

DRAWINGS

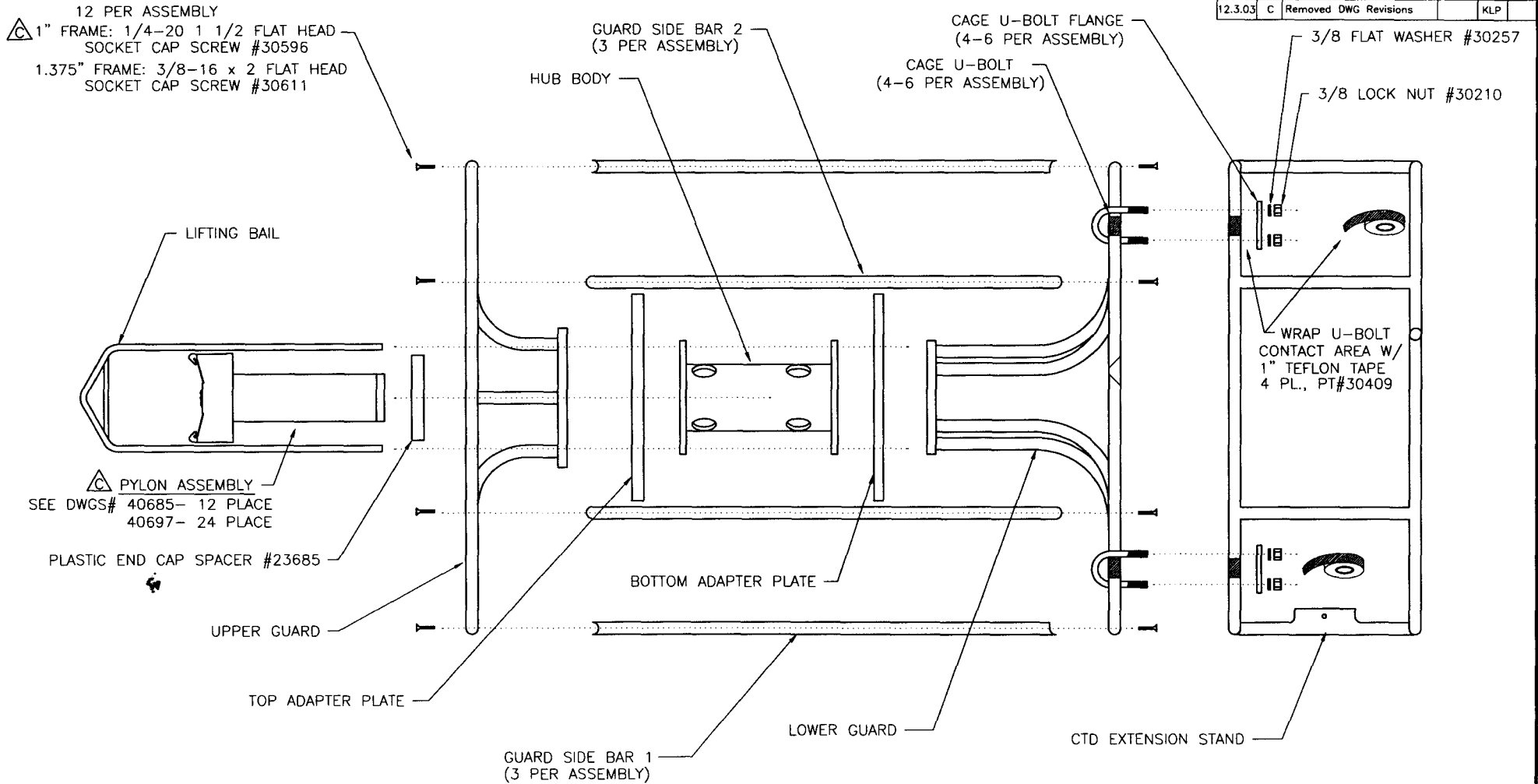
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|--|----|
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DRAWINGS

Dwg 40734A Carousel Solenoid Terminator - 12 Position, Assembly.....

23

| DATE | SYM | REVISION RECORD | AUTH. | DR. | CK. |
|---------|-----|-----------------------|-------|-----|-----|
| 3.14.95 | A | CHANGED MISC. TEXT | | | |
| 5.99 | B | Added 24PI Hardware | | MJ | |
| 12.3.03 | C | Removed DWG Revisions | | KLP | |



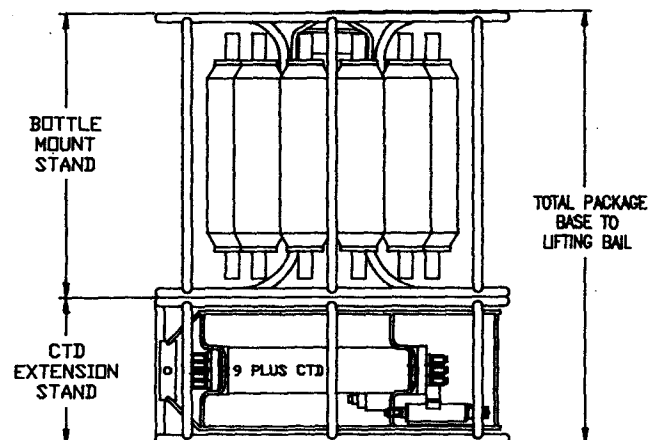
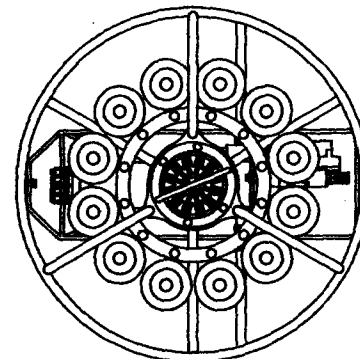
NOTES:

- REFER TO DRAWING 40714 FOR SPECIFIC PART NUMBERS FOR EACH FRAME TYPE

| TOLERANCES | | | | | | SEA-BIRD ELECTRONICS, INC | | | |
|------------|---------|----------------|-------------|--|-----|--------------------------------|--|--|--|
| FRACTIONAL | P/N | SCALE | DRAWN BY DG | | | APPROVED BY | | | |
| DECIMAL | TITLE | | | | | SBE 32 CAROUSEL FRAME ASSEMBLY | | | |
| ANGULAR | DATE | DRAWING NUMBER | 40713 | | REV | C | | | |
| | 4/11/94 | | | | | | | | |

| STANDARD CAROUSEL | | BOTTLE MOUNT STAND | | CTD EXTENSION STAND | | TOTAL PACKAGE | |
|-----------------------|----------------|--------------------|----------|---------------------|----------|---------------|--------|
| DESCRIPTION | PRICE LIST P/N | HEIGHT | DIAMETER | HEIGHT | DIAMETER | HEIGHT | WEIGHT |
| 12 BOTTLE / 1.2 LITER | 80723 | 31.0 | 39.0 | 16.0 | 39.0 | 48.3 | 209 |
| 12 BOTTLE / 1.7 LITER | 80723 | 31.0 | 39.0 | 16.0 | 39.0 | 48.3 | 209 |
| 12 BOTTLE / 2.5 LITER | 80724 | 40.3 | 39.0 | 16.0 | 39.0 | 56.5 | 219 |
| 12 BOTTLE / 5 LITER | 80725 | 32.3 | 39.0 | 16.0 | 39.0 | 48.3 | 209 |
| 12 BOTTLE / 8 LITER | 80726 | 40.3 | 39.0 | 16.0 | 39.0 | 56.5 | 219 |
| 12 BOTTLE / 10 LITER | 80727 | 48.8 | 39.0 | 16.0 | 39.0 | 62.9 | 227 |
| 12 BOTTLE / 12 LITER | 80728 | 51.8 | 39.0 | 16.0 | 39.0 | 68.0 | 235 |
| 12 BOTTLE / 20 LITER | 80729 | 53.2 | 61.0 | 16.0 | 61.0 | 73.7 | 418 |
| 12 BOTTLE / 30 LITER | 80730 | 63.5 | 61.0 | 16.0 | 61.0 | 61.0 | 447 |
| 24 BOTTLE / 1.2 LITER | 80731 | 31.0 | 45.0 | 16.0 | 45.0 | 47.5 | 205 |
| 24 BOTTLE / 1.7 LITER | 80731 | 31.0 | 45.0 | 16.0 | 45.0 | 47.5 | 205 |
| 24 BOTTLE / 2.5 LITER | 80732 | 39.0 | 45.0 | 16.0 | 45.0 | 54.5 | 285 |
| 24 BOTTLE / 5 LITER | 80733 | 34.2 | 61.0 | 16.8 | 61.0 | 53.5 | 452 |
| 24 BOTTLE / 8 LITER | 80734 | 42.2 | 61.0 | 16.8 | 61.0 | 61.5 | 466 |
| 24 BOTTLE / 10 LITER | 80735 | 48.2 | 61.0 | 16.8 | 61.0 | 67.7 | 485 |
| 24 BOTTLE / 12 LITER | 80736 | 53.2 | 61.0 | 16.8 | 61.0 | 73.7 | 494 |
| 36 BOTTLE / 12 LITER | | 65.1 | 84.0 | NA | NA | 66.8 | |
| COMPACT CAROUSEL | | | | | | | |
| 12 BOTTLE 1.2/8 LITER | | 38.0 | 38.0 | NA | NA | 38.2 | 150 |
| SUB-COMPACT CAROUSEL | | | | | | | |
| 12 BOTTLE / 1.7 LITER | | 31.0 | 27.5 | NA | NA | 31.2 | 111 |
| 12 BOTTLE / 2.5 LITER | | 39.0 | 27.5 | NA | NA | 39.2 | 114 |
| | | | | | | | |
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| | | | | | | | |

| DATE | SYM | REVISION RECORD | AUTH. | DR. | CK. |
|------|-----|-----------------|-------|-----|-----|
| | | | | | |



NOTE:

DIM. = INCH
 WEIGHT = POUNDS
 WEIGHT IS LESS BOTTLES AND CTD

| | | | | |
|------------|---------------------------|-------------|-----------|-----|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | |
| FRACTIONAL | P/N | SCALE | DESIGN BY | CHK |
| DECIMAL | TITLE | APPROVED BY | | |
| ANGULAR | DATE | DWG NO. | KEY | |
| | 3-3-96 | 21134 | | |

003

HUB IS NOT INCLUDED:

HUB PART NUMBERS

HUB IS INCLUDED:

| | | | | | |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 6800M | 7000M | 10,500M | 6800M | 7000M | 10,500M |
| 90409, 12-Position | 90413, 12-Position | 90416, 12-Position | 90420, 12-Position | 90425, 12-Position | 90427, 12-Position |
| 90410, 24-Position | 90414, 24-Position | 90417, 24-Position | 90421, 24-Position | 90426, 24-Position | 90428, 24-Position |
| Subconn | | | | | |
| 90476, 12-Position | 90479, 12-Position | 90482, 12-Position | | | |
| 90477, 24-Position | 90480, 24-Position | 90483, 24-Position | | | |

| DATE | SYM | REVISION RECORD | AUTH. | DR. | CK. |
|----------|-----|-----------------------------|-------|-----|-----|
| 07/28/94 | A | P/Ns ADDED FOR 24/8,10,12 | PG | DG | |
| 08/23/94 | B | P/Ns CHANGED FOR 12/1.7 | RB | DG | |
| 06/4/96 | C | Updates for New Assemblies | | JEB | |
| 12.05.00 | D | Update 12-20, Remove SC | CB | MJ | CB |
| 12.04.02 | E | See Rev.E Text File | CB | MJ | CB |
| 12.03.03 | F | Added Subconn to Pylon only | CB | KLP | CB |

CAROUSEL ASSEMBLY PART NUMBERS

| BOTTLE MOUNT STAND | | GUARD | | GUARD SIDE BAR | | CTD EXTENSION STAND | | ASSEMBLY KITS | | ADAPTER PLATES | | LIFTING BAIL | CAGE U-BOLT | U-BOLT FLANGE | |
|-----------------------|----------------|--------|--------|----------------|--------|---------------------|----------------|---------------|------------|----------------|--------|--------------|-------------|---------------|----------------------|
| DESCRIPTION | PRICE LIST P/N | UPPER | LOWER | 1 | 2 | SBE P/N | PRICE LIST P/N | HARDWARE | LIFT BAILE | TOP | BOTTOM | | | | PRICE LIST P/N (SET) |
| 12 BOTTLE / 1.2 LITER | 80723 | 23677C | | 23742C | 23743C | 23675C | 80742 | 50112 | 50111 | 70071 (SET) | | 80737 | 23678 | 23694 | 23695 |
| 12 BOTTLE / 1.7 LITER | 80723 | 23677C | 23676C | 23679C | 23681C | 23675C | 80742 | 50112 | 50111 | 70071 (SET) | | 80737 | 23678 | 23694 | 23695 |
| 12 BOTTLE / 2.5 LITER | 80724 | 23677C | 23741C | 23739C | 23740C | 23675C | 80742 | 50112 | 50111 | 70071 (SET) | | 80737 | 23678 | 23694 | 23695 |
| 12 BOTTLE / 5 LITER | 80725 | 23677C | 23676C | 23679C | 23681C | 23675C | 80742 | 50112 | 50111 | 70071 (SET) | | 80738 | 23678 | 23694 | 23695 |
| 12 BOTTLE / 8 LITER | 80726 | 23677C | 23741C | 23739C | 23740C | 23675C | 80742 | 50112 | 50111 | 70071 (SET) | | 80738 | 23678 | 23694 | 23695 |
| 12 BOTTLE / 10 LITER | 80727 | 23677C | 23683C | 23680C | 23682C | 23675C | 80742 | 50112 | 50111 | 70071 (SET) | | 80738 | 23678 | 23694 | 23695 |
| 12 BOTTLE / 12 LITER | 80728 | 23677C | 23703C | 23701C | 23702C | 23675C | 80742 | 50112 | 50111 | 70071 (SET) | | 80738 | 23678 | 23694 | 23695 |
| 12 BOTTLE / 20 LITER | 80729 | 23720C | 23857C | 23855C | 23856C | 23724C | 80743 | 50115 | -- | 23902C | 23903C | 80739 | 23723 | 23714 | 23715 |
| 12 BOTTLE / 30 LITER | 80730 | 23720C | 23783C | 23781C | 23782C | 23724C | 80743 | 50115 | -- | 23902C | 23903C | 80739 | 23723 | 23714 | 23715 |
| 24 BOTTLE / 1.2 LITER | 80731 | 23736C | | 23742C | 23743C | 23738C | 80744 | 50112 | 50111 | | | 80740 | 23678 | 23694 | 23695 |
| 24 BOTTLE / 1.7 LITER | 80731 | 23736C | | 23742C | 23743C | 23738C | 80744 | 50112 | 50111 | | | 80740 | 23678 | 23694 | 23695 |
| 24 BOTTLE / 2.5 LITER | 80732 | 23736C | 23737C | 23725C | 23726C | 23738C | 80744 | 50112 | 50111 | 23729C | 23730C | 80740 | 23678 | 23694 | 23695 |
| 24 BOTTLE / 5 LITER | 80733 | 23720C | 23719C | 23721C | 23722C | 23724C | 80743 | 50115 | -- | 23716C | 23717C | 80741 | 23723 | 23714 | 23715 |
| 24 BOTTLE / 8 LITER | 80734 | 23720C | 23857C | 23855C | 23856C | 23724C | 80743 | 50115 | -- | 23716C | 23717C | 80741 | 23723 | 23714 | 23715 |
| 24 BOTTLE / 10 LITER | 80735 | 23720C | 23854C | 23852C | 23853C | 23724C | 80743 | 50115 | -- | 23716C | 23717C | 80741 | 23723 | 23714 | 23715 |
| 24 BOTTLE / 12 LITER | 80736 | 23720C | 23783C | 23781C | 23782C | 23724C | 80743 | 50115 | -- | 23716C | 23717C | 80741 | 23723 | 23714 | 23715 |

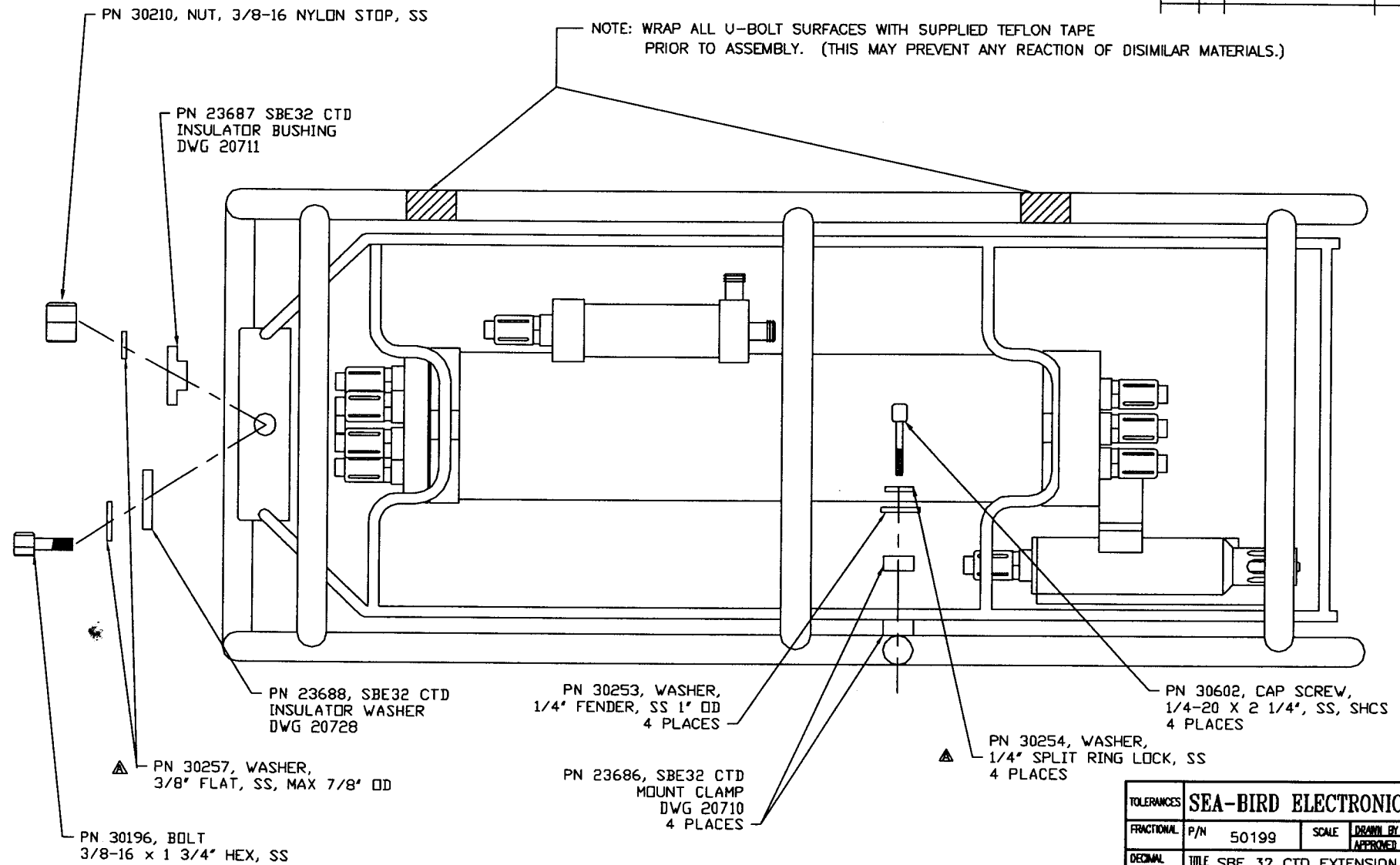
NOTES:

1. REFER TO FRAME ASSEMBLY DRAWING 40713 FOR PART LOCATIONS.

| | | | | | |
|------------|------------------------------------|---------------------------|-------------|--|--|
| TOLERANCES | | SEA-BIRD ELECTRONICS, INC | | | |
| FRACTIONAL | P/N | SCALE | DRAWN BY DG | | |
| | | | APPROVED BY | | |
| DECIMAL | TITLE | | | | |
| | SBE 32 CAROUSEL : FRAME COMPONENTS | | | | |
| ANGULAR | DATE | DWG NO. | REV | | |
| | 4/11/94 | 40714 | F | | |

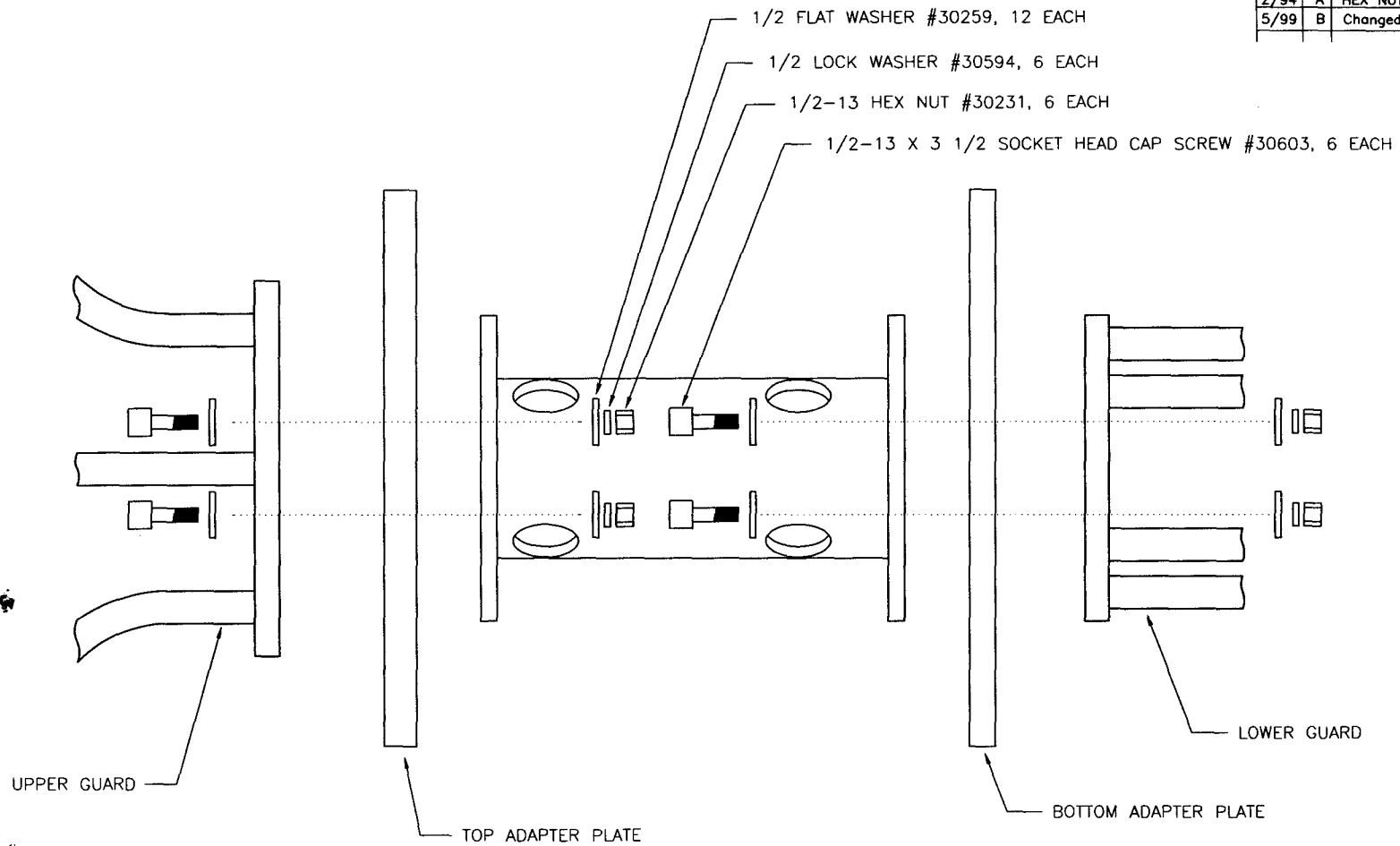
| DATE | SYM | REVISION RECORD | AUTH. | DR. | CK. |
|---------|-----|-----------------|-------|-----|-----|
| 8-27-03 | A | ADDED WASHERS | | KLP | |
| | | | | | |

NOTE: WRAP ALL U-BOLT SURFACES WITH SUPPLIED TEFLON TAPE PRIOR TO ASSEMBLY. (THIS MAY PREVENT ANY REACTION OF DISIMILAR MATERIALS.)



| | | | | | |
|------------|---|----------------------|--------------|--|--|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | | |
| FRACTIONAL | P/N 50199 | SCALE | DRAWN BY DJM | | |
| DECIMAL | TITLE SBE 32 CTD EXTENSION STAND CTD INSTALLATION | | | | |
| ANGULAR | DATE 10/22/03 | DRAWING NUMBER 40683 | REV A | | |

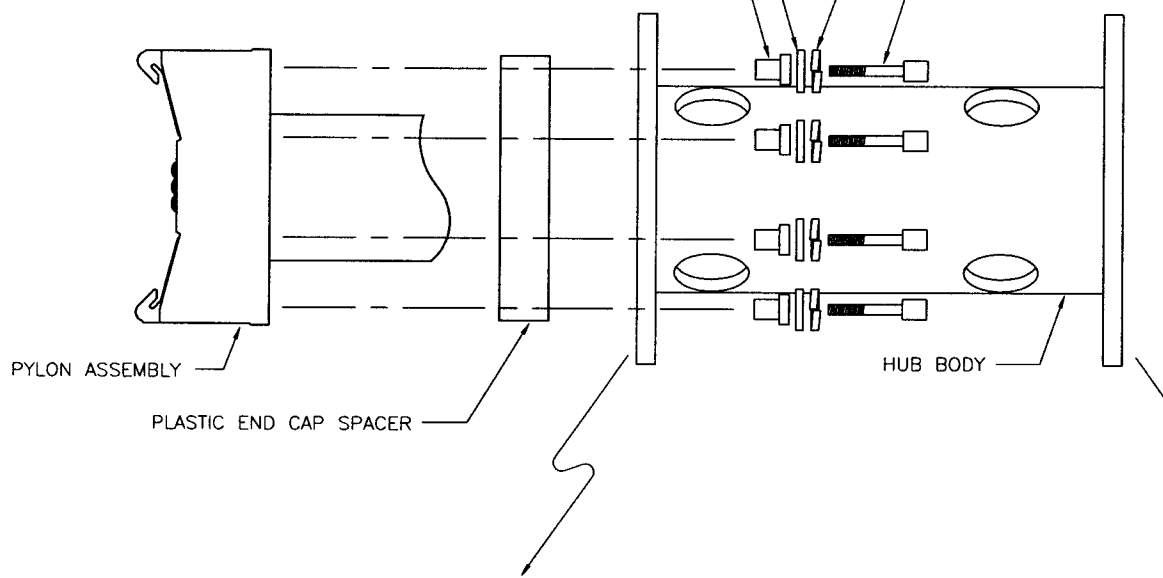
| DATE | SYM | REVISION RECORD | AUTH. | DR. | CK. |
|------|-----|-----------------------|-------|-----|-----|
| 2/94 | A | HEX NUT & LABELING | PG | DG | |
| 5/99 | B | Changed Bolt Quantity | MJ | | |



| | | | | |
|------------|---------------------------|----------------|--------------|--|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | |
| FRACTIONAL | P/N | SCALE | DRAWN BY DJM | |
| DECIMAL | TITLE | | APPROVED BY | |
| ANGULAR | DATE | DRAWING NUMBER | REV | |
| | 10/22/93 | 40684 | B | |

| DATE | SYM | REVISION RECORD | AUTH. | DR. | CK. |
|----------|-----|----------------------|-------|-----|-----|
| 5.9.2002 | A | ADDED HARDWARE TABLE | KLP | MJ | |
| | | | | | |

② WASHER, 1/4 FLAT
 PN 30294, SCREW INS, 1/4 ID X 1/4",
 IN-14/4, 6 PER ASSEMBLY
 WASHER, 1/4 SPLIT RING LOCK ③
 SCREW, 1/4-20 X 2 1/4 ①



FOR ALUMINUM PYLONS

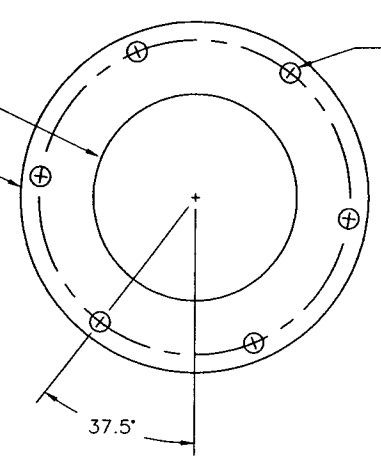
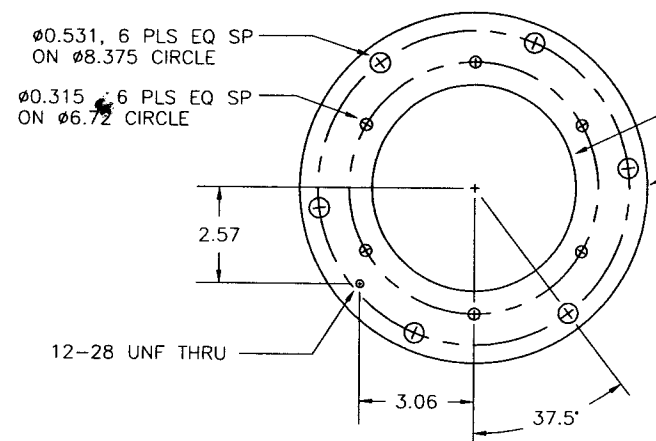
| NUM | QTY | PN | DESCRIPTION |
|-----|-----|-------|--|
| 1 | 6 | 30602 | CAP SCREW, 1/4-20 X 2 1/4, SOCKET HEAD, SS |
| 2 | 6 | 30570 | WASHER, 1/4" FLAT, SS |
| 3 | 6 | 30254 | WASHER, 1/4" SPLIT RING LOCK, SS |

FOR TITANIUM PYLONS

| NUM | QTY | PN | DESCRIPTION |
|-----|-----|-------|---|
| 1 | 6 | 30630 | MACHINE SCREW, 1/4-20 X 2 1/4, HEX HEAD, Ti |
| 2 | 6 | 30634 | WASHER, 1/4" FLAT, Ti |
| 3 | 6 | 30633 | WASHER, 1/4" SPLIT RING LOCK, Ti |

TOP END VIEW

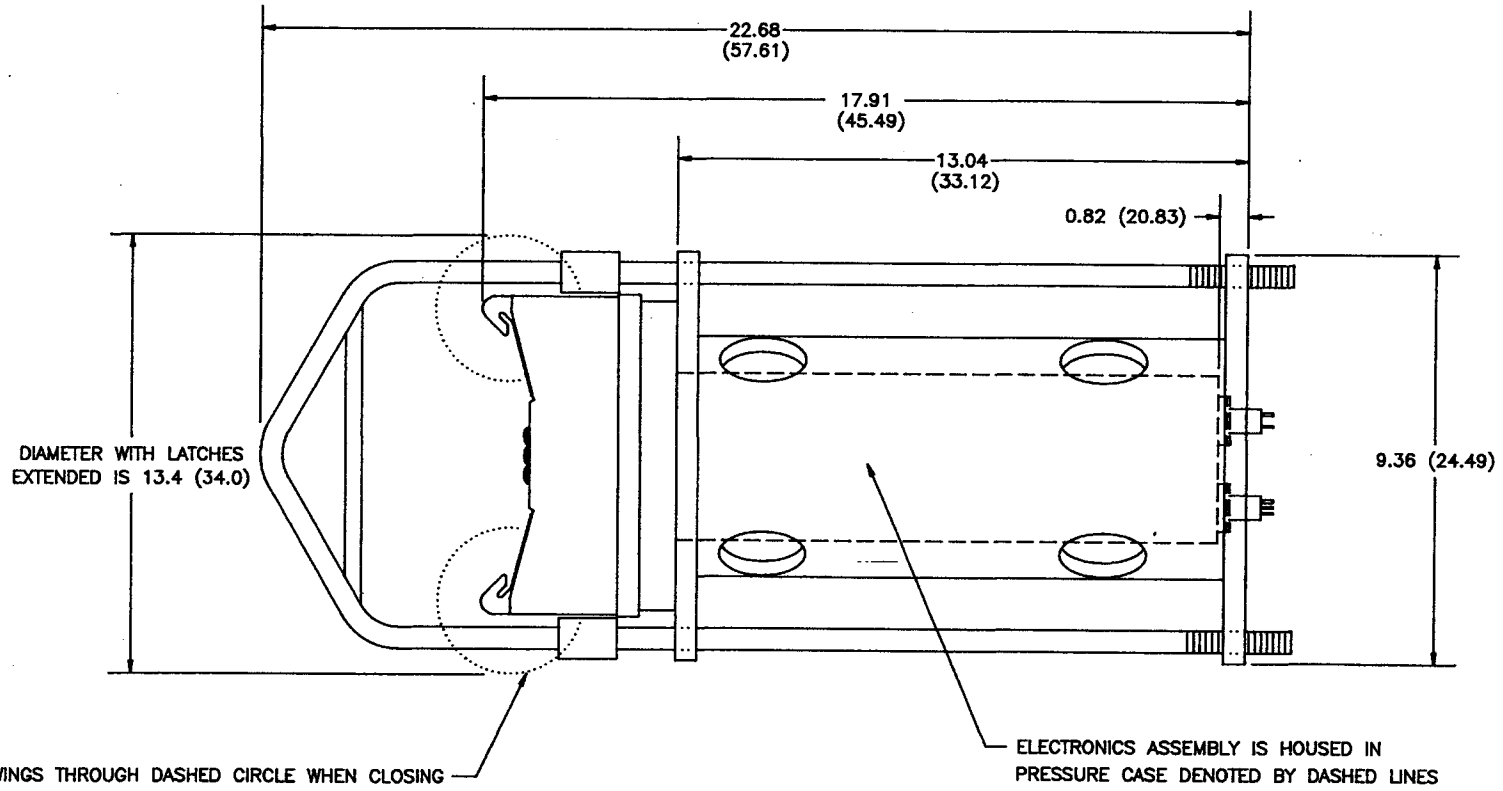
BOTTOM END VIEW



[NOTE - HUB BODY FLANGE PLATES:
 THE 0.531 TOP END HOLES
 ARE ALIGNED WITH THE 0.531
 BOTTOM END HOLES.]

| | | | | | |
|------------|---------------------------|----------------|-------------------------|----|--|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | | |
| FRACTIONAL | P/N | SCALE | DRAWN BY | DG | |
| DECIMAL | TITLE | | | | |
| ANGULAR | DATE | DRAWING NUMBER | REV | | |
| | 6/15/94 | 40721 | A | | |
| | | | SBE 32 PYLON/HUB DETAIL | | |

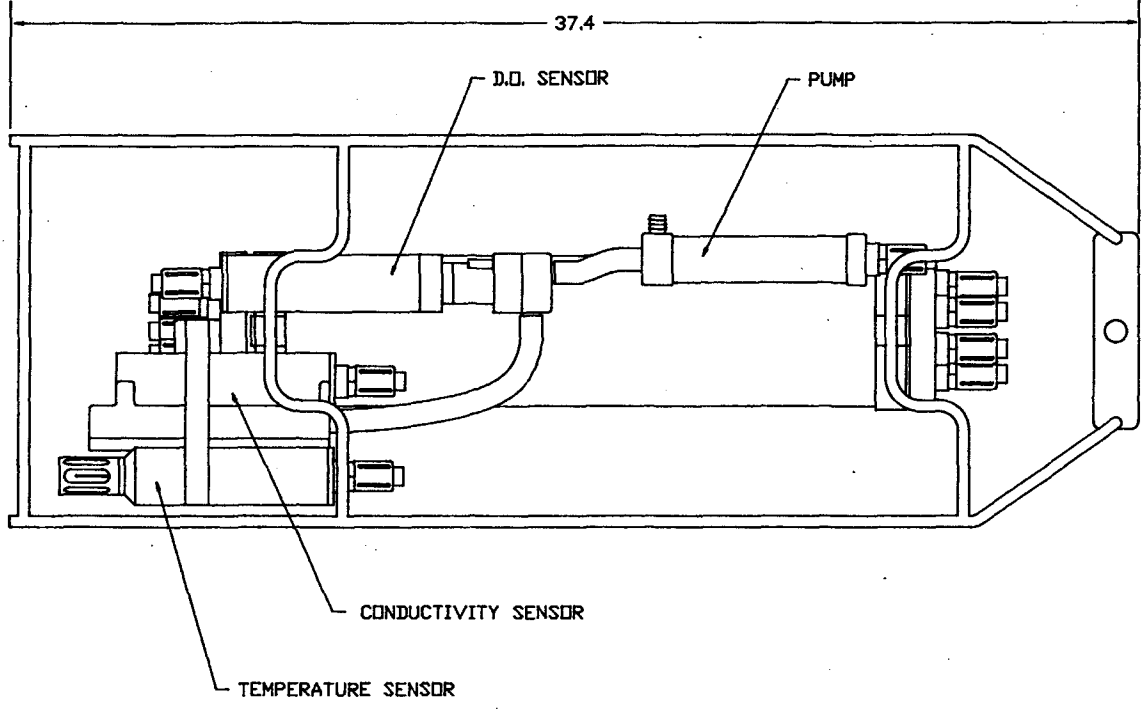
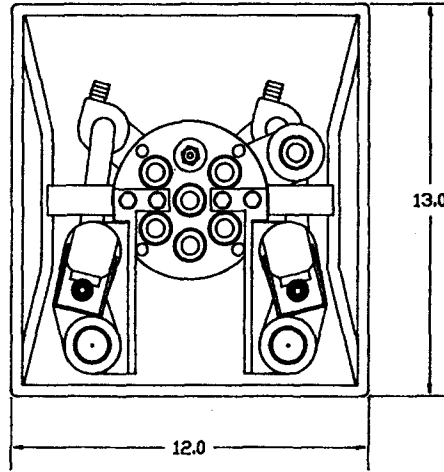
| DATE | SYM | REVISION RECORD | AUHL | DR. | CK. |
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NOTE: DRAWING IS NOT TO SCALE
ALL DIMENSIONS ARE IN INCHES (CM)

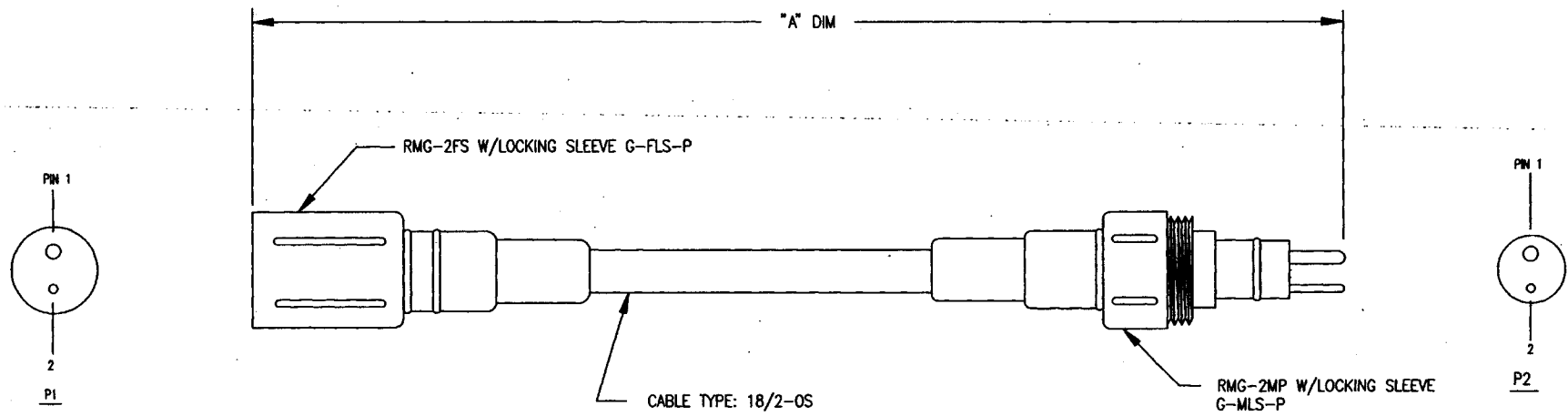
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|------------|---|----------------------|-----------------------------|--|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | |
| FRACTIONAL | P/N | SCALE NONE | DRAWN BY DJM APPROVED BY | |
| DECIMAL | TITLE SBE 32 PYLON AND LIFTING BAIL DIMENSIONS | | | |
| ANGULAR | DATE 1/3/84 | DRAWING NUMBER 20749 | REV A | |

| DATE | SYM | REVISION RECORD | AUTH. | DR. | CK. |
|------|-----|-----------------|-------|-----|-----|
| | | | | | |
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| | | | | |
|------------|---------------------------|----------------|-------------|-----|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | |
| FRACTIONAL | P/N | SCALE | DRAWN BY DW | |
| DECIMAL | TITLE | 1 : 4 | APPROVED BY | |
| ANGULAR | DATE | DRAWING NUMBER | 20887 | REV |
| | 11-22-94 | | | A |

| DATE | SYM | REVISION RECORD | AUTH. | DR. | CK. |
|---------|-----|-----------------|-------|-----|-----|
| 9/29/89 | A | ECN 262 | KL | BMC | KDL |
| | | | | | |



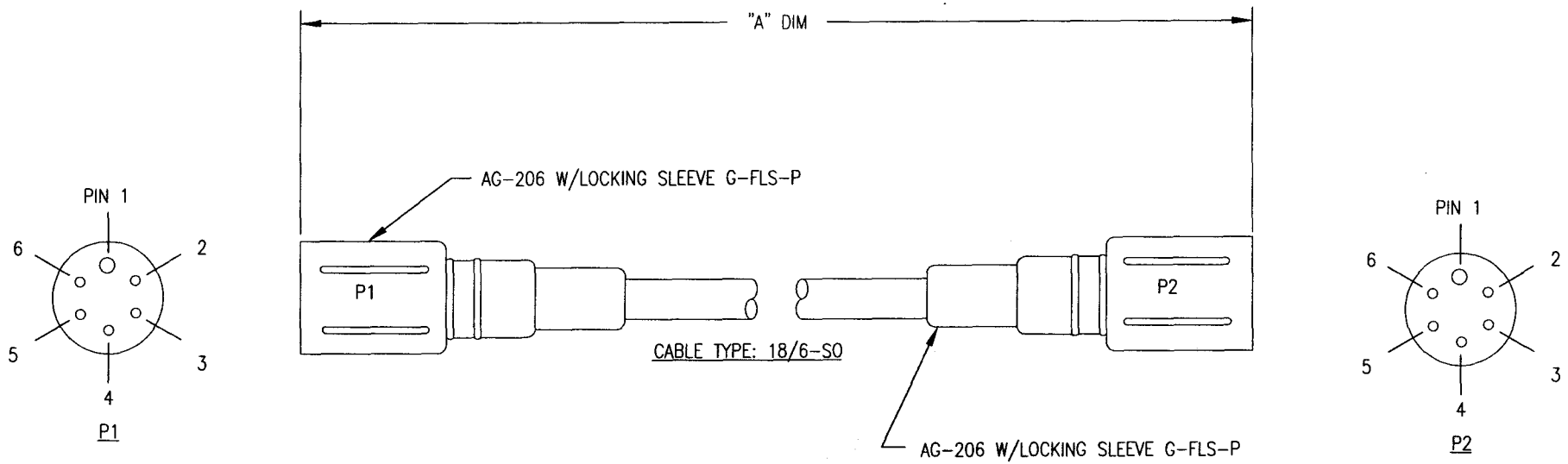
| SBE PART NO | A DIM |
|-------------|--------|
| 17120 | 80 IN |
| 17252 | 30 IN |
| 17680 | 12 IN |
| 171090 | 120 IN |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

| P1 | P2 |
|-------|-------|
| PIN 1 | PIN 1 |
| PIN 2 | PIN 2 |
| | |
| | |
| | |

REDRAWN ON ACAD NO CHG

| | | | | | |
|---------------------------|------------------|----------------------|--------------|----------------------------------|--|
| TOLERANCES | | | | SEA-BIRD ELECTRONICS, INC | |
| FRACTIONAL | P/N SEE TABLE | SCALE 1:1 | DRAWN BY BMC | | |
| DECIMAL | APPROVED BY P.G. | | | | |
| ANGULAR | DATE 3/1/89 | DRAWING NUMBER 30588 | REV A | | |
| TITLE CABLE, 2 PIN /2 PIN | | RMG-2FS TO RMG-2MP | | | |

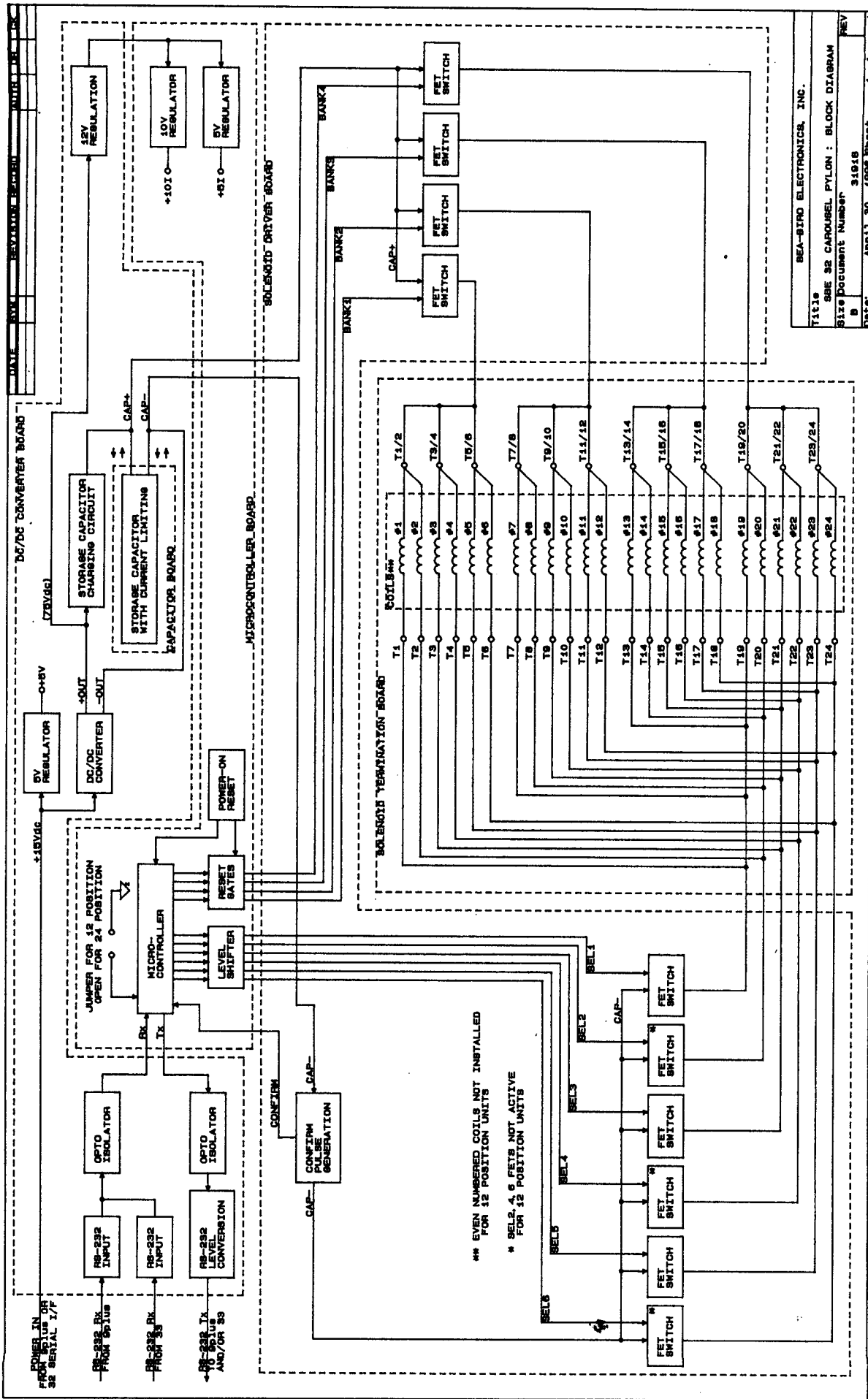
| DATE | SYM | REVISION RECORD | AUTH. | DR. | CK. |
|------|-----|-----------------|-------|-----|-----|
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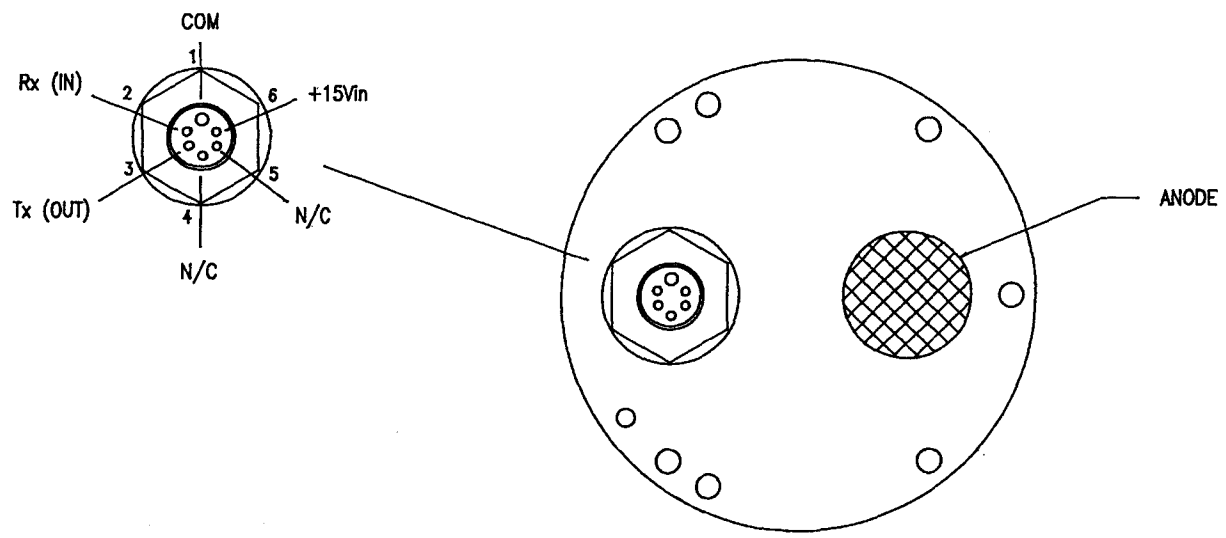
| SBE PN | DIM A | |
|--------|---------|-------|
| 17033 | 36 IN. | ---- |
| 17132 | 13 IN. | ---- |
| 17162 | 30 FT | ---- |
| 17168 | 44 IN. | ---- |
| 17197 | 98 IN. | ---- |
| 17198 | 79 IN. | 2 m |
| 17260 | 120 IN. | 3 m |
| 17368 | 30 IN. | ---- |
| 17597 | 20 IN. | ---- |
| 17607 | 50 IN. | ---- |
| 17950 | 60 IN. | 1.5 m |
| 17954 | 17 FT | 5.5 m |
| 171097 | 27 FT | 8 m |
| 171098 | 40 FT | 12 m |
| 171745 | 33 FT | 10 m |

| P1 | P2 |
|-------|-------|
| PIN 1 | PIN 1 |
| PIN 2 | PIN 2 |
| PIN 3 | PIN 3 |
| PIN 4 | PIN 4 |
| PIN 5 | PIN 5 |
| PIN 6 | PIN 6 |

| | | | | |
|------------|--|----------------|-----------------------------|-----|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | |
| FRACTIONAL | P/N SEE TABLE | SCALE 1:1 | DRAWN BY JEB APPROVED BY | |
| DECIMAL | TITLE CABLE, 6 PIN/ 6 PIN AG-206 + LS | | | |
| ANGULAR | DATE 4/19/96 | DRAWING NUMBER | 30568 | REV |

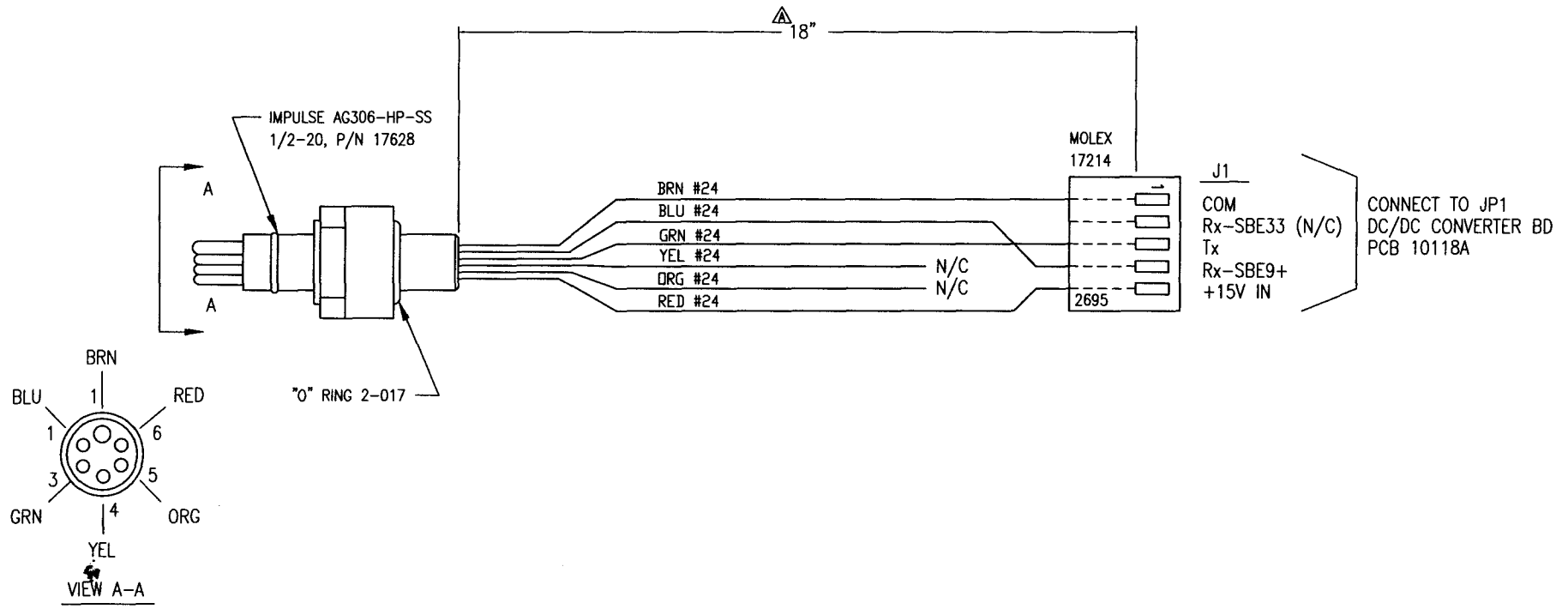


| DATE | SYM | REVISION RECORD | AUTH. | DR. | CK. |
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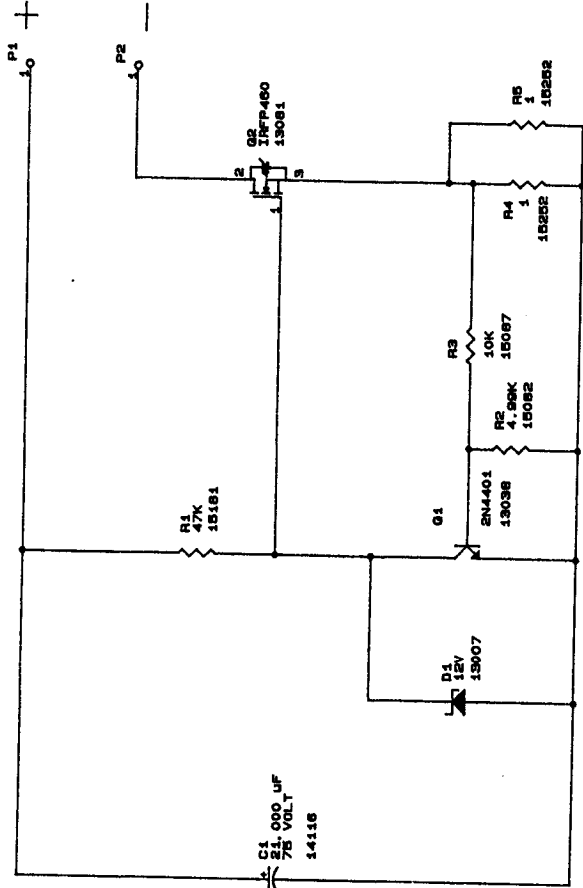
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|------------|---------------------------|---|---------|-----------|-------------|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | | |
| FRACTIONAL | P/N | WIRING 31572 | SCALE | DESIGN BY | DC |
| DECIMAL | TITLE | SBE 32 CAROUSEL BOTTOM END CAP CONNECTOR (STANDARD - 911pin CONTROL) | | | APPROVED BY |
| ANGULAR | DATE | 10/18/93 | DWG NO. | 40678 | REV |

| DATE | REV | REVISION RECORD | AUTH. | DR. | CK. |
|----------|-----|---------------------|-------|-----|-----|
| 11.19.03 | A | CHANGED WIRE LENGTH | --- | KLP | |



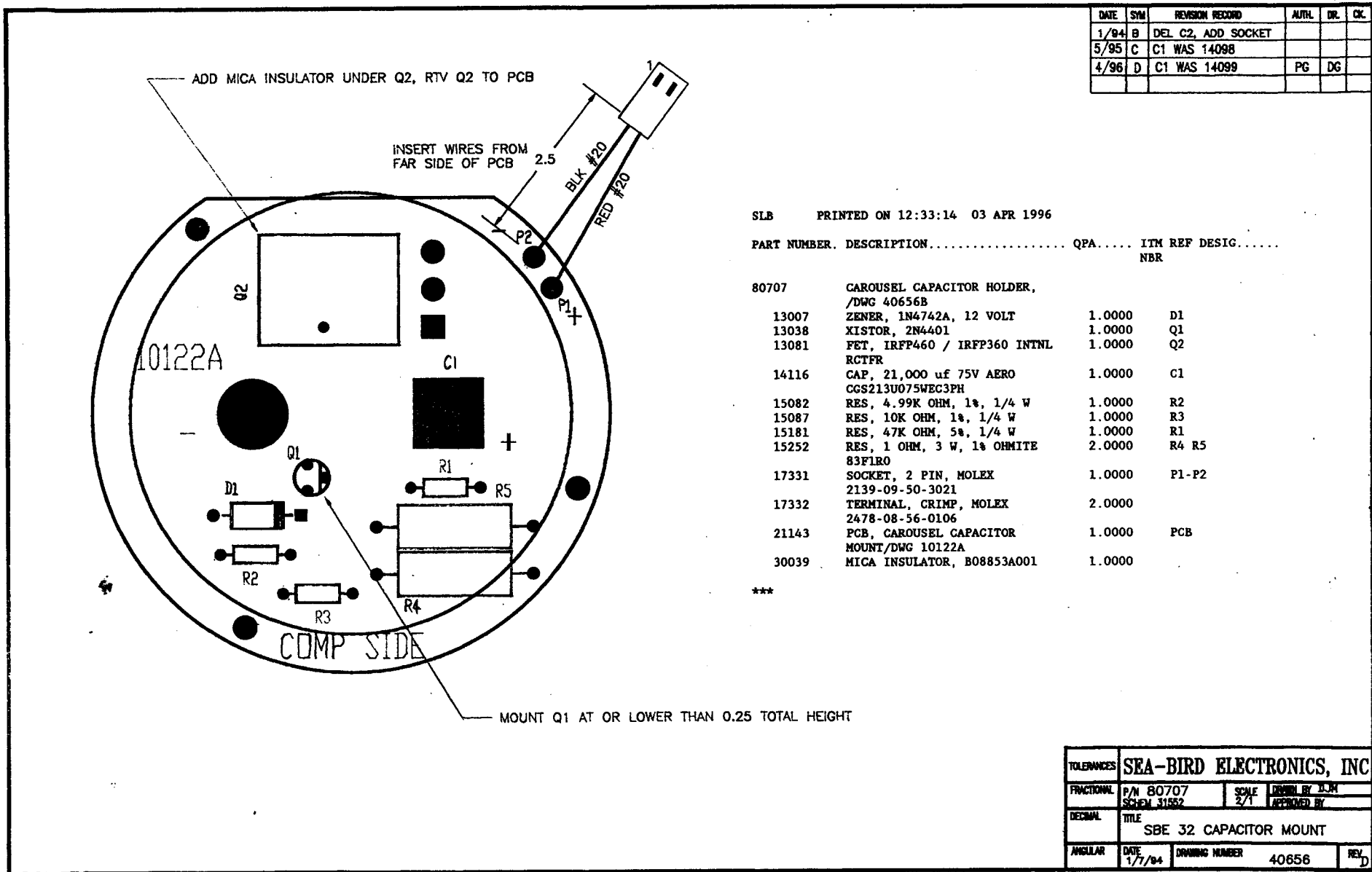
| | | | | | |
|------------|---|------------|---------|-------------|-------|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | | |
| FRACTIONAL | P/N | CONN 40678 | SCALE | DRAWN BY DG | |
| | | | | APPROVED BY | |
| DECIMAL | TITLE SBE 32 CAROUSEL BOTTOM END CAP WIRING (STANDARD - 911plus CONTROL) | | | | |
| ANGULAR | DATE | 1/7/94 | DWG NO. | 31614 | REV A |

| | | | |
|----------|----|----------|------------------------------|
| DATE | BY | REVISION | REASON |
| 07/28/78 | B | 1 | PRINT |
| 07/28/78 | B | 2 | CHANGE TO 0000UF AS 21 0000U |
| 07/28/78 | B | 3 | CHANGE TO 0000UF AS 21 0000U |
| 07/28/78 | B | 4 | CHANGE TO 0000UF AS 21 0000U |
| 07/28/78 | B | 5 | CHANGE TO 0000UF AS 21 0000U |
| 07/28/78 | B | 6 | CHANGE TO 0000UF AS 21 0000U |
| 07/28/78 | B | 7 | CHANGE TO 0000UF AS 21 0000U |
| 07/28/78 | B | 8 | CHANGE TO 0000UF AS 21 0000U |
| 07/28/78 | B | 9 | CHANGE TO 0000UF AS 21 0000U |
| 07/28/78 | B | 10 | CHANGE TO 0000UF AS 21 0000U |

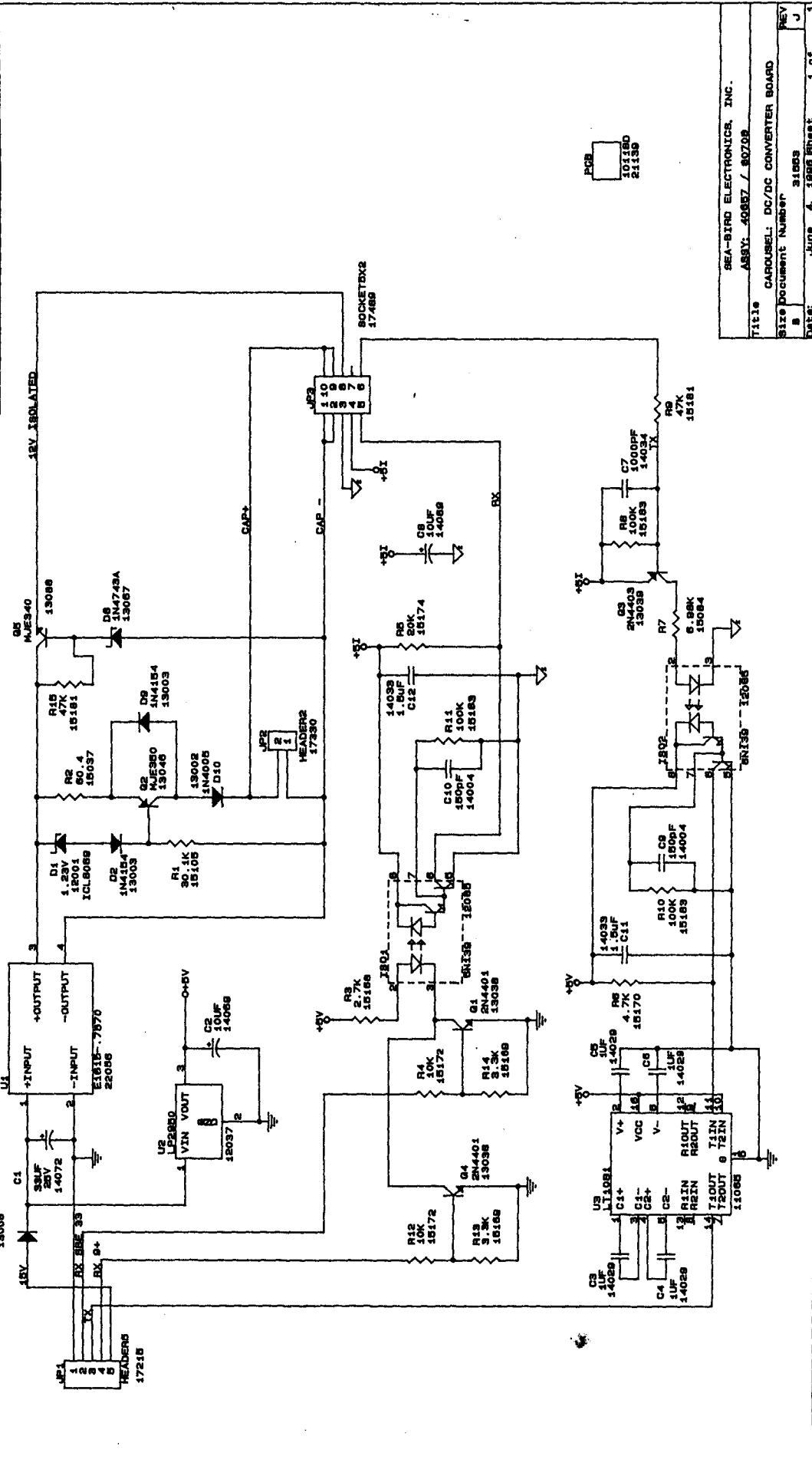


10122A
21198

| | |
|---------------------------------------|-----------------|
| SEA-BIRD ELECTRONICS, INC. | |
| ASSY. 40858 / 80707 | |
| TITLE CAROUSEL CAPACITOR HOLDER BOARD | |
| SIZE | Document Number |
| B | 31852 |
| REV | D |
| DATE | APR 11 5 1982 |
| 1 OF | 1 |



| | | | | | |
|----|----------|----|----------|----|----------|
| 1 | 10/27/72 | 1 | 10/27/72 | 1 | 10/27/72 |
| 2 | 11/14/72 | 2 | 11/14/72 | 2 | 11/14/72 |
| 3 | 11/14/72 | 3 | 11/14/72 | 3 | 11/14/72 |
| 4 | 11/14/72 | 4 | 11/14/72 | 4 | 11/14/72 |
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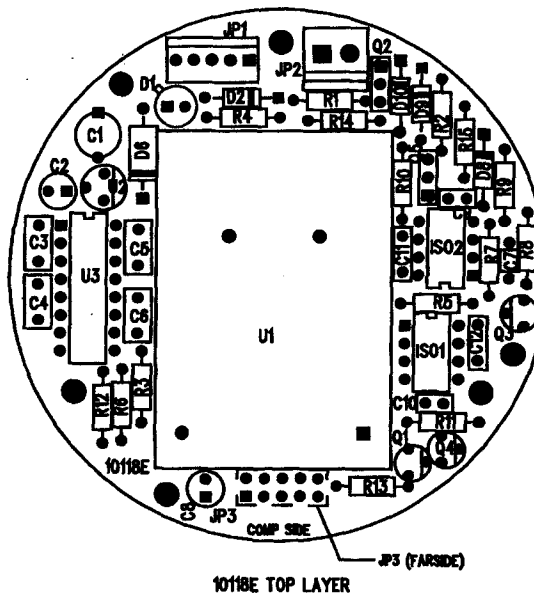


SEA-BIRD ELECTRONICS, INC.
 Title: ASSY: 40857 / 80708
 CAROUSEL: DC/DC CONVERTER BOARD
 Size Document Number: 31888
 Date: JUN 6, 1988 BRES
 REV J

SLB PRINTED ON 08:07:36 04 JUN 1996

PART NUMBER. DESCRIPTION..... QPA..... ITM REF DESIG.....
NBR

| | | | |
|-------|---|--------|-------------|
| 80708 | CAROUSEL DC/DC CONVERTER, /DWG 40657H | | |
| 11065 | IC, LT1081GN, LINEAR TECH, RS232 | 1.0000 | U3 |
| 12001 | DIODE, ICL8069CCSQ, 1.23V REF. | 1.0000 | D1 |
| 12037 | IC, LP2950ACZ-5.0, 5 VOLT REGULATOR | 1.0000 | U2 |
| 12085 | IC, HP6N139 OPTO ISOLATOR | 2.0000 | ISO1 ISO2 |
| 13002 | DIODE, 1N4005, HI-VOLTAGE | 1.0000 | D10 |
| 13003 | DIODE, 1N4154, UNITRODE | 2.0000 | D2 D9 |
| 13008 | DIODE, 1N5818, SCHOTKEY | 1.0000 | D6 |
| 13038 | XISTOR, 2N4401 | 2.0000 | Q1 Q4 |
| 13039 | XISTOR, 2N4403 | 1.0000 | Q3 |
| 13046 | XISTOR, MJE 350, FNP | 1.0000 | Q2 |
| 13067 | ZENER DIODE, 13 VOLT, 1N4743A | 1.0000 | D8 |
| 13088 | XISTOR, MJE340, MOTOROLA | 1.0000 | Q5 |
| 14004 | CAP, 150 pF, 100V CER, SR151A151KAA, NPO | 2.0000 | C9 C10 |
| 14029 | CAP, 1 uF, 50V CER, SR305E105MAA, Z5U | 4.0000 | C3 C4 C5 C6 |
| 14033 | CAP, 1.5 uF, 50V CER, C330C155M5U5CA, Z5U | 2.0000 | C11 C12 |
| 14034 | CAP, .001 uF, 200V CER, C322C102J2G5CA, NPO | 1.0000 | C7 |
| 14069 | CAP, 10 uF, 20V DIPPED TANT, T350E106K020AS | 2.0000 | C2 C8 |
| 14072 | CAP, 33 uF, 25V DIPPED TANT, TAP336K025HSB | 1.0000 | C1 |
| 15037 | RES, 60.4 OHM, 1%, 1/4 W | 1.0000 | R2 |
| 15084 | RES, 6.98K OHM, 1%, 1/4 W | 1.0000 | R7 |
| 15105 | RES, 30.1K OHM, 1%, 1/4 W | 1.0000 | R1 |
| 15168 | RES, 2.7K OHM, 5%, 1/4 W | 1.0000 | R3 |
| 15169 | RES, 3.3K OHM, 5%, 1/4 W | 2.0000 | R13 R14 |
| 15170 | RES, 4.7K OHM, 5%, 1/4 W | 1.0000 | R6 |
| 15172 | RES, 10K OHM, 5%, 1/4 W | 2.0000 | R4 R12 |
| 15174 | RES, 20K OHM, 5%, 1/4 W | 1.0000 | R5 |
| 15181 | RES, 47K OHM, 5%, 1/4 W | 2.0000 | R9 R15 |
| 15183 | RES, 100K OHM, 5%, 1/4 W | 3.0000 | R8 R10 R11 |
| 17215 | HEADER, 5 PIN, MOLEX 6373-22-11-2052 | 1.0000 | JP1 |
| 17330 | HEADER, 2 PIN, MOLEX 41671-26-48-2025 | 1.0000 | JP2 |
| 17489 | SOCKET, 10 PIN, 2 ROW, SAMTEC SD-105-G-2 | 1.0000 | JP3 |
| 21139 | PCB, CAROUSEL DC/DC CONVTR DWG 10118 E | 1.0000 | PCB |
| 22056 | CONVERTER, DC/DC ENDICOTT, E1615-.7570S | 1.0000 | U1 |

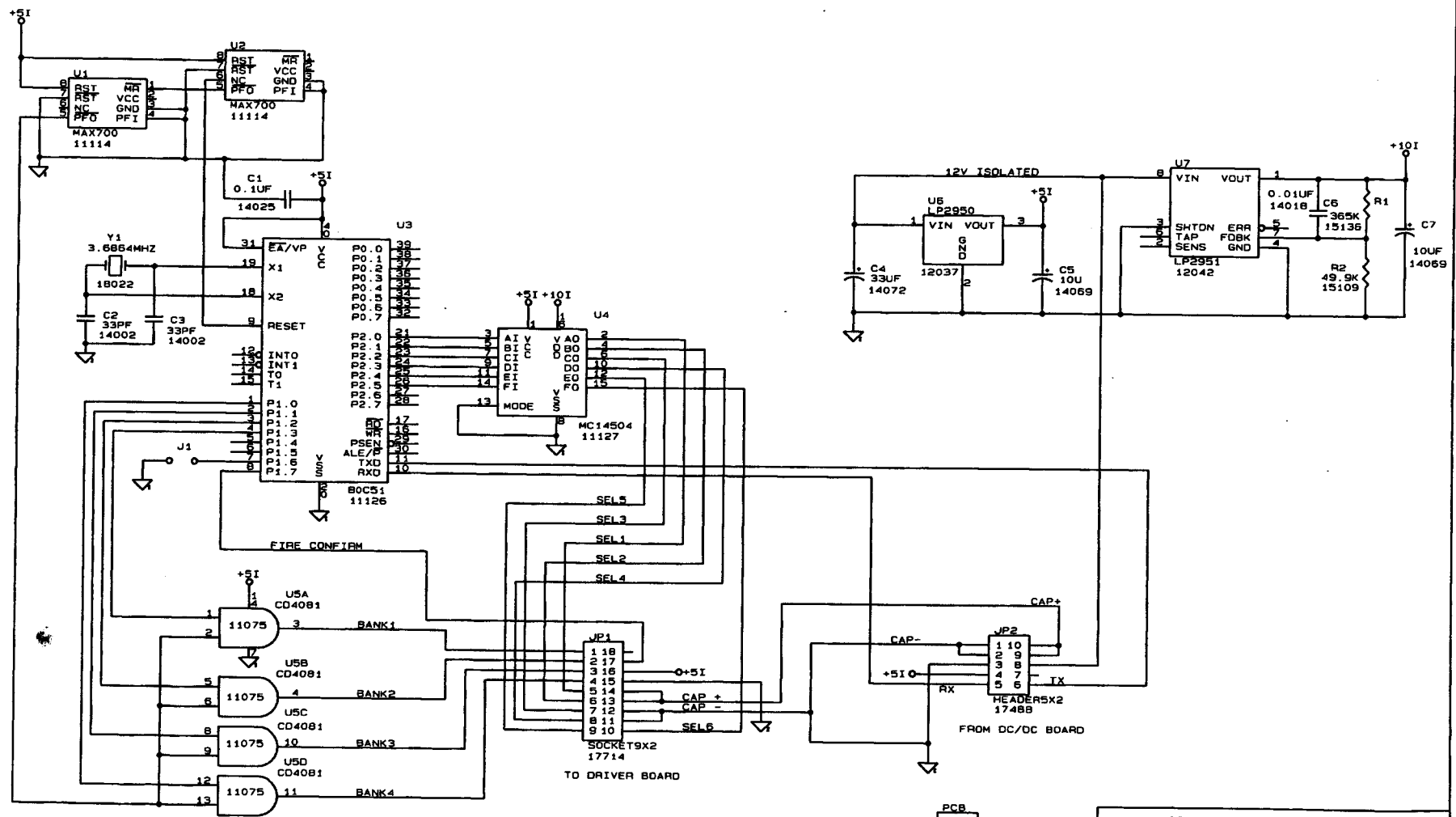


| DATE | SYM | REVISION RECORD | AUTH | DR. | CHK |
|---------|-----|---------------------------|------|-------|-----|
| | B | Q4, D7, R17, U1 | | | |
| 1/7/94 | C | DEL R3,R7 ADD R13,R14 | | | |
| 2/7/94 | D | R2 WAS 16.9 IS 30.1 OHMS | JB | DG | |
| | E | R2 WAS 30.1 IS 121 OHMS | JB | DG | |
| 8/4/94 | F | DELETE D4,D5 ADD Q5,R5,D6 | | | J.M |
| 8/13/94 | G | PCB D3,R7 CHG TO R13,R14 | J.M | J.M.C | |
| 7/4/94 | H | ECN 401, CHG R2, ADD D7 | JB | DF | |
| 7/6/94 | J | ADD D10, CUT TRACE | JB | D6 | |
| 1/13/95 | K | ADD REV D PCB | | | BJP |
| 4/4/96 | L | CORRECT D1 DESCRIPTION | | | DG |
| 7/6/96 | M | ECN 447: NEW PCB | | | D6 |

| | | | | |
|------------|---------------------------------|----------------|----------------|--|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | |
| FRACTIONAL | P/N 80708 | SCALE | DRAWN BY D.J.M | |
| | SCHEM 31553 | 3:2 | APPROVED BY | |
| DECIMAL | TITLE | | | |
| | SBE 32 CAROUSEL DC/DC CONVERTER | | | |
| ANGULAR | DATE | DRAWING NUMBER | REV | |
| | 1/4/94 | 40857 | M | |

OK 10

| DATE | SYM | REVISION | BY | CHKD | APP'D | CR |
|----------|-----|--------------------|----|------|-------|----|
| 01/25/02 | A | CORRECTED BY VALUE | | CB | CB | |



PCB
10119
21140

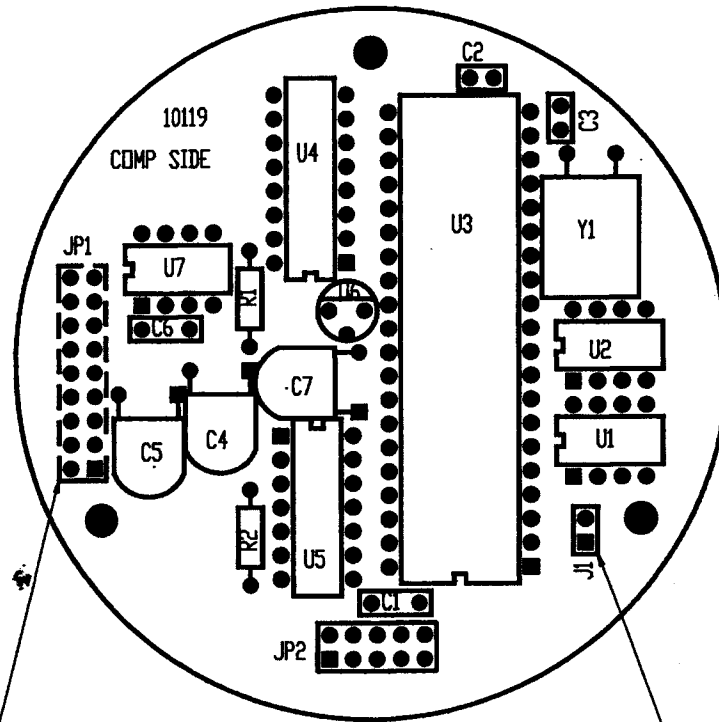
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|---------------------------------------|-----------------------|
| SEA-BIRD ELECTRONICS, INC. | |
| ASSY: 40658 / 80709 | |
| Title CAROUSEL: MICROCONTROLLER BOARD | |
| Size B | Document Number 31554 |
| Date: January 25, 2002 | Sheet 1 of 1 |

| DATE | SYM | REVISION RECORD | APPL | DR | CK |
|------|-----|-----------------|------|----|----|
| | | | | | |
| | | | | | |

SINGLE LEVEL BILLS PAGE 1
 SLB PRINTED ON 09:22:08 28 SEP 1993

PART NUMBER. DESCRIPTION..... GPA..... ITM REF
 DESIG..... NBR

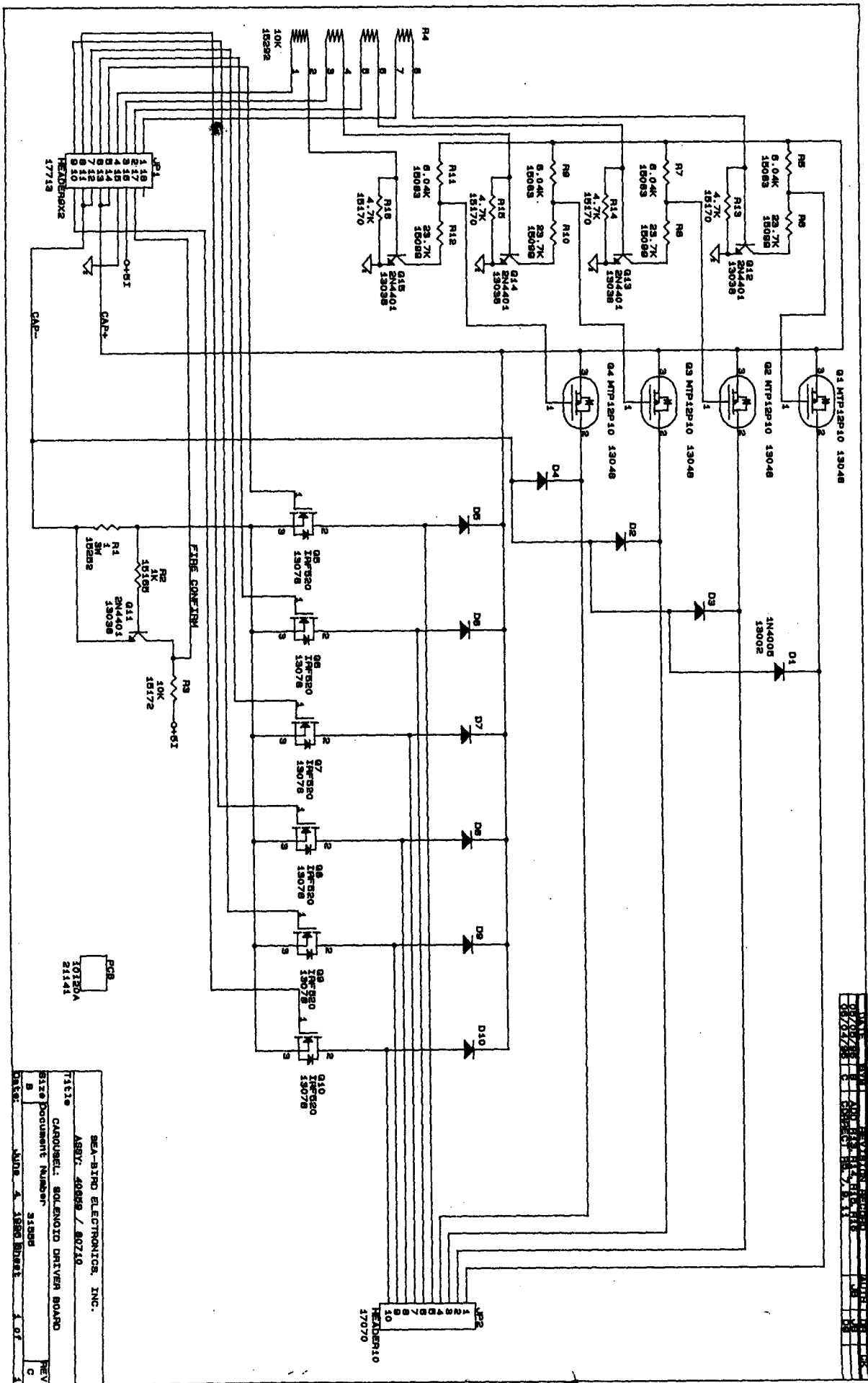
| | | | |
|-------|---|--------|-------|
| 80709 | CAROUSEL uCONTROLLER, /DWG 40658 | | |
| 11075 | IC, CD4081BE, QUAD 2-INPUT AND | 1.0000 | U5 |
| 11114 | IC, MAXIM, MAX700CPA | 2.0000 | U1 U2 |
| 11126 | IC, V1.0 CAROUSEL SC87C51 uCONTROLLER | 1.0000 | U3 |
| 11127 | IC, MC14504BCP, MDT. HEX LEVEL SHIFTER | 1.0000 | U4 |
| 12037 | IC, LP2950ACZ-5.0, 5 VOLT REGULATOR | 1.0000 | U6 |
| 12042 | IC, LP2951CN, VAR. VOLT. REG. | 1.0000 | U7 |
| 14002 | CAP, 33 pf, 100V CER, SR151A330KAA, NPO | 2.0000 | C3 C2 |
| 14018 | CAP, .01 uf, 100V CER, SR211C103KAA, X7R | 1.0000 | C6 |
| 14025 | CAP, .1 uf, 100V CER, SR211C104KAA, X7R | 1.0000 | C1 |
| 14069 | CAP, 10 uf, 20V DIPPED TANT, T350E106K020AS | 2.0000 | C5 C7 |
| 14072 | CAP, 33 uf, 25V DIPPED TANT, TAP336K025HSB | 1.0000 | C4 |
| 15109 | RES, 49.9K OHM, 1%, 1/4 W | 1.0000 | R2 |
| 15136 | RES, 365K OHM 1%, 1/4 W | 1.0000 | R1 |
| 17712 | HEADER, 10 PIN, 2 ROW, SAMTEK BBD-105-GA | 1.0000 | JP2 |
| 17566 | SOCKET, 40 PIN, LD-PRD, AUGAT 540-AG11D | 1.0000 | U3 |
| 17714 | SOCKET, 18 PIN (.375") SAMTEC SD109G2 | 1.0000 | JP1 |
| 18022 | CRYSTAL, FDX 0368-20, 3.6864 MHZ | 1.0000 | Y1 |
| 21140 | PCB, CAROUSEL uCONTROLLER, /DWG 10119 | 1.0000 | PCB |



MOUNT ON SOLDER SIDE OF BOARD

J1 INSTALLED FOR 12 PLACE CAROUSEL
 J1 NOT INSTALLED FOR 24 PLACE CAROUSEL

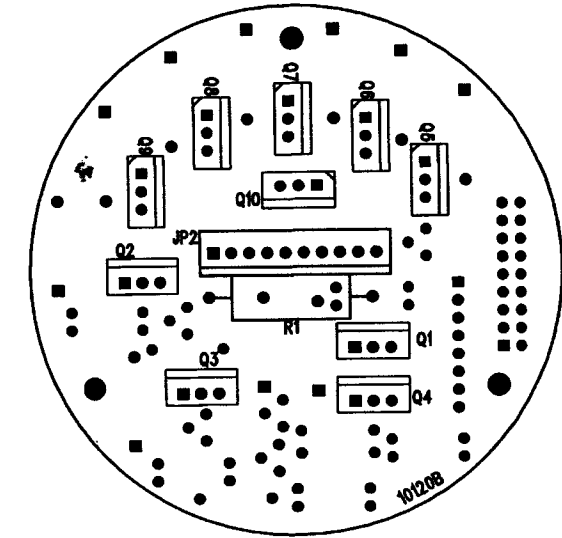
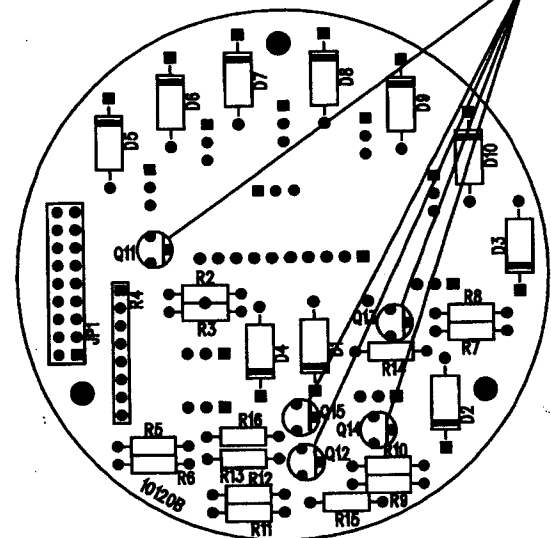
| TOLERANCES | | | |
|-----------------------------|--------------|----------------------|-----------------|
| SEA-BIRD ELECTRONICS, INC | | | |
| FRACTIONAL | P/N 80709 | SCALE 2:1 | DESIGNED BY LJM |
| DECIMAL | TITLE | APPROVED BY | |
| ANGULAR | DATE 9/27/93 | DRAWING NUMBER 40658 | REV |
| SBE 32 CAROUSEL uCONTROLLER | | | |



| | | | |
|----------|-----|--------|-------|
| DATE | REV | BY | APP |
| 06/27/88 | 1 | CONRAD | 17713 |

SEA-SHED ELECTRONICS, INC.
 ASSEMBLY: 40888 / 80710
 CAROUSEL SOLLENGID DRIVER BOARD
 Size Document Number 31888
 DATE: JUNE 4, 1988
 1 OF 1

MOUNT Q11 THRU Q15
LESS THAN 0.3" TOTAL HEIGHT



| DATE | SYM | REVISION RECORD | AUTH | DR. | CK. |
|------|-----|------------------------|------|-----|-----|
| 1/77 | B | PCB 10120A | | | |
| 5/76 | C | ADD R13, R14, R15, R16 | JB | D6 | |
| 4/97 | D | ECH 456: NAW PCB | | D6 | |

SLB PRINTED ON 12:55:20 09 MAY 1996

PART NUMBER. DESCRIPTION..... QPA..... ITM REF DESIG.....
NBR

| | | | | | | | | | | |
|-------|---|---------|--------------------------------|--|--|--|--|--|--|--|
| 80710 | CAROUSEL SOLENOID DRIVER, /DWG 40659C | | | | | | | | | |
| 13002 | DIODE, 1N4005, HI-VOLTAGE | 10.0000 | D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 | | | | | | | |
| 13038 | XISTOR, 2N4401 | 5.0000 | Q11 Q12 Q13 Q14 Q15 | | | | | | | |
| 13048 | FET, MTP12P10, MOTOROLA / IRF9530 SILICONIX | 4.0000 | Q1 Q2 Q3 Q4 | | | | | | | |
| 13078 | FET, IRF520 POWER MOSFET, INT'L RECTIFIER | 6.0000 | Q5 Q6 Q7 Q8 Q9 Q10 | | | | | | | |
| 15083 | RES, 6.04K OHM, 1%, 1/4 W | 4.0000 | R5 R7 R9 R11 | | | | | | | |
| 15099 | RES, 23.7K OHM, 1%, 1/4 W | 4.0000 | R6 R8 R10 R12 | | | | | | | |
| 15165 | RES, 1K OHM, 5%, 1/4 W | 1.0000 | R2 | | | | | | | |
| 15170 | RES, 4.7K OHM, 5%, 1/4 W | 4.0000 | R13 R14 R15 R16 | | | | | | | |
| 15172 | RES, 10K OHM, 5%, 1/4 W | 1.0000 | R3 | | | | | | | |
| 15252 | RES, 1 OHM, 3 W, 1% OHMITE 83F1R0 | 1.0000 | R1 | | | | | | | |
| 15292 | RES-NET, 10K X 4, SIP, CSC08A03103G | 1.0000 | R4 | | | | | | | |
| 17070 | HEADER, 10 PIN, MOLEX 6373-22-11-2102 | 1.0000 | JP2 | | | | | | | |
| 17713 | HEADER, 18 PIN (.375") SAMTEC BBD109GA | 1.0000 | JP1 | | | | | | | |
| 21141 | PCB, CAROUSEL SOLINOID DRVR, /DWG 10120A | 1.0000 | PCB | | | | | | | |

| | | | | |
|------------|---------------------------------|----------------|--------------------------------|----------|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | |
| FUNCTIONAL | P/N 80710 | SCALE | DRAWN BY D.J.M. APPROVED BY | |
| DECIMAL | TITLE SBE 32 SOLENOID DRIVER | | | |
| ANGULAR | DATE 12/16/83 | DRAWING NUMBER | 40659 | REV D |

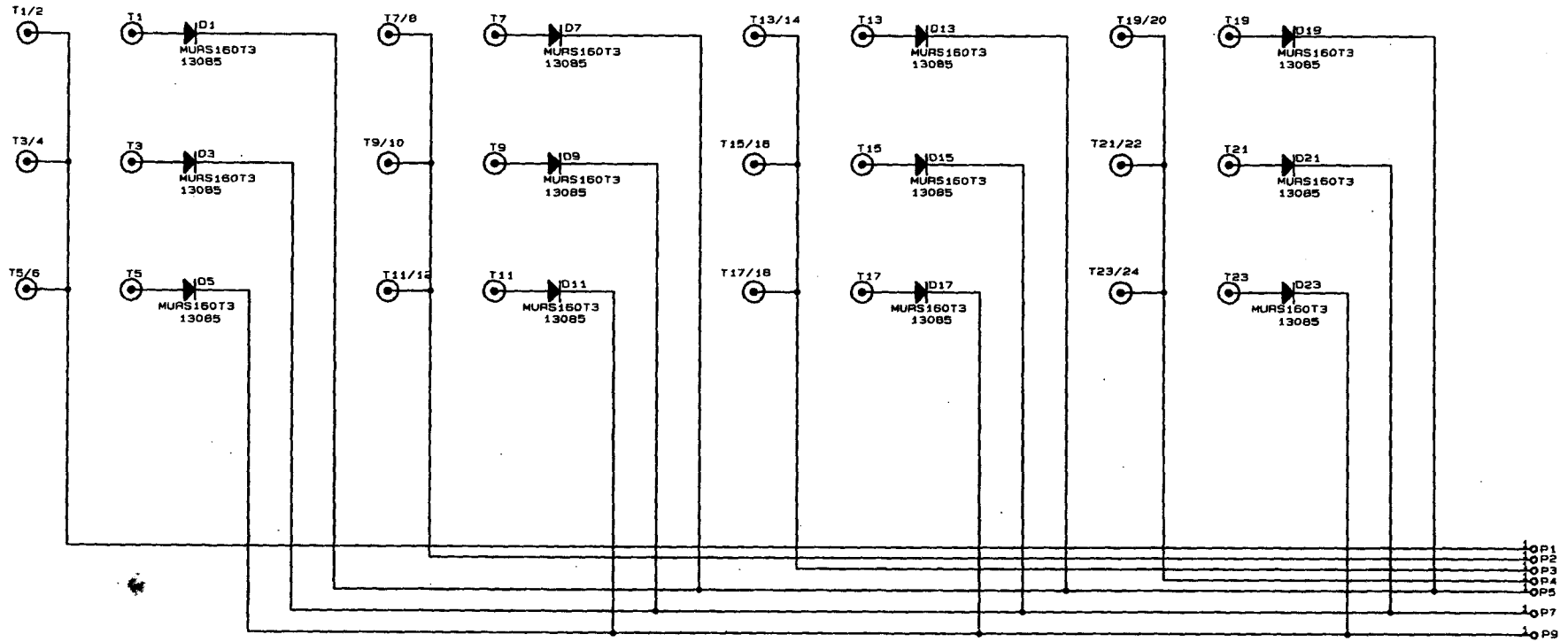
| DATE | SWN | REVISION | REVISION | DATE | BY | CHK |
|----------|-----|----------|----------------|------|----|-----|
| 07/28/98 | A | CHANGE | 13085 TO 13085 | | DP | |

BANK 1

BANK 2

BANK 3

BANK 4

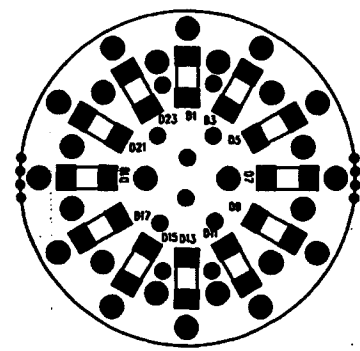


PCB
10121A
21142

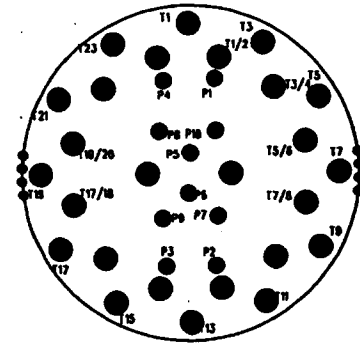
| | |
|--------------------------------------|----------------------------|
| SEA-BIRD ELECTRONICS, INC. | |
| ASSY: 40734 / 80621 | |
| Title | 12 POSITION |
| CAROUSEL: SOLENOID TERMINATION BOARD | |
| Size | Document Number |
| B | 31856 |
| Date: | July 28, 1998 Sheet 1 of 1 |

612.16

| DATE | SN | REVISION RECORD | AUTH. | DR. | CHK. |
|------|----|-----------------|-------|-----|------|
| 7/98 | A | ECNS62: 13085 | | | DB |



layer 1...top



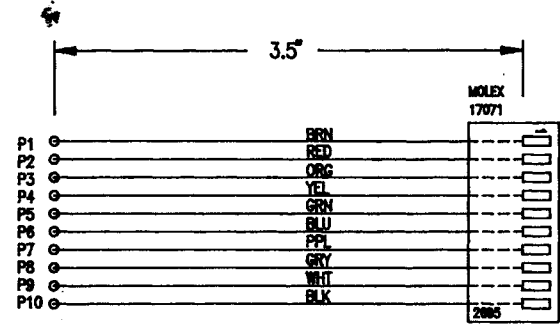
layer 4...bottom

SLB PRINTED ON 14:39:23 28 JUL 1998

| PART NUMBER. | DESCRIPTION..... | SRFC MNT | QPA..... | ITM NBR | REF DESIG..... |
|--------------|---|----------|-----------|---------|---|
| 80821 | SBE 32 12 PLACE COIL TERMINATE /DWG 40734A | | | | |
| 13085 | DIODE, MURS160T3, 600V, 1A, SRFC MNT | | S 12.0000 | | ODD NBR'D DIODES D1-D23 |
| 15001.1 | JUMPER WIRE, 1 POSITION | | 1.0000 | | P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 |
| 17052 | PIN, GOLD, MOLEX 2759-08-56-0110 (0.156") | | 10.0000 | | |
| 17071 | SOCKET, 10 PIN MOLEX 2695-22-01-3107 (0.1") | | 1.0000 | | J1 |
| 17620 | TERMINAL, 1/16" FORKED, CONCORD 12-471-2-01 | | 24.0000 | | ODD NBR'D TERM'S T1 TO T23 T1/2 T3/4 T5/6 T7/8 T9/10 T11/12 T13/14 T15/16 T17/18 T19/20 T21/22 T23/24 |
| 21142 | PCB, CAROUSEL SOLENOID, /DWG 10121A & 40710 | | 1.0000 | | PCB |

NOTES:

- ALL DIODES INSTALLED WITH CATHODE (NOTCH) LOCATED TOWARDS CENTER OF PCB.
- TERMINALS AND 10 PIN MOLEX CABLE ARE INSTALLED FROM THE "BOTTOM" SIDE.
- TO MOUNT TERMINATE BOARD, ALIGN T1 WITH LOCATOR PIN ON TOP OF END CAP; SECURE WITH 2-56 X 3/8 P.H. SCREWS, #2 NYLON WASHERS AND #2 X 1/8 NYLON SPACERS.
- FOR 12 POSITION APPLICATION; T1, T3, T5, ETC AND T1/2, T3/4, T5/6, ETC ARE USED. SOLDER POSITION 1 COIL RED WIRE TO T1, BLACK WIRE TO T1/2. SOLDER POSITION 2 RED WIRE TO T3, BLACK WIRE TO T3/4. WIRE ALL 12 COILS IN THE SAME WAY.



| | | | | |
|------------|---|---------|---------|-------|
| TOLERANCES | SEA-BIRD ELECTRONICS, INC | | | |
| FUNCTIONAL | P/N 31856 | SCALE | DATE BY | EN |
| DESIGN | TITLE SBE 32 SOLENOID TERMINATE 12 POSITION | | | |
| ANGULAR | DATE 11/9/94 | DWG NO. | 40734 | REV A |