

# Customer Information Sheet

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

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NOT TO SCALE

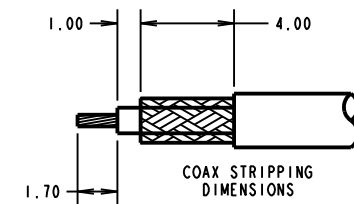
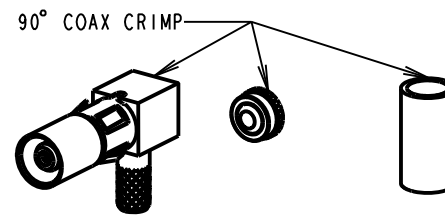
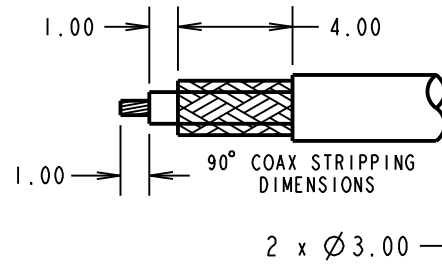
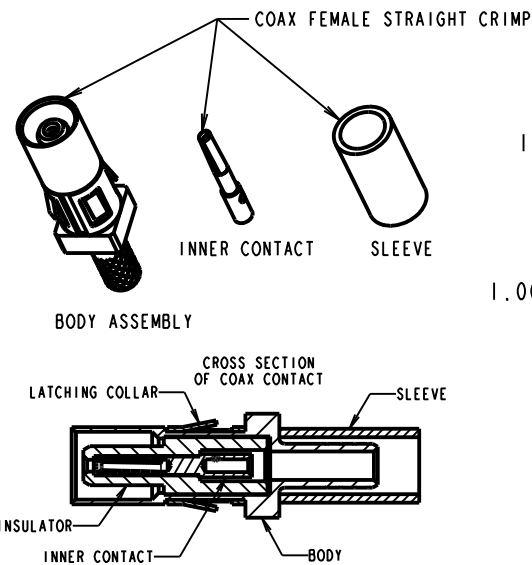
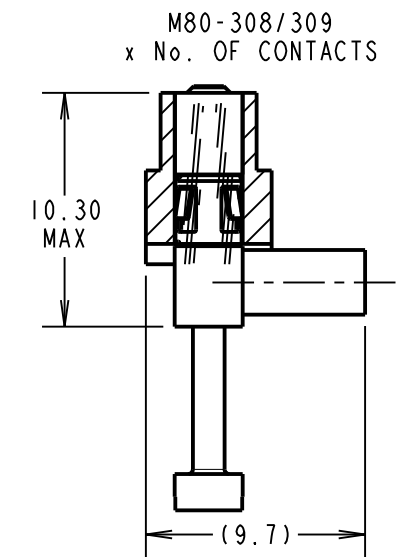
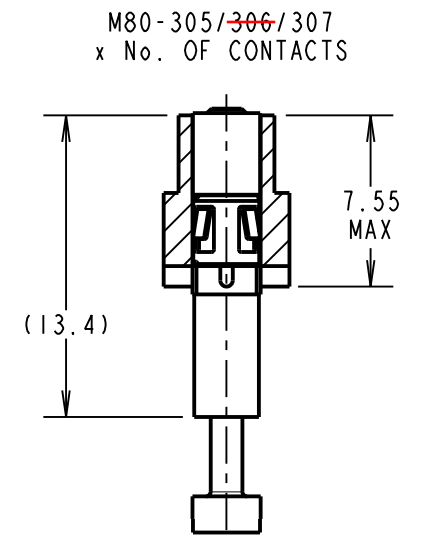
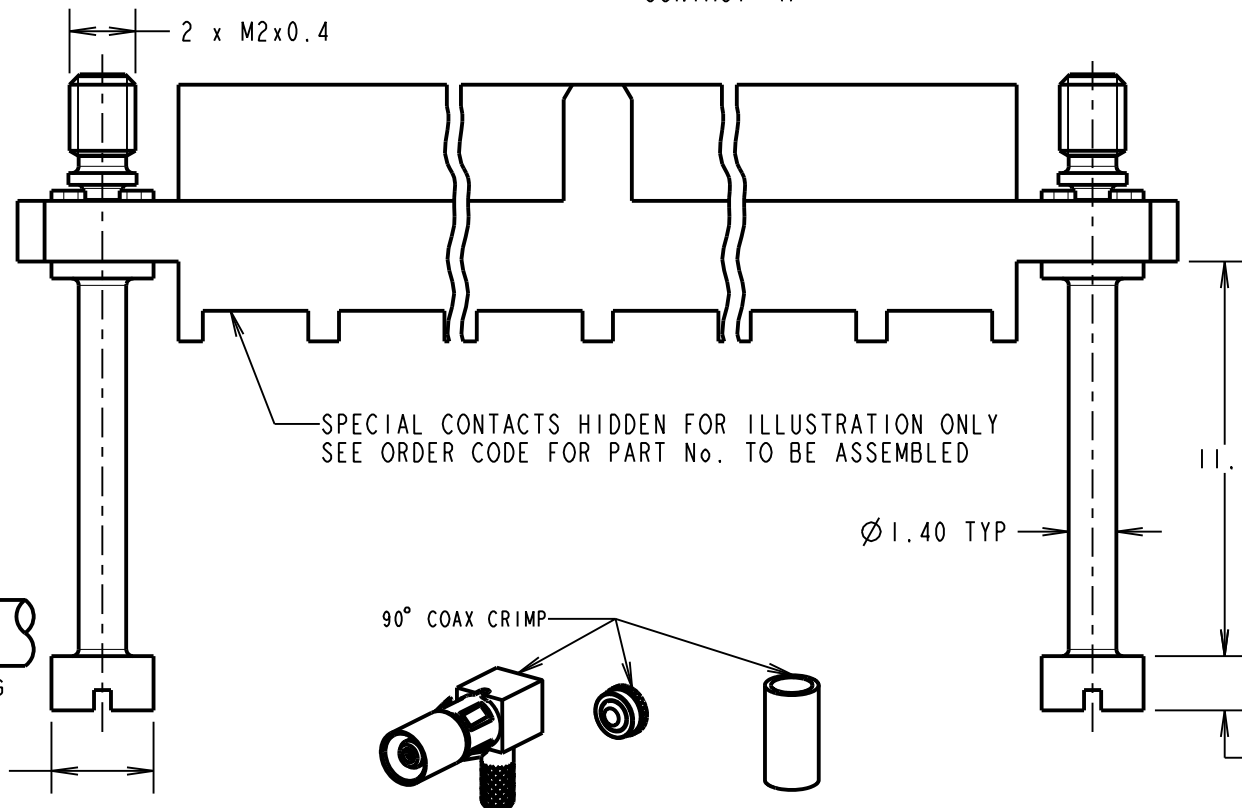
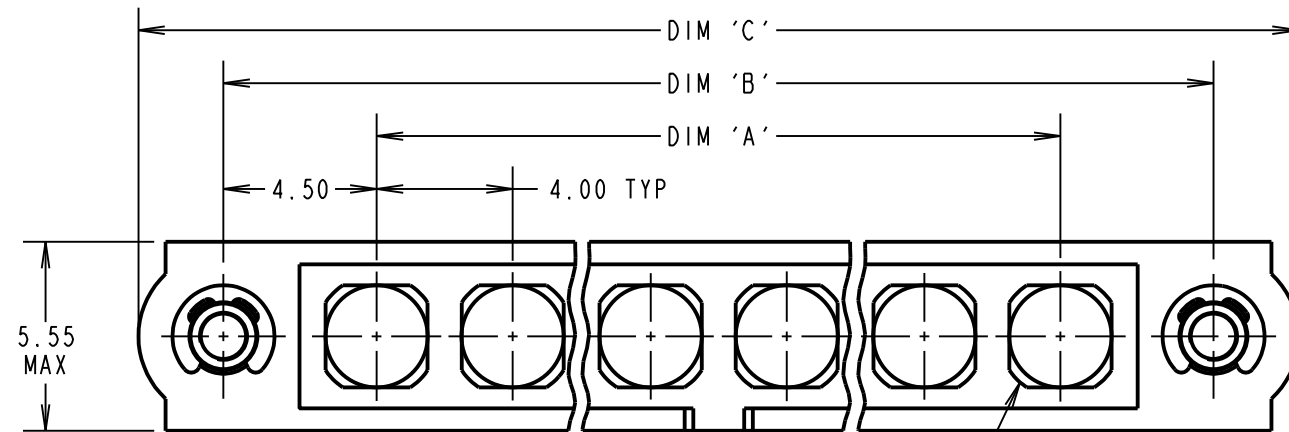
THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

**SPECIFICATIONS:**

**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
**COAX CONTACT:**  
 BODY, SLEEVE, END PLUG = COPPER ALLOY  
 INNER CONTACT, LATCHING COLLAR = BERYLLIUM COPPER  
 INSULATOR = PTFE  
 JACKSCREW, CIRCLIP = STAINLESS STEEL  
**FINISH:**  
**COAX CONTACT**  
 BODY, SLEEVE, INNER CONTACT, END PLUG = GOLD  
 LATCHING COLLAR: = NICKEL  
**ELECTRICAL:**  
 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 AND SOLDER CONTACTS ONLY



ORDER CODE: (COAX CRIMP/SOLDER)  
**M80-400000FS-XX-XXX-00-000**

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

SPECIAL CONTACTS:  
 305 = COAX CONTACT CRIMP 2.0mm M80-305  
~~306 = COAX CONTACT CRIMP 2.4mm M80-306~~  
 307 = COAX CONTACT CRIMP 2.7mm M80-307  
 308 = 90° COAX CONTACT CRIMP/SOLDER 2.0mm M80-308  
 309 = 90° COAX CONTACT CRIMP/SOLDER 2.7mm M80-309

**NOTES:**

- CONNECTORS ARE SUPPLIED WITH CONTACTS LOOSE.
- COAX CONTACT IS SUPPLIED AS A KIT OF PARTS: BODY, INSULATOR AND LATCHING COLLAR ARE PRE-ASSEMBLED. SLEEVE AND INNER CONTACT ARE SEPARATE.
- FOR EXTRA COAX CONTACTS, USE PART NUMBER M80-305/306/307/308/309.
- RECOMMENDED HAND CRIMP TOOL FOR COAX INNER CONTACT = Z80-292 WITH POSITIONER Z80-291 AND RECOMMENDED HAND CRIMP TOOL AND DIE SET FOR COAX SLEEVE = Z80-293.
- COAX CONTACT EXTRACTION TOOL = Z80-290.
- INSTRUCTION SHEETS ARE AVAILABLE.

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

**HARWIN**

www.harwin.com  
 technical@harwin.com

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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 ASSY WITH EXTENDED JACKSCREW

**DRAWING NUMBER:**  
**M80-400000FS-XX-XXX-00-000** SHT 5 OF 8

MGP	3	9.12.19	21540
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: RP			
DRAWN: M.G.PLESTED			
CUSTOMER REF.:			
ASSEMBLY DRG:			

# Customer Information Sheet

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

IF IN DOUBT - ASK

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NOT TO SCALE

THIRD ANGLE PROJECTION

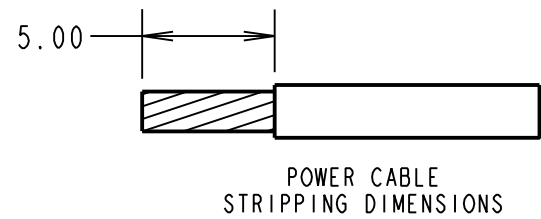
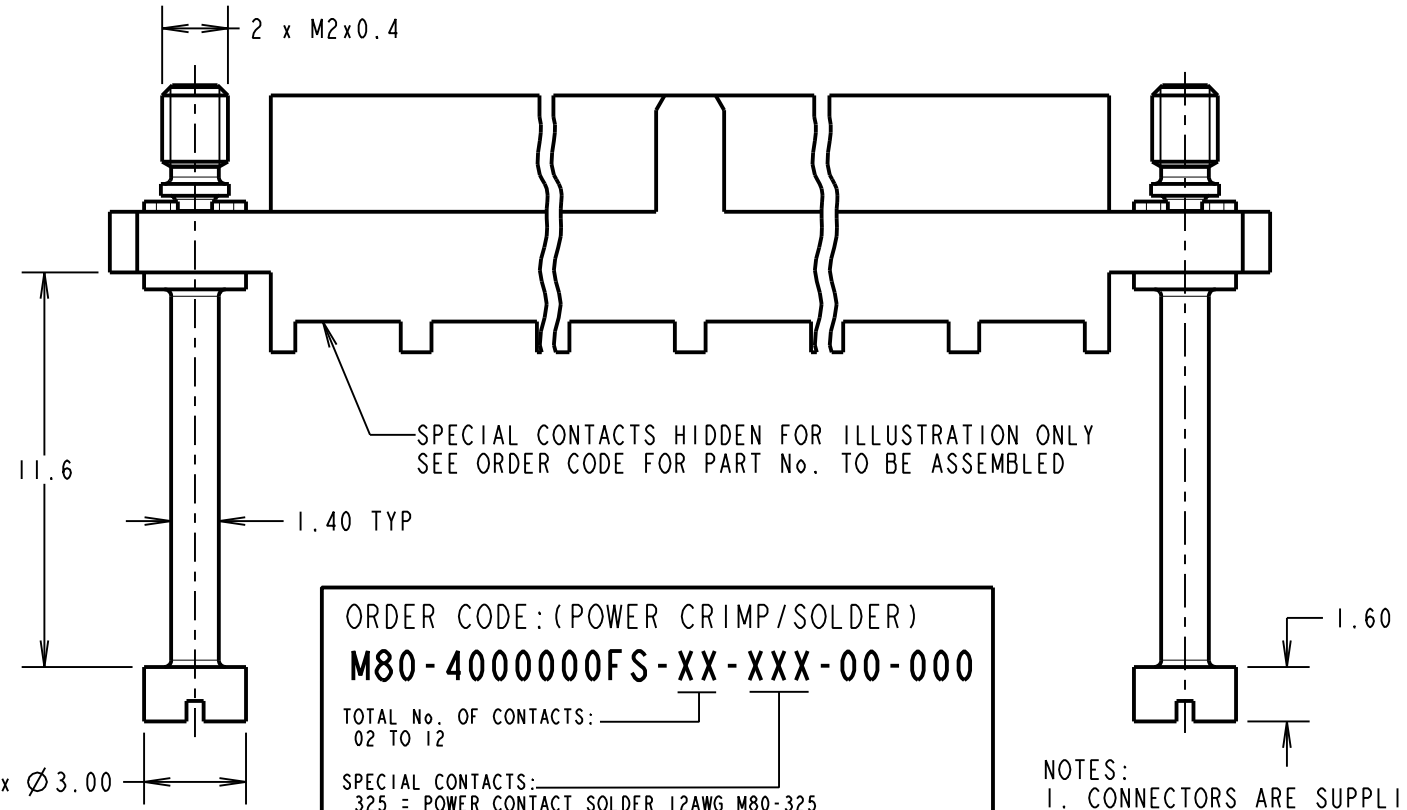
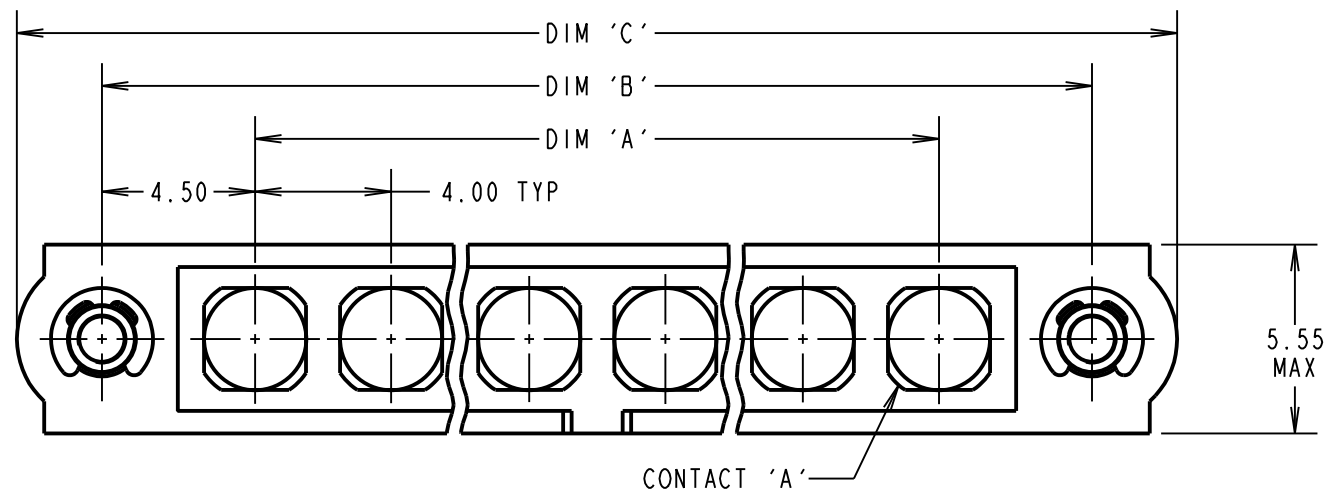
ALL DIMENSIONS IN mm

**SPECIFICATIONS:**

**MATERIAL:**  
 Moulding: GLASS FILLED PPS, UL94V-0, BLACK  
**POWER CONTACT:**  
 BODY = COPPER ALLOY  
 LATCHING COLLAR = BERYLLIUM COPPER  
 JACKSCREW, CIRCLIP = 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

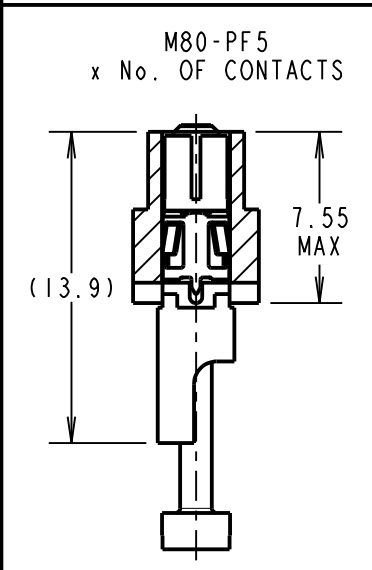
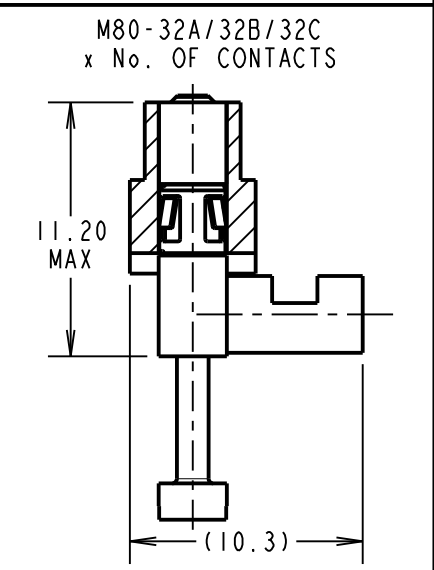
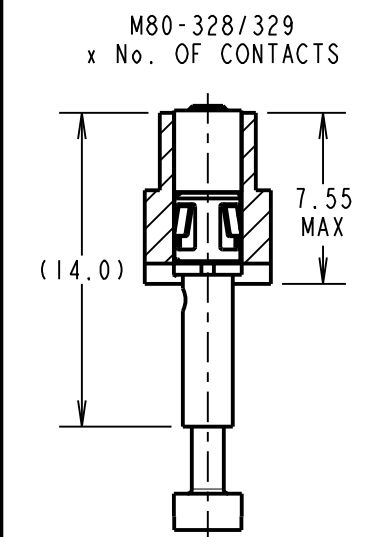
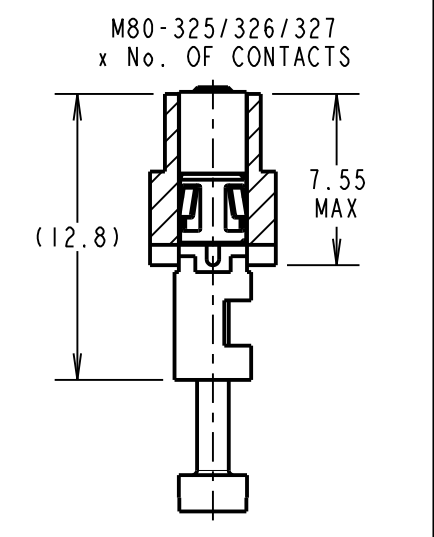
**MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
**POWER CONTACT:**  
 INSERTION FORCE:  
 M80-325/326/327/328/329/  
 32A/32B/32C = 8N MAX  
 M80-PF5 = 15N MAX  
 WITHDRAWAL FORCE = 0.5N MIN  
**ENVIRONMENTAL:**  
 TEMPERATURE RANGE:  
 M80-325/326/327/328/329/  
 32A/32B/32C = -55°C TO +125°C  
 M80-PF5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

## POWER CRIMP AND SOLDER CONTACTS ONLY



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: CONNECTOR WITH 08 POWER CONTACTS, M80-400000FS-08-305-00-000 DIM 'A' = 28.00mm, DIM 'B' = 37.00mm, DIM 'C' = 42.0mm	

ORDER CODE: (POWER CRIMP/SOLDER)  
**M80-400000FS-XX-XXX-00-000**  
 TOTAL No. OF CONTACTS: \_\_\_\_\_  
 02 TO 12  
 SPECIAL CONTACTS: \_\_\_\_\_  
 325 = POWER CONTACT SOLDER 12AWG M80-325  
 326 = POWER CONTACT SOLDER 14AWG M80-326  
 327 = POWER CONTACT SOLDER 16AWG M80-327  
 328 = POWER CONTACT SOLDER OR CRIMP 18AWG M80-328  
 329 = POWER CONTACT SOLDER OR CRIMP 20AWG M80-329  
 32A = 90° POWER CONTACT SOLDER 12AWG M80-32A  
 32B = 90° POWER CONTACT SOLDER 14AWG M80-32B  
 32C = 90° POWER CONTACT SOLDER 16AWG M80-32C  
 PF5 = POWER CONTACT SOLDER 10AWG M80-PF5



- NOTES:**
- CONNECTORS ARE SUPPLIED WITH CONTACTS LOOSE.
  - FOR EXTRA POWER CONTACTS, USE PART NUMBERS:  
M80-325/326/327/328/329/32A/32B/32C/PF5.
  - POWER CONTACT EXTRACTION TOOL = Z80-290.
  - INSTRUCTION SHEETS ARE AVAILABLE.
  - RECOMMENDED HAND CRIMP TOOL FOR CONTACTS  
M80-328/329 = Z80-294 WITH POSITIONER Z80-295.
  - POWER CONTACT WIRE, STRIP BY 5.00mm MINIMUM.

MGP	3	9.12.19	21540
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: RP			
DRAWN: M.G.PLESTED			
CUSTOMER REF.:			
ASSEMBLY DRG:			

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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 ASSY WITH EXTENDED JACKSCREW  
**DRAWING NUMBER:**  
**M80-400000FS-XX-XXX-00-000**  
 SHT 6 OF 8

# Customer Information Sheet

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

IF IN DOUBT - ASK

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NOT TO SCALE

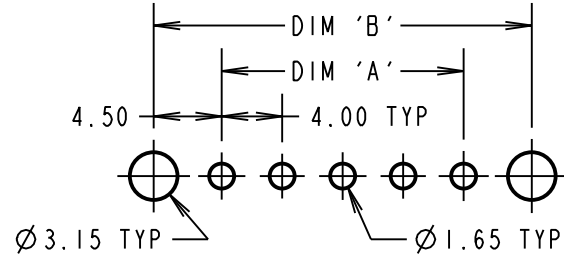
THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

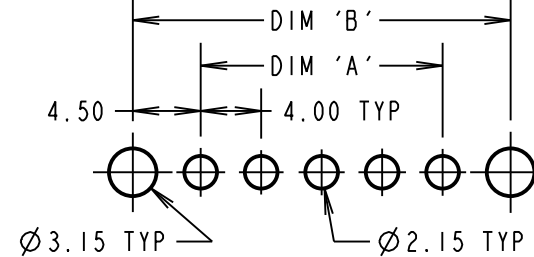
**SPECIFICATIONS:**

**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
 POWER CONTACT: COPPER ALLOY  
 COAX CONTACT:  
 BODY = COPPER ALLOY  
 INNER CONTACT = COPPER ALLOY  
 INSULATOR = PTFE  
 JACKSCREW, CIRCLIP = 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)

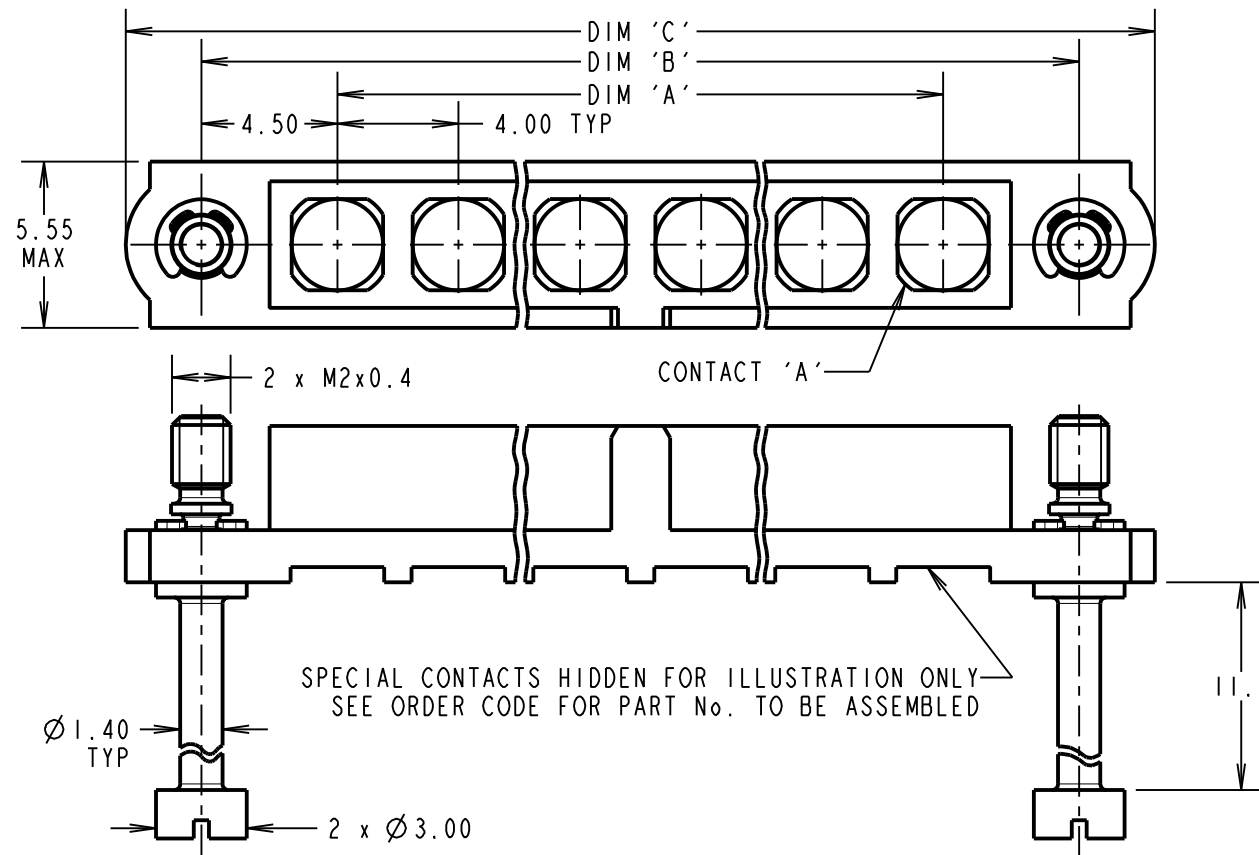
RECOMMENDED PCB LAYOUT FOR  
 POWER CONTACTS: M80-321/322  
 TOLERANCE = ±0.05mm



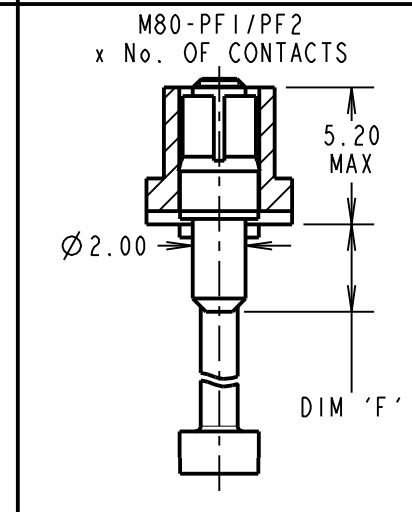
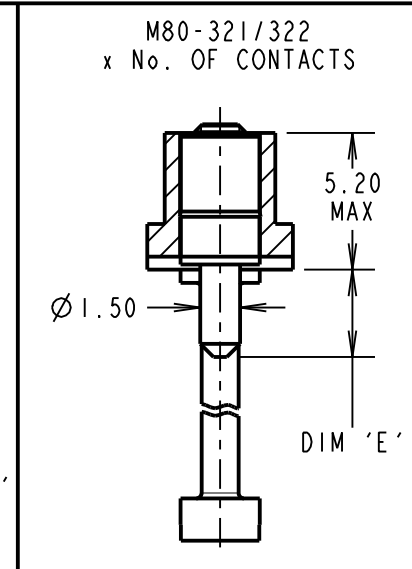
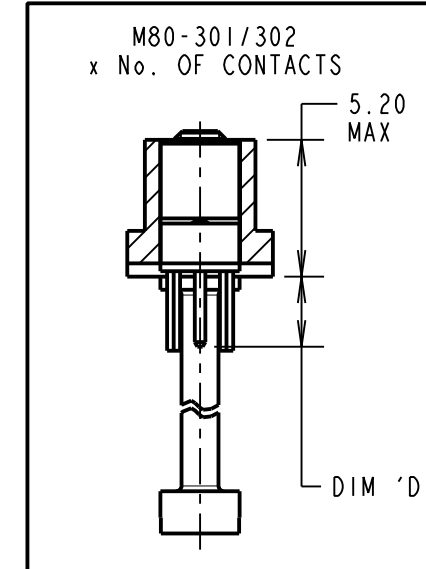
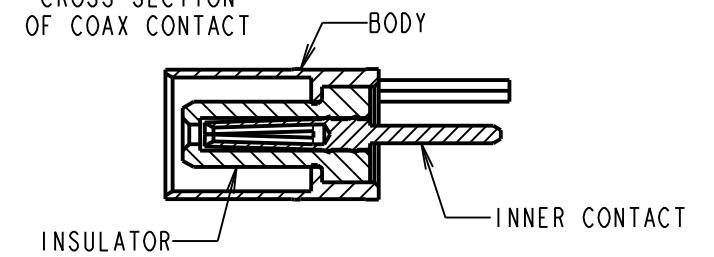
RECOMMENDED PCB LAYOUT FOR  
 POWER CONTACTS: M80-PF1/PF2  
 TOLERANCE = ±0.05mm



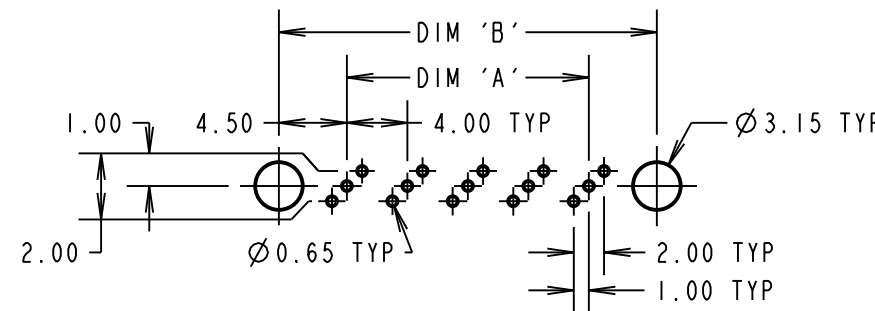
## PC TAIL VERTICAL CONTACTS ONLY



CROSS-SECTION OF COAX CONTACT



RECOMMENDED PCB LAYOUT FOR  
 COAX CONTACTS: M80-301/302  
 TOLERANCE = ±0.05mm



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 = 3.00mm, M80-302 = 4.50mm
DIM 'E'	M80-321 = 3.50mm, M80-322 = 5.00mm
DIM 'F'	M80-PF1 = 3.50mm, M80-PF2 = 5.00mm

EXAMPLE 1: CONNECTOR WITH 08 COAX CONTACTS,  
 M80-400000FS-08-301-00-000  
 DIM 'A' = 28.00mm, DIM 'B' = 37.00mm, DIM 'C' = 42.0mm  
 DIM 'D' = 3.00mm

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS,  
 M80-400000FS-10-321-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.0mm  
 DIM 'E' = 3.50mm

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

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

SPECIAL CONTACTS: \_\_\_\_\_

301 = COAX CONTACT PC TAIL 3.0mm M80-301  
 302 = COAX CONTACT PC TAIL 4.5mm M80-302  
 321 = 20A POWER CONTACT PC TAIL 3.5mm M80-321  
 322 = 20A POWER CONTACT PC TAIL 5.0mm M80-322  
 PF1 = 40A POWER CONTACT PC TAIL 3.5mm M80-PF1  
 PF2 = 40A POWER CONTACT PC TAIL 5.0mm M80-PF2

MGP	3	9.12.19	21540
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: RP			
DRAWN: M.G.PLESTED			
CUSTOMER REF.:			
ASSEMBLY DRG:			

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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 ASSY WITH EXTENDED JACKSCREW  
 DRAWING NUMBER: **M80-400000FS-XX-XXX-00-000** SHT 7 OF 8

# Customer Information Sheet

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

IF IN DOUBT - ASK

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NOT TO SCALE

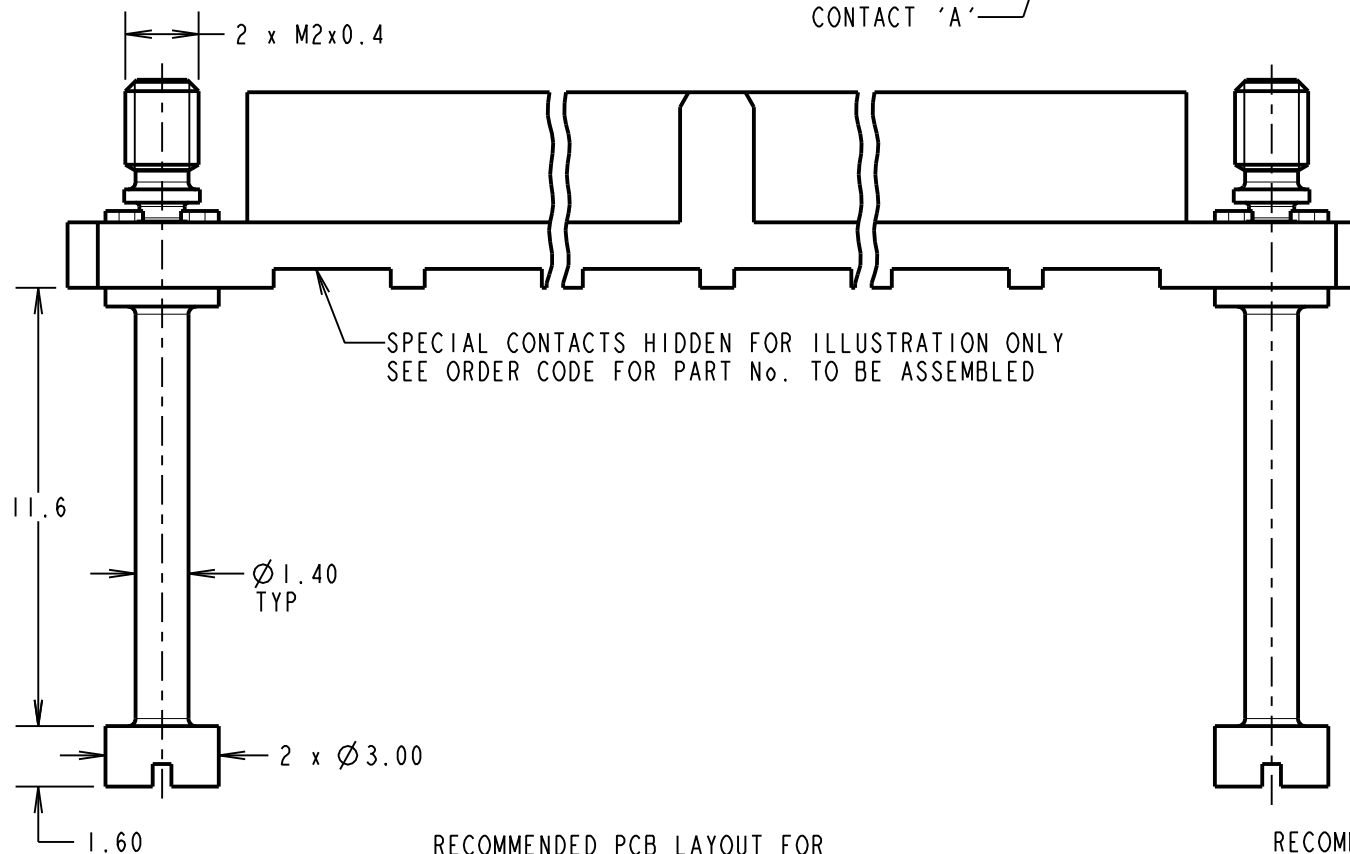
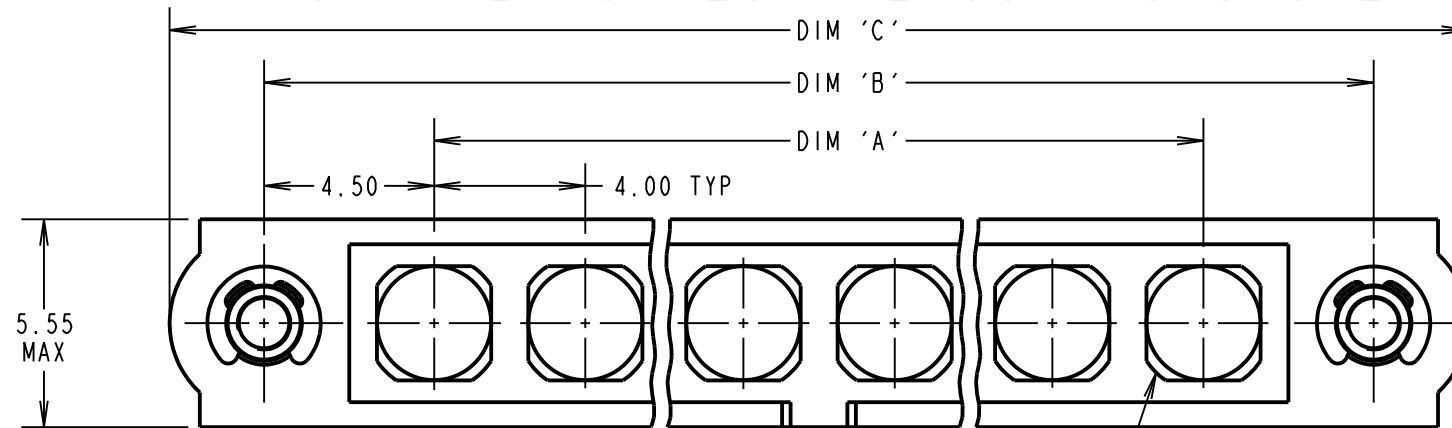
THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

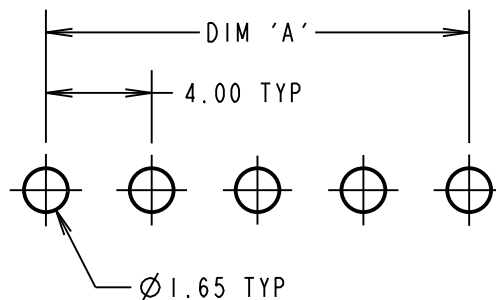
**SPECIFICATIONS:**

**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
 POWER CONTACT: COPPER ALLOY  
 COAX CONTACT:  
 BODY = COPPER ALLOY  
 INNER CONTACT = COPPER ALLOY  
 INSULATOR = PTFE  
 JACKSCREW, CIRCLIP = 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)

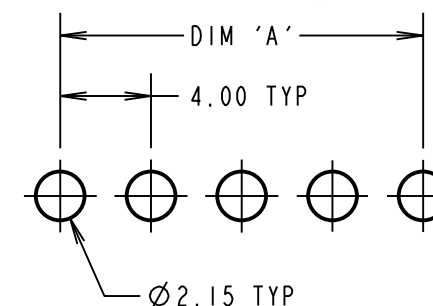
## PC TAIL HORIZONTAL CONTACTS ONLY



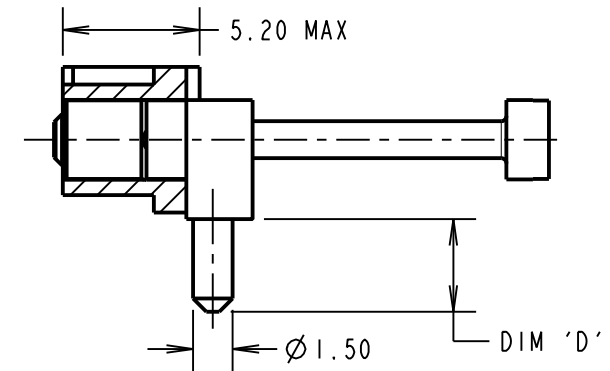
RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-323/324  
 TOLERANCE = ±0.05mm



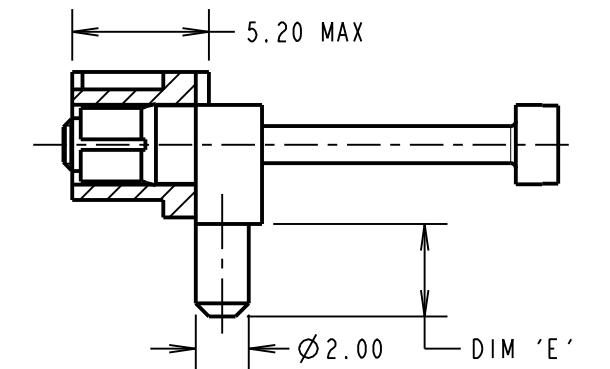
RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-PF3/PF4  
 TOLERANCE = ±0.05mm



M80-323/324  
 x No. OF CONTACTS



M80-PF3/PF4  
 x No. OF CONTACTS



ORDER CODE:  
 (FEMALE HORIZONTAL POWER CONTACTS ONLY)

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

TOTAL No. OF CONTACTS:  
 02 TO 12

FEMALE HORIZONTAL POWER CONTACTS:

323 = 20A POWER CONTACT PC TAIL 3.5mm M80-323  
 324 = 20A POWER CONTACT PC TAIL 5.0mm M80-324  
 PF3 = 40A POWER CONTACT PC TAIL 3.5mm M80-PF3  
 PF4 = 40A POWER CONTACT PC TAIL 5.0mm 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 = 3.50mm, M80-324 = 5.00mm
DIM 'E'	M80-PF3 = 3.50mm, M80-PF4 = 5.00mm
EXAMPLE 1: CONNECTOR WITH 10 POWER CONTACTS 3.5mm, M80-400000FS-10-323-00-000 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.0mm DIM 'D' = 3.50mm	

MGP	3	9.12.19	21540
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: RP			
DRAWN: M.G.PLESTED			
CUSTOMER REF.:			
ASSEMBLY DRG:			

**HARWIN**

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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 ASSY WITH EXTENDED JACKSCREW  
**DRAWING NUMBER:**  
 M80-400000FS-XX-XXX-00-000  
 SHT 8 OF 8