

Customer Information Sheet

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

SHEET 5 OF 8

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NOT TO SCALE

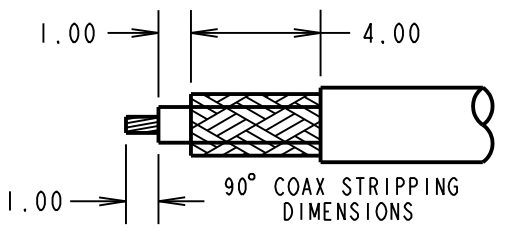
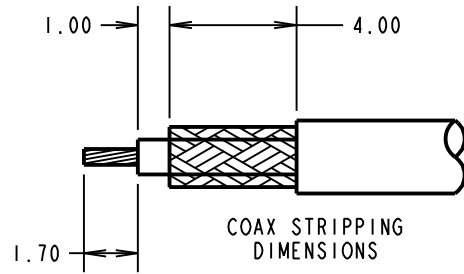
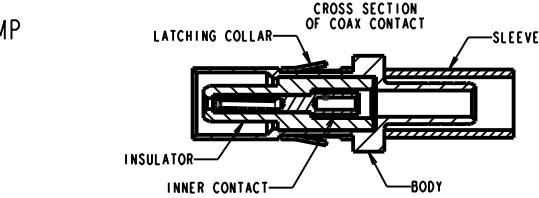
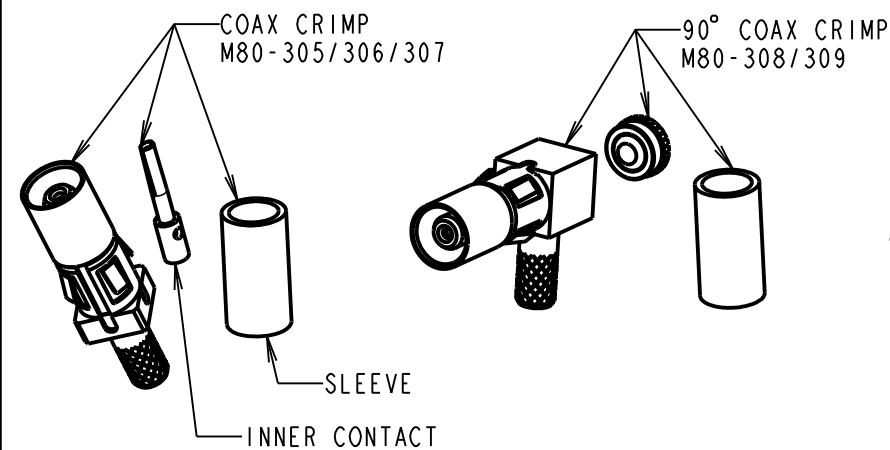
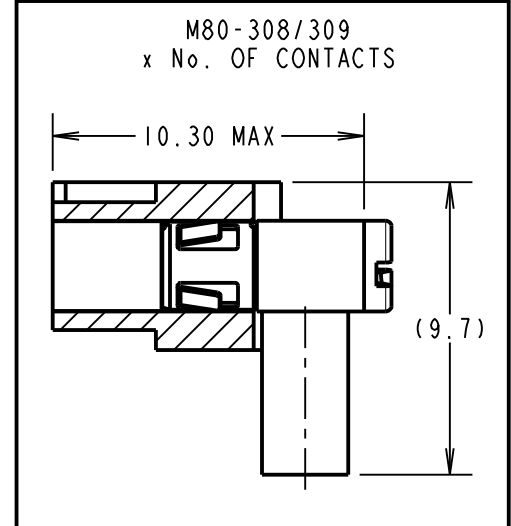
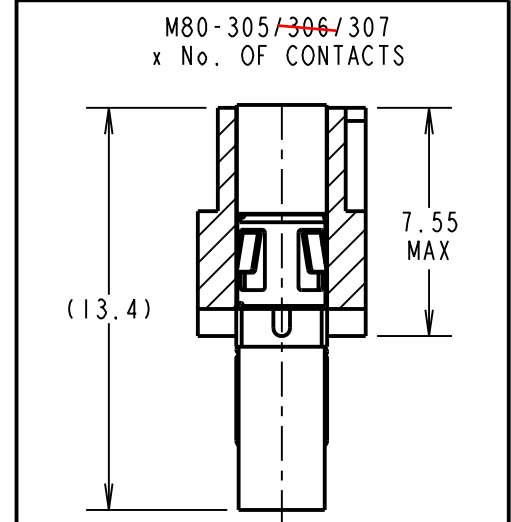
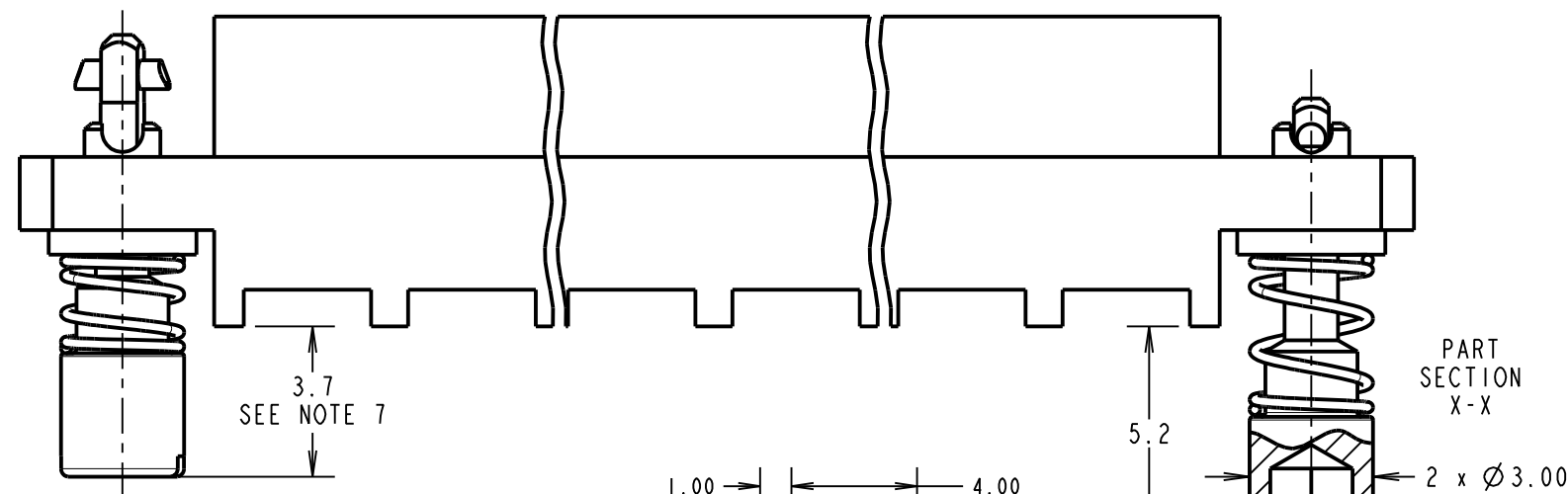
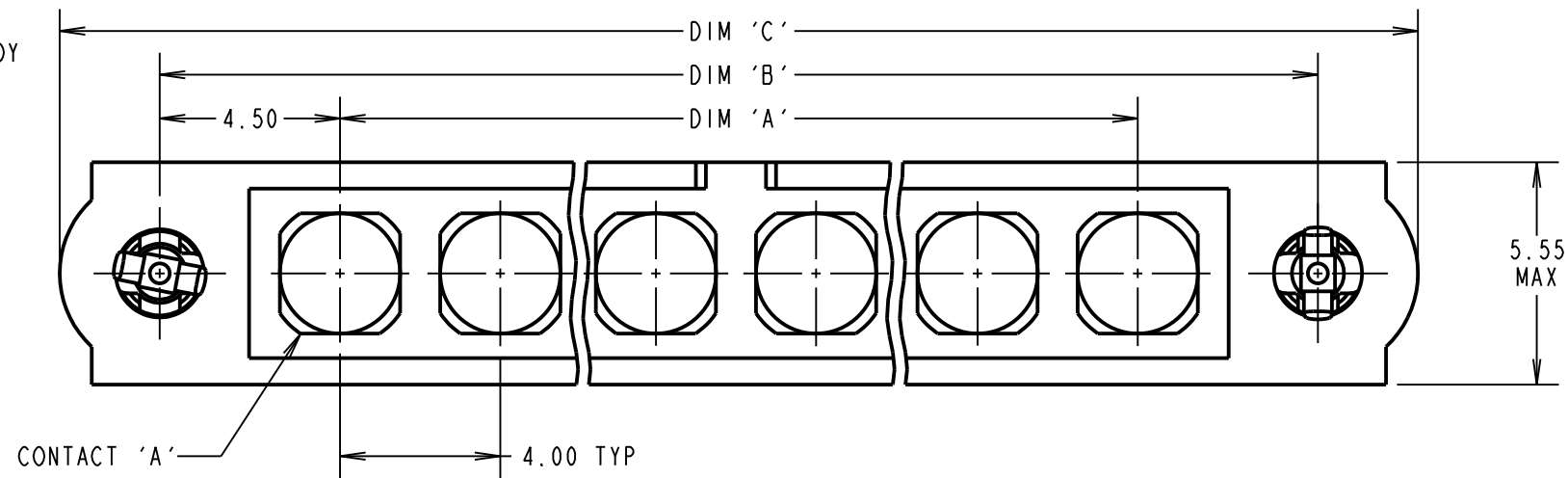
THIRD ANGLE PROJECTION

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 = 10⁶MΩ @ 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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 technical@harwin.com

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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: mm²

TITLE: DATAMATE MIX-TEK FEMALE ASSEMBLY WITH HEX SOCKET IOILOK
DRAWING NUMBER: M80-400000FR-XX-XXX-00-000
 SHT 5 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 6 OF 8

IF IN DOUBT - ASK

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NOT TO SCALE

THIRD ANGLE PROJECTION

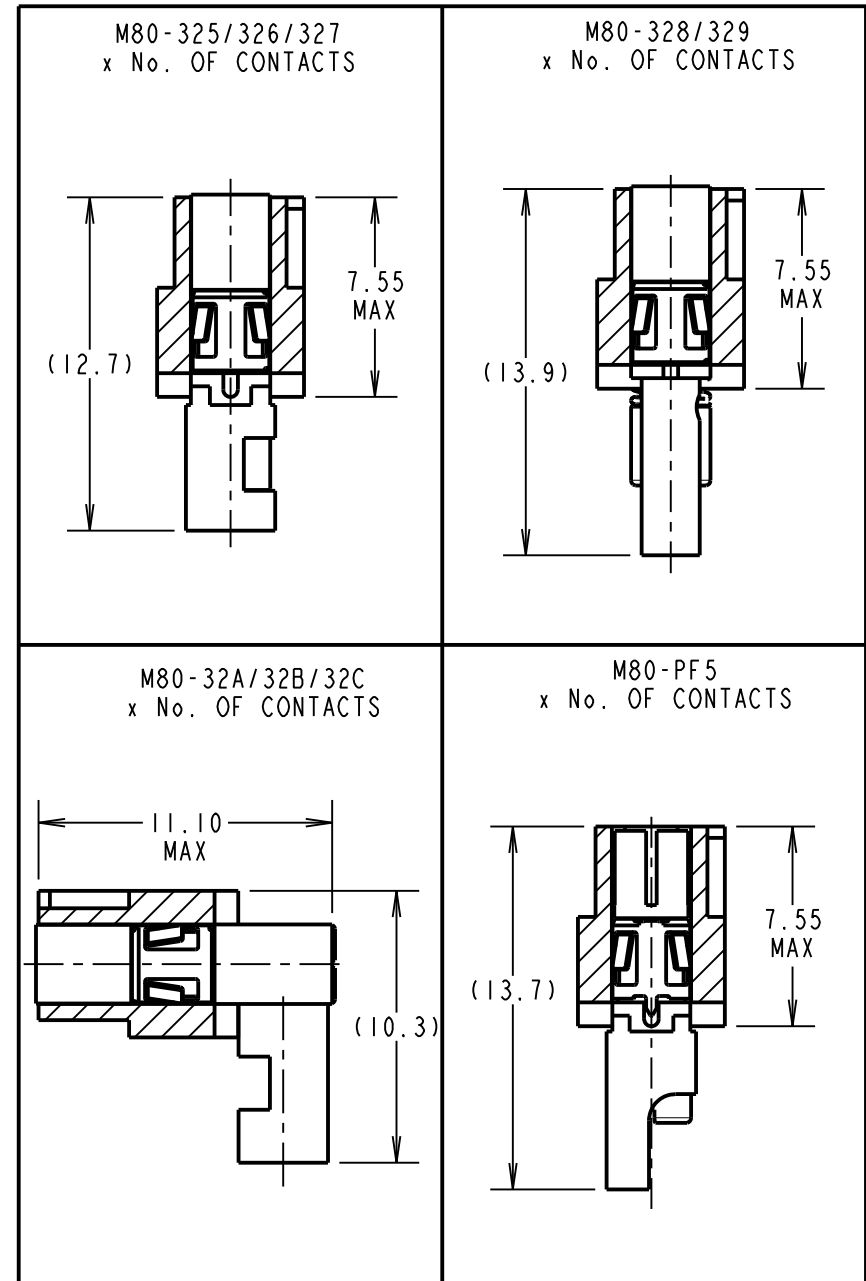
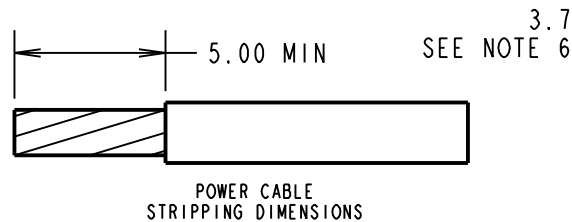
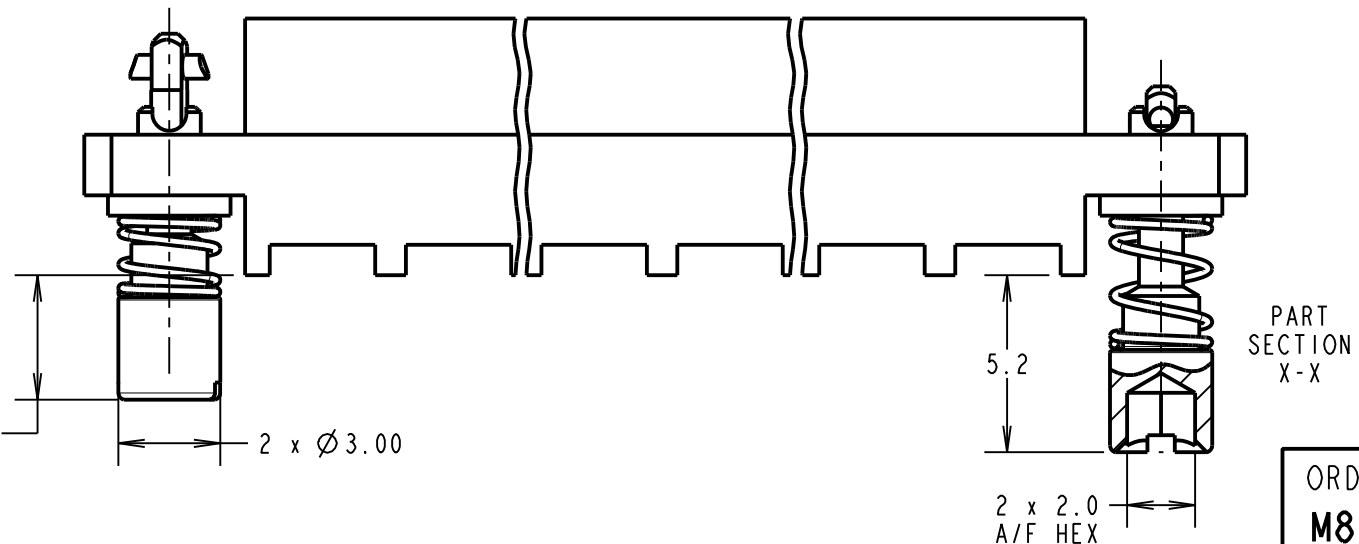
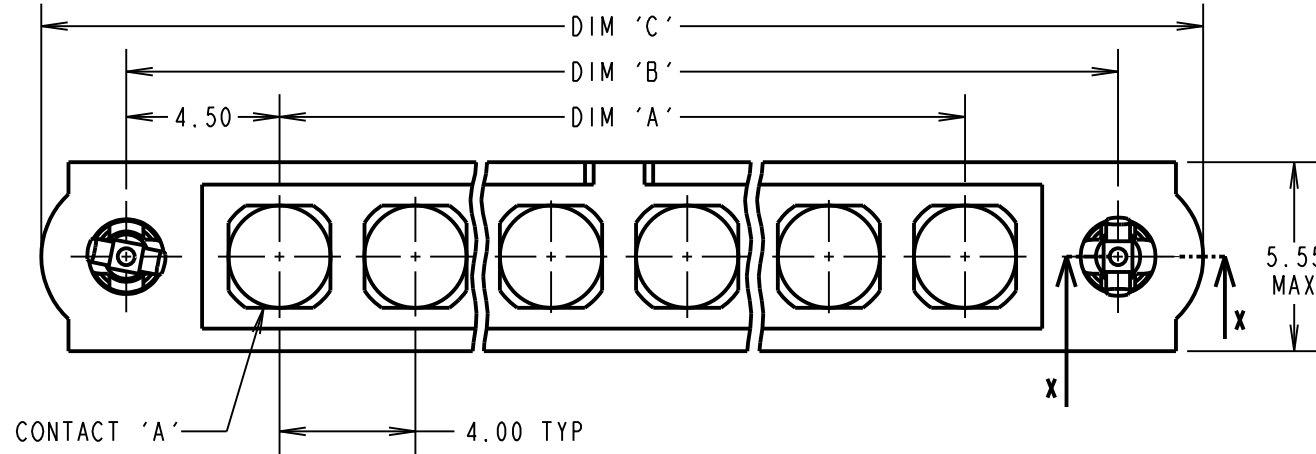
ALL DIMENSIONS IN mm

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: mm²

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

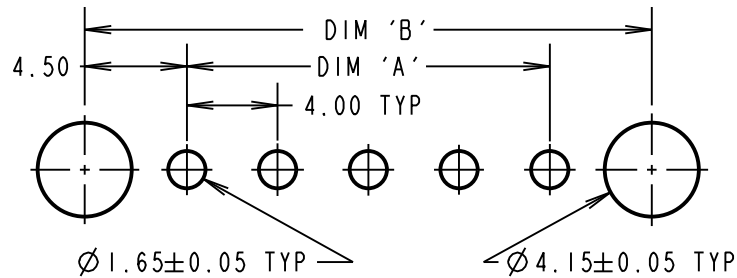
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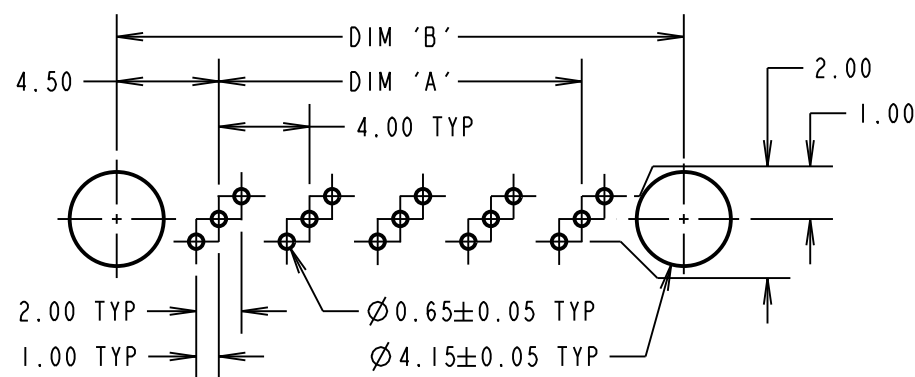
THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

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

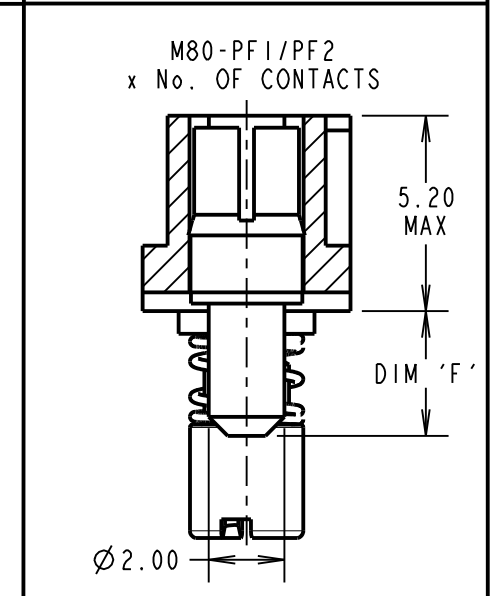
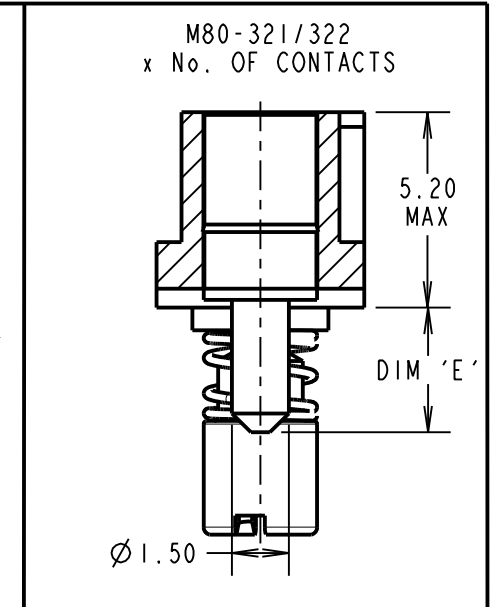
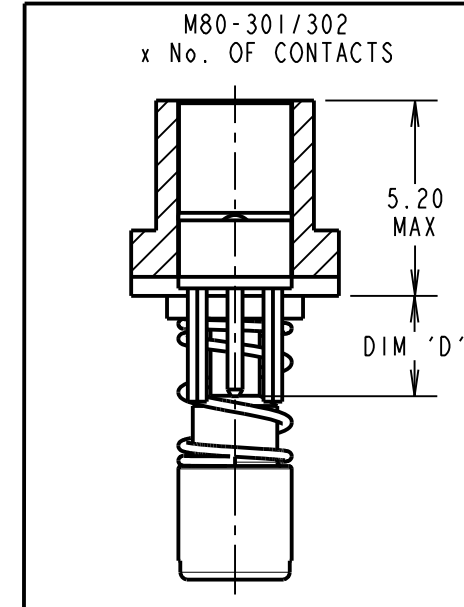
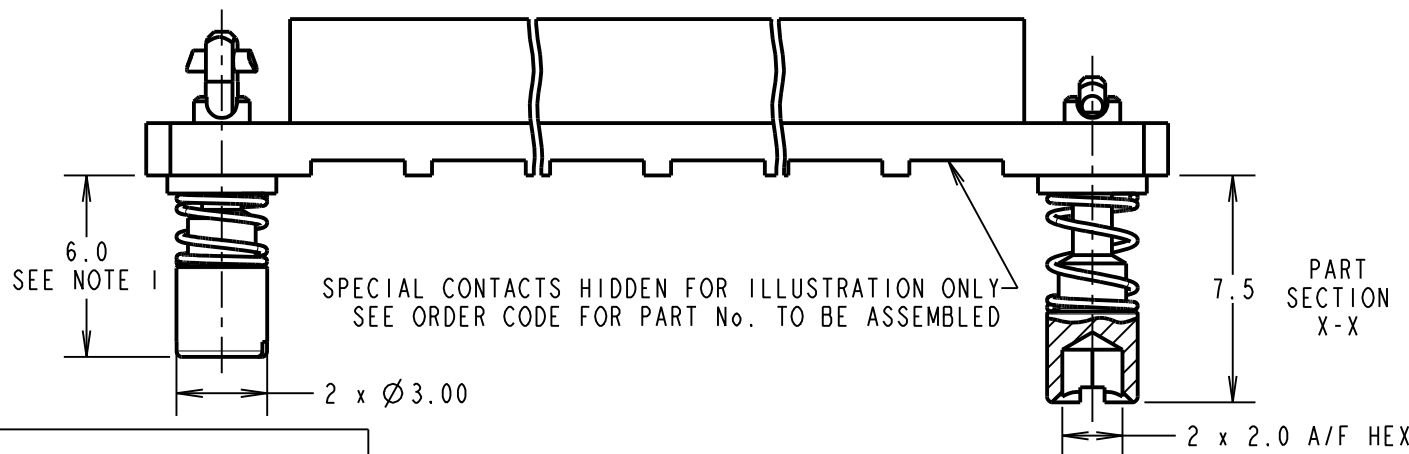
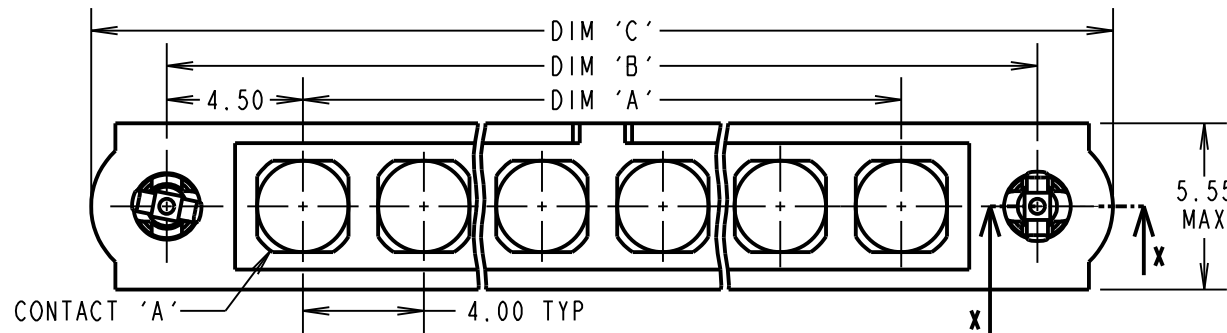


RECOMMENDED PCB LAYOUT FOR COAX CONTACTS: M80-301/302

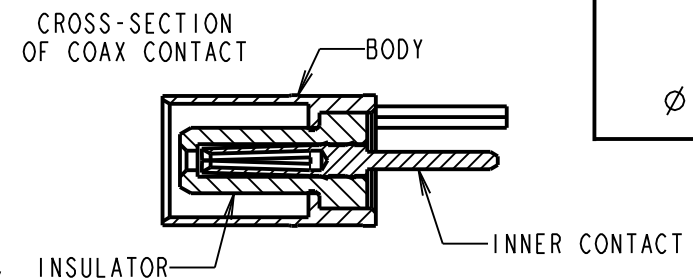


- SPECIFICATIONS:**
MATERIAL:
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK
 POWER CONTACT: COPPER ALLOY
 COAX CONTACT:
 BODY = COPPER ALLOY
 INNER CONTACT = COPPER ALLOY
 INSULATOR = PTFE
 IOILOK SCREW, COLLAR = STAINLESS STEEL
FINISH:
 POWER CONTACT: GOLD
 COAX CONTACT: BODY, INNER CONTACT = GOLD
ELECTRICAL:
 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 = 10⁶MΩ @ 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)

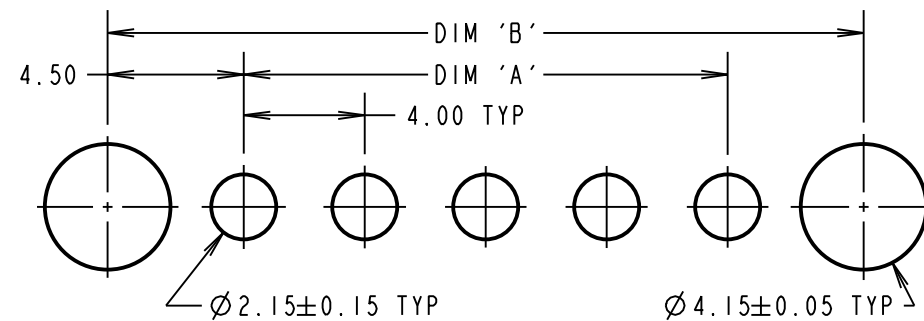
VERTICAL PC TAIL CONTACTS ONLY



- 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: mm²

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 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
 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

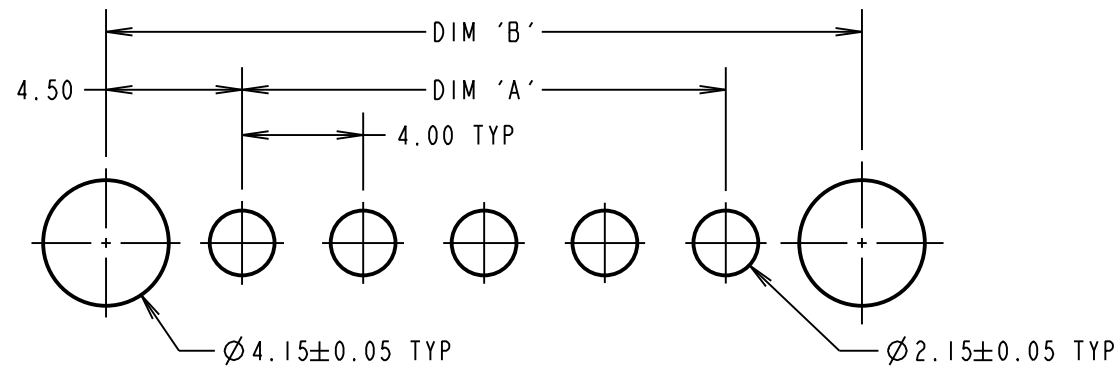
PACKING:

TUBE
 FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

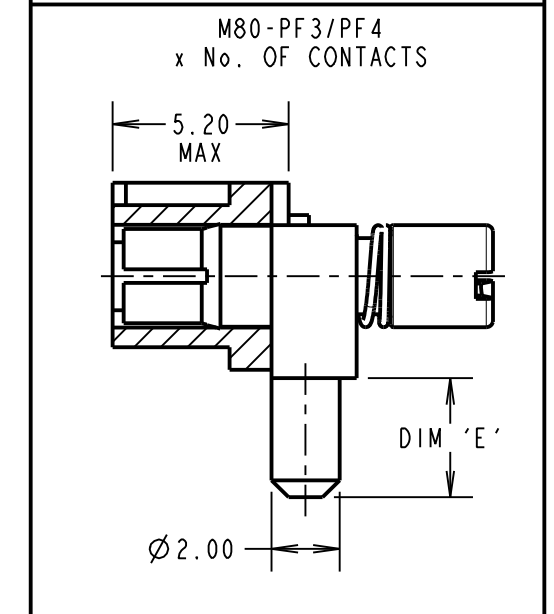
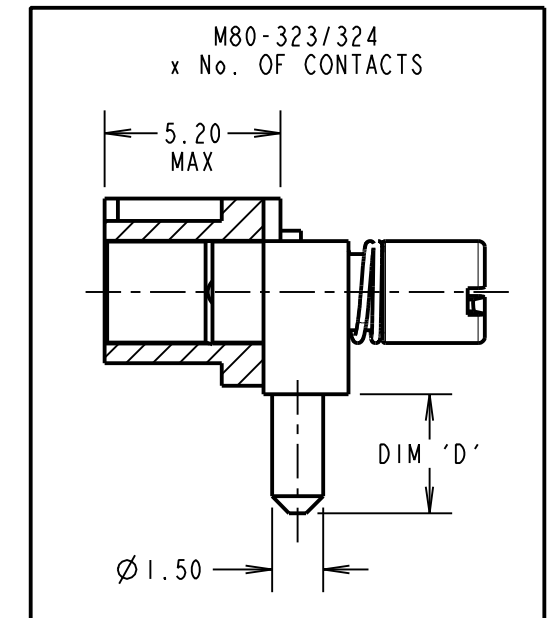
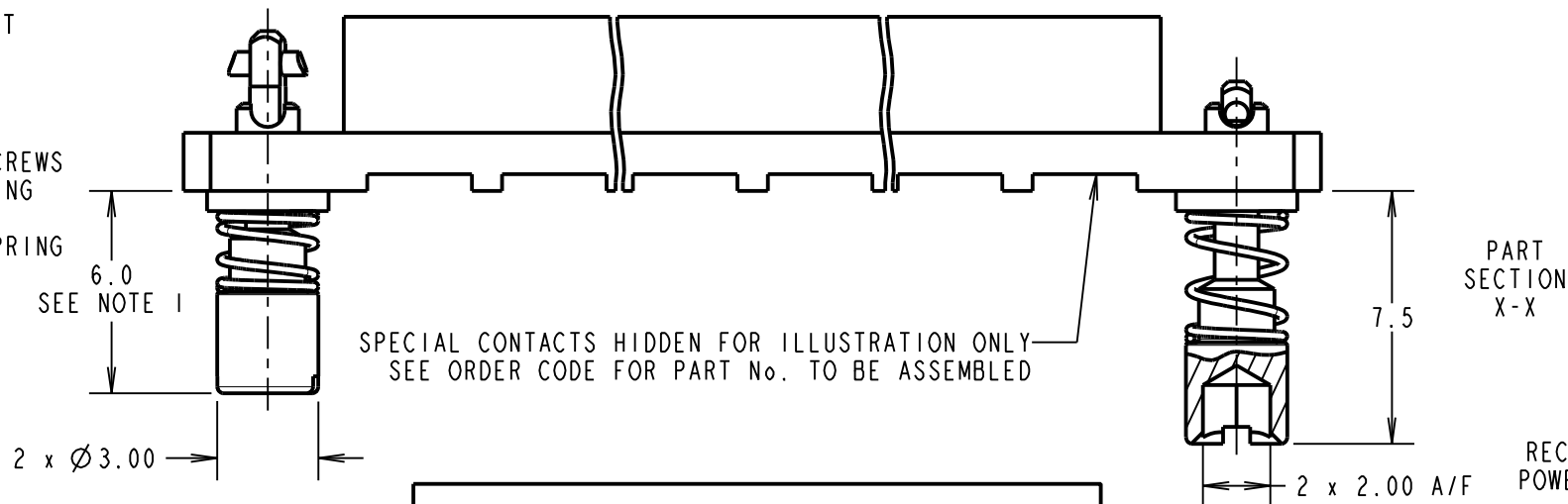
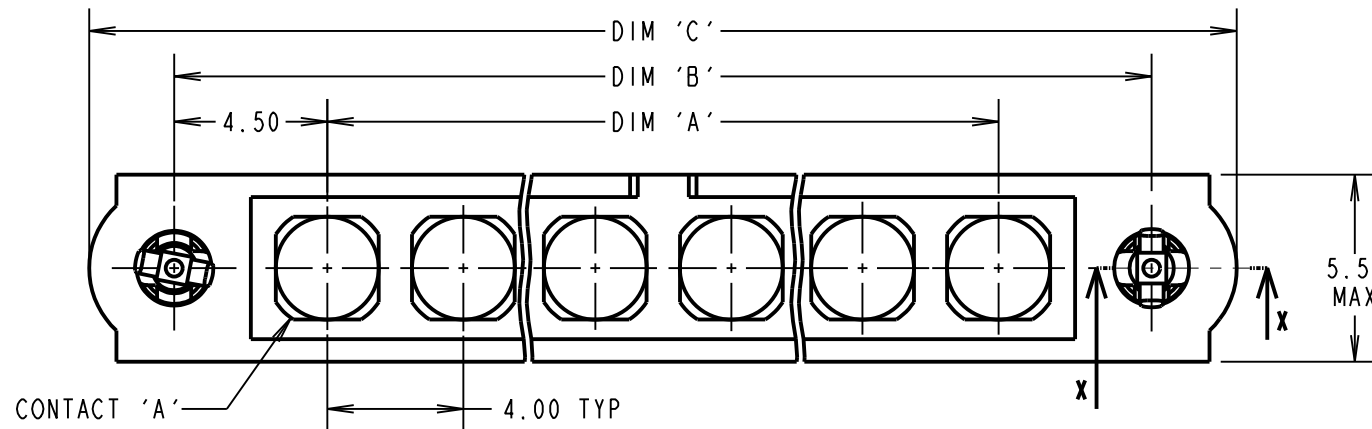
NOTES:

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

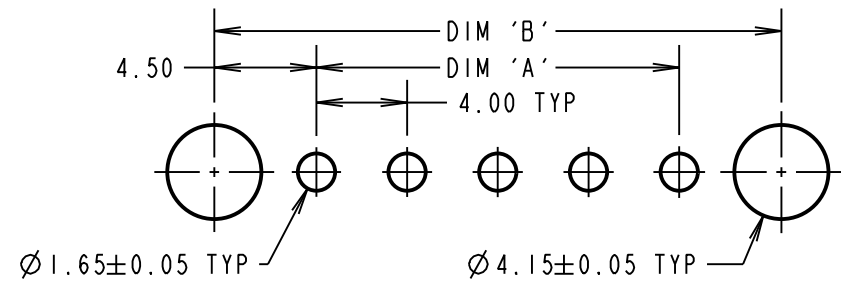
RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-PF3/PF4



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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 technical@harwin.com

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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: mm²

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:			

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