Customer Information Sheet

DRAWING No.: M80-4000000FC-XX-XXX-00-000	SHEET 5 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
- COAX CONTACT:
  - BODY, SLEEVE, INNER CONTACT, END PLUG = COPPER ALLOY
  - LATCHING COLLAR = BERYLLIUM COPPER
  - INSULATOR = PTFE
- 101LOK 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 = 10^6MΩ @250V AC
  - OPERATING VOLTAGE = 180V AC @ 500mA
  - MAXIMUM VOLTAGE = 1000V AC

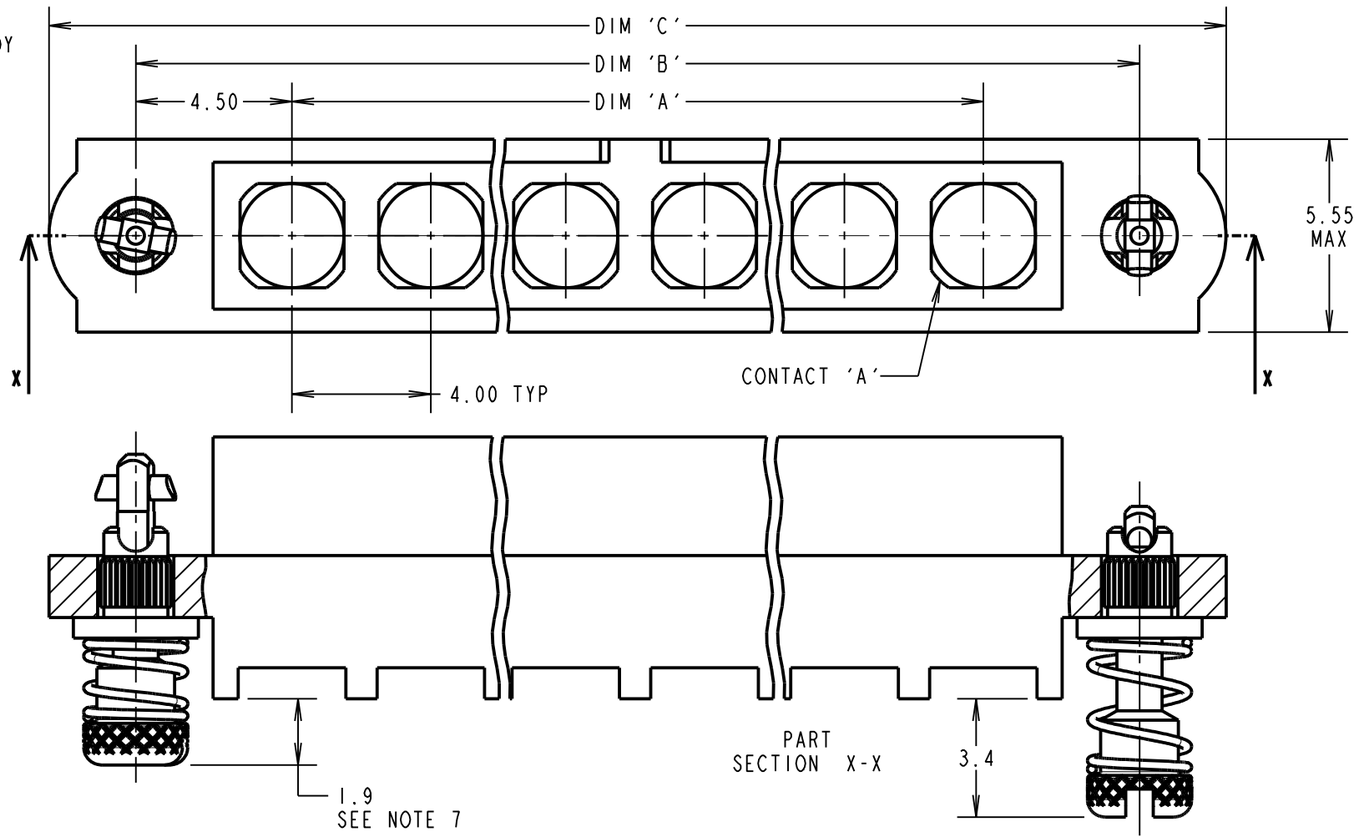
MECHANICAL:
- DURABILITY = 500 OPERATIONS
- COAX CONTACT:
  - INSERTION FORCE = 8N MAX
  - WITHDRAWAL FORCE = 0.5N MIN

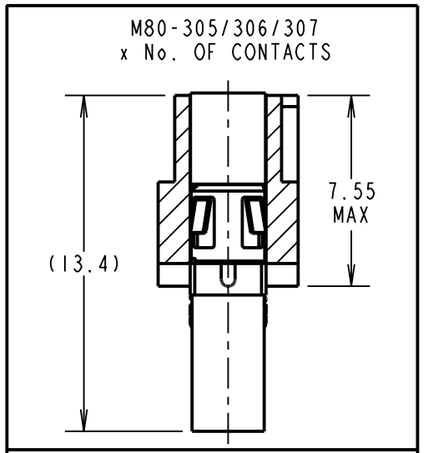
ENVIRONMENTAL:
- TEMPERATURE RANGE = -55°C TO +125°C

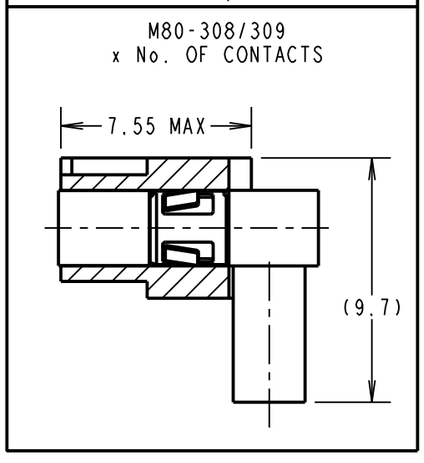
PACKING:
- BAG

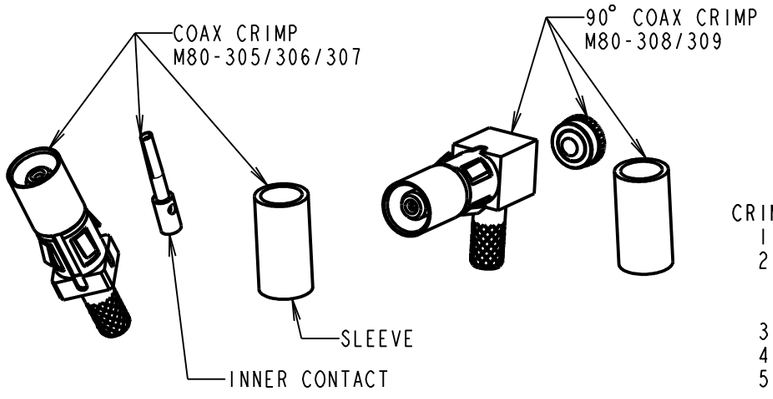
FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

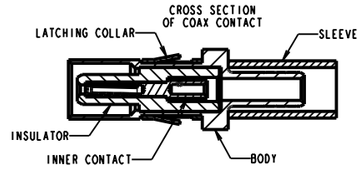
COAX CRIMP CONTACTS ONLY

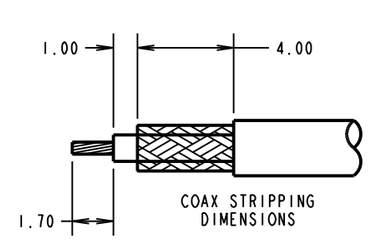


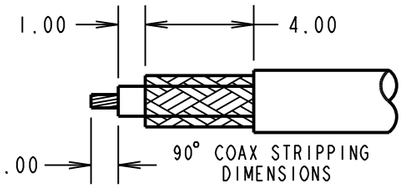












DIMENSION	CALCULATION
DIM 'A'	4 x No. OF CONTACTS - 4.00
DIM 'B'	4 x No. OF CONTACTS + 5.00
DIM 'C'	4 x No. OF CONTACTS + 10.00

EXAMPLE 1: CONNECTOR WITH 08 COAX CONTACTS,
M80-4000000FC-08-305-00-000
DIM 'A' = 28.00mm, DIM 'B' = 37.00mm, DIM 'C' = 42.00mm

CRIMP/SOLDER NOTES:
1. CONNECTORS ARE SUPPLIED WITH CONTACTS LOOSE.
2. 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.
3. FOR EXTRA COAX CONTACTS, USE PART NUMBERS M80-305/306/307/308/309.
4. COAX CONTACT EXTRACTION TOOL = Z80-290.
5. 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.
6. INSTRUCTION SHEETS ARE AVAILABLE.
7. LENGTH WILL BE 1.9 WHEN 101LOK SCREWS ARE ENGAGED WITH RETAINERS IN MATING CONNECTOR.
8. SPRING LOAD WHEN SOLID = 2.642N. SPRING RATE = 1.32N/mm.
9. RECOMMENDED PANEL/PCB THICKNESS = 1.3 - 1.6mm.

ORDER CODE: (COAX CRIMP CONTACTS ONLY)

M80-4000000FC-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

NAME	ISS.	DATE	C/NOTE
MSP	6	31.03.15	12566
APPROVED:	M.PERREN		
CHECKED:	S.BENNETT		
DRAWN:	C.PENROSE		
CUSTOMER REF.:			
ASSEMBLY DRG:			

HARWIN
www.harwin.com
technical@harwin.com

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 101LOK JACKSCREW

DRAWING NUMBER: M80-4000000FC-XX-XXX-00-000

SHT 5 OF 8

Customer Information Sheet

DRAWING No.: M80-4000000FC-XX-XXX-00-000	SHEET 6 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:
  - BODY, SLEEVE, INNER CONTACT, END PLUG = COPPER ALLOY
  - LATCHING COLLAR = BERYLLIUM COPPER
  - INSULATOR = PTFE
- 10ILOK 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

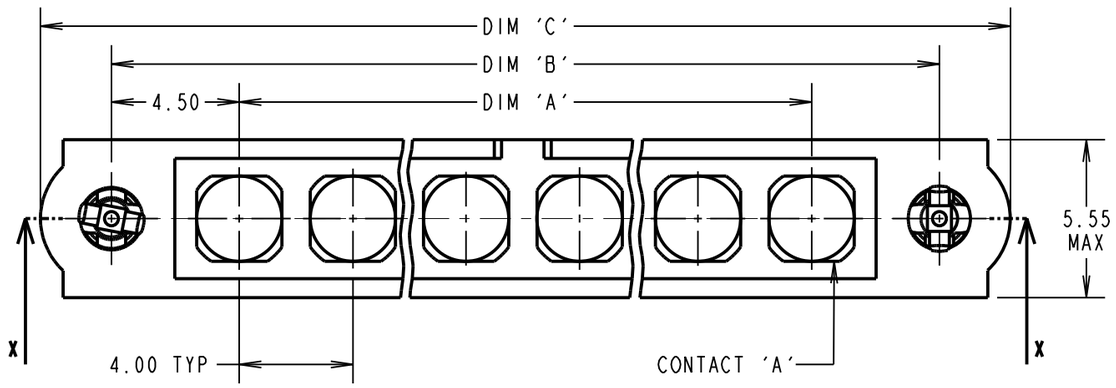
MECHANICAL:
- DURABILITY = 500 OPERATIONS
- POWER CONTACT:
  - INSERTION FORCE:
    M80-325/326/327/328/329/
    32A/32B/32C = 8N MAX
    M80-PF5 = 15N MAX
  - WITHDRAWAL FORCE = 0.5N MIN

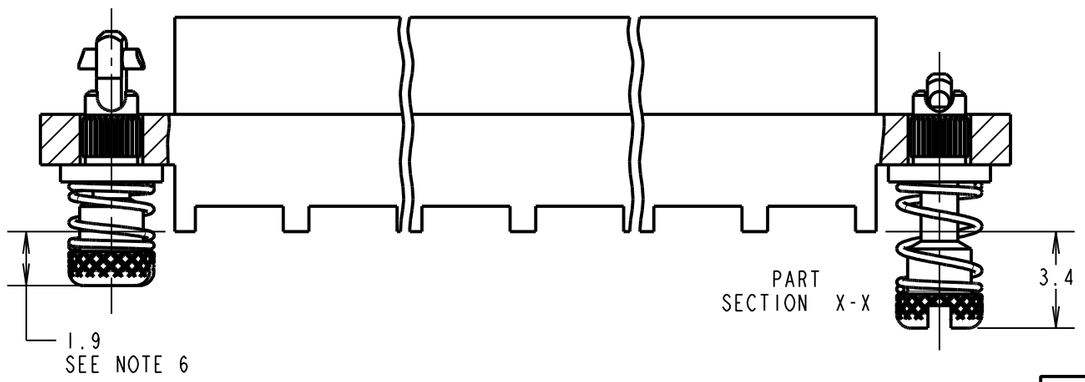
ENVIRONMENTAL:
- TEMPERATURE RANGE:
  M80-325/326/327/328/329/
  32A/32B/32C = -55°C TO +125°C
  M80-PF5 = -55°C TO +150°C

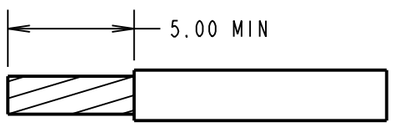
PACKING:
- BAG

FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

POWER CRIMP & SOLDER CONTACTS ONLY

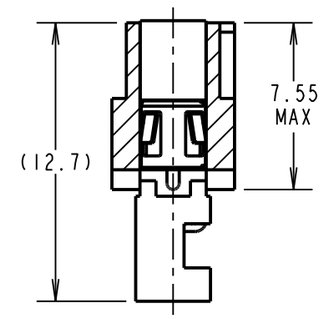




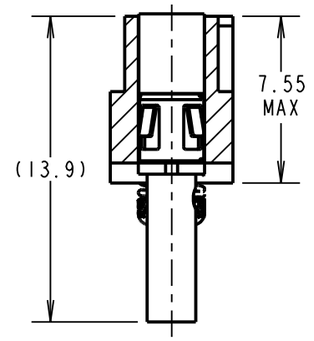


POWER CABLE STRIPPING DIMENSIONS

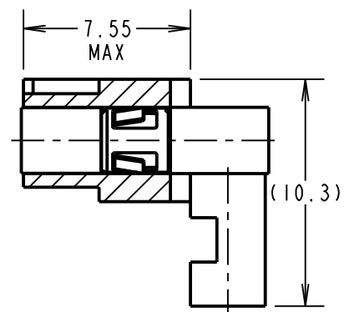
M80-325/326/327 x No. OF CONTACTS



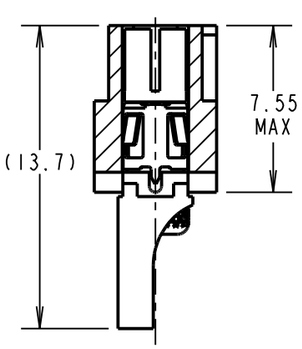
M80-328/329 x No. OF CONTACTS



M80-32A/32B/32C x No. OF CONTACTS



M80-PF5 x No. OF CONTACTS



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 + 10.00

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS,
M80-4000000FC-10-325-00-000
DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.00mm

CRIMP/SOLDER NOTES:
1. CONNECTORS ARE SUPPLIED WITH CONTACTS LOOSE.
2. FOR EXTRA POWER CONTACTS USE PART NUMBERS M80-325/326/327/328/329/32A/32B/32C/PM5.
3. POWER CONTACT EXTRACTION TOOL = Z80-290.
4. RECOMMENDED HAND CRIMP TOOL FOR CONTACTS 328/329 = Z80-294 AND POSITIONER Z80-295.
5. INSTRUCTION SHEETS ARE AVAILABLE.
6. LENGTH WILL BE 1.9 WHEN 10ILOK SCREWS ARE ENGAGED WITH RETAINERS IN MATING CONNECTOR.
7. SPRING LOAD WHEN SOLID = 2.642N. SPRING RATE = 1.32N/mm.
8. RECOMMENDED PANEL/PCB THICKNESS = 1.3 - 1.6mm.

ORDER CODE: (POWER CRIMP/SOLDER CONTACTS ONLY)

M80-4000000FC-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

MSP	6	31.03.15	12566
NAME	ISS.	DATE	C/NOTE
APPROVED:	M.PERREN		
CHECKED:	S.BENNETT		
DRAWN:	C.PENROSE		
CUSTOMER REF.:			
ASSEMBLY DRG:			

HARWiN
www.harwin.com
technical@harwin.com

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 10ILOK JACKSCREW

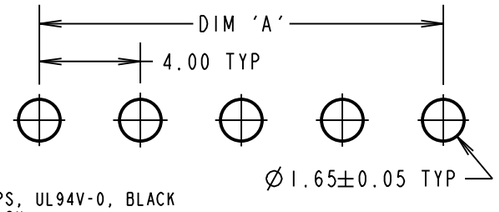
DRAWING NUMBER: M80-4000000FC-XX-XXX-00-000

SHT 6 OF 8

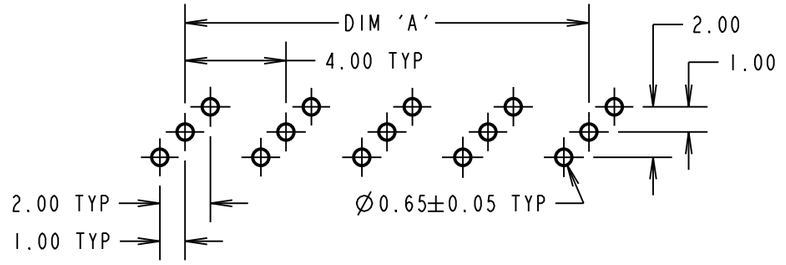
Customer Information Sheet

DRAWING No.: M80-4000000FC-XX-XXX-00-000	SHEET 7 OF 8	IF IN DOUBT - ASK	©	NOT TO SCALE	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
- 101LOK 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 = 10^6MΩ @250V AC
  - OPERATING VOLTAGE = 180V AC @ 500mA
  - MAXIMUM VOLTAGE = 1000V AC

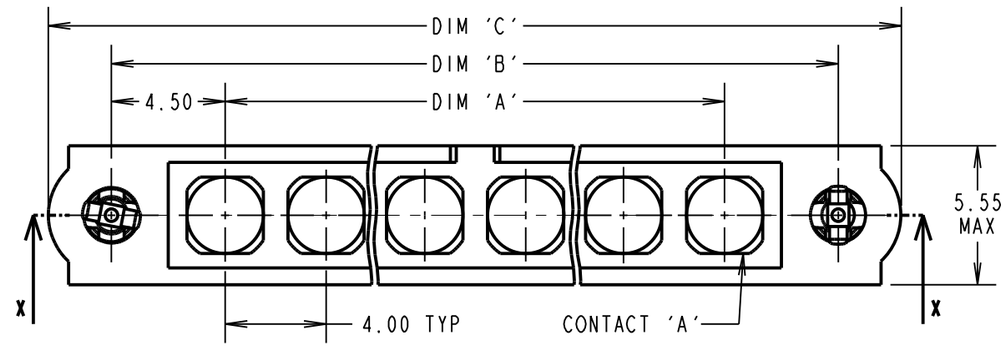
MECHANICAL:
- DURABILITY = 500 OPERATIONS
- POWER CONTACT:
  - INSERTION FORCE:
    - M80-321/322 = 8N MAX
    - M80-PF1/PF2 = 15N MAX
  - WITHDRAWAL FORCE = 0.5N MIN
- COAX CONTACT:
  - INSERTION FORCE = 8N MAX
  - WITHDRAWAL FORCE = 0.5N MIN

ENVIRONMENTAL:
- TEMPERATURE RANGE:
  - M80-301/302/321/322 = -55°C TO +125°C
  - M80-PF1/PF2 = -55°C TO +150°C

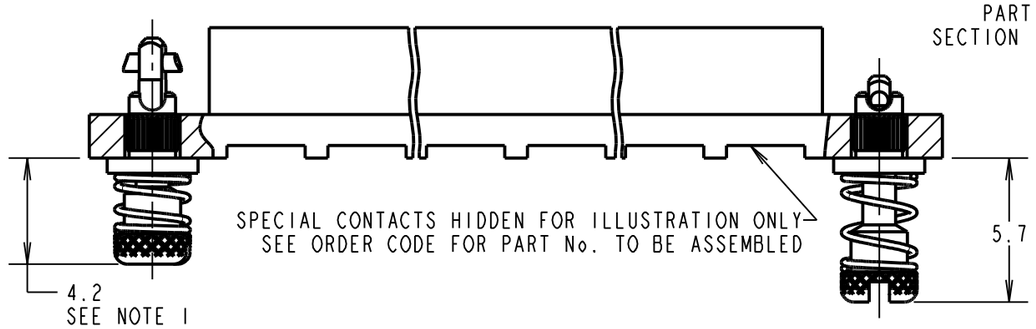
PACKING:
- TUBE

FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

VERTICAL PC TAIL CONTACTS ONLY



PART
SECTION X-X

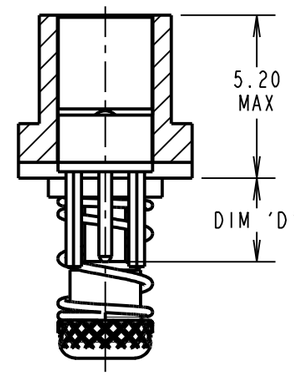


DIMENSION	CALCULATION
DIM 'A'	4 x No. OF CONTACTS - 4.00
DIM 'B'	4 x No. OF CONTACTS + 5.00
DIM 'C'	4 x No. OF CONTACTS + 10.00
DIM 'D'	M80-301 = 3.0mm, M80-302 = 4.5mm
DIM 'E'	M80-321 = 3.5mm, M80-322 = 5.0mm
DIM 'F'	M80-PF1 = 3.5mm, M80-PF2 = 5.0mm

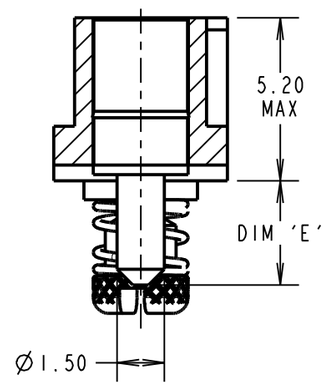
EXAMPLE 1: CONNECTOR WITH 08 COAX CONTACTS,
M80-4000000FC-08-301-00-000
DIM 'A' = 28.00mm, DIM 'B' = 37.00mm, DIM 'C' = 42.00mm
DIM 'D' = 3.0mm

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS,
M80-4000000FC-10-PF1-00-000
DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.00mm
DIM 'F' = 3.5mm

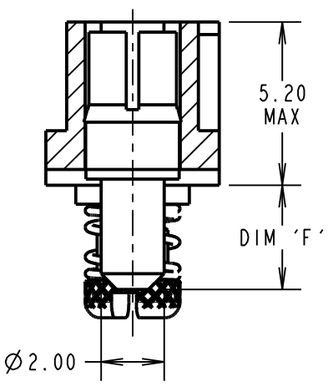
M80-301/302
x No. OF CONTACTS



M80-321/322
x No. OF CONTACTS

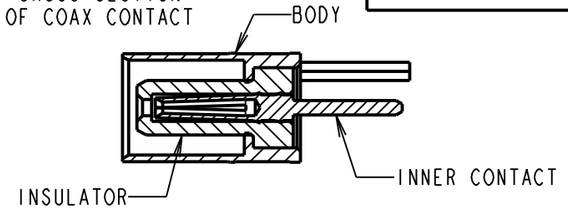


M80-PF1/PF2
x No. OF CONTACTS

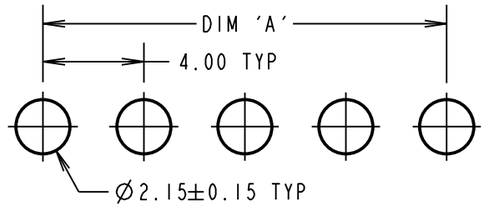


NOTES:
1. LENGTH WILL BE 4.2mm WHEN 101LOK SCREWS ARE ENGAGED WITH REATAINERS IN MATING CONNECTOR.
2. SPRING LOAD WHEN SOLID = 2.642N. SPRING RATE = 1.32N/mm.

CROSS-SECTION
OF COAX CONTACT



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



ORDER CODE: (PC TAIL CONTACTS ONLY)

M80-4000000FC-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

MSP	6	31.03.15	12566
NAME	ISS.	DATE	C/NOTE
APPROVED:	M.PERREN		
CHECKED:	S.BENNETT		
DRAWN:	C.PENROSE		
CUSTOMER REF.:			
ASSEMBLY DRG:			

HARWIN
www.harwin.com
technical@harwin.com

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 101LOK JACKSCREW

DRAWING NUMBER: M80-4000000FC-XX-XXX-00-000

SHT 7 OF 8

Customer Information Sheet

DRAWING No.: M80-4000000FC-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
- 101LOK 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

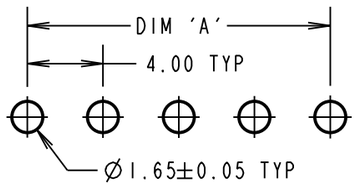
ENVIRONMENTAL:
- TEMPERATURE RANGE:
  - M80-323/324 = -55°C TO +125°C
  - M80-PF3/PF4 = -55°C TO +150°C

PACKING:
- TUBE

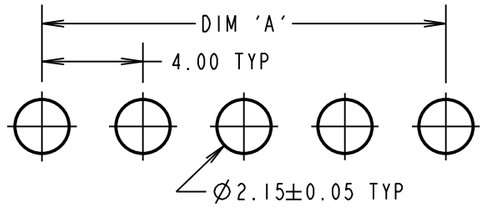
FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

NOTES:
1. LENGTH WILL BE 4.2mm WHEN 101LOK SCREWS ARE ENGAGED WITH REATAINERS IN MATING CONNECTOR.
2. SPRING LOAD WHEN SOLID = 2.642N. SPRING RATE = 1.32N/mm.

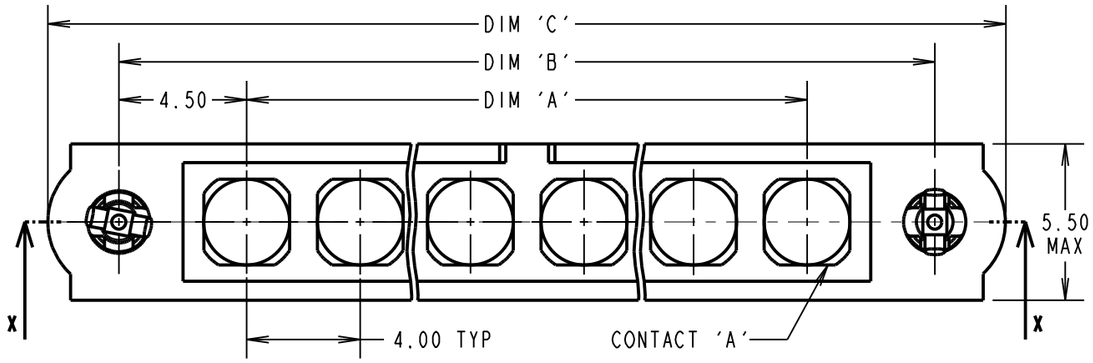
RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-323/324

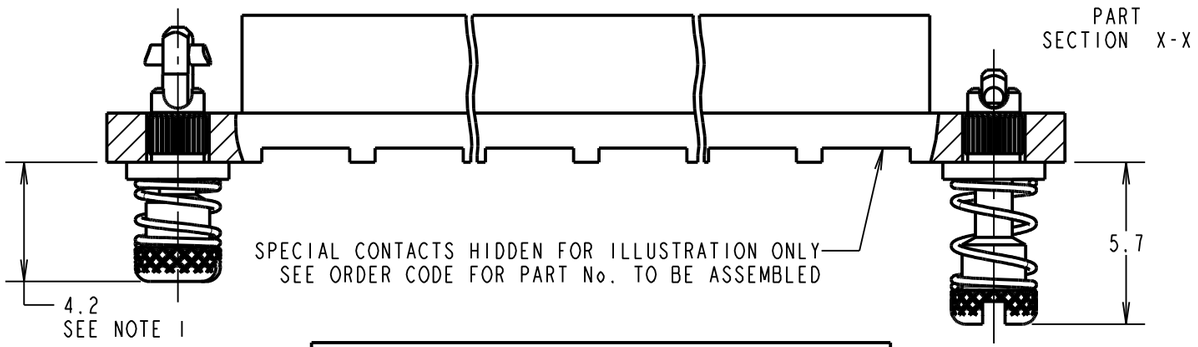


RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-PF3/PF4

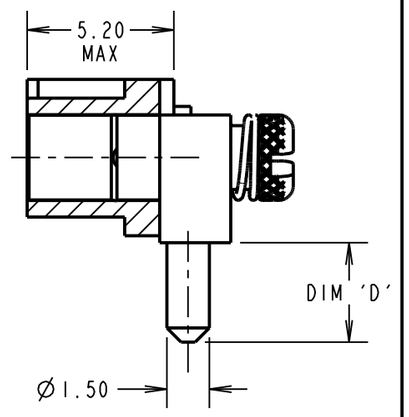


HORIZONTAL PC TAIL & SMT CONTACTS ONLY

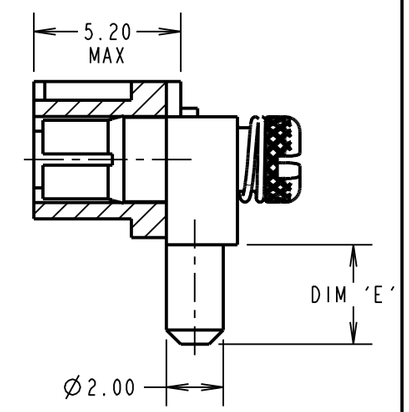




M80-323/324
x No. OF CONTACTS



M80-PF3/PF4
x No. OF CONTACTS



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 + 10.00
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, M80-4000000FC-10-323-00-000 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.00mm DIM 'E' = 3.5mm	

ORDER CODE: (PC TAIL CONTACTS ONLY)

M80-4000000FC-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

HARWIN
www.harwin.com
technical@harwin.com

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 101LOK JACKSCREW

DRAWING NUMBER: M80-4000000FC-XX-XXX-00-000

SHT 8 OF 8

NAME	ISS.	DATE	C/NOTE
MSP	6	31.03.15	12566

APPROVED: M.PERREN
CHECKED: S.BENNETT
DRAWN: C.PENROSE
CUSTOMER REF.:
ASSEMBLY DRG: