# Customer Information Sheet

| DRAWING No.: M80-400000000-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

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 = $10^6$MΩ @ 250V AC
  - OPERATING VOLTAGE = 180V AC @ 500mA
  - MAXIMUM VOLTAGE = 1000V AC

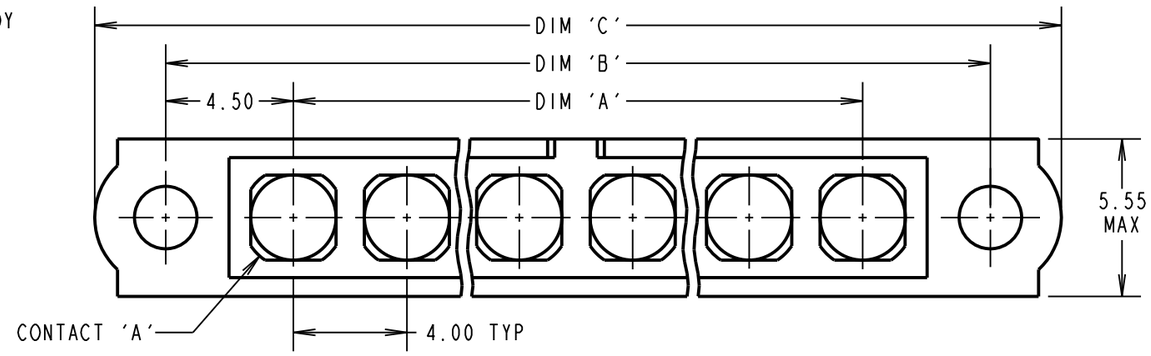
MECHANICAL:
- DURABILITY = 500 OPERATIONS
- COAX CONTACT:
  - INSERTION FORCE = 8N MAX
  - WITHDRAWAL FORCE = 0.5N MIN

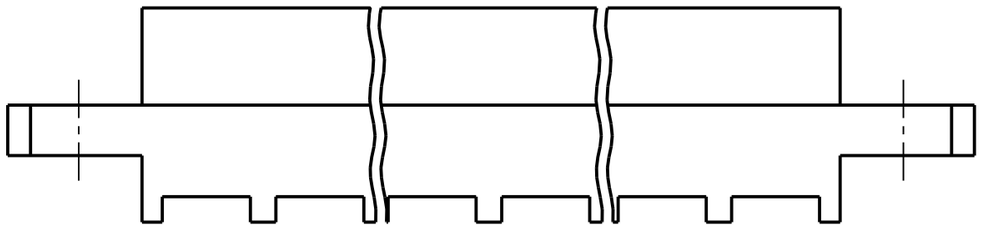
ENVIRONMENTAL:
- TEMPERATURE RANGE = -55°C TO +125°C

PACKING:
- BAG

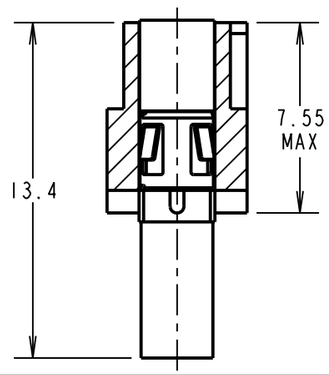
FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

## COAX CRIMP CONTACTS ONLY

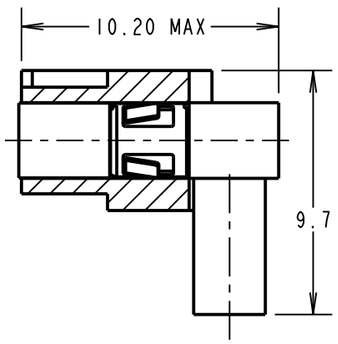


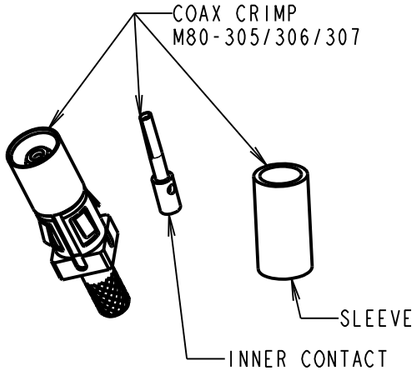



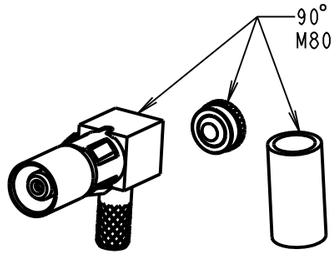
M80-305/~~306~~/307
x No. OF CONTACTS

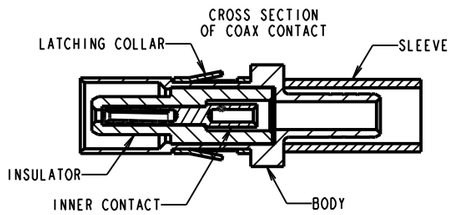


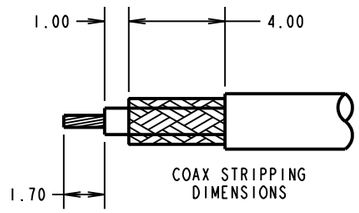

M80-308/309
x No. OF CONTACTS

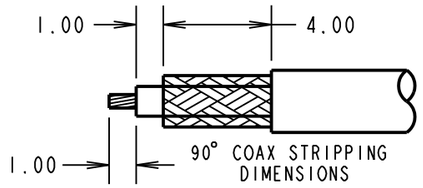



| DIMENSION | CALCULATION |
|---|---|
| DIM 'A' | 4 x No. OF CONTACTS - 4.00 |
| DIM 'B' | 4 x No. OF CONTACTS + 5.00 |
| DIM 'C' | 4 x No. OF CONTACTS + 10.0 |

EXAMPLE 1: CONNECTOR WITH 08 COAX CONTACTS,
M80-400000000-08-305-00-000
DIM 'A' = 28.00mm, DIM 'B' = 37.00mm, DIM 'C' = 42.0mm

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.

ORDER CODE: (COAX CRIMP CONTACTS ONLY)

**M80-400000000-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

| MGP | 6 | 10.01.18 | 21020 |
|---|---|---|---|
| NAME | ISS. | DATE | C/NOTE |

APPROVED: MGP
CHECKED: SB
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

DRAWING NUMBER: M80-400000000-XX-XXX-00-000

SHT 5 OF 8

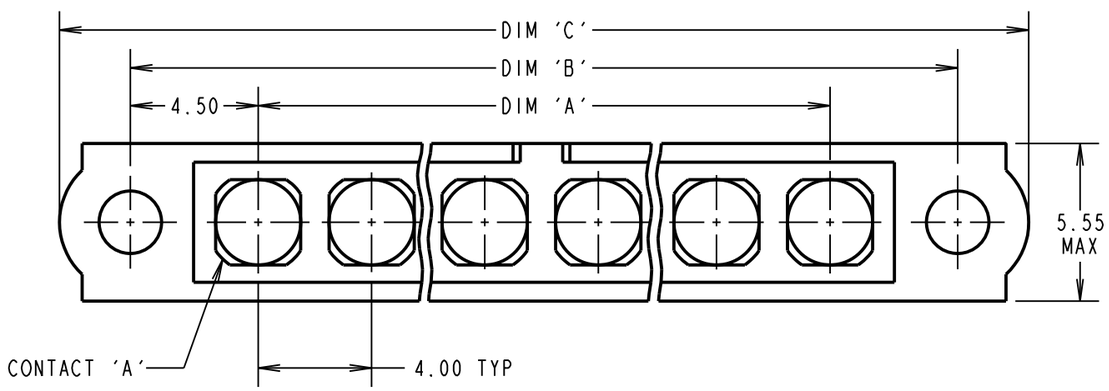
# Customer Information Sheet

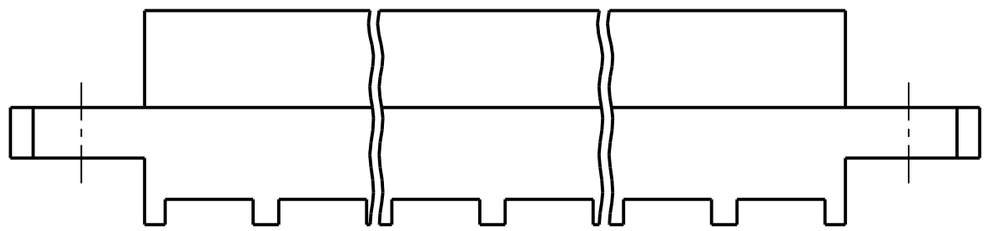
| DRAWING No.: M80-400000000-XX-XXX-00-000 | SHEET 6 OF 8 | IF IN DOUBT - ASK | © | NOT TO SCALE | THIRD ANGLE PROJECTION | ALL DIMENSIONS IN mm |
|---|---|---|---|---|---|---|

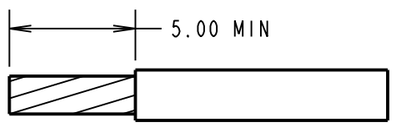
## SPECIFICATIONS:

MATERIAL:
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK
 POWER CONTACT:
  BODY, SLEEVE, INNER CONTACT, END PLUG = COPPER ALLOY
  LATCHING COLLAR = BERYLLIUM COPPER
  INSULATOR = PTFE
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



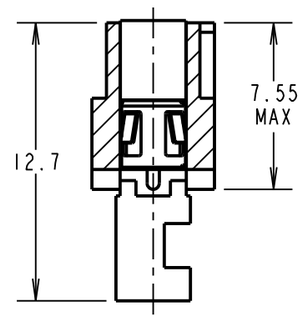



POWER CABLE
STRIPPING DIMENSIONS

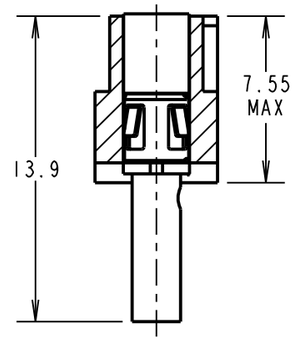
| DIMENSION | CALCULATION |
|---|---|
| DIM 'A' | 4 x No. OF CONTACTS - 4.00 |
| DIM 'B' | 4 x No. OF CONTACTS + 5.00 |
| DIM 'C' | 4 x No. OF CONTACTS + 10.0 |
| EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS, M80-500000000-10-325-00-000 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.0mm | |

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.

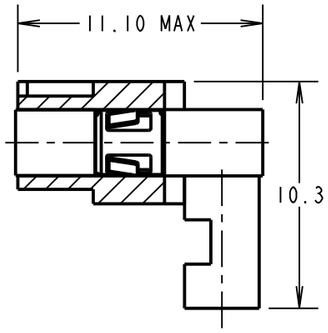
M80-325/326/327
x No. OF CONTACTS



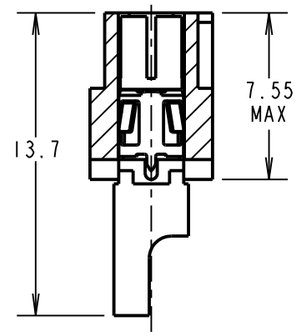

M80-328/329
x No. OF CONTACTS




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




M80-PF5
x No. OF CONTACTS




ORDER CODE: (POWER CRIMP/SOLDER CONTACTS ONLY)

**M80-400000000-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

| NAME | ISS. | DATE | C/NOTE |
|---|---|---|---|
| MGP | 6 | 10.01.18 | 21020 |

| | |
|---|---|
| APPROVED: | MGP |
| CHECKED: | SB |
| 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

DRAWING NUMBER: M80-400000000-XX-XXX-00-000

SHT 6 OF 8

# Customer Information Sheet

| DRAWING No.: M80-400000000-XX-XXX-00-000 | SHEET 7 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

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 = $10^6$MΩ @ 250V AC
  - OPERATING VOLTAGE = 180V AC @ 500mA
  - MAXIMUM VOLTAGE = 1000V AC

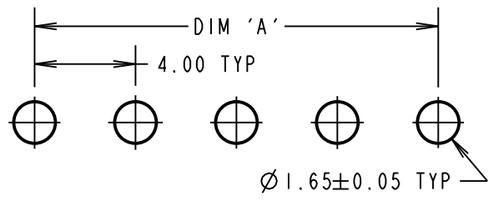
MECHANICAL:
- DURABILITY = 500 OPERATIONS
- POWER CONTACT:
  - INSERTION FORCE:
    - M80-321/322 = 8N MAX
    - M80-PF1/PF2 = 15N MAX
  - WITHDRAWAL FORCE = 0.5N MIN
- COAX CONTACT:
  - INSERTION FORCE = 8N MAX
  - WITHDRAWAL FORCE = 0.5N MIN

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

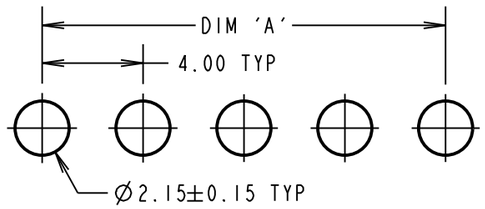
PACKING:
- TUBE

FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

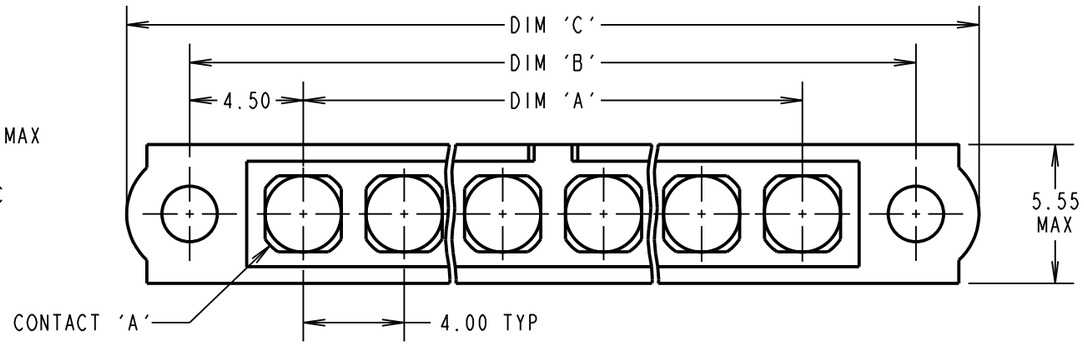
RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-321/322




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



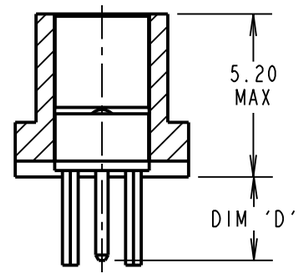

## VERTICAL PC TAIL CONTACTS ONLY



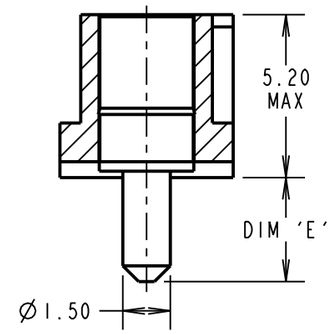




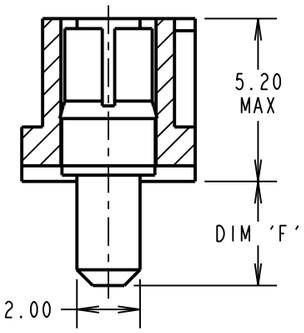
M80-301/302
x No. OF CONTACTS



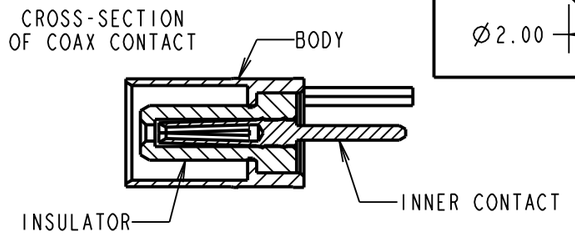

M80-321/322
x No. OF CONTACTS




M80-PF1/PF2
x No. OF CONTACTS




CROSS-SECTION OF COAX CONTACT




| 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,
M80-400000000-08-301-00-000
DIM 'A' = 28.00mm, DIM 'B' = 37.00mm, DIM 'C' = 42.0mm
DIM 'D' = 3.0mm

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS,
M80-400000000-10-PF1-00-000
DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.0mm
DIM 'F' = 3.5mm

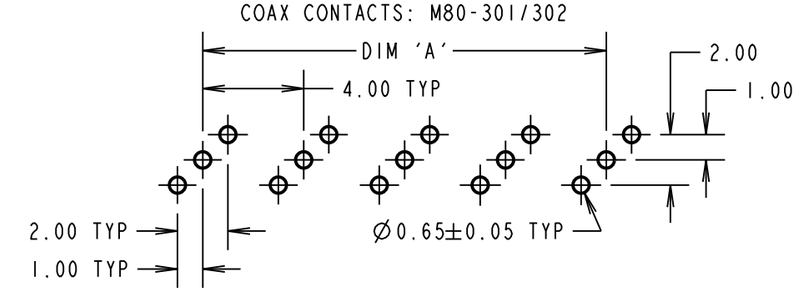
ORDER CODE: (PC TAIL CONTACTS ONLY)

**M80-400000000-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

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




| MGP | 6 | 10.01.18 | 21020 |
|---|---|---|---|
| NAME | ISS. | DATE | C/NOTE |

APPROVED: MGP
CHECKED: SB
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
DRAWING NUMBER: M80-400000000-XX-XXX-00-000
SHT 7 OF 8

# Customer Information Sheet

| DRAWING No.: M80-400000000-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

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

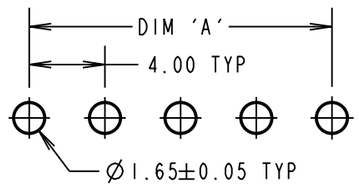
MECHANICAL:
- DURABILITY = 500 OPERATIONS
- POWER CONTACT:
  - INSERTION FORCE:
    - M80-323/324 = 8N MAX
    - M80-PF3/PF4 = 15N MAX
  - WITHDRAWAL FORCE = 0.5N MIN

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

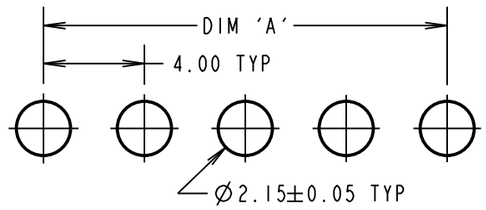
PACKING:
- TUBE

FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

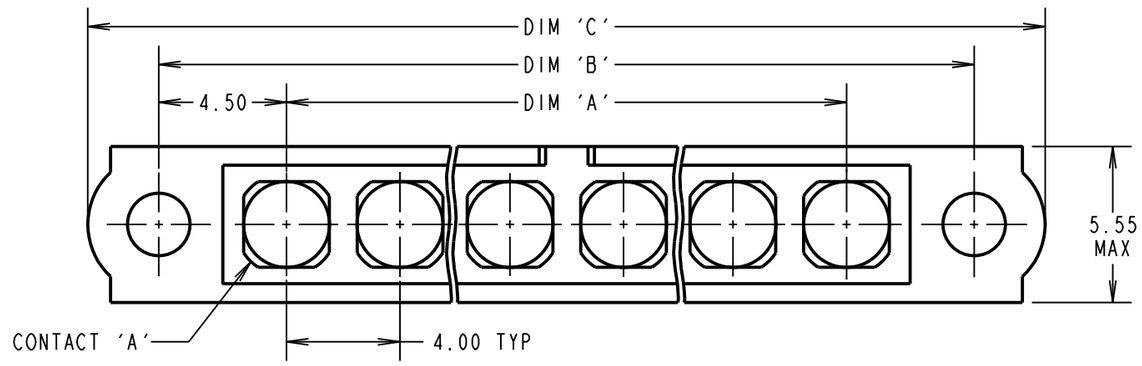
RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-323/324

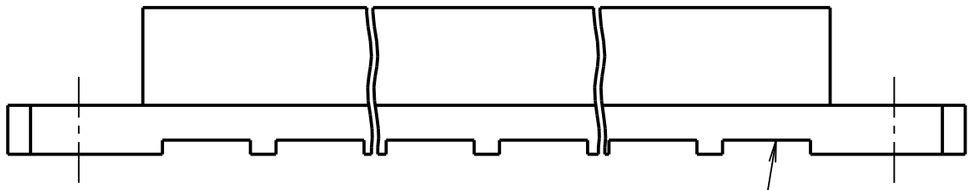


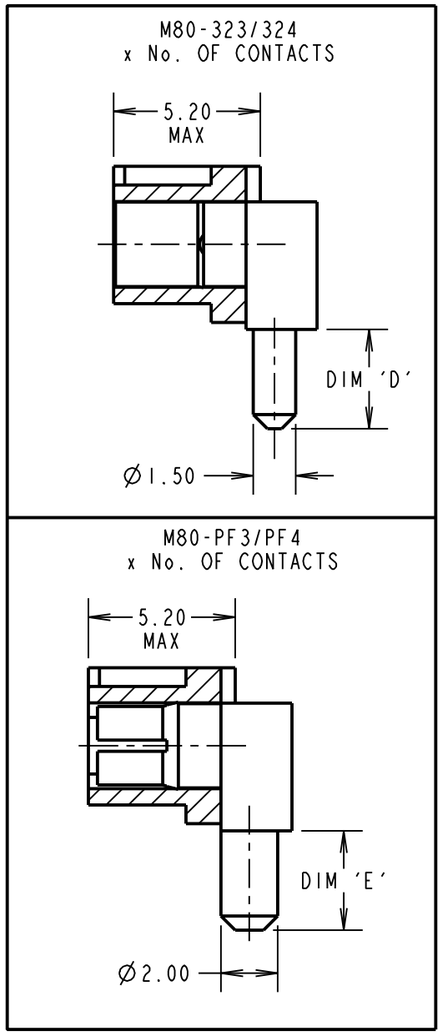

RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-PF3/PF4




## HORIZONTAL PC TAIL & SMT 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 |
| 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, M80-400000000-10-323-00-000 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.0mm DIM 'E' = 3.5mm | |

ORDER CODE: (PC TAIL CONTACTS ONLY)

**M80-400000000-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

| MGP | 6 | 10.01.18 | 21020 |
|---|---|---|---|
| NAME | ISS. | DATE | C/NOTE |

APPROVED: MGP
CHECKED: SB
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

DRAWING NUMBER: M80-400000000-XX-XXX-00-000

SHT 8 OF 8