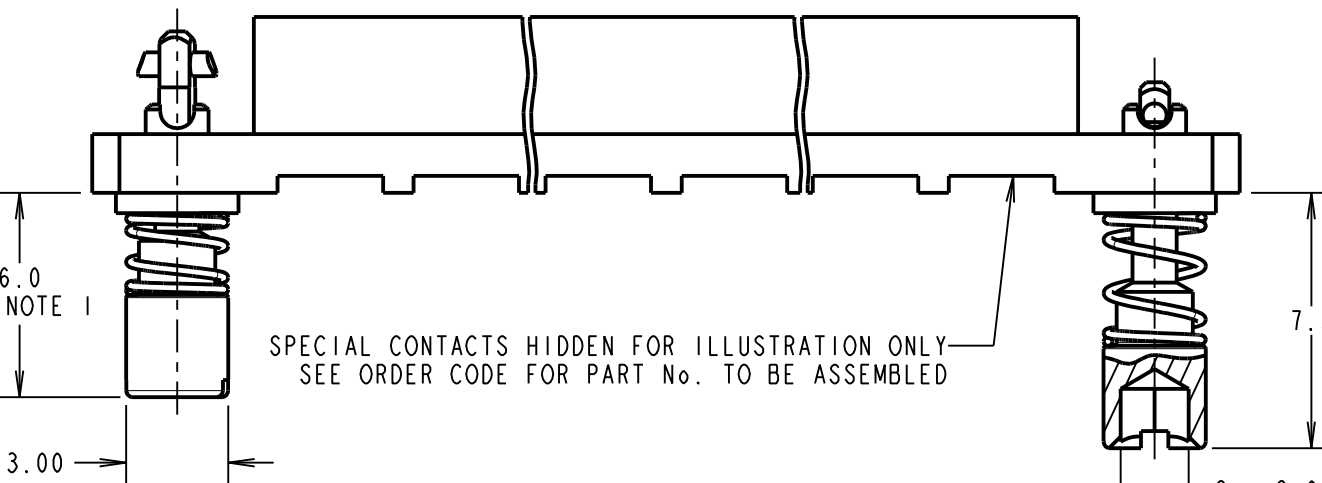
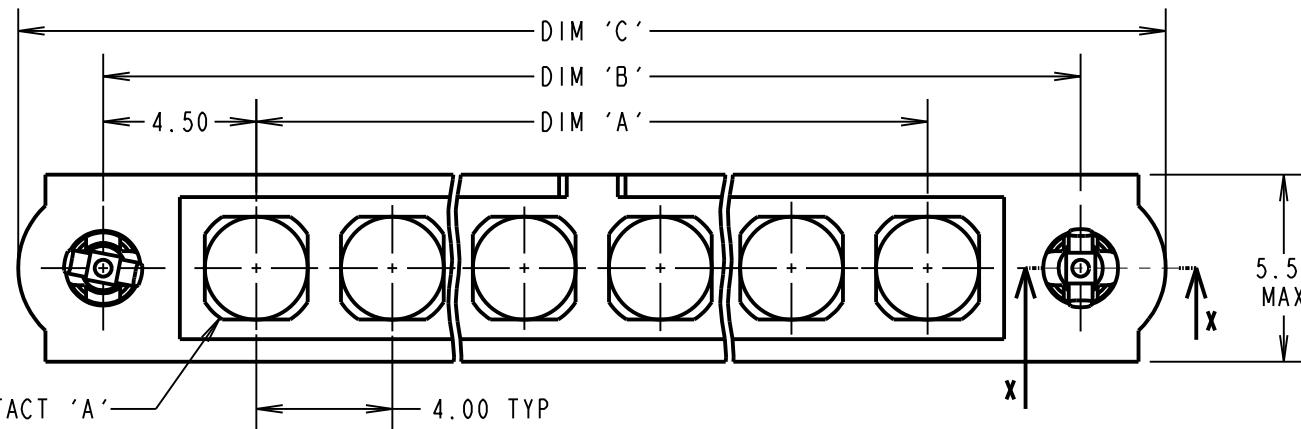
### NOTES:

- LENGTH WILL BE 6.0mm WHEN 10ILOK SCREWS ARE ENGAGED WITH RETAINERS IN MATING CONNECTOR.
- SPRING LOAD WHEN SOLID = 2.642N. SPRING RATE = 1.32N/mm.

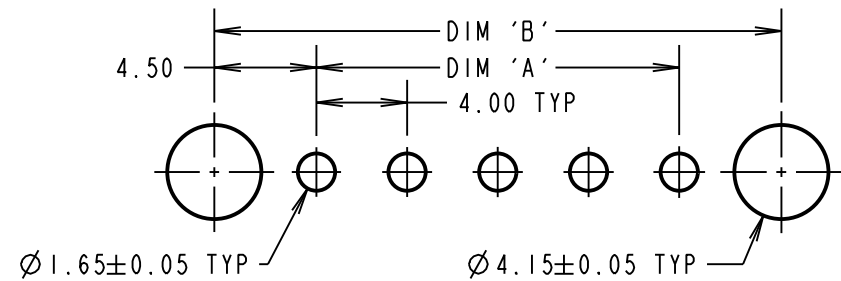
RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-PF3/PF4



HORIZONTAL PC TAIL & SMT CONTACTS ONLY



RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-323/324



DIMENSION	CALCULATION
DIM 'A'	4 x No. OF CONTACTS - 4.00
DIM 'B'	4 x No. OF CONTACTS + 5.00
DIM 'C'	4 x No. OF CONTACTS + 10.0
DIM 'D'	M80-323 = 3.5mm, M80-324 = 5.0mm
DIM 'E'	M80-PF3 = 3.5mm, M80-PF4 = 5.0mm

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS,  
M80-400000FR-10-323-00-000  
DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.0mm  
DIM 'E' = 3.5mm

ORDER CODE: (PC TAIL CONTACTS ONLY)  
**M80-400000FR-XX-XXX-00-000**

TOTAL No. OF CONTACTS  
02 TO 12

### SPECIAL CONTACTS

323 = 20A POWER CONTACT 3.5mm HORZ' PC TAIL M80-323  
324 = 20A POWER CONTACT 5.0mm HORZ' PC TAIL M80-324  
PF3 = 40A POWER CONTACT 3.5mm HORZ' PC TAIL M80-PF3  
PF4 = 40A POWER CONTACT 5.0mm HORZ' PC TAIL M80-PF4

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TOLERANCES  
X. = ±1mm  
X.X = ±0.50mm  
X.XX = ±0.10mm  
X.XXX = ±0.01mm  
ANGLES = ±5°  
UNLESS STATED

### MATERIAL:

SEE ABOVE

### FINISH:

SEE ABOVE

### S/AREA:

mm<sup>2</sup>

### TITLE:

DATAMATE MIX-TEK  
FEMALE ASSEMBLY WITH  
HEX SOCKET 10ILOK

### DRAWING NUMBER:

**M80-400000FR-XX-XXX-00-000**

MGP	5	17.01.18	21020
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: SB			
DRAWN: C.PENROSE			
CUSTOMER REF.:			
ASSEMBLY DRG:			

SHT  
8 OF 8