











Crimp contacts

| Contact size | Contact type | MIL-DTL-38999 qualified contacts | | |
|------------------------------|--------------|----------------------------------|---|-------------------------|
| | | Part number | Profile and color code | |
| #26 | Pin | - | | |
| | Socket | - | | |
| #22D | Pin | M39029/58 360 |  | Black / Blue / Orange |
| | Socket | M39029/56 348 |  | Grey / Yellow / Orange |
| #20 | Pin | M39029/58 363 |  | Orange / Blue / Orange |
| | Socket | M39029/56 351 |  | Brown / Green / Orange |
| #16 | Pin | M39029/58 364 |  | Yellow / Blue / Orange |
| | Socket | M39029/56 352 |  | Red / Green / Orange |
| #16 Coax | Pin | M39029/76 424 |  | Yellow / Red / Yellow |
| | Socket | M39029/77 428 |  | Grey / Red / Yellow |
| #12 | Pin | M39029/58 365 |  | Green / Blue / Orange |
| | Socket | M39029/56 353 |  | Orange / Green / Orange |
| #12 Coax | Pin | M39029/102 558 | | |
| | Socket | M39029/103 559 | | |
| | Pin | M39029/28 211 | | |
| | Socket | M39029/75 416 | | |
| #10 Power | Pin | M39029/58 528 | | |
| | Socket | M39029/56 527 | | |
| #8 Power | Pin | - | | |
| | Socket | - | | |
| | Pin | - | | |
| | Socket | - | | |
| | Boot | - | | |
| | Reductor | - | | |
| #8 Coax | Pin | M39029/60 367 | | |
| | Socket | M39029/59 366 | | |
| | Boot | - | | |
| #8 Concentric Twinax * | Pin | M39029/90 529 | | |
| | Socket | M39029/91 530 | | |
| | Boot | - | | |
| #4 Power | Pin | - | | |
| | Socket | - | | |
| | Pin | - | | |
| | Socket | - | | |
| | Boot | - | | |
| | Reductor | - | | |
| #4 Power with reduced barrel | Pin | - | | |
| | Socket | - | | |
| | Boot | - | | |

| Souriau contacts (without color code) | |
|---------------------------------------|--------------------------------|
| Part number | Information |
| 8599-0297 | |
| 8599-0298 | |
| 8599-0702 JJ | |
| 8599-0706 900 | |
| 8599-0703 SA | |
| 8599-0707 900 | |
| 8599-0704 MJ | |
| 8599-0708 900 | |
| - | |
| - | |
| 8599-0705 MJ | |
| 8599-0709 900 | |
| - | |
| - | |
| - | |
| - | |
| - | |
| 8599-7544 ** | |
| 8599-7541 ** | |
| 8599-7580 | |
| 8599-7581 | |
| 8599-4542 | For wire #8 |
| 8599-4547 | For wire #10 |
| 8599-7645 | For wire #10 |
| - | |
| - | |
| 8590-4571 | |
| - | |
| - | |
| 8590-4571 | |
| 8599-7598 900 *** | For wire 25 mm ² |
| 8599-7599 900 *** | |
| 8599-7534 | For wire 21.15 mm ² |
| 8599-7535 | |
| 8599-4594 | For wire 16 mm ² |
| 8599-4593 | For wire 10 mm ² |
| 8400-2352A | For wire 10 mm ² |
| 8599-7528 900 | Mating part #4 / Barrel #6 |
| 8599-7529 900 | |
| 8599-4593 | |

* Concentric Twinax = Triax

** JVS only

*** Not included in connector Part number. Must be ordered separately












Crimp contacts

| Contact size | Contact type | | Contact Ø | Conductor section AWG | | Conductor section mm² | | External Ø over insulator | | |
|------------------------------|--------------|---|------------|---|-------------------|-----------------------|-------|---------------------------|------|------|
| | | | | Min | Max | Min | Max | Min | Max | |
| #26 | Pin | | 0.50 | 30 | 24 | 0.055 | 0.215 | 0.60 | 0.83 | |
| | Socket | | | | | | | | | |
| #22D | Pin | | 0.76 | 26 | 22 | 0.12 | 0.34 | 0.76 | 1.37 | |
| | Socket | | | | | | | | | |
| #20 | Pin | | 1.00 | 24 | 20 | 0.21 | 0.60 | 1.02 | 2.11 | |
| | Socket | | | | | | | | | |
| #16 | Pin | | 1.60 | 20 | 16 | 0.60 | 1.34 | 1.65 | 2.77 | |
| | Socket | | | | | | | | | |
| #16 Coax | Pin | | | RG 174 RG 179 RG 316 | | | | | 1.65 | 2.60 |
| | Socket | | | | | | | | | |
| #12 | Pin | | 2.40 | 14 | 12 | 1.91 | 3.18 | 2.46 | 3.61 | |
| | Socket | | | | | | | | | |
| #12 Coax | Pin | | | RG 174 RG 179 RG 316 | | | | | 2.40 | 2.60 |
| | Socket | | | | | | | | | |
| | Pin | | | | | | | | | |
| | Socket | | | | | | | | | |
| #10 Power | Pin | | | 3.20 | Please consult us | | | | - | 2.95 |
| | Socket | | | | | | | | | |
| #8 Power ** | Pin | | 3.64 | - | 8 | - | 8.98 | - | - | |
| | Socket | | | | | | | | | |
| | Boot | | | | | | | | | |
| | Reductor | | | | | | | | | |
| | Reductor | | | | | | | | | |
| #8 Coax | Pin | | RG 180 A/U | | | | | - | 2.80 | |
| | Socket | | | | | | | | | |
| | Boot | | | | | | | | | |
| #8 Concentric Twinax * | Pin | | 5.50 | 0,76MIL-C17/176 00002 FILECA F.2703/14 RAYCHEM CHEMINAX 10612 FILOTEX M 17/176 00002 | | | | 3.15 | 3.40 | |
| | Socket | | | | | | | | | |
| | Boot | | | | | | | | | |
| #4 Power ** | Pin | | 5.74 | - | 3 | - | 25 | - | - | |
| | Socket | | | | | | | | | |
| | Pin | | | 5 | 4 | 16 | 21.15 | - | - | |
| | Socket | | | | | | | | | |
| | Boot | Available for 8599-7534 and 7535 contacts | | - | - | - | - | 6.35 | 7.50 | |
| | | | | - | - | - | - | 4 | 5.80 | |
| | | | | - | - | - | - | - | - | |
| #4 Power with reduced barrel | Pin | | 6 | | | | 13.3 | | - | - |
| | Socket | | | | | | | | | |
| | Boot | | - | - | - | - | 4 | 5.80 | | |

* Concentric Twinax = Triax

** For more information, please see p.117

Straight PC tail contacts

| Contact size | Contact type | PC tail type | Part number | Profile |
|--------------|--------------|--------------|----------------|--|
| #26 | Pin | | 8599-0118A | - |
| #22D | Pin | L | 8599-0720 900 |  |
| | Pin | M | 8599-8028 900 | - |
| | Pin | C | 8599-0730 900 |  |
| | Pin | S | 8599-0796 900 |  |
| | Socket | L | 8599-0721 900 |  |
| | Socket | C | 8599-0731 900 |  |
| | Socket | S | 8599-0797 900 |  |
| #20 | Pin | M | 8599-0658 JJ | - |
| | Socket | M | 8599-0759 900 | - |
| | Pin | C | 8599-0724 900 |  |
| | Socket | C | 8599-0725 900 |  |
| | Pin | L | 8599-0771 900 | - |
| | Socket | L | 8599-0772 900 | - |
| #16 | Pin | C | 8599-0726 900 |  |
| | Socket | C | 8599-0727 900 |  |
| Coax #16 | Pin | C | 8599-1000A 900 |  |
| #12 | Pin | C | 8599-7929 900 | - |
| | Socket | C | 8599-7932 900 | - |

S: Specific PC tail
L: Long PC tail
M: Medium PC tail
C: Short PC tail

Note: PC tail contacts without shoulder also available. Please see page 100.

Coax contacts #12

| Designation | Part number |
|--------------------------------|-------------|
| Coax socket solder contact #12 | THA1-0151A |
| Coax pin solder contact#12 | THA1-0152A |
| Coax pin crimp contact #12 | THA1-0155A |
| Coax socket crimp contact #12 | THA1-0156A |

Solder cup

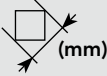


| Contact size | Contact type | Part number |
|--------------|--------------|----------------|
| #22D | Pin | 8599-0750 900 |
| #20 | Pin | 8599-0077A 900 |
| #16 | Pin | 8599-7482A 900 |
| #12 | Socket | 8599-7485A 900 |

For other contacts type please consult us.

Crimp contacts: 1500 mating

| Contact size | MIL-DTL-38999 contacts | | |
|--------------|------------------------|----------------|-----------------------|
| | Contact type | Part number | Color code |
| #22D | Pin (H) | M39029/107 620 | Blue / Red / Black |
| | Socket (J) | M39029/106 614 | Blue / Brown / Yellow |
| #20 | Pin (H) | M39029/107 621 | Blue / Red / Brown |
| | Socket (J) | M39029/106 615 | Blue / Brown / Green |
| #16 | Pin (H) | M39029/107 622 | Blue / Red / Red |
| | Socket (J) | M39029/106 616 | Blue / Brown / Blue |
| #12 | Pin (H) | M39029/107 623 | Blue / Red / Orange |
| | Socket (J) | M39029/106 617 | Blue / Brown / Gray |









Wire wrap contacts

| Contact size | Contact type | Part number | Contact Ø (mm) | Profile |  (mm) |
|--------------|--------------|---------------|----------------|--|--|
| #22D | Pin | 8599-0790 JJ | 0.76 |  | 0.86 |
| #20 | Pin | 8599-0791 900 | 1 |  | 0.86 |

Quadrax #8 contacts

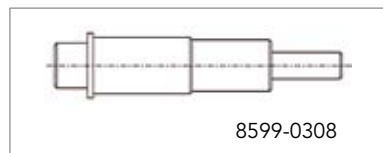
| Contact type | Version | Souriau Part Number | Cross Norm | T° | Impedance | Sealing | Release |
|--------------|-----------|---------------------|------------|-------|-----------|---------|---------|
| Pin | PCB mount | ETH1-1237A | - | 125°C | 100Ω | Sealed | Rear |
| | | ETH1-1501A | - | | 150Ω | | |
| | Crimp | ETH1-1345A | EN3155-074 | 200°C | 100Ω | | |
| | | ETH1-1503A | - | | 150Ω | | |
| Socket | PCB mount | ETH1-1238A | - | 125°C | 100Ω | | |
| | | ETH1-1502A | - | | 150Ω | | |
| | Crimp | ETH1-1346A | EN3155-075 | 200°C | 100Ω | | |
| | | ETH1-1504A | - | | 150Ω | | |

Thermocouple contacts

| Contact size | Contact type | Souriau part numbers (without color code) | MIL-DTL-38999 contacts | | Ø Contact (mm) | Wire section | | | | Ø Over insulation (mm) | |
|--------------|--------------|---|------------------------|--|----------------|--------------|-----|-------|------|------------------------|------|
| | | | Part numbers | Profile and color code | | Awg | | mm² | | | |
| | | | | | | min | max | min | max | min | max |
| #22D Chromel | Pin | - | M39029/87-472 |  Red / Violet / Yellow | 0.75 | 28 | 22 | 0.095 | 0.34 | 0.76 | 1.37 |
| | Socket | - | M39029/88-484 |  Yellow / Grey / Yellow | | | | | | | |
| #22D Alumel | Pin | - | M39029/87-471 |  Brown / Violet / Yellow | | | | | | | |
| | Socket | - | M39029/88-483 |  Orange / Grey / Yellow | | | | | | | |
| #20 Chromel | Pin | 8599-0749 900 | 8599-0949 900 |  Blue / Violet / Yellow | 1 | 24 | 20 | 0.21 | 0.6 | 1.02 | 2.11 |
| | Socket | 8599-0753 900 | 8599-0953 900 |  Grey / Grey / Yellow | | | | | | | |
| #20 Alumel | Pin | 8599-0761 900 | 8599-0961 900 |  Green / Violet / Yellow | | | | | | | |
| | Socket | 8599-0765 900 | 8599-0965 900 |  Violet / Grey / Yellow | | | | | | | |

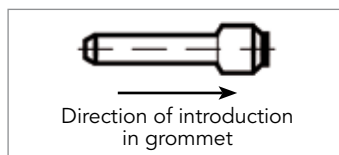
Dummy contacts

| Size | Part number |
|------|----------------|
| #16 | 8599-6A016001A |
| #8 | 8599-0308 |
| #4 | 8599-0310 |



Filler plugs

| Contact size | Filler plugs | | |
|--------------|-------------------------|---------------------|--------|
| | MS Part number (Rev. N) | Souriau Part number | Color |
| #22D | MS27488-22-2 | 8660-212 | Black |
| #20 | MS27488-20-2 | 8522-389A | Red |
| #16 | MS27488-16-2 | 8522-390A | Green |
| #12 | MS27488-12-2 | 8522-391A | Orange |

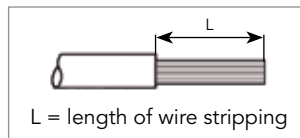


These filler plugs are installed at the rear of unwired contact to maintain connector sealing.

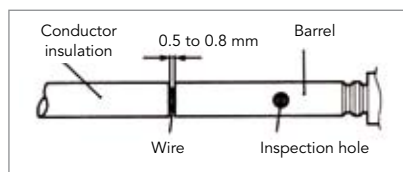
Wiring instruction

Cable preparation and wire stripping

| Contact size | #26 | #22D | #20 | #16 | #12 | #8 | #4 |
|--------------|-----|------|-----|-----|-----|----|----|
| L | 4 | | 6 | | | | 12 |



Insertion of wire in contact barrel



When inserting the stripped wire into the contact barrel check that no strands are left outside and that the wire is visible through the wire inspection hole in the barrel.

Important:

- Slide any accessories over wire strands before carrying out the following operations.
- Contacts are inserted and extracted from the rear of the connector.

Insertion of the contacts

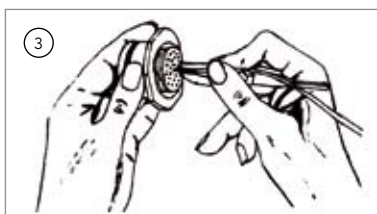
1 - Engage the crimp cable / contact assembly into the longitudinal slot of the plastic tool (coloured tip). Slide the tool down the cable until the tip of the tool abuts the contact retention shoulder.



2 - Introduce the contact into the required contact cavity in the insulator, pushing tool axially, until the contact snaps into position in clip.



3 - Withdraw the tool from rear. Check that contact is firmly locked by pulling wire gently. When connector is fully loaded, check the position of contact tips. They should all be in the same plane.
Nota: For larger sizes of cable which are stiff enough manual insertion without tool is preferable.

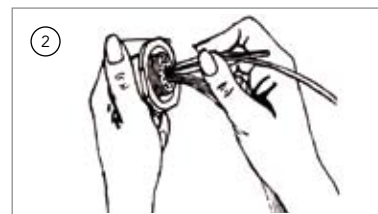


Extraction of the contacts

1 - Engage the appropriate cable into the longitudinal slot of the tool with the white tip towards connector.



2 - Slide the tool down towards the contact. Insert the tool in the insulator until it abuts the contact shoulder.



3 - Holding the tool-contact and cable assembly together, remove them simultaneously.



Tooling

Crimping tools

| Contact size | Contact type | Plier M22520/1-01 | | Plier M22520/2-01 (Souriau 8476-01) | | Plier M300BT | Plier * M22520/23-01 | |
|--------------|--------------|--------------------|---------|-------------------------------------|-----------|---------------------|----------------------|---------------------|
| | | Turret Part number | | Locator Part number | | Locator Part number | Turret Part number | Locator Part number |
| | | Norm | Souriau | Norm | Souriau | | | |
| #26 | Pin | - | - | - | 8599-0397 | - | - | - |
| | Socket | - | - | - | 8599-0398 | - | - | - |
| #22D | Pin | - | - | M22520/2-09 | 8476-09 | - | - | - |
| | Socket | - | - | M22520/2-07 | 8476-07 | - | - | - |
| #20 | Pin | M22520/1-04 | 8365-04 | M22520/2-10 | 8476-10 | - | - | - |
| | Socket | | | | | - | - | - |
| #16 | Pin | M22520/1-04 | 8365-04 | - | - | - | - | - |
| | Socket | | | - | - | - | - | - |
| #12 | Pin | M22520/1-04 | 8365-04 | - | - | - | - | - |
| | Socket | | | - | - | - | - | - |
| #8 Power | Pin | - | - | - | - | SP 593 | M22520/23-02 | 8599-9601 |
| | Socket | - | - | - | - | | | |
| #4 Power | pin | - | - | - | - | - | M22520/23-04 | M22520/23-11 |
| | Socket | - | - | - | - | - | | |

| Contact size | Contact type | Plier M22520/2-01 (Souriau 8476-01) | Plier M22520/31-01 | Plier M22520/4-01 | Plier M22520/5-01 |
|--|--------------|-------------------------------------|---------------------|---------------------|-----------------------|
| | | Locator Part Number | Locator Part number | Locator Part Number | Die set Part Number |
| #12 Coax M39029/102-558 M39029/103-559 | Inner | - | - | - | M22520/5-03 |
| | Outer | - | - | - | |
| #12 Coax M39029/28-211 M39029/75-416 | Inner | M22520/2-34 | - | - | - |
| | Outer | - | M22520/31-02 | - | - |
| #16 Coax | Inner | M22520/2-35 | - | - | - |
| | Outer | - | - | M22520/4-02 | - |
| #8 Coax | Inner | M22520/2-31 | - | - | - |
| | Outer | - | - | - | M22520/5-05 closure B |
| #8 Concentric Twinax (= Triax) | Inner | K709 | - | - | - |
| | Middle | - | - | - | Y631 closure B |
| | Ferrule | - | - | - | Y631 closure A |

* Pneumatic plier

Note: for the #10 contact's plier and locator, please consult us.

Insertion & extraction tools

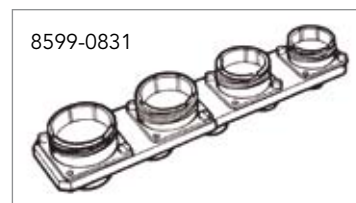
| Contact size | Material | Part number | | Color | |
|--------------|----------|--------------|---------------|-----------|------------|
| | | MIL standard | Souriau | Insertion | Extraction |
| #26 | Plastic | - | 8599-0399 900 | Black | White |
| #22D | Plastic | M81969/14-01 | - | Green | White |
| #20 | Plastic | M81969/14-10 | - | Red | Orange |
| #16 | Plastic | M81969/14-03 | - | Blue | White |
| #12 | Plastic | M81969/14-04 | - | Yellow | White |
| #10 | Plastic | M81969/14-05 | - | Grey | - |
| #8 | Plastic | M81969/14-12 | - | - | Green |
| | Metallic | - | 8660-197 | - | - |
| #4 | Plastic | M81969/14-07 | - | - | Blue |
| | Metallic | - | 8533-8175 | - | - |

Backshell tightening tools



Backshell tightening pliers,
part number: 8498-03
Square jaws (order 2 jaws),
part number: 8500-1015

Tightening support



Part number: 8599-0831
This tool is made up of
dummy receptacles
 housings of all 9 sizes for all
key polarisation, and secures
free connectors during wiring
and fitting of rear accessories.

Tightening of rear accessories:

| Shell size | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 | 25 |
|------------------------|------|----|----|----|----|----|------|----|----|
| Max torque in m/daN | 0.62 | | | | | | 1.24 | | |

Slackening tools



Strap clamp,
part number: 8498-04
Spare strap,
part number: 8498-103

Accessories

Plastic protective caps*

| Shell size | Caps for receptacles | Caps for plugs | Caps for composite plugs only (J & M) | Antistatic caps for receptacles | Antistatic caps for plugs | Antistatic caps for composite plugs only (J & M) |
|------------|----------------------|----------------|---------------------------------------|---------------------------------|---------------------------|--|
| 9 (A) | MS90376-10R | 8500-5587 A | MS90376-12R | MS90376-10RF | 8500-5587N | 8500-5587N |
| 11 (B) | MS90376-12R | 8500-5588A | 8500-5598 | MS90376-12RF | 70198N | 8500-5598N |
| 13 (C) | MS90376-14R | 8500-5600 | 8500-5600 | MS90376-14RF | 8500-5600N | 8500-5600N |
| 15 (D) | MS90376-16R | 8500-5601 | 8500-5601 | MS90376-16RF | 8500-5601N | 8500-5601N |
| 17 (E) | MS90376-19R | 8500-5602 | 8500-5602 | MS90376-18RF | 8500-5602N | 8500-5602N |
| 19 (F) | MS90376-20R | 8500-5592 A | 8500-5592 A | MS90376-20RF | 8500-5592N | 8500-5592N |
| 21 (G) | MS90376-22R | 8500-5593 A | 8500-5593 A | MS90376-22RF | 8500-5593N | 8500-5593N |
| 23 (H) | MS90376-24R | 8500-5593 A | MS90376-28R | MS90376-24RF | 8500-5593N | 70472N |
| 25 (J) | 8599-0029 | J599ABC6009A00 | J599ABC6009A00 | 8500-5593N | MS90376-28RF | MS90376-28RF |

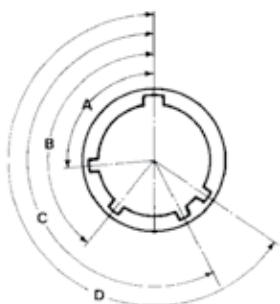
* Excepted 8D composite version (X): supplied without cap

Gaskets

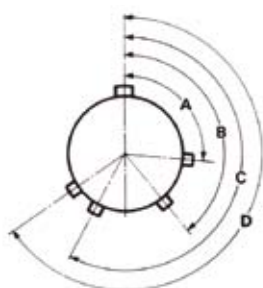
| Shell size | Gasket for receptacles Type 0* (ordered separately) | O ring for receptacle Type 7 |
|------------|---|------------------------------|
| 9 (A) | 8599-5541 | AS3582-019 |
| 11 (B) | 8599-5542 | AS3582-022 |
| 13 (C) | 8599-5543 | AS3582-024 |
| 15 (D) | 8599-5544 | AS3582-026 |
| 17 (E) | 8599-5545 | AS3582-028 |
| 19 (F) | 8599-5546 | AS3582-128 |
| 21 (G) | 8599-5547 | AS3582-130 |
| 23 (H) | 8599-5548 | AS3582-132 |
| 25 (J) | 8599-5549 | AS3582-134 |

* For front mounting

Orientations



Viewed from front face of receptacle

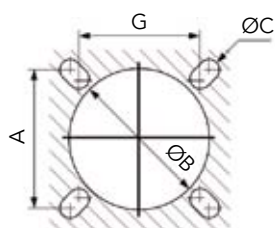


Viewed from front face of plug

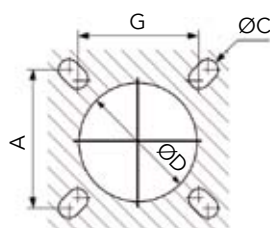
| Shell size | Angles | N | A | B | C | D | E | T | V |
|----------------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|
| 9 (A) | A° | 105 | 102 | 80 | 35 | 64 | 91 | - | - |
| | B° | 140 | 132 | 118 | 140 | 155 | 131 | | |
| | C° | 215 | 248 | 230 | 205 | 234 | 197 | | |
| | D° | 265 | 320 | 312 | 275 | 304 | 240 | | |
| 11 (B) 15 (D) | A° | 95 | 113 | 90 | 53 | 119 | 51 | - | - |
| | B° | 141 | 156 | 145 | 156 | 146 | 141 | | |
| | C° | 208 | 182 | 195 | 220 | 176 | 184 | | |
| | D° | 236 | 292 | 252 | 255 | 298 | 242 | | |
| 13 (C) | A° | 95 | 113 | 90 | 53 | 119 | 51 | 70 | 75 |
| | B° | 141 | 156 | 145 | 156 | 146 | 141 | 136 | 138 |
| | C° | 208 | 182 | 195 | 220 | 176 | 184 | 218 | 224 |
| | D° | 236 | 292 | 252 | 255 | 298 | 242 | 261 | 268 |
| 17 (E) 21 (G) | A° | 80 | 135 | 49 | 66 | 62 | 79 | 58 | 85 |
| | B° | 142 | 170 | 169 | 140 | 145 | 153 | 162 | 150 |
| | C° | 196 | 200 | 200 | 200 | 180 | 197 | 188 | 191 |
| | D° | 293 | 310 | 244 | 257 | 280 | 272 | 316 | 307 |
| 19 (F) 23 (H) 25 (J) | A° | 80 | 135 | 49 | 66 | 62 | 79 | - | - |
| | B° | 142 | 170 | 169 | 140 | 145 | 153 | | |
| | C° | 196 | 200 | 200 | 200 | 180 | 197 | | |
| | D° | 293 | 310 | 244 | 257 | 280 | 272 | | |

Panel cut-out

Square flange receptacle (Type 0)

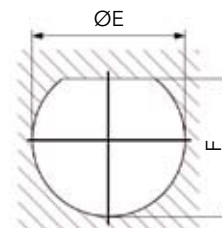


Rear mounting*



Front mounting

Jam nut receptacle (Type 7)



| Shell size | A | G | B min. | C ±0.13 | D min. | E +0.25 -0 | F |
|------------|-------|-------|--------|---------|--------|---------------|-------|
| 9 (A) | 18.26 | 15.09 | 16.66 | 3.25 | 13.11 | 17.78 | 17.02 |
| 11 (B) | 20.62 | 18.26 | 20.22 | | 15.88 | 20.96 | 19.59 |
| 13 (C) | 23.01 | 20.62 | 23.42 | | 19.05 | 25.65 | 24.26 |
| 15 (D) | 24.61 | 23.01 | 26.59 | | 23.01 | 28.83 | 27.56 |
| 17 (E) | 26.97 | 24.61 | 30.96 | | 25.81 | 32.01 | 30.73 |
| 19 (F) | 29.36 | 26.97 | 32.94 | | 28.98 | 35.18 | 33.91 |
| 21 (G) | 31.75 | 29.36 | 36.12 | 3.91 | 32.16 | 38.35 | 37.08 |
| 23 (H) | 34.93 | 31.75 | 39.29 | | 34.93 | 41.53 | 40.26 |
| 25 (J) | 38.10 | 34.94 | 42.47* | | 37.69 | 44.70 | 43.43 |

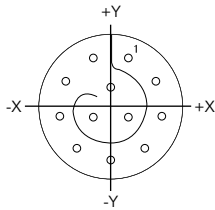
* For Type 0 composite shell rear mounting: 43.77 mm.

Max. thickness panel for receptacle: Type 0: front mounting = 3.2 mm, rear mounting = 2.5 mm
Type 7: 3.2 mm

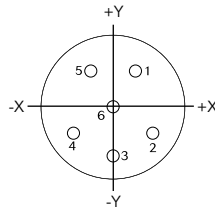
Coordinates for straight PC tail terminations

Viewed from front face of male insulator

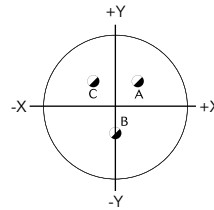
Hole sizes: 1mm min. (#22 and #20 contacts) and 1.3mm min. (#16 contact) coordinates in mm.

09 / A
12


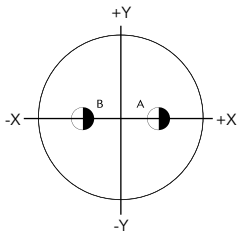
| Ctc | X | Y | Ctc | X | Y |
|-----|-------|-------|-----|-------|-------|
| 1 | +0.92 | +2.54 | 7 | -2.66 | -0.47 |
| 2 | +2.34 | +1.35 | 8 | -2.34 | +1.35 |
| 3 | +2.66 | -0.47 | 9 | -0.92 | +2.54 |
| 4 | +1.74 | -2.07 | 10 | 0.00 | +1.03 |
| 5 | 0.00 | -2.70 | 11 | +0.89 | -0.51 |
| 6 | -1.74 | -2.07 | 12 | -0.89 | -0.51 |

35


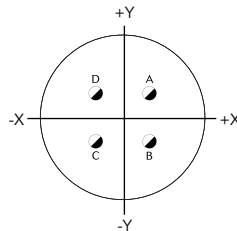
| Ctc | X | Y |
|-----|-------|-------|
| 1 | +1.14 | +1.98 |
| 2 | +1.98 | -1.14 |
| 3 | 0.00 | -2.29 |
| 4 | +1.98 | -1.14 |
| 5 | +1.14 | +1.98 |
| 6 | 0.00 | 0.00 |

98


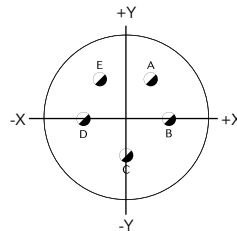
| Ctc | X | Y |
|-----|-------|-------|
| A | +1.65 | +0.97 |
| B | 0.00 | -1.90 |
| C | -1.65 | +0.97 |

11 / B
02


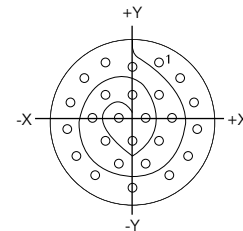
| Ctc | X | Y |
|-----|------|-------|
| A | 0.00 | +2.41 |
| B | 0.00 | -2.41 |

04


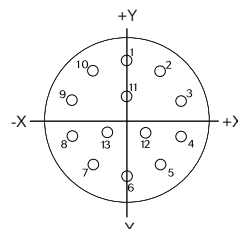
| Ctc | X | Y |
|-----|-------|-------|
| A | +1.65 | +1.65 |
| B | +1.65 | -1.65 |
| C | -1.65 | -1.65 |
| D | -1.65 | +1.65 |

05


| Ctc | X | Y |
|-----|-------|-------|
| A | +1.65 | +1.42 |
| B | +2.86 | -1.65 |
| C | 0.00 | -3.30 |
| D | -2.86 | -1.65 |
| E | -1.65 | +1.42 |

26


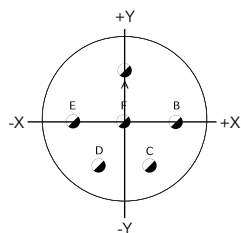
| Ctc | X | Y | Ctc | X | Y |
|-----|-------|-------|-----|-------|-------|
| 1 | +1.69 | +3.79 | 14 | 0.00 | +3.50 |
| 2 | +3.09 | +2.77 | 15 | +1.70 | +1.76 |
| 3 | +3.95 | +1.28 | 16 | +2.55 | +0.29 |
| 4 | +4.13 | -0.44 | 17 | +1.70 | -1.18 |
| 5 | +3.58 | -2.10 | 18 | +0.85 | -2.65 |
| 6 | +2.40 | -3.37 | 19 | -0.85 | -2.65 |
| 7 | 0.00 | -4.13 | 20 | -1.70 | -1.18 |
| 8 | -2.40 | -3.37 | 21 | -2.55 | +0.29 |
| 9 | -3.58 | -2.10 | 22 | -1.70 | +1.76 |
| 10 | -4.13 | -0.44 | 23 | 0.00 | +1.76 |
| 11 | -3.95 | +1.28 | 24 | +0.85 | +0.29 |
| 12 | -3.09 | +2.77 | 25 | 0.00 | -1.18 |
| 13 | -1.69 | +3.79 | 26 | -0.85 | +0.29 |

35


| Ctc | X | Y | Ctc | X | Y | Ctc | X | Y |
|-----|-------|-------|-----|-------|-------|-----|-------|-------|
| 1 | 0.00 | +3.71 | 6 | 0.00 | -3.71 | 10 | -2.16 | +3.00 |
| 2 | +2.16 | +3.00 | 7 | -2.16 | -3.00 | 11 | 0 | +1.42 |
| 3 | +3.51 | +1.14 | 8 | -3.51 | -1.14 | 12 | +1.24 | -0.89 |
| 4 | +3.51 | -1.14 | 9 | -3.51 | +1.14 | 13 | -1.24 | -0.89 |
| 5 | +2.16 | -3.00 | | | | | | |

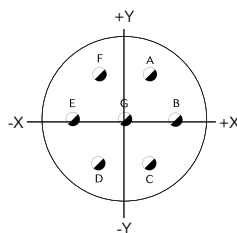
11 / B

98



| Ctc | X | Y |
|-----|-------|-------|
| A | 0.00 | +3.30 |
| B | +3.30 | 0.00 |
| C | +1.65 | -2.87 |
| D | -1.65 | -2.87 |
| E | -3.30 | 0.00 |
| F | 0.00 | 0.00 |

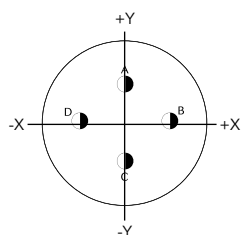
99



| Ctc | X | Y |
|-----|-------|-------|
| A | +1.65 | +2.85 |
| B | +3.30 | 0.00 |
| C | +1.65 | -2.87 |
| D | -1.65 | -2.87 |
| E | -3.30 | 0.00 |
| F | -1.65 | +2.87 |
| G | 0.00 | 0.00 |

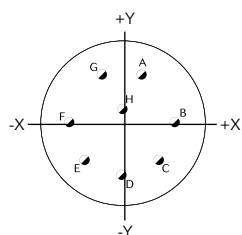
13 / C

04



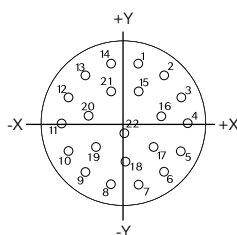
| Ctc | X | Y |
|-----|-------|-------|
| A | 0.00 | +3.81 |
| B | +3.71 | +0.89 |
| C | 0.00 | -2.11 |
| D | -3.71 | +0.89 |

08



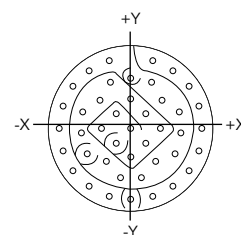
| Ctc | X | Y |
|-----|-------|-------|
| A | +1.65 | +3.99 |
| B | +4.32 | 0.00 |
| C | +3.05 | -3.05 |
| D | 0.00 | -4.32 |
| E | -3.05 | -3.05 |
| F | -4.32 | 0.00 |
| G | -1.65 | +3.99 |
| H | 0.00 | +1.12 |

35



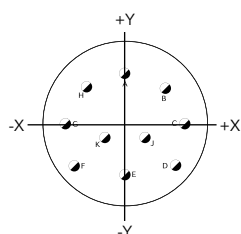
| Ctc | X | Y |
|-----|-------|-------|
| 1 | +1.14 | +5.00 |
| 2 | +3.20 | +4.01 |
| 3 | +4.62 | +2.24 |
| 4 | +5.16 | 0.00 |
| 5 | +4.62 | -2.24 |
| 6 | +3.20 | -4.01 |
| 7 | +1.14 | -5.00 |
| 8 | -1.14 | -5.00 |
| 9 | -3.20 | -4.01 |
| 10 | -4.62 | -2.24 |
| 11 | -5.16 | 0.00 |
| 12 | -4.62 | +2.24 |
| 13 | -3.20 | +4.01 |
| 14 | -1.14 | +5.00 |
| 15 | +1.14 | +2.72 |
| 16 | +2.97 | +0.66 |
| 17 | +2.36 | -1.91 |
| 18 | 0.00 | -3.05 |
| 19 | -2.36 | -1.91 |
| 20 | -2.97 | +0.66 |
| 21 | -1.14 | +2.72 |
| 22 | 0.00 | -0.76 |

43



| Ctc | X | Y |
|-----|-------|-------|
| 1 | +1.80 | +5.54 |
| 2 | -1.80 | +5.54 |
| 3 | +3.42 | +4.71 |
| 4 | +4.71 | +3.42 |
| 5 | +5.54 | +1.80 |
| 6 | +5.82 | 0.00 |
| 7 | +5.54 | -1.80 |
| 8 | +4.71 | -3.42 |
| 9 | +3.42 | -4.71 |
| 10 | +1.80 | -5.54 |
| 11 | 0.00 | -5.82 |
| 12 | -1.80 | -5.54 |
| 13 | -3.42 | -4.71 |
| 14 | -4.71 | -3.42 |
| 15 | -5.54 | -1.80 |
| 16 | -5.82 | 0.00 |
| 17 | -5.54 | +1.80 |
| 18 | -4.71 | +3.42 |
| 19 | -3.42 | +4.71 |
| 20 | 0.00 | +4.12 |
| 21 | +1.68 | +3.76 |
| 22 | +2.54 | +2.28 |
| 23 | +3.92 | +1.27 |
| 24 | +4.10 | -0.43 |
| 25 | +3.57 | -2.06 |
| 26 | +1.99 | -2.74 |
| 27 | +0.86 | -4.03 |
| 28 | -0.86 | -4.03 |
| 29 | -1.99 | -2.74 |
| 30 | -3.57 | -2.06 |
| 31 | -4.10 | -0.43 |
| 32 | -3.92 | +1.27 |
| 33 | -2.54 | +2.28 |
| 34 | -1.68 | +3.76 |
| 35 | 0.00 | +2.42 |
| 36 | +1.21 | +1.21 |
| 37 | +2.42 | 0.00 |
| 38 | +1.21 | -1.21 |
| 39 | 0.00 | -2.42 |
| 40 | -1.21 | -1.21 |
| 41 | -2.42 | 0.00 |
| 42 | -1.21 | +1.21 |
| 43 | 0.00 | 0.00 |

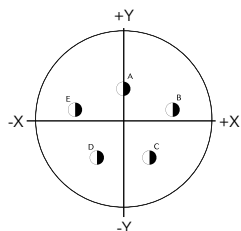
98



| Ctc | X | Y |
|-----|-------|-------|
| A | 0.00 | +4.95 |
| B | +3.18 | +3.81 |
| C | +4.90 | +0.76 |
| D | +4.17 | -2.67 |
| E | 0.00 | -3.43 |
| F | -4.17 | -2.67 |
| G | -4.90 | +0.76 |
| H | -3.18 | +3.81 |
| J | +1.65 | -0.38 |
| K | -1.65 | -0.38 |

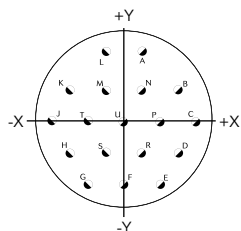
15 / D

05



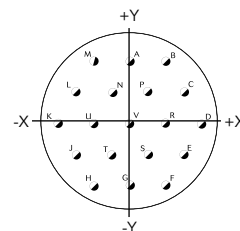
| Ctc | X | Y |
|-----|-------|-------|
| A | 0 | +2.54 |
| B | +4.42 | +0.61 |
| C | +2.39 | +3.76 |
| D | -2.39 | -3.76 |
| E | -4.42 | +0.61 |

18



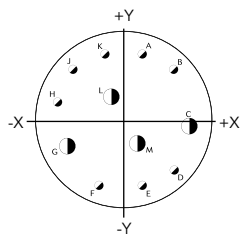
| Ctc | X | Y |
|-----|-------|-------|
| A | +1.65 | +6.40 |
| B | +4.95 | +2.87 |
| C | +6.60 | 0.00 |
| D | +4.95 | -2.87 |
| E | +3.30 | -5.72 |
| F | 0.00 | -5.72 |
| G | -3.30 | -5.72 |
| H | -4.95 | -2.87 |
| J | -6.60 | 0.00 |
| K | -4.95 | +2.87 |
| L | -1.65 | +6.40 |
| M | -1.65 | +2.87 |
| N | +1.65 | +2.87 |
| P | +3.30 | 0.00 |
| R | +1.65 | -2.87 |
| S | -1.65 | -2.87 |
| T | -3.30 | 0.00 |
| U | 0.00 | 0.00 |

19



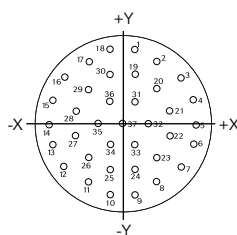
| Ctc | X | Y |
|-----|-------|-------|
| A | 0.00 | +5.72 |
| B | +3.30 | +5.72 |
| C | +4.95 | +2.87 |
| D | +6.60 | 0.00 |
| E | +4.95 | -2.87 |
| F | +3.30 | -5.72 |
| G | 0.00 | -5.72 |
| H | -3.30 | -5.72 |
| J | -4.95 | -2.87 |
| K | -6.60 | 0.00 |
| L | -4.95 | +2.87 |
| M | -3.30 | +5.72 |
| N | -1.65 | +2.87 |
| P | +1.65 | +2.87 |
| R | +3.30 | 0.00 |
| S | +1.65 | -2.87 |
| T | -1.65 | -2.87 |
| U | -3.30 | 0.00 |
| V | 0.00 | 0.00 |

97



| Ctc | X | Y |
|-----|-------|-------|
| A | +1.65 | +5.94 |
| B | +4.52 | +4.52 |
| C | +5.84 | -0.58 |
| D | +4.52 | -4.52 |
| E | +1.65 | -5.94 |
| F | -2.26 | -5.97 |
| G | -5.26 | -2.41 |
| H | -5.94 | +1.65 |
| J | -4.52 | +4.52 |
| K | -1.65 | +5.94 |
| L | -1.19 | +2.06 |
| M | +1.19 | -2.06 |

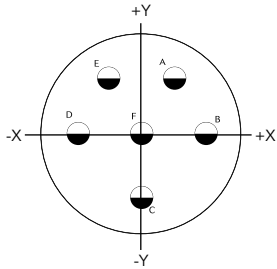
35



| Ctc | X | Y |
|-----|-------|-------|
| 1 | +1.14 | +6.65 |
| 2 | +3.12 | +5.51 |
| 3 | +5.36 | +4.06 |
| 4 | +6.45 | +2.03 |
| 5 | +6.75 | -0.25 |
| 6 | +6.27 | -2.49 |
| 7 | +5.08 | -4.45 |
| 8 | +3.30 | -5.89 |
| 9 | +1.14 | -6.65 |
| 10 | -1.14 | -6.65 |
| 11 | -3.30 | -5.89 |
| 12 | -5.08 | -4.45 |
| 13 | -6.27 | -2.49 |
| 14 | -6.76 | -0.25 |
| 15 | -6.45 | +2.03 |
| 16 | -5.36 | +4.06 |
| 17 | -3.12 | +5.51 |
| 18 | -1.14 | +6.65 |
| 19 | +1.14 | +4.37 |
| 20 | +3.12 | +3.02 |
| 21 | +4.32 | +1.02 |
| 22 | +4.32 | -1.27 |
| 23 | +3.12 | -3.23 |
| 24 | +1.14 | -4.37 |
| 25 | -1.14 | -4.37 |
| 26 | -3.12 | -3.23 |
| 27 | -4.32 | -1.27 |
| 28 | -4.32 | +1.02 |
| 29 | -3.12 | +3.02 |
| 30 | -1.14 | +4.37 |
| 31 | +1.14 | +1.88 |
| 32 | +2.29 | -0.10 |
| 33 | +1.14 | -2.08 |
| 34 | -1.14 | -2.08 |
| 35 | -2.29 | -0.10 |
| 36 | -1.14 | +1.88 |
| 37 | 0.00 | -0.10 |

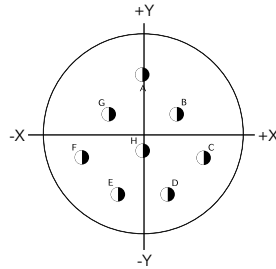
17 / E

06



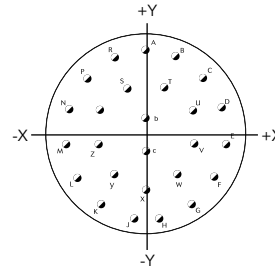
| Ctc | X | Y |
|-----|-------|-------|
| A | +3.07 | +5.31 |
| B | +6.12 | 0.00 |
| C | 0.00 | -6.12 |
| D | -6.12 | 0.00 |
| E | -3.07 | +5.31 |
| F | 0.00 | 0.00 |

08



| Ctc | X | Y |
|-----|-------|-------|
| A | 0.00 | +5.99 |
| B | +3.25 | +2.18 |
| C | +5.84 | -1.98 |
| D | +2.39 | -5.49 |
| E | -2.39 | -5.49 |
| F | -5.84 | -1.98 |
| G | -3.25 | +2.18 |
| H | 0.00 | -1.32 |

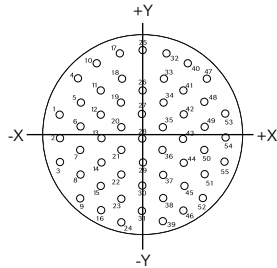
26



| Ctc | X | Y |
|-----|-------|-------|
| A | 0.00 | +8.15 |
| B | +3.33 | +7.44 |
| C | +6.07 | +5.44 |
| D | +7.75 | +2.51 |
| E | +8.10 | -0.86 |
| F | +7.06 | -4.09 |
| G | +4.80 | -6.60 |
| H | +1.70 | -7.98 |

| Ctc | X | Y |
|-----|-------|-------|
| J | -1.70 | -7.98 |
| K | -4.80 | -6.60 |
| L | -7.06 | -4.09 |
| M | -8.10 | -0.86 |
| N | -7.75 | +2.51 |
| P | -6.07 | +5.44 |
| R | -3.33 | +7.44 |
| S | -1.78 | +4.50 |
| T | +1.78 | +4.50 |
| U | +4.45 | +2.39 |
| V | +4.53 | -0.91 |
| W | +3.02 | -3.84 |
| X | 0.00 | -5.16 |
| Y | -3.02 | -3.84 |
| Z | -4.53 | -0.91 |
| a | -4.45 | +2.39 |
| b | 0.00 | +1.65 |
| c | 0.00 | -1.65 |

35



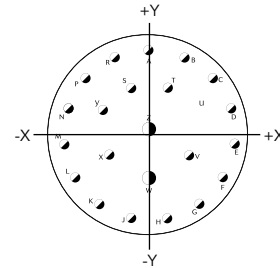
| Ctc | X | Y |
|-----|-------|-------|
| 1 | -7.92 | +2.18 |
| 2 | -7.92 | -0.10 |
| 3 | -7.92 | -2.39 |
| 4 | -6.15 | +5.61 |
| 5 | -5.94 | +3.33 |
| 6 | -5.94 | +1.04 |
| 7 | -5.94 | -1.24 |
| 8 | -5.94 | -3.53 |
| 9 | -5.94 | -5.82 |
| 10 | -4.37 | +7.09 |
| 11 | -3.96 | +4.47 |
| 12 | -3.96 | +2.18 |

| Ctc | X | Y |
|-----|-------|-------|
| 13 | -3.96 | -0.10 |
| 14 | -3.96 | -2.39 |
| 15 | -3.96 | -4.67 |
| 16 | -3.96 | -6.96 |
| 17 | -2.26 | +8.03 |
| 18 | -1.98 | +5.61 |
| 19 | -1.98 | +3.33 |
| 20 | -1.98 | +1.04 |
| 21 | -1.98 | -1.24 |
| 22 | -1.98 | -3.53 |
| 23 | -1.98 | -5.82 |
| 24 | -1.98 | -8.10 |

| Ctc | X | Y |
|-----|-------|-------|
| 25 | 0.00 | +8.36 |
| 26 | 0.00 | +4.47 |
| 27 | 0.00 | +2.18 |
| 28 | 0.00 | -0.10 |
| 29 | 0.00 | -2.39 |
| 30 | 0.00 | +4.67 |
| 31 | 0.00 | -6.96 |
| 32 | +2.26 | +8.03 |
| 33 | +1.98 | +5.61 |
| 34 | +1.98 | +3.33 |
| 35 | +1.98 | +1.04 |
| 36 | +1.98 | -1.24 |
| 37 | +1.98 | -3.53 |
| 38 | +1.98 | -5.82 |
| 39 | +1.98 | -8.10 |
| 40 | +4.37 | +7.09 |

| Ctc | X | Y |
|-----|-------|-------|
| 41 | +3.96 | +4.47 |
| 42 | +3.96 | +2.18 |
| 43 | +3.96 | -0.10 |
| 44 | +3.96 | -2.39 |
| 45 | +3.96 | -4.67 |
| 46 | +3.96 | -6.96 |
| 47 | +6.15 | +5.61 |
| 48 | +5.94 | +3.33 |
| 49 | +5.94 | +1.04 |
| 50 | +5.94 | -1.24 |
| 51 | +5.94 | -3.53 |
| 52 | +5.94 | -5.82 |
| 53 | +7.92 | +2.18 |
| 54 | +7.92 | -0.10 |
| 55 | +7.92 | -2.39 |

99

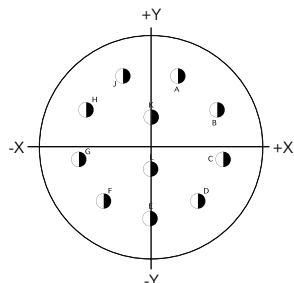


| Ctc | X | Y |
|-----|-------|-------|
| A | 0.00 | +8.15 |
| B | +3.33 | +7.44 |
| C | +6.07 | +5.44 |
| D | +7.75 | +2.51 |
| E | +8.10 | -0.86 |
| F | +7.06 | -4.09 |
| G | +4.80 | -6.60 |
| H | +1.70 | -7.98 |
| J | -1.70 | -7.98 |
| K | -4.80 | -6.60 |
| L | -7.06 | -4.09 |
| M | -8.10 | -0.86 |

| Ctc | X | Y |
|-----|-------|-------|
| N | -7.75 | +2.51 |
| P | -6.07 | +5.44 |
| R | -3.33 | +7.44 |
| S | -1.78 | +4.50 |
| T | +1.78 | +4.50 |
| U | +4.45 | +2.39 |
| V | +3.81 | -1.91 |
| W | 0.00 | -4.09 |
| X | -3.81 | -1.91 |
| Y | -4.45 | +2.39 |
| Z | 0.00 | +0.64 |

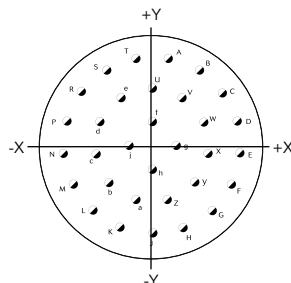
19 / F

11



| Ctc | X | Y |
|-----|-------|-------|
| A | +2.67 | +6.60 |
| B | +6.35 | +3.35 |
| C | +6.99 | -1.35 |
| D | +4.55 | -5.46 |
| E | 0.00 | -7.14 |
| F | -4.55 | -5.46 |
| G | -6.99 | -1.35 |
| H | -6.35 | +3.35 |
| J | -2.67 | +6.60 |
| K | 0.00 | +2.67 |
| L | 0.00 | -2.34 |

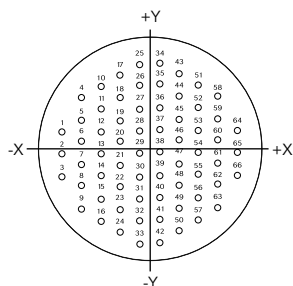
32



| Ctc | X | Y |
|-----|-------|-------|
| A | +1.68 | +8.97 |
| B | +4.80 | +7.75 |
| C | +7.26 | +5.51 |
| D | +8.76 | +2.49 |
| E | +9.07 | -0.84 |
| F | +8.15 | -4.06 |
| G | +6.15 | -6.73 |
| H | +3.30 | -8.51 |
| J | 0.00 | -9.12 |
| K | -3.30 | -8.51 |
| L | -6.15 | -6.73 |
| M | -8.15 | -4.06 |
| N | -9.07 | -0.84 |
| P | -8.76 | +2.49 |
| R | -7.26 | +5.51 |
| S | -4.80 | +7.75 |

| Ctc | X | Y |
|-----|-------|-------|
| T | -1.68 | +8.97 |
| U | 0.00 | +5.84 |
| V | +3.15 | +4.90 |
| W | +5.31 | +2.41 |
| X | +5.79 | -0.84 |
| Y | +4.42 | -3.84 |
| Z | +1.65 | -5.61 |
| a | -1.65 | -5.61 |
| b | -4.42 | -3.84 |
| c | -5.79 | -0.84 |
| d | -5.31 | +2.41 |
| e | -3.15 | +4.90 |
| f | 0.00 | +2.44 |
| g | +2.44 | 0.00 |
| h | 0.00 | -2.44 |
| j | -2.44 | 0.00 |

35



| Ctc | X | Y |
|-----|-------|-------|
| 1 | -9.07 | +2.29 |
| 2 | -9.07 | +0.08 |
| 3 | -9.07 | -2.29 |
| 4 | -7.09 | +5.72 |
| 5 | -7.09 | +3.43 |
| 6 | -7.09 | +1.14 |
| 7 | -7.09 | -1.14 |
| 8 | -7.09 | -3.43 |
| 9 | -7.09 | -5.72 |
| 10 | -5.11 | +6.86 |
| 11 | -5.11 | +4.57 |
| 12 | -5.11 | +2.29 |
| 13 | -5.11 | 0.00 |
| 14 | -5.11 | -2.29 |

| Ctc | X | Y |
|-----|-------|-------|
| 15 | -5.11 | -4.57 |
| 16 | -5.11 | -6.86 |
| 17 | -3.12 | +8.00 |
| 18 | +3.12 | +5.72 |
| 19 | -3.12 | +3.43 |
| 20 | -3.12 | +1.14 |
| 21 | -3.12 | -1.14 |
| 22 | -3.12 | -3.43 |
| 23 | -3.12 | -5.72 |
| 24 | -3.12 | -8.00 |
| 25 | -1.14 | +9.14 |
| 26 | -1.14 | +6.86 |
| 27 | -1.14 | +4.57 |

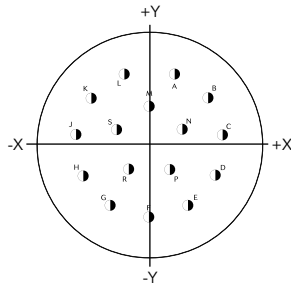
| Ctc | X | Y |
|-----|-------|-------|
| 28 | -1.14 | +2.29 |
| 29 | -1.14 | 0.00 |
| 30 | -1.14 | -2.29 |
| 31 | -1.14 | -4.57 |
| 32 | -1.14 | -6.86 |
| 33 | -1.14 | -9.14 |
| 34 | +1.14 | +9.14 |
| 35 | +1.14 | +6.86 |
| 36 | +1.14 | +4.57 |
| 37 | +1.14 | +2.29 |
| 38 | +1.14 | 0.00 |
| 39 | +1.14 | -2.29 |
| 40 | +1.14 | -4.57 |

| Ctc | X | Y |
|-----|-------|-------|
| 41 | +1.14 | -6.86 |
| 42 | +1.14 | -9.14 |
| 43 | +3.12 | +8.00 |
| 44 | +3.12 | +5.72 |
| 45 | +3.12 | +3.43 |
| 46 | +3.12 | +1.14 |
| 47 | +3.12 | -1.14 |
| 48 | +3.12 | -3.43 |
| 49 | +3.12 | -5.72 |
| 50 | +3.12 | -8.00 |
| 51 | +5.11 | +6.86 |
| 52 | +5.11 | +4.57 |
| 53 | +5.11 | +2.29 |

| Ctc | X | Y |
|-----|-------|-------|
| 54 | +5.11 | 0.00 |
| 55 | +5.11 | -2.29 |
| 56 | +5.11 | -4.57 |
| 57 | +5.11 | -6.86 |
| 58 | +7.09 | +5.72 |
| 59 | +7.09 | +3.43 |
| 60 | +7.09 | +1.14 |
| 61 | +7.09 | -1.14 |
| 62 | +7.09 | -3.43 |
| 63 | +7.09 | -5.72 |
| 64 | +9.07 | +2.29 |
| 65 | +9.07 | 0.00 |
| 66 | +9.07 | -2.29 |

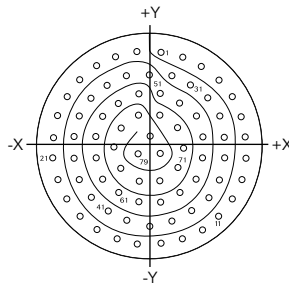
21 / G

16



| Ctc | X | Y | Ctc | X | Y |
|-----|-------|-------|-----|-------|-------|
| A | +3.00 | +8.18 | J | -8.66 | +0.91 |
| B | +6.88 | +5.36 | K | -6.88 | +5.36 |
| C | +8.66 | +0.91 | L | -3.00 | +8.18 |
| D | +7.82 | -3.81 | M | 0.00 | +4.45 |
| E | +4.62 | -7.37 | N | +3.91 | +1.57 |
| F | 0.00 | -8.71 | P | +2.39 | -3.10 |
| G | -4.62 | -7.37 | R | -2.39 | -3.10 |
| H | -7.82 | -3.81 | S | -3.91 | +1.57 |

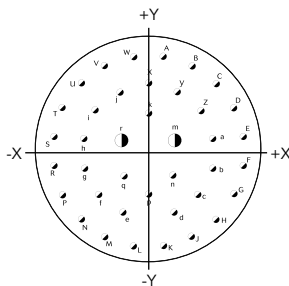
35



| Ctc | X | Y |
|-----|--------|--------|
| 1 | +1.35 | +10.82 |
| 2 | +3.71 | +10.26 |
| 3 | +5.89 | +9.19 |
| 4 | +7.77 | +7.67 |
| 5 | +9.27 | +5.77 |
| 6 | +10.31 | +3.58 |
| 7 | +10.85 | +1.22 |
| 8 | +10.85 | -1.22 |
| 9 | +10.31 | -3.58 |
| 10 | +9.27 | -5.77 |
| 11 | +7.77 | -7.67 |
| 12 | +5.89 | -9.19 |
| 13 | +3.71 | -10.26 |

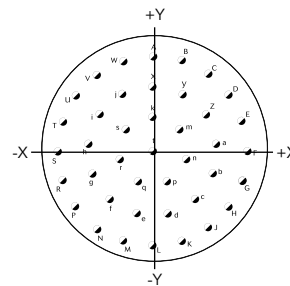
| Ctc | X | Y | Ctc | X | Y | Ctc | X | Y |
|-----|--------|--------|-----|-------|-------|-----|-------|-------|
| 14 | +1.35 | -10.82 | 36 | +7.90 | -3.58 | 58 | +3.40 | -5.05 |
| 15 | -1.35 | -10.82 | 37 | +6.55 | -5.59 | 59 | +1.22 | -6.12 |
| 16 | -3.71 | -10.26 | 38 | +4.67 | -7.11 | 60 | -1.22 | -6.12 |
| 17 | -5.89 | -9.19 | 39 | +2.49 | -8.18 | 61 | -3.40 | -5.05 |
| 18 | -7.77 | -7.67 | 40 | 0.00 | -8.81 | 62 | -5.28 | -3.53 |
| 19 | -9.27 | -5.77 | 41 | -2.49 | -8.18 | 63 | -6.02 | -1.22 |
| 20 | -10.31 | -3.58 | 42 | -4.67 | -7.11 | 64 | -6.02 | +1.22 |
| 21 | -10.85 | -1.22 | 43 | -6.55 | -5.59 | 65 | -5.28 | +3.53 |
| 22 | -10.85 | +1.22 | 44 | -7.90 | -3.58 | 66 | -3.40 | +5.05 |
| 23 | -10.31 | +3.58 | 45 | -8.43 | -1.22 | 67 | -1.22 | +3.71 |
| 24 | -9.27 | +5.77 | 46 | -8.43 | +1.22 | 68 | +1.22 | +3.71 |
| 25 | -7.77 | +7.67 | 47 | -7.90 | +3.58 | 69 | +3.18 | +2.29 |
| 26 | -5.89 | +9.19 | 48 | -6.55 | +5.59 | 70 | +3.94 | 0.00 |
| 27 | -3.71 | +10.26 | 49 | -4.67 | +7.11 | 71 | +3.18 | -2.29 |
| 28 | -1.35 | +10.82 | 50 | -2.49 | +8.18 | 72 | +1.22 | -3.71 |
| 29 | 0.00 | +8.20 | 51 | -1.22 | +6.12 | 73 | -1.22 | -3.71 |
| 30 | +2.49 | +8.18 | 52 | +1.22 | +6.12 | 74 | -3.18 | -2.29 |
| 31 | +4.67 | +7.11 | 53 | +3.40 | +5.05 | 75 | -3.94 | 0.00 |
| 32 | +6.55 | +5.59 | 54 | +5.28 | +3.53 | 76 | -3.18 | +2.29 |
| 33 | +7.90 | +3.58 | 55 | +6.02 | +1.22 | 77 | 0.00 | +1.35 |
| 34 | +8.43 | +1.22 | 56 | +6.02 | -1.22 | 78 | +1.22 | -0.74 |
| 35 | +8.43 | -1.22 | 57 | +5.28 | -3.53 | 79 | -1.22 | -0.74 |

39



| Ctc | X | Y | Ctc | X | Y | Ctc | X | Y |
|-----|--------|--------|-----|--------|--------|-----|-------|-------|
| A | +1.65 | +10.44 | P | -9.42 | -4.80 | d | +2.84 | -6.73 |
| B | +4.80 | +9.42 | R | -10.44 | -1.65 | e | -2.84 | -6.73 |
| C | +7.47 | +7.47 | S | -10.44 | +1.65 | f | -5.51 | -4.80 |
| D | +9.42 | +4.80 | T | -9.42 | +4.80 | g | -7.11 | -1.88 |
| E | +10.44 | +1.65 | U | -7.47 | +7.47 | h | -7.11 | +1.45 |
| F | +10.44 | -1.65 | V | -4.80 | +9.42 | i | -5.89 | +4.55 |
| G | +9.42 | -4.80 | W | -1.65 | +10.44 | j | -3.20 | +6.50 |
| H | +7.47 | -7.47 | X | 0.00 | +7.49 | k | 0.00 | +4.17 |
| J | +4.80 | -9.42 | Y | +3.20 | +6.50 | m | +2.90 | +1.22 |
| K | +1.65 | -10.44 | Z | +5.89 | +4.55 | n | +2.69 | -2.72 |
| L | -1.65 | -10.44 | a | +7.11 | +1.45 | p | 0.00 | -4.80 |
| M | -4.80 | -9.42 | b | +7.11 | -1.88 | q | -2.69 | -2.72 |
| N | -7.47 | -7.47 | c | +5.51 | -4.80 | r | -2.90 | +1.22 |

41

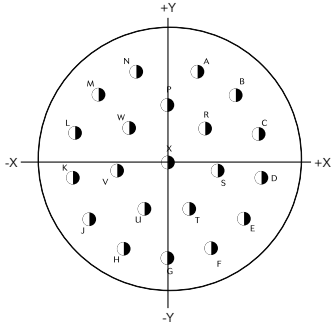


| Ctc | X | Y | Ctc | X | Y |
|-----|--------|--------|-----|--------|--------|
| A | 0.00 | +10.60 | M | -3.26 | -10.09 |
| B | +3.28 | +10.09 | N | -6.23 | -8.58 |
| C | +6.23 | +8.58 | P | -8.58 | -6.23 |
| D | +8.58 | +6.23 | R | -10.09 | -3.28 |
| E | +10.09 | +3.28 | S | -10.60 | 0.00 |
| F | +10.60 | 0.00 | T | -10.09 | +3.28 |
| G | +10.09 | -3.28 | U | -8.58 | +6.23 |
| H | +8.58 | -6.23 | V | -6.23 | +8.58 |
| J | +6.23 | -8.58 | W | -3.28 | +10.09 |
| K | +3.28 | -10.09 | X | 0.00 | +7.20 |
| L | 0.00 | -10.60 | Y | +3.35 | +6.38 |

| Ctc | X | Y |
|-----|-------|-------|
| Z | +5.92 | +4.09 |
| a | +7.15 | +0.87 |
| b | +6.73 | -2.55 |
| c | +4.78 | -5.39 |
| d | +1.73 | -6.99 |
| e | -1.73 | -6.99 |
| f | -4.78 | -5.39 |
| g | -6.73 | -2.55 |
| h | -7.15 | +0.87 |
| i | -5.92 | +4.09 |
| j | -3.35 | +6.38 |
| k | 0.00 | +3.81 |
| m | +2.98 | +2.38 |
| n | +3.71 | -0.85 |
| p | -1.66 | -3.43 |
| q | +1.66 | -3.43 |
| r | -3.71 | -0.85 |
| s | -2.98 | +2.38 |
| t | 0.00 | 0.00 |

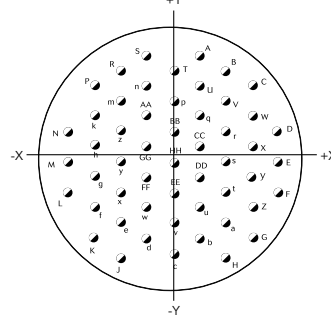
23 / H

21



| Ctc | X | Y |
|-----|--------|--------|
| A | +3.25 | +9.78 |
| B | +7.34 | +7.24 |
| C | +9.80 | +3.12 |
| D | +10.16 | -1.65 |
| E | +8.33 | -6.07 |
| F | +4.65 | -9.19 |
| G | 0.00 | -10.31 |
| H | -4.65 | -9.19 |
| J | -8.33 | -6.07 |
| K | -10.16 | -1.65 |
| L | -9.80 | +3.12 |
| M | -7.34 | +7.24 |
| N | -3.25 | +9.78 |
| P | 0.00 | +6.22 |
| R | +4.06 | +3.71 |
| S | +5.44 | -0.89 |
| T | +2.39 | -4.93 |
| U | -2.39 | -4.93 |
| V | -5.44 | -0.89 |
| W | -4.06 | +3.71 |
| X | 0.00 | 0.00 |

53



| Ctc | X | Y |
|-----|--------|--------|
| A | +2.84 | +11.56 |
| B | +5.72 | +9.91 |
| C | +8.53 | +8.26 |
| D | +11.43 | +3.30 |
| E | +11.43 | 0.00 |
| F | +11.43 | -3.30 |

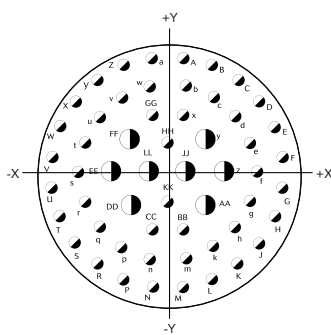
| Ctc | X | Y |
|-----|--------|--------|
| G | +8.53 | -8.26 |
| H | +5.72 | -10.41 |
| J | -5.72 | -10.41 |
| K | -8.53 | -8.26 |
| L | -11.43 | -3.30 |
| M | -11.43 | 0.00 |

| Ctc | X | Y |
|-----|--------|--------|
| N | -11.43 | +3.30 |
| P | -8.53 | +8.26 |
| R | -5.72 | +9.91 |
| S | -2.84 | +11.56 |
| T | 0.00 | +9.91 |
| U | +2.84 | +8.26 |
| V | +5.72 | +6.60 |
| W | +8.53 | +4.95 |
| X | +8.53 | +1.65 |
| Y | +8.53 | -1.65 |
| Z | +8.53 | -4.95 |
| a | +5.72 | -6.60 |
| b | +2.84 | -8.26 |
| c | 0.00 | -9.91 |
| d | -2.84 | -8.26 |
| e | -5.72 | -6.60 |
| f | -8.53 | -4.95 |
| g | -8.53 | -1.65 |
| h | -8.53 | +1.65 |
| k | -8.53 | +4.95 |

| Ctc | X | Y |
|-----|-------|-------|
| m | -5.72 | +6.60 |
| n | -2.84 | +8.26 |
| p | 0.00 | +6.60 |
| q | +2.84 | +4.95 |
| r | +5.72 | +3.30 |
| s | +5.72 | 0.00 |
| t | +5.72 | -3.30 |
| u | +2.84 | -4.95 |
| v | 0.00 | -6.60 |
| w | -2.84 | -4.95 |
| x | -5.72 | -3.30 |
| y | -5.72 | 0.00 |
| z | -5.72 | +3.30 |
| AA | -2.84 | +4.95 |
| BB | 0.00 | +3.30 |
| CC | +2.84 | +1.65 |
| DD | +2.84 | -1.65 |
| EE | 0.00 | -3.30 |
| FF | -2.84 | -1.65 |
| GG | -2.84 | +1.65 |
| HH | 0.00 | 0.00 |

25 / J

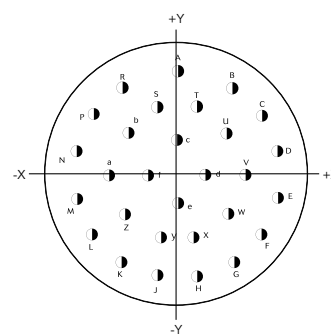
04



| Ctc | X | Y |
|-----|--------|--------|
| A | +1.75 | +13.49 |
| B | +5.16 | +12.57 |
| C | +8.23 | +10.80 |
| D | +10.77 | +8.28 |
| E | +12.52 | +5.21 |
| F | +13.49 | +1.75 |
| G | +13.49 | -1.75 |
| H | +12.52 | -5.21 |
| J | +10.77 | -8.28 |
| K | +8.23 | -10.80 |
| L | +5.16 | -12.57 |
| M | +1.75 | -13.49 |
| N | -1.75 | -13.49 |
| P | -5.16 | -12.57 |

| Ctc | X | Y |
|-----|--------|--------|
| R | -8.23 | -10.80 |
| S | -10.77 | -8.28 |
| T | -12.52 | -5.21 |
| U | -13.49 | -1.75 |
| V | -13.49 | +1.75 |
| W | -12.52 | +5.21 |
| X | -10.77 | +8.28 |
| Y | -8.23 | +10.80 |
| Z | -5.16 | +12.57 |
| a | -1.75 | +13.49 |
| b | +2.18 | +10.08 |
| c | +5.38 | +8.78 |
| d | +7.90 | +6.38 |
| e | +9.58 | +3.35 |
| f | +10.46 | 0.00 |
| g | +9.58 | -3.35 |
| h | +7.90 | -6.38 |
| k | +5.38 | -8.78 |
| m | +2.18 | -10.08 |
| n | -2.18 | -10.08 |
| p | -5.38 | -8.78 |
| q | -7.90 | -6.38 |
| r | -9.58 | -3.35 |
| s | -10.46 | 0.00 |
| t | -9.58 | +3.35 |
| u | -7.90 | +6.38 |
| v | -5.38 | +8.78 |
| w | -2.18 | +10.08 |
| x | +1.75 | +6.66 |
| y | +4.37 | +3.78 |
| z | +6.55 | 0.00 |
| AA | +4.37 | -3.78 |
| BB | +1.75 | -6.66 |
| CC | -1.75 | -6.66 |
| DD | -4.37 | -3.78 |
| EE | -6.55 | 0.00 |
| FF | -4.37 | -3.78 |
| GG | -1.75 | -6.66 |
| HH | 0.00 | +3.35 |
| JJ | +2.18 | 0.00 |
| KK | 0.00 | -3.35 |
| LL | -2.18 | 0.00 |

29

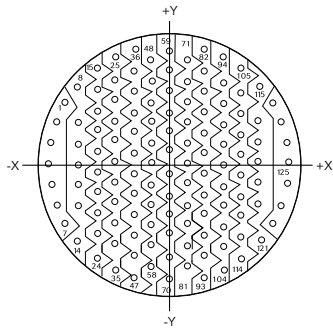


| Ctc | X | Y |
|-----|--------|--------|
| A | 0.00 | +12.22 |
| B | +6.55 | +10.31 |
| C | +10.03 | +7.04 |
| D | +11.91 | +2.77 |
| E | +11.91 | -2.77 |
| F | +10.03 | -7.04 |
| G | +6.68 | -10.31 |
| H | +2.31 | -11.99 |

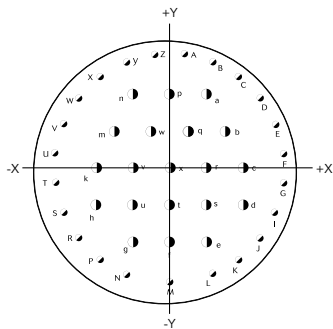
| Ctc | X | Y |
|-----|--------|--------|
| J | -2.31 | -11.99 |
| K | -6.68 | -10.31 |
| L | -10.03 | -7.04 |
| M | -11.91 | -2.77 |
| N | -11.91 | +2.77 |
| P | -10.03 | +7.04 |
| R | -6.55 | +10.31 |
| S | -2.31 | +8.15 |
| T | +2.31 | +8.15 |
| U | +5.79 | +4.93 |
| V | +8.10 | 0.00 |
| W | +6.10 | -4.60 |
| X | +2.31 | -7.37 |
| Y | -2.31 | -7.37 |
| Z | -6.10 | -4.60 |
| a | -8.10 | 0.00 |
| b | -5.79 | +4.93 |
| c | 0.00 | +4.09 |
| d | +3.40 | 0.00 |
| e | 0.00 | -3.30 |
| f | -3.40 | 0.00 |

25 / J

35



43



| Ctc | X | Y |
|-----|--------|--------|
| 1 | -12.17 | +7.09 |
| 2 | -13.21 | +4.83 |
| 3 | -13.87 | +2.41 |
| 4 | -14.10 | 0.00 |
| 5 | -13.87 | -2.41 |
| 6 | -13.21 | -4.83 |
| 7 | -12.17 | -7.09 |
| 8 | -10.77 | +9.07 |
| 9 | -10.54 | +4.83 |
| 10 | -10.54 | +2.41 |
| 11 | -10.54 | 0.00 |
| 12 | -10.54 | -2.41 |
| 13 | -10.54 | -4.83 |
| 14 | -10.77 | -9.07 |
| 15 | -8.43 | +11.28 |
| 16 | -8.43 | +8.43 |
| 17 | -8.43 | +6.02 |
| 18 | -8.43 | +3.61 |
| 19 | -8.43 | +1.19 |
| 20 | -8.43 | -1.19 |
| 21 | -8.43 | -3.61 |
| 22 | -8.43 | -6.02 |
| 23 | -8.43 | -8.43 |
| 24 | -8.43 | -10.85 |
| 25 | -6.32 | +12.60 |
| 26 | -6.32 | +9.65 |

| Ctc | X | Y |
|-----|-------|--------|
| 27 | -6.32 | +7.24 |
| 28 | -6.32 | +4.83 |
| 29 | -6.32 | +2.41 |
| 30 | -6.32 | 0.00 |
| 31 | -6.32 | -2.41 |
| 32 | -6.32 | -4.83 |
| 33 | -6.32 | -7.24 |
| 34 | -6.32 | -9.65 |
| 35 | -6.32 | -12.07 |
| 36 | -4.06 | +13.49 |
| 37 | -4.22 | +10.85 |
| 38 | -4.22 | +8.43 |
| 39 | -4.22 | +6.02 |
| 40 | -4.22 | +3.61 |
| 41 | -4.22 | +1.19 |
| 42 | -4.22 | -1.19 |
| 43 | -4.22 | -3.61 |
| 44 | -4.22 | -6.02 |
| 45 | -4.22 | -8.43 |
| 46 | -4.22 | -10.85 |
| 47 | -4.22 | -13.26 |
| 48 | -2.11 | +12.07 |
| 49 | -2.11 | +9.65 |
| 50 | -2.11 | +7.24 |
| 51 | -2.11 | +4.83 |
| 52 | -2.11 | +2.41 |

| Ctc | X | Y |
|-----|-------|--------|
| 53 | -2.11 | 0.00 |
| 54 | -2.11 | -2.41 |
| 55 | -2.11 | -4.83 |
| 56 | -2.11 | -7.24 |
| 57 | -2.11 | -9.65 |
| 58 | -2.11 | -12.07 |
| 59 | 0.00 | +13.26 |
| 60 | 0.00 | +10.85 |
| 61 | 0.00 | +8.43 |
| 62 | 0.00 | +6.02 |
| 63 | 0.00 | +3.61 |
| 64 | 0.00 | +1.19 |
| 65 | 0.00 | -1.19 |
| 66 | 0.00 | -3.61 |
| 67 | 0.00 | -6.02 |
| 68 | 0.00 | -8.43 |
| 69 | 0.00 | -10.85 |
| 70 | 0.00 | -14.10 |
| 71 | +2.11 | +12.07 |
| 72 | +2.11 | +9.65 |
| 73 | +2.11 | +7.34 |
| 74 | +2.11 | +4.83 |
| 75 | +2.11 | +2.41 |
| 76 | +2.11 | 0.00 |
| 77 | +2.11 | -2.41 |
| 78 | +2.11 | -4.83 |

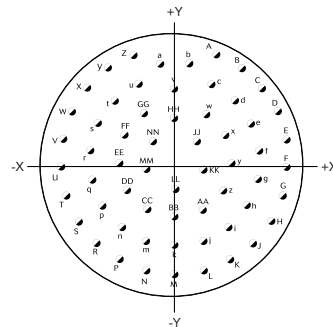
| Ctc | X | Y |
|-----|-------|--------|
| 79 | +2.11 | -7.24 |
| 80 | +2.11 | -9.65 |
| 81 | +2.11 | -12.07 |
| 82 | +4.06 | +13.49 |
| 83 | +4.22 | +10.85 |
| 84 | +4.22 | +8.43 |
| 85 | +4.22 | +6.02 |
| 86 | +4.22 | +3.61 |
| 87 | +4.22 | +1.19 |
| 88 | +4.22 | -1.19 |
| 89 | +4.22 | -3.61 |
| 90 | +4.22 | -6.02 |
| 91 | +4.22 | -8.43 |
| 92 | +4.22 | -10.85 |
| 93 | +4.22 | -13.26 |
| 94 | +6.32 | +12.60 |
| 95 | +6.32 | +9.65 |
| 96 | +6.32 | +7.24 |
| 97 | +6.32 | +4.83 |
| 98 | +6.32 | +2.41 |
| 99 | +6.32 | 0.00 |
| 100 | +6.32 | -2.41 |
| 101 | +6.32 | -4.83 |
| 102 | +6.32 | -7.24 |
| 103 | +6.32 | -9.65 |

| Ctc | X | Y |
|-----|--------|--------|
| 104 | +6.32 | -12.07 |
| 105 | +8.43 | +11.28 |
| 106 | +8.43 | +8.43 |
| 107 | +8.43 | +6.02 |
| 108 | +8.43 | +3.61 |
| 109 | +8.43 | +1.19 |
| 110 | +8.43 | -1.19 |
| 111 | +8.43 | -3.61 |
| 112 | +8.43 | -6.02 |
| 113 | +8.43 | -8.43 |
| 114 | +8.43 | -10.85 |
| 115 | +10.77 | +9.07 |
| 116 | +10.54 | +4.83 |
| 117 | +10.54 | +2.41 |
| 118 | +10.54 | 0.00 |
| 119 | +10.54 | -2.41 |
| 120 | +10.54 | -4.83 |
| 121 | +10.77 | -9.07 |
| 122 | +12.17 | +7.09 |
| 123 | +13.21 | +4.83 |
| 124 | +13.87 | +2.41 |
| 125 | +14.10 | 0.00 |
| 126 | +13.87 | -2.41 |
| 127 | +13.21 | -4.83 |
| 128 | +12.17 | -7.09 |

| Ctc | X | Y |
|-----|--------|--------|
| A | +1.75 | +13.49 |
| B | +5.16 | +12.57 |
| C | +8.23 | +10.80 |
| D | +10.77 | +8.28 |
| E | +12.52 | +5.21 |
| F | +13.49 | +1.75 |
| G | +13.49 | -1.75 |
| H | +12.52 | -5.21 |
| J | +10.77 | -8.28 |
| K | +8.23 | -10.80 |
| L | +5.16 | -12.57 |
| M | 0.00 | -13.49 |
| N | -5.16 | -12.57 |
| P | -8.23 | -10.80 |
| R | -10.77 | -8.28 |
| S | -12.52 | -5.21 |
| T | -13.49 | -1.75 |
| U | -13.49 | +1.75 |
| V | -12.52 | +5.21 |
| W | -10.77 | +8.28 |
| X | -8.23 | +10.80 |
| Y | -5.16 | +12.57 |

| Ctc | X | Y |
|-----|-------|-------|
| Z | -1.75 | +13.4 |
| a | +4.37 | +8.74 |
| b | +6.55 | +4.37 |
| c | +8.74 | 0.00 |
| d | +8.74 | -4.37 |
| e | +4.37 | -8.74 |
| f | 0.00 | -8.74 |
| g | -4.37 | -8.74 |
| h | -8.74 | -4.37 |
| k | -8.74 | 0.00 |
| m | -6.55 | +4.37 |
| n | -4.37 | +8.74 |
| p | 0.00 | +8.74 |
| q | +2.18 | +4.37 |
| r | +4.37 | 0.00 |
| s | +4.37 | -4.37 |
| t | 0.00 | -4.37 |
| u | -4.37 | -4.37 |
| v | -4.37 | 0.00 |
| w | -2.18 | +4.37 |
| x | 0.00 | 0.00 |

61



| Ctc | X | Y |
|-----|--------|--------|
| A | +4.98 | +12.70 |
| B | +7.98 | +11.05 |
| C | +10.49 | +8.71 |
| D | +12.32 | +5.84 |
| E | +13.39 | +2.57 |
| F | +13.61 | -0.76 |
| G | +12.98 | -4.17 |
| H | +11.53 | -7.29 |
| J | +9.35 | -9.93 |

| Ctc | X | Y |
|-----|--------|--------|
| K | +6.58 | -11.94 |
| L | +3.40 | -13.18 |
| M | 0.00 | -13.64 |
| N | -3.40 | -13.18 |
| P | -6.58 | -11.94 |
| R | -9.35 | -9.93 |
| S | -11.53 | -7.29 |
| T | -12.98 | -4.17 |
| U | -13.61 | -0.76 |

| Ctc | X | Y |
|-----|--------|--------|
| V | -13.39 | +2.57 |
| W | -12.32 | +5.84 |
| X | -10.49 | +8.71 |
| Y | -7.98 | +11.05 |
| Z | -4.98 | +12.70 |
| a | -1.73 | +11.53 |
| b | +1.73 | +11.53 |
| c | +4.39 | +9.22 |
| d | +7.24 | +7.19 |
| e | +9.19 | +4.45 |
| f | +10.13 | +1.17 |
| g | +9.96 | -2.24 |
| h | +8.66 | -5.41 |
| i | +6.38 | -7.98 |
| j | +3.38 | -9.63 |
| k | 0.00 | -10.21 |
| m | -3.38 | -9.63 |
| n | -6.38 | -7.98 |
| p | -8.66 | -5.41 |
| q | -9.96 | -2.24 |
| r | -10.13 | +1.17 |
| s | -9.19 | +4.45 |

| Ctc | X | Y |
|-----|-------|-------|
| t | -7.24 | +7.19 |
| u | -4.39 | +9.22 |
| v | 0.00 | +8.59 |
| w | +3.73 | +5.66 |
| x | +6.02 | +3.10 |
| y | +6.78 | -0.25 |
| z | +5.79 | -3.53 |
| AA | +3.33 | -5.92 |
| BB | 0.00 | -6.78 |
| CC | -3.33 | -5.92 |
| DD | -5.79 | -3.53 |
| EE | -6.78 | -0.25 |
| FF | -6.02 | +3.10 |
| GG | -3.73 | +5.66 |
| HH | 0.00 | +5.08 |
| JJ | +2.67 | +2.39 |
| KK | +3.43 | -1.04 |
| LL | 0.00 | -3.35 |
| MM | -3.43 | -1.04 |
| NN | -2.67 | +2.39 |
| PP | 0.00 | 0.00 |