

# Customer Information Sheet

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

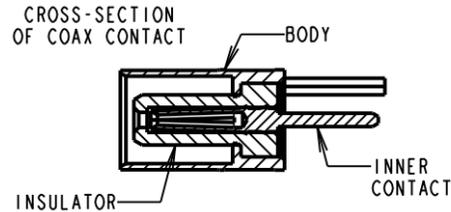
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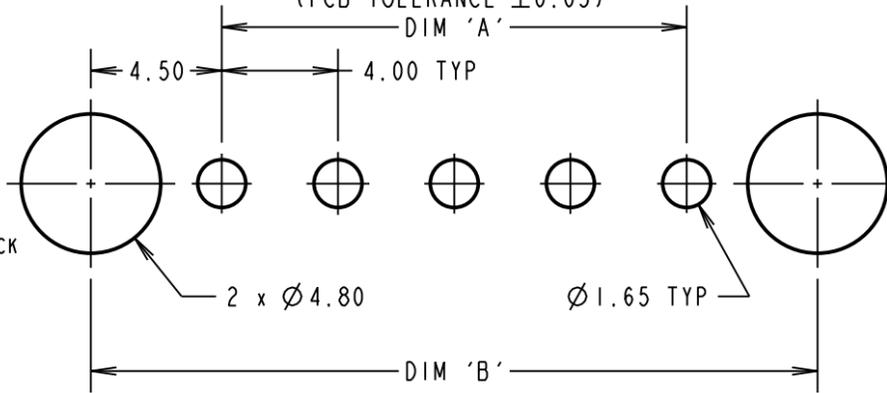
THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

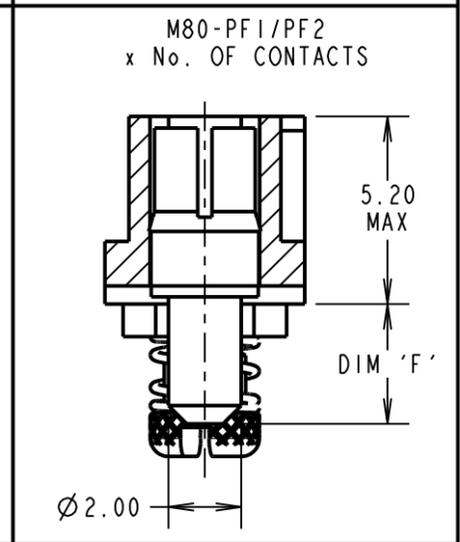
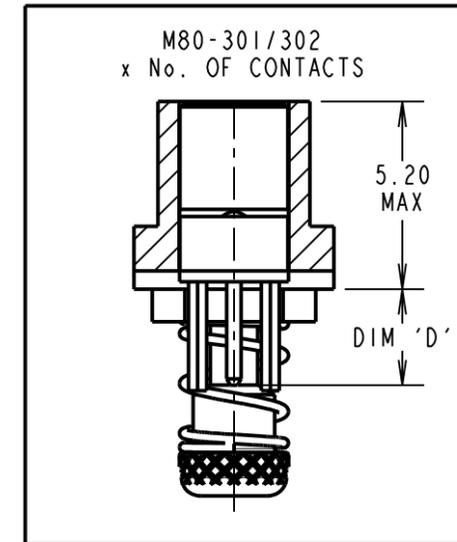
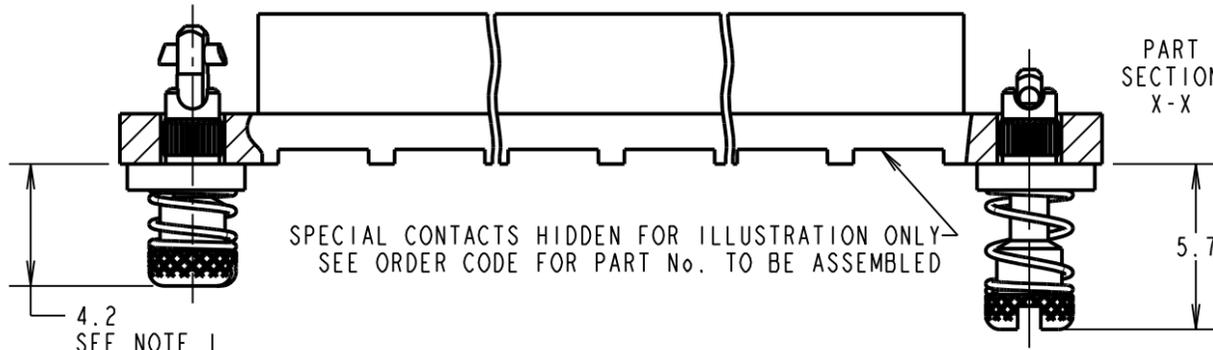
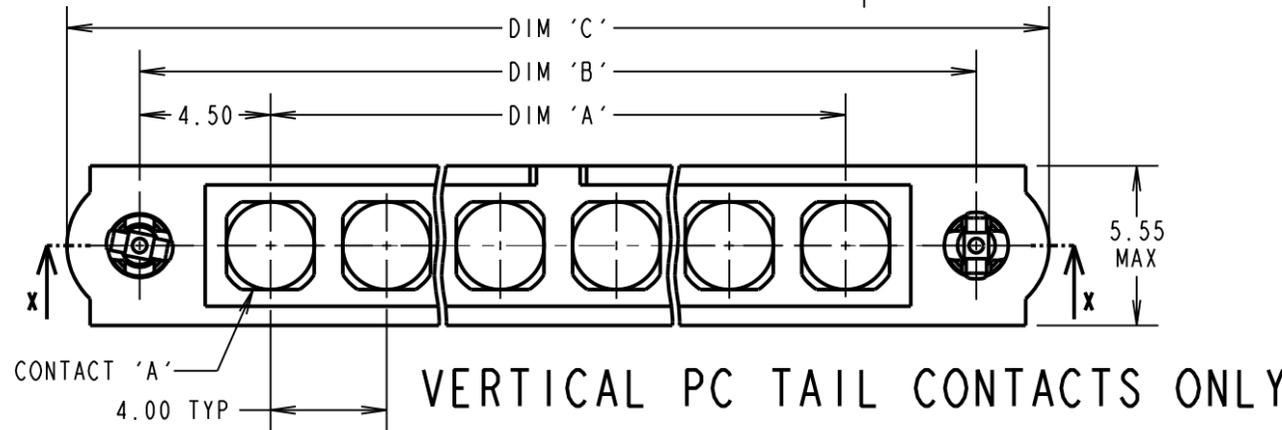
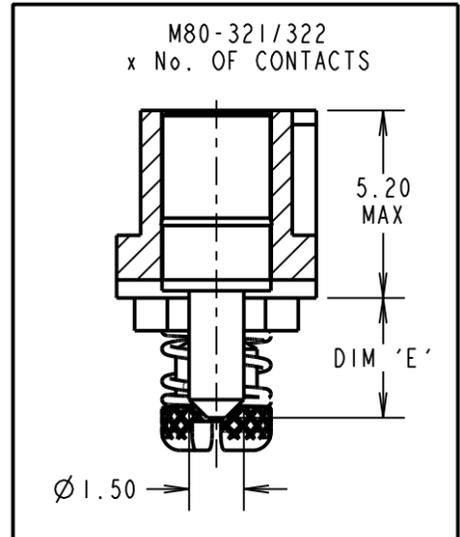
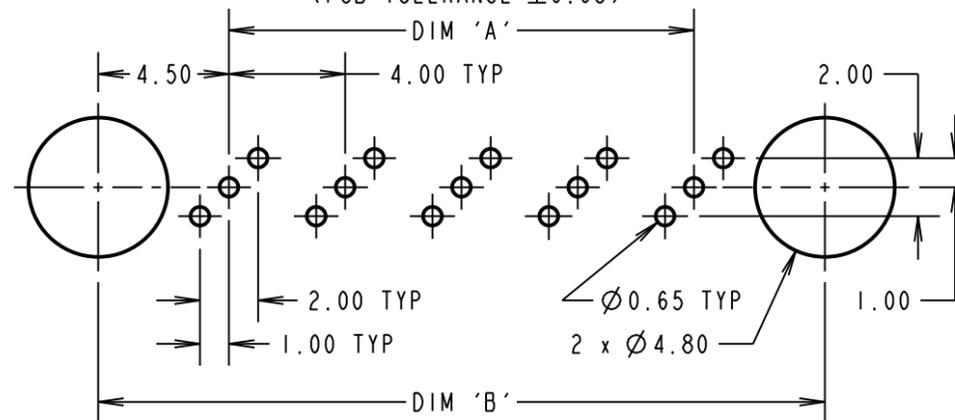


- SPECIFICATIONS:**
- MATERIAL:**  
 Moulding: GLASS FILLED PPS, UL94V-0, BLACK  
 POWER CONTACT: COPPER ALLOY  
 COAX CONTACT:  
 BODY = COPPER ALLOY  
 INNER CONTACT = COPPER ALLOY  
 INSULATOR = PTFE  
 IOILOK SCREW, COLLAR = STAINLESS STEEL
- FINISH:**  
 POWER CONTACT: GOLD  
 COAX CONTACT: BODY, 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)

RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-321/322  
(PCB TOLERANCE ±0.05)

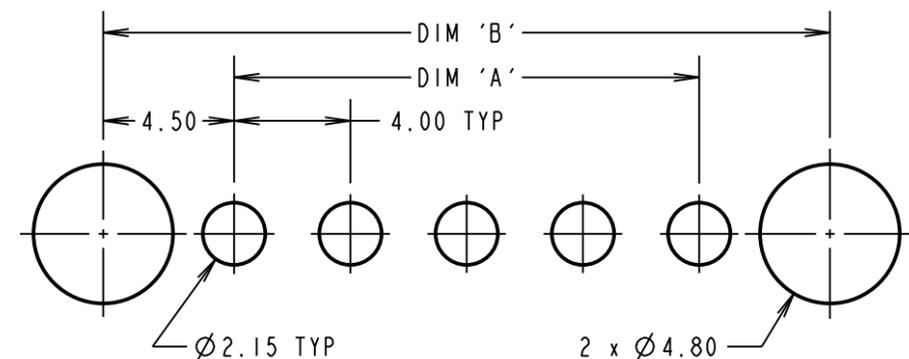


RECOMMENDED PCB LAYOUT FOR COAX CONTACTS: M80-301/302  
(PCB TOLERANCE ±0.05)



- NOTES:**
- LENGTH WILL BE 4.2mm WHEN IOILOK 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-PF1/PF2  
(PCB TOLERANCE ±0.05)



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

EXAMPLE 1: CONNECTOR WITH 08 COAX CONTACTS,  
 M80-400000FD-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,  
 M80-400000FD-10-PF1-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.0mm  
 DIM 'F' = 3.5mm

ORDER CODE: (PC TAIL CONTACTS ONLY)  
**M80-400000FD-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



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**TOLERANCES**  
 X. = ±1mm  
 X.X = ±0.50mm  
 X.XX = ±0.20mm  
 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 IOILOK JACKSCREW  
**DRAWING NUMBER:** M80-400000FD-XX-XXX-00-000  
 SHT 3 OF 4

MGP	1	12.03.19	21834
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: SB			
DRAWN: M G PLESTED			
CUSTOMER REF.:			
ASSEMBLY DRG:			

# Customer Information Sheet

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NOT TO SCALE

THIRD ANGLE PROJECTION

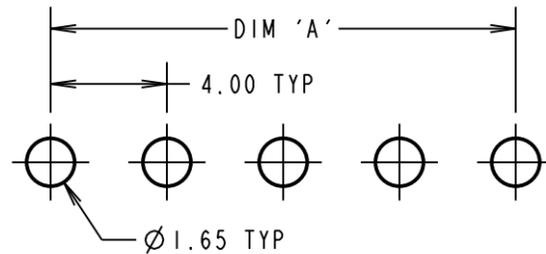
ALL DIMENSIONS IN mm

**SPECIFICATIONS:**

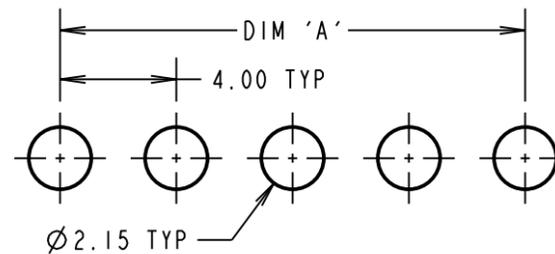
**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
 POWER CONTACT: COPPER ALLOY  
 COAX CONTACT:  
 BODY = COPPER ALLOY  
 INNER CONTACT = COPPER ALLOY  
 INSULATOR = PTFE  
 IOILOK SCREW, COLLAR = STAINLESS STEEL  
**FINISH:**  
 POWER CONTACT: GOLD  
 COAX CONTACT: BODY, INNER CONTACT = GOLD  
**ELECTRICAL:**  
 WORKING VOLTAGE = 800V AC/DC  
 VOLTAGE PROOF = 1200V AC/DC  
 INSULATION RESISTANCE = 100MΩ MIN  
**POWER CONTACT:**  
 CONTACT RESISTANCE = 6mΩ MAX  
**CURRENT RATING:**  
 M80-323/324 = 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 4.2mm WHEN IOILOK SCREWS ARE ENGAGED WITH RETAINERS IN MATING CONNECTOR.
  - SPRING LOAD WHEN SOLID = 2.642N. SPRING RATE = 1.32N/mm.

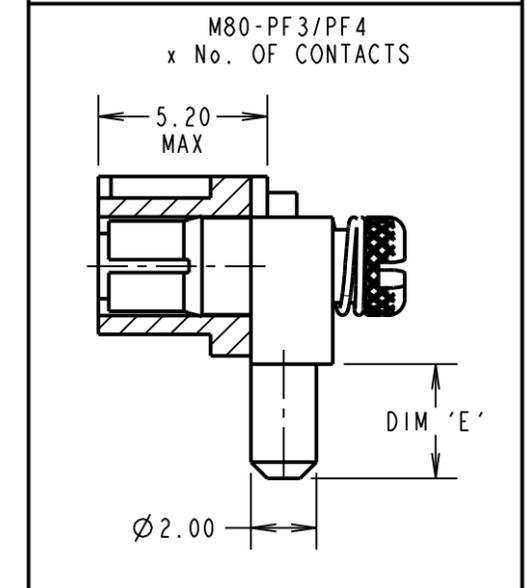
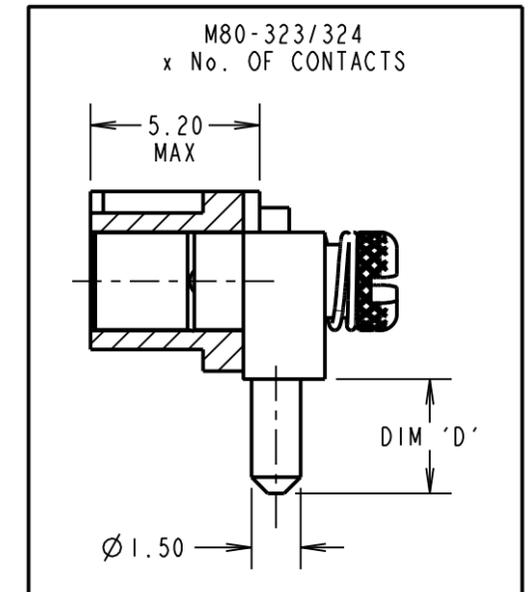
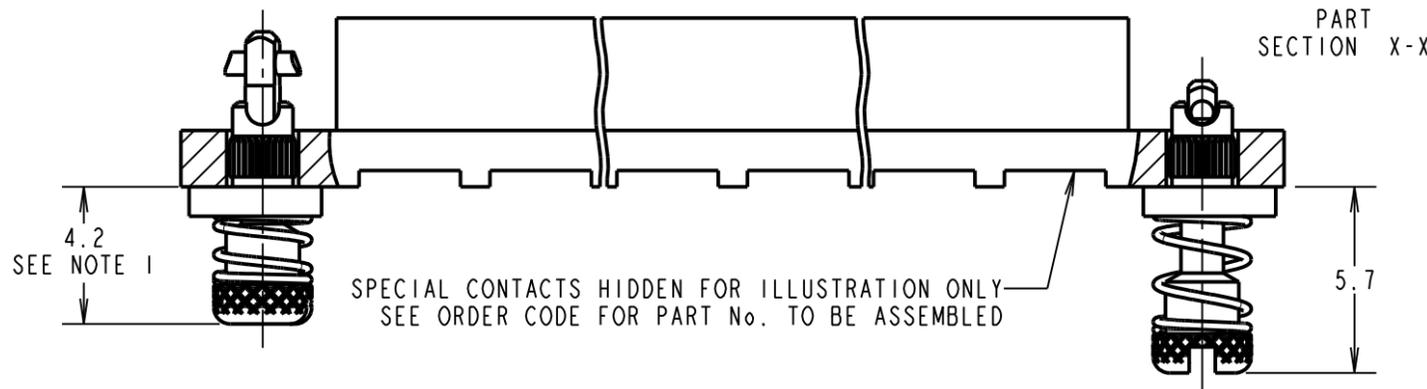
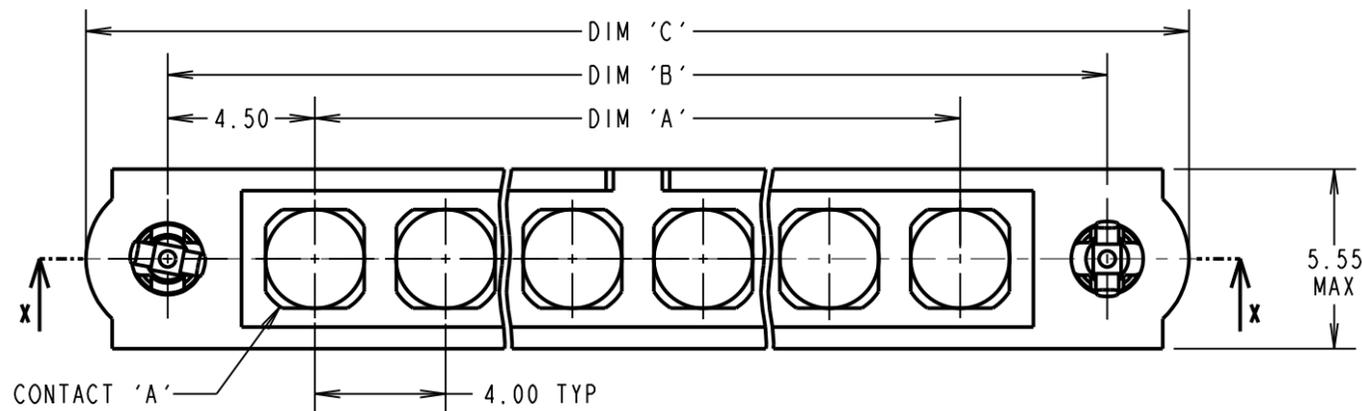
RECOMMENDED PCB LAYOUT  
 FOR POWER CONTACTS: M80-323/324  
 (PCB TOLERANCE ±0.05)



RECOMMENDED PCB LAYOUT  
 FOR POWER CONTACTS: M80-PF3/PF4  
 (PCB TOLERANCE ±0.05)



## HORIZONTAL PC TAIL CONTACTS ONLY



ORDER CODE: (PC TAIL CONTACTS ONLY)

**M80-400000FD-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

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,  
 M80-400000FD-10-323-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.0mm  
 DIM 'E' = 3.5mm

**HARWIN**

www.harwin.com  
 technical@harwin.com

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 X.XX = ±0.20mm  
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 UNLESS STATED

**MATERIAL:**

SEE ABOVE

**FINISH:**

SEE ABOVE

**S/AREA:**

mm<sup>2</sup>

**TITLE:** DATAMATE MIX-TEK  
 FEMALE ASSEMBLY  
 WITH IOILOK JACKSCREW

**DRAWING NUMBER:**

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

SHT  
 4 OF 4

MGP	1	12.03.19	21834
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: SB			
DRAWN: M G PLESTED			
CUSTOMER REF.:			
ASSEMBLY DRG:			