H1

WARNING:
CONTACT ORDER
NOT SEQUENTIAL

## J1 BULKHEAD
## SEACON MINR-84

To J1 BULKHEAD

| Pin | Wire | Connection |
|---|---|---|
| 350V_OUT_2 3 | 10 AWG | RED 16 AWG → B7P1 A P187_R_IN |
| 350V_COM_2 4 | 10 AWG | BLACK 16 AWG → B7P1 B N187_R_IN |
| 350V_OUT_1 5 | 10 AWG | RED 16 AWG → B7P2 A P187_L_IN |
| 350V_COM_1 6 | 10 AWG | BLACK 16 AWG → B7P2 B N187_L_IN |
| +24V_IN 11 | 16 AWG | → B5P5 1 ISO_24V* (RED 22 AWG 1.1mm Ø) |
| UW_RS232_RXD 14 | 22 AWG | → B5P5 2 ISO_24V* (RED 22 AWG 1.1mm Ø) |
| POWER RETURN 12 | 16 AWG | → B5P5 4 ISO_GND* (BLK 22 AWG 1.1mm Ø) |
| RS232_RTN 15 | 22 AWG | → B5P5 5 ISO_GND* (BLK 22 AWG 1.1mm Ø) |
| UW_RS232_TXD 13 | 22 AWG | → B5P5 6 ISO_RS232_TX (WHT 22 AWG 1.1mm Ø) |
| SEAWATER GROUND 7 | 22 AWG | → B7P3 1 ANNODE (GRN 22 AWG 1.1mm Ø) |
| ALL OTHER PINS | 16 AWG | NC |

## CHASSIS LUG

CHASSIS LUG — GRN 22 AWG 1.1mm Ø → B7P3 2 CHASSIS (GRN 22 AWG 1.1mm Ø)

## B7P1
## M80-263F202-00-00

## B7P2
## M80-263F202-00-00

To **B7** IGB

## B5P5
## M80-4800605

TOOLING:
*USE T-CONTACT

| Pin | Wire |
|---|---|
| 1 ISO_24V* | RED 22 AWG 1.1mm Ø |
| 2 ISO_24V* | RED 22 AWG 1.1mm Ø |
| 3 ISO_RS232_RX | NC |
| 4 ISO_GND* | BLK 22 AWG 1.1mm Ø |
| 5 ISO_GND* | BLK 22 AWG 1.1mm Ø |
| 6 ISO_RS232_TX | WHT 22 AWG 1.1mm Ø |

To **B5** HPB

## B7P3
## M80-4800405

| Pin | Wire |
|---|---|
| 1 ANNODE | GRN 22 AWG 1.1mm Ø |
| 2 CHASSIS | GRN 22 AWG 1.1mm Ø |
| 3 ANNODE | NC |
| 4 CHASSIS | GRN 22 AWG 1.1mm Ø |

To **B7** IGB

| | | | | | |
|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: J1 Bulkhead<br>Power and Fiber Input<br>MARS | | | |
| DRAWN BY: | K. ZACK | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | SHEET 1 | OF 41 |

H1

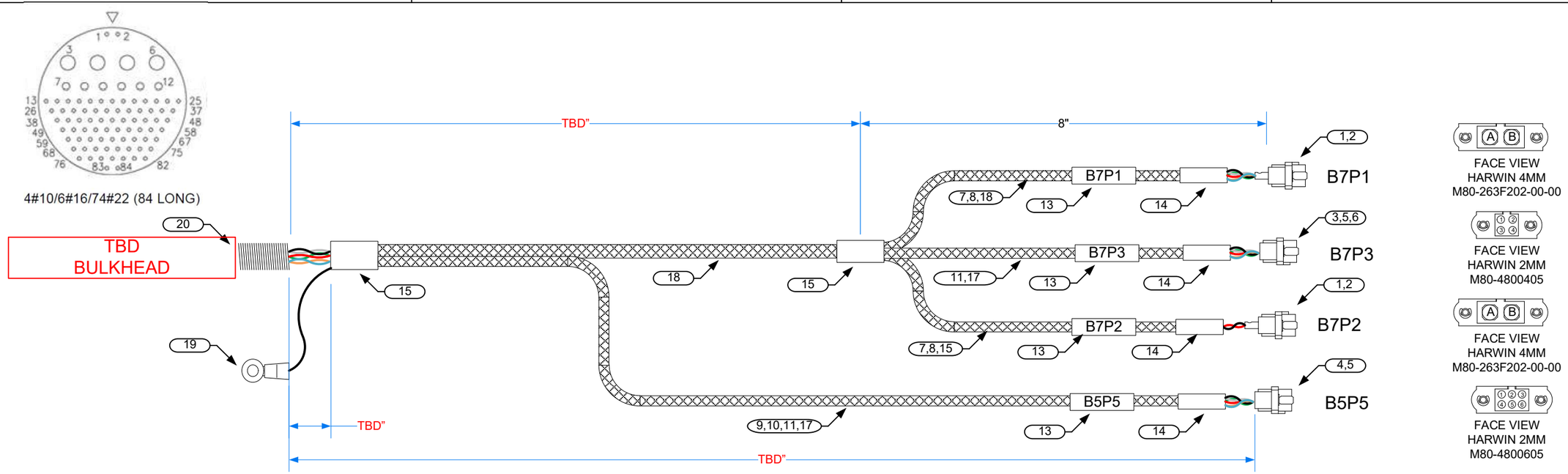
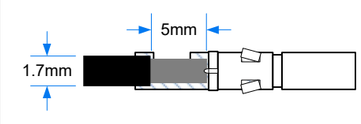



**TABLE A1H1: PARTS LIST**

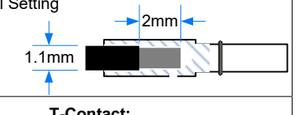
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 4 | M80-327 | HARWIN | CONN SOCKET 10AWG CRIMP/SLD GOLD |
| 3 | 1 | M80-4800405 | HARWIN | DATAMATE FEMALE 4-PIN |
| 4 | 1 | M80-4800605 | HARWIN | DATAMATE FEMALE 6-PIN |
| 5 | 4 | M80-2060005 | HARWIN | DATAMATE 22AWG FEMALE CRIMP T-CONTACT |
| 6 | 2 | M80-0110005 | HARWIN | DATAMATE 22AWG FEMALE CRIMP |
| 7 | TBD | AT161929 BK005 | ALPHA | 16 AWG BLACK WIRE PTFE |
| 8 | TBD | AT161929 RD005 | ALPHA | 16 AWG RED WIRE PTFE |
| 9 | TBD | 2845/19 BK001 | ALPHA | 22 AWG BLACK WIRE PTFE 1.07mm Ø |
| 10 | TBD | 2845/19 RD001 | ALPHA | 22 AWG RED WIRE PTFE 1.07mm Ø |
| 11 | TBD | 2845/19 GR001 | ALPHA | 22 AWG GRN WIRE PTFE 1.07mm Ø |
| 12 | TBD | 2845/19 WH001 | ALPHA | 22 AWG WHT WIRE PTFE 1.07mm Ø |
| 13 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 14 | 2" | STOCK | STOCK | 1/2" ADHESIVE HEAT SHRINK |
| 15 | 2" | STOCK | STOCK | 3/4" ADHESIVE HEAT SHRINK |
| 16 | 2" | STOCK | STOCK | 1/8" CLEAR HEAT SHRINK |
| 17 | TBD | PTN0.25BK-100 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |
| 18 | TBD | PTN0.50BK-100 | Techflex | Techflex 1/2"Flexo PET General Purpose Sleeving |
| 19 | 1 | STOCK | STOCK | CRIMP EYE |
| 20 | 1 | TBD | TBD | J1 BULKHEAD |

**NOTE:**

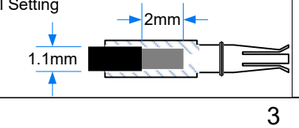
*Power Contact (16AWG):*
Z80-290 - Extraction tool
5x – Contact Replacement In Insulator



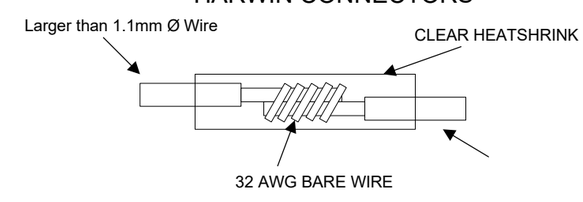

**Large Bore Signal Contact:**
M22520/2-01 - Hand Crimp Tool
T5747 – Positioner
6 – Crimp Tool Setting




**T-Contact:**
M22520/2-01 - Hand Crimp Tool
Z80-444 – Positioner
6 – Crimp Tool Setting




22 AWG SPLICES FOR
HARWIN CONNECTORS




| | | | |
|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | |
| MANAGER: | - | | |
| ENGINEER: | K. ZACK | TITLE: J1 Bulkhead<br>Power and Fiber Input<br>MARS | |
| DRAWN BY: | K. ZACK | | |
| | | | |
| PRINT DATE: | 8/15/2023 | | |
| PAGE CREATION: 12/14/2021 | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 — REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | SHEET 2 OF 41 |

H2

WARNING:
CONTACT ORDER
NOT SEQUENTIAL

To **B6**
HPB J10

TOOLING:
*USE T-CONTACT

B6P10
M80-4800405

B10 DC-A
TBD

| | | |
|---|---|---|
| *CISCO_SWITCH_2 1 | RED 22 AWG 1.1mm Ø | 9V TO 60V IN |
| *GND 3 | RED 22 AWG 1.1mm Ø | GROUND |
| CISCO_SWITCH_2 2 | | |
| GND 4 | | |

To **B10**
CISCO 1

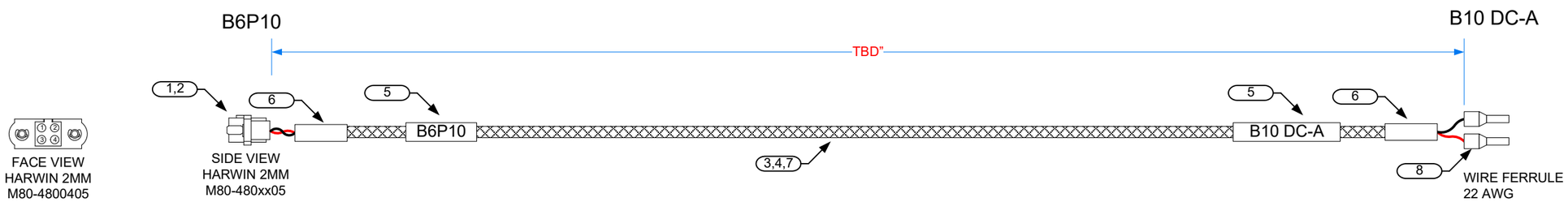
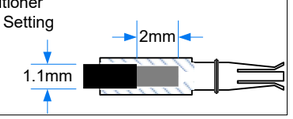



**TABLE A1H2: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-4800405 | HARWIN | DATAMATE FEMALE 4-PIN |
| 2 | 2 | M80-2060005 | HARWIN | DATAMATE 22AWG FEMALE CRIMP T-CONTACT |
| 3 | TBD | 2845/19 BK001 | HARWIN | 22 AWG BLACK WIRE PTFE 1.07mm Ø |
| 4 | TBD | 2845/19 RD001 | HARWIN | 22 AWG RED WIRE PTFE 1.07mm Ø |
| 5 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 1/2" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |
| 8 | 2 | FSD75-8-D | Panduit Corp | CONN FERRULE DIN 22AWG WHITE |

**T-Contact:**
M22520/2-01 - Hand Crimp Tool
Z80-444 – Positioner
6 – Crimp Tool Setting




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

APPLIED PHYSICS LABORATORY
UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H2 CISCO Switch 1
Switch Power
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE:
MARS Harnessing.vsdx

SHEET 3 OF 41

H3

WARNING:
CONTACT ORDER
NOT SEQUENTIAL

B6P11
M80-4800405

B11 DC-A
FERRELS

To **B6**
HPB J11

TOOLING:
*USE T-CONTACT

| | | | |
|---|---|---|---|
| *CISCO_SWITCH_2 1 | RED 22 AWG 1.1mm Ø | 9V TO 60V IN |
| *GND 3 | BLK 22 AWG 1.1mm Ø | GROUND |
| CISCO_SWITCH_2 2 | NC | |
| GND 4 | NC | |

To **B11**
CISCO 2

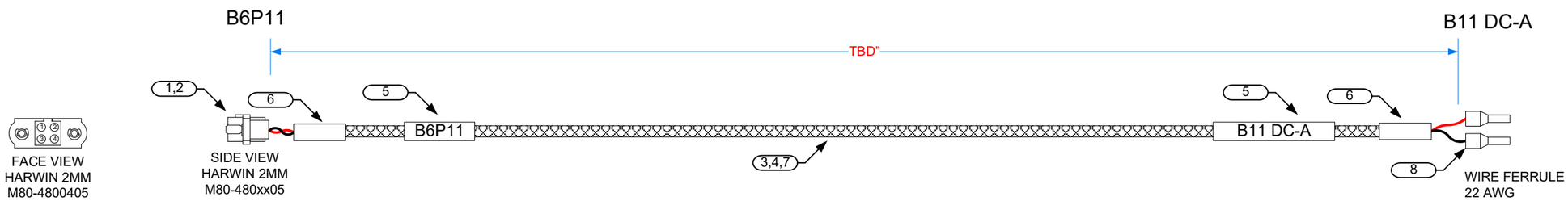
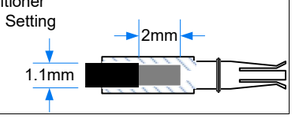



**TABLE A1H3: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-4800405 | HARWIN | DATAMATE FEMALE 4-PIN |
| 2 | 2 | M80-2060005 | HARWIN | DATAMATE 22AWG FEMALE CRIMP T-CONTACT |
| 3 | TBD | 2845/19 BK001 | HARWIN | 22 AWG BLACK WIRE PTFE 1.07mm Ø |
| 4 | TBD | 2845/19 RD001 | HARWIN | 22 AWG RED WIRE PTFE 1.07mm Ø |
| 5 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 1/2" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |
| 8 | 2 | FSD75-8-D | Panduit Corp | CONN FERRULE DIN 22AWG WHITE |

**T-Contact:**
M22520/2-01 - Hand Crimp Tool
Z80-444 – Positioner
6 – Crimp Tool Setting




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| PRINT DATE: | 8/15/2023 |

APPLIED PHYSICS LABORATORY
UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H3 CISCO Switch 2
Switch Power
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
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| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE:
MARS Harnessing.vsdx

SHEET 4 OF 41

H4

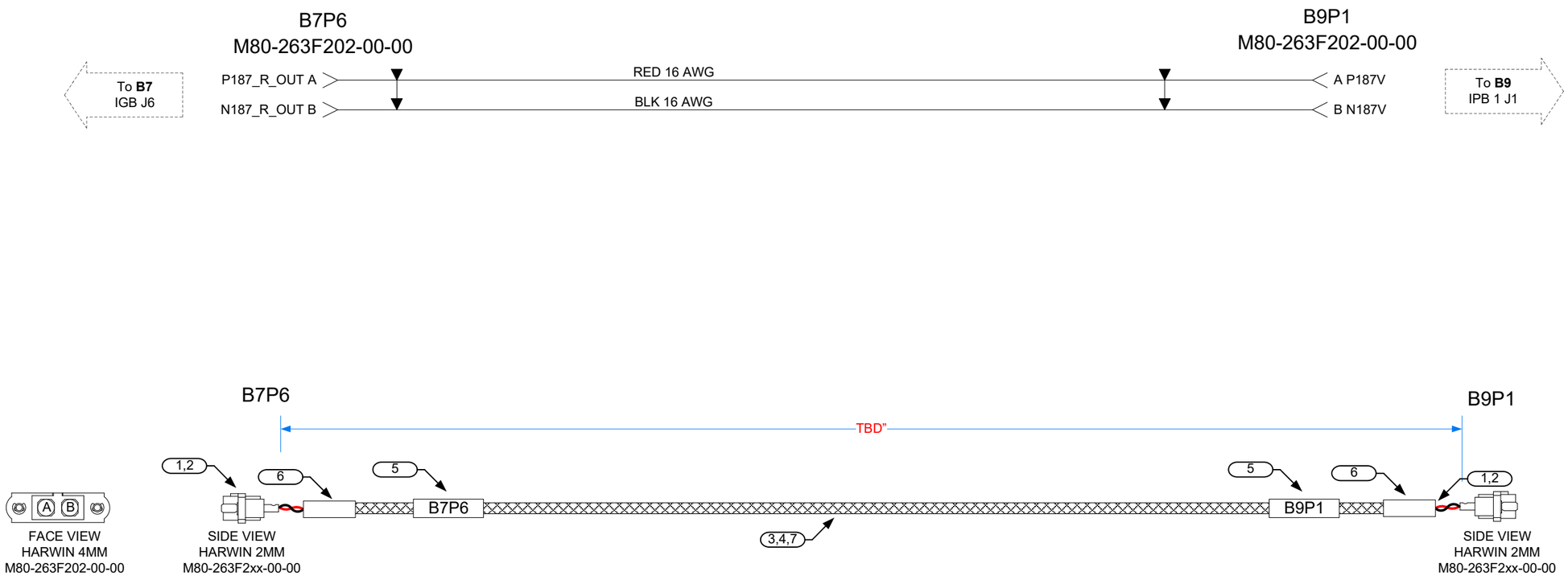



**TABLE A1H4: PARTS LIST**

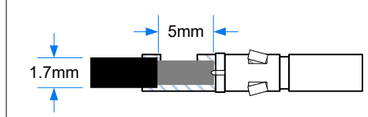
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 4 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 3 | TBD | | HARWIN | 16 AWG BLACK WIRE PTFE |
| 4 | TBD | | HARWIN | 16 AWG RED WIRE PTFE |
| 5 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 1/2" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |

**NOTE:**

*Power Contact (16AWG):*

Z80-290 - Extraction tool

5x – Contact Replacement In Insulator




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

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1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H4 IPB 1 POWER
375V Power
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
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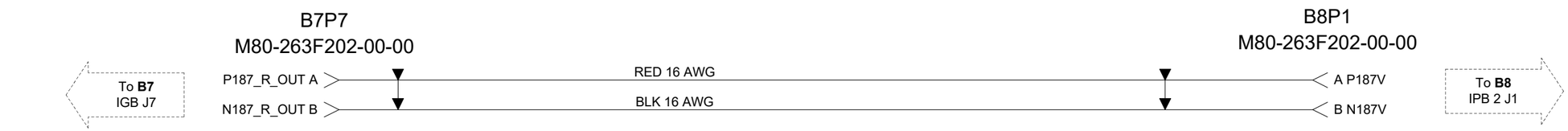
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 5 OF 41

H5



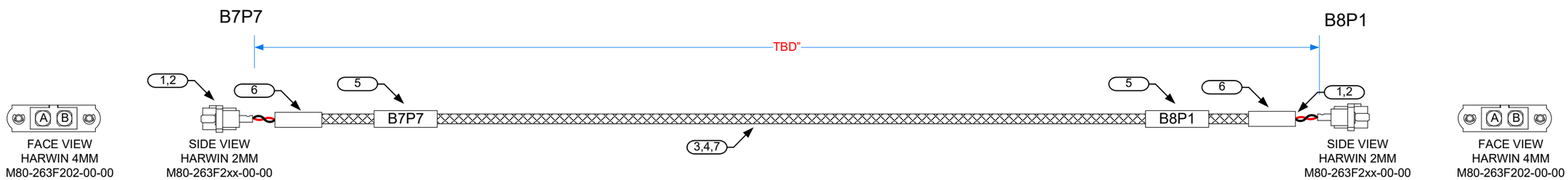




**TABLE A1H5: PARTS LIST**

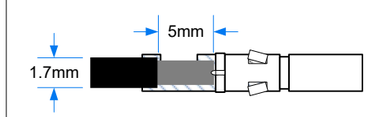
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 4 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 3 | TBD | AT161929 BK005 | HARWIN | 16 AWG BLACK WIRE PTFE |
| 4 | TBD | AT161929 RD005 | HARWIN | 16 AWG RED WIRE PTFE |
| 5 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 1/2" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |

**NOTE:**

*Power Contact (16AWG):*

Z80-290 - Extraction tool

5x – Contact Replacement In Insulator




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

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UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H5 IPB 2 POWER
375V Power
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
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| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 6 OF 41

H6

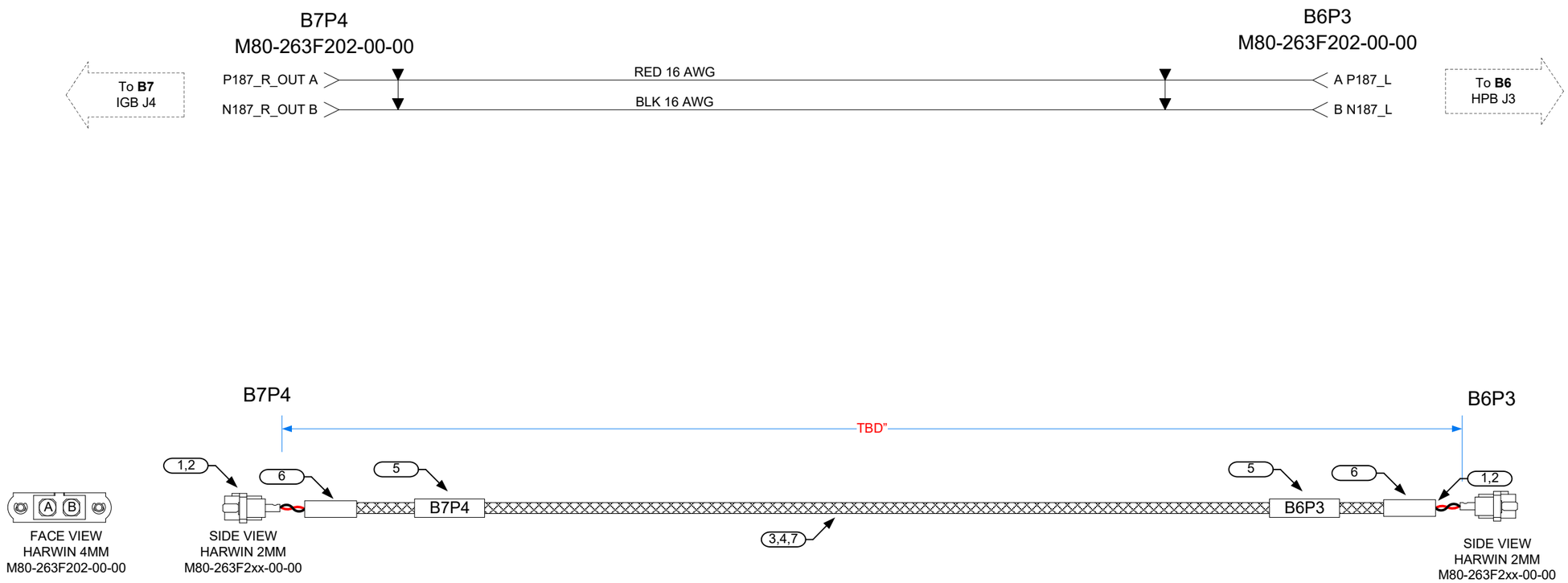



**TABLE A1H6: PARTS LIST**

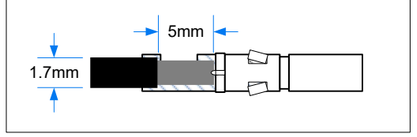
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 4 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 3 | TBD | AT161929 BK005 | HARWIN | 16 AWG BLACK WIRE PTFE |
| 4 | TBD | AT161929 RD005 | HARWIN | 16 AWG RED WIRE PTFE |
| 5 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 1/2" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |

**NOTE:**

*Power Contact (16AWG):*

Z80-290 - Extraction tool

5x – Contact Replacement In Insulator




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

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1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H6 HOTEL POWER BOARD POWER
375V Power LEFT
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
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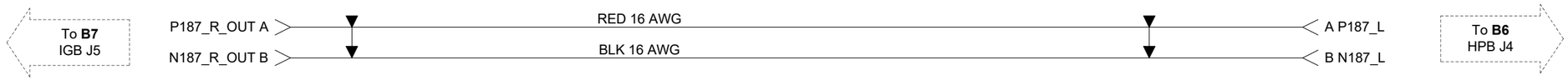
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 7 OF 41

H7



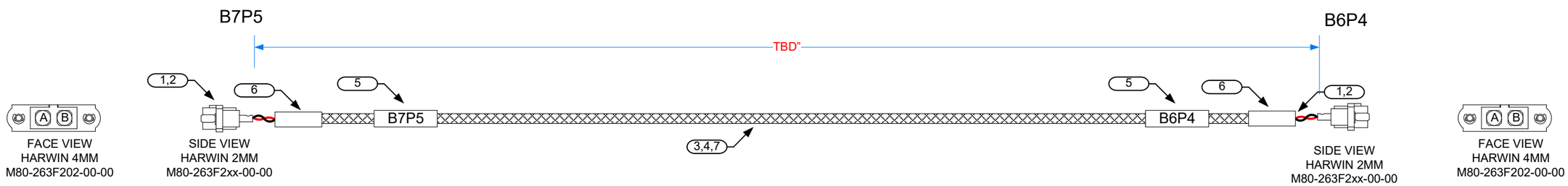




**TABLE A1H7: PARTS LIST**

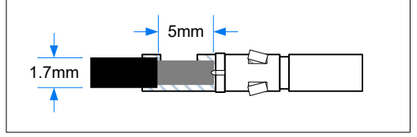
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 4 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 3 | TBD | AT161929 BK005 | HARWIN | 16 AWG BLACK WIRE PTFE |
| 4 | TBD | AT161929 RD005 | HARWIN | 16 AWG RED WIRE PTFE |
| 5 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 1/2" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |

**NOTE:**

*Power Contact (16AWG):*

Z80-290 - Extraction tool

5x – Contact Replacement In Insulator




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

APPLIED PHYSICS LABORATORY
UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H6 HOTEL POWER BOARD POWER
375V Power RIGHT
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
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| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 8 OF 41

# H8

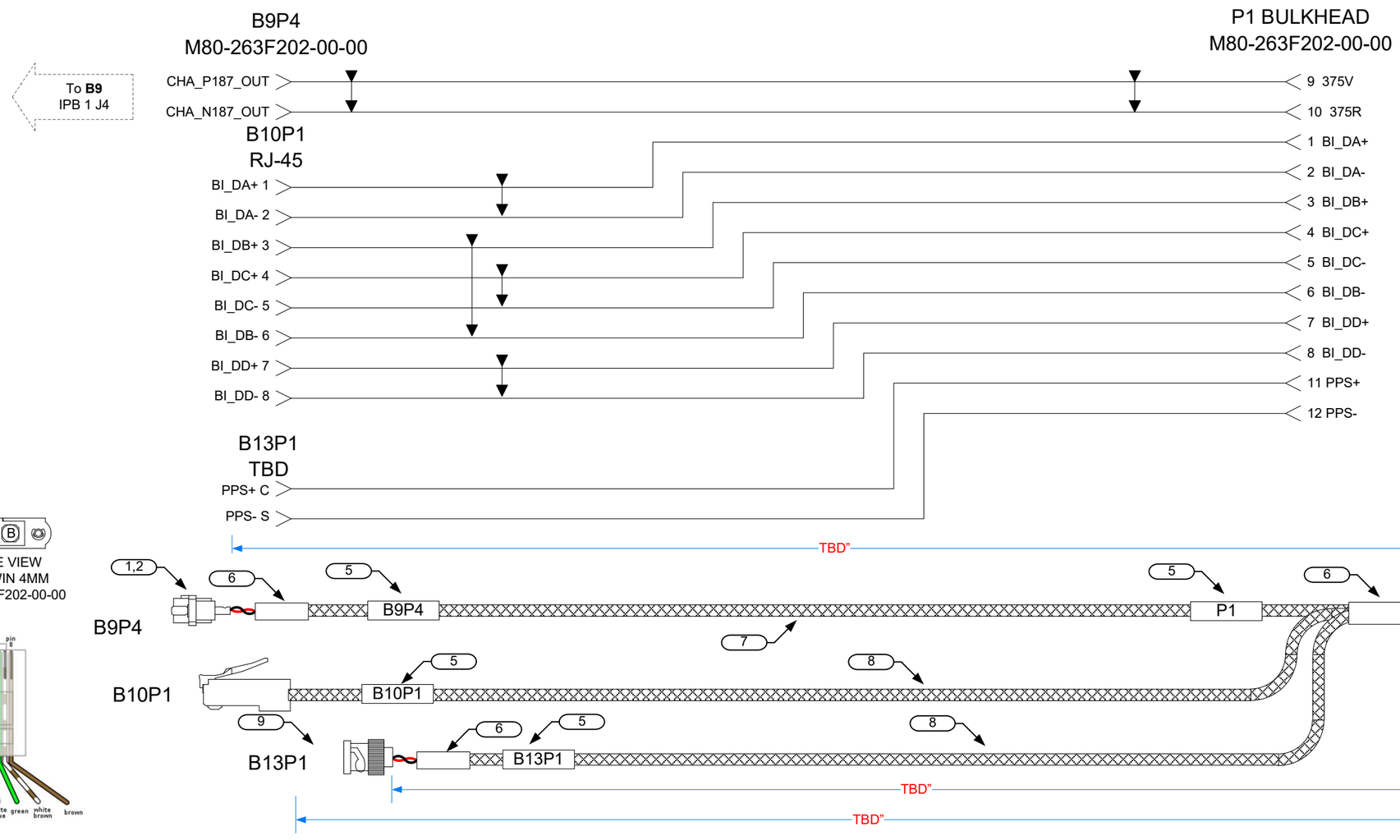



**TABLE A1H8: PARTS LIST**

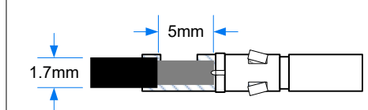
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 2 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 2 | 1 | STOCK | STOCK | RJ45 CONNECTOR |
| 5 | 2" | STOCK | STOCK | 1/2" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 3/4" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.50BK-200 | Techflex | Techflex 1/2"Flexo PET General Purpose Sleeving |
| 8 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |
| 9 | 1 | STOCK | STOCK | GENERIC BNC SOLDER |
| 9 | TBD | TBD | TBD | WET MATE PENETRATOR CONNECTOR |

**NOTE:**

*Power Contact (16AWG):*

Z80-290 - Extraction tool

5x – Contact Replacement In Insulator




| | | | | | |
|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: H8 P1 BULKHEAD<br>IPS 1 CHA 375V OUTPUT<br>MARS | | | |
| DRAWN BY: | K. ZACK | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | SHEET 9 OF 41 | |

# H9

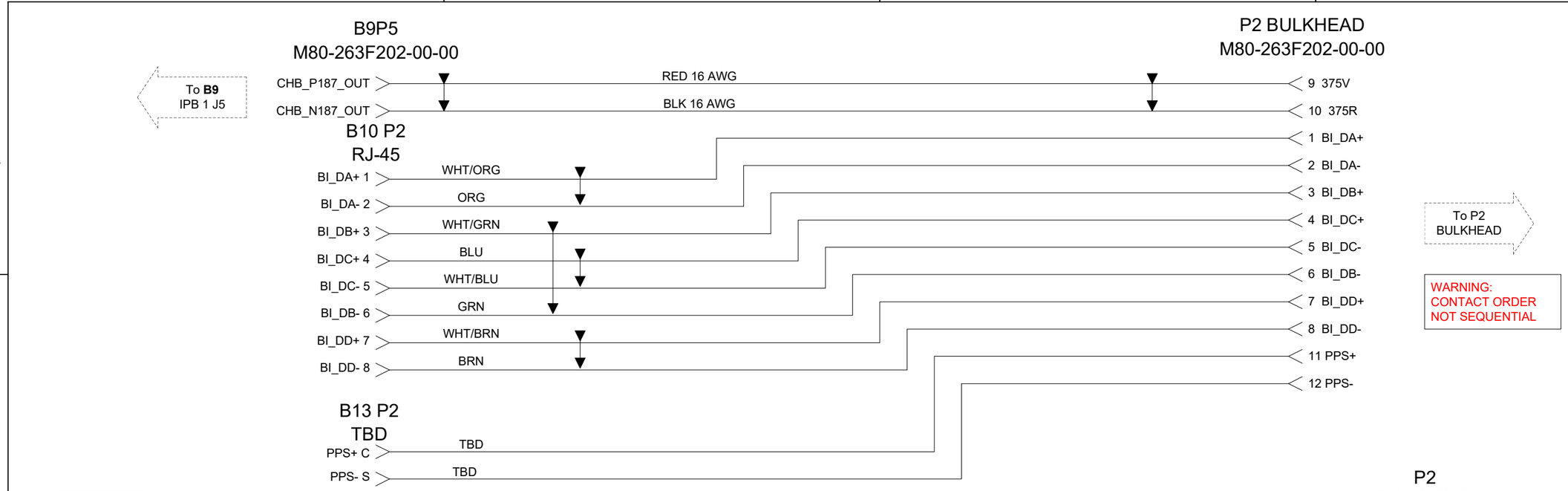



**TABLE A1H9: PARTS LIST**

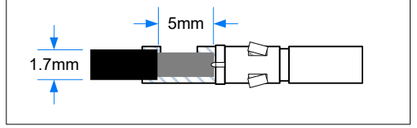
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 2 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 2 | 1 | STOCK | STOCK | RJ45 CONNECTOR |
| 5 | 2" | STOCK | STOCK | 1/2" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 3/4" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.50BK-200 | Techflex | Techflex 1/2"Flexo PET General Purpose Sleeving |
| 8 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |
| 9 | 1 | STOCK | STOCK | GENERIC BNC SOLDER |
| 10 | TBD | TBD | TBD | WET MATE PENETRATOR CONNECTOR |

**NOTE:**

*Power Contact (16AWG):*

Z80-290 - Extraction tool

5x – Contact Replacement In Insulator

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|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

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UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H9 P2 BULKHEAD
IPS 1 CHB 375V OUTPUT
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
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| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

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# H10

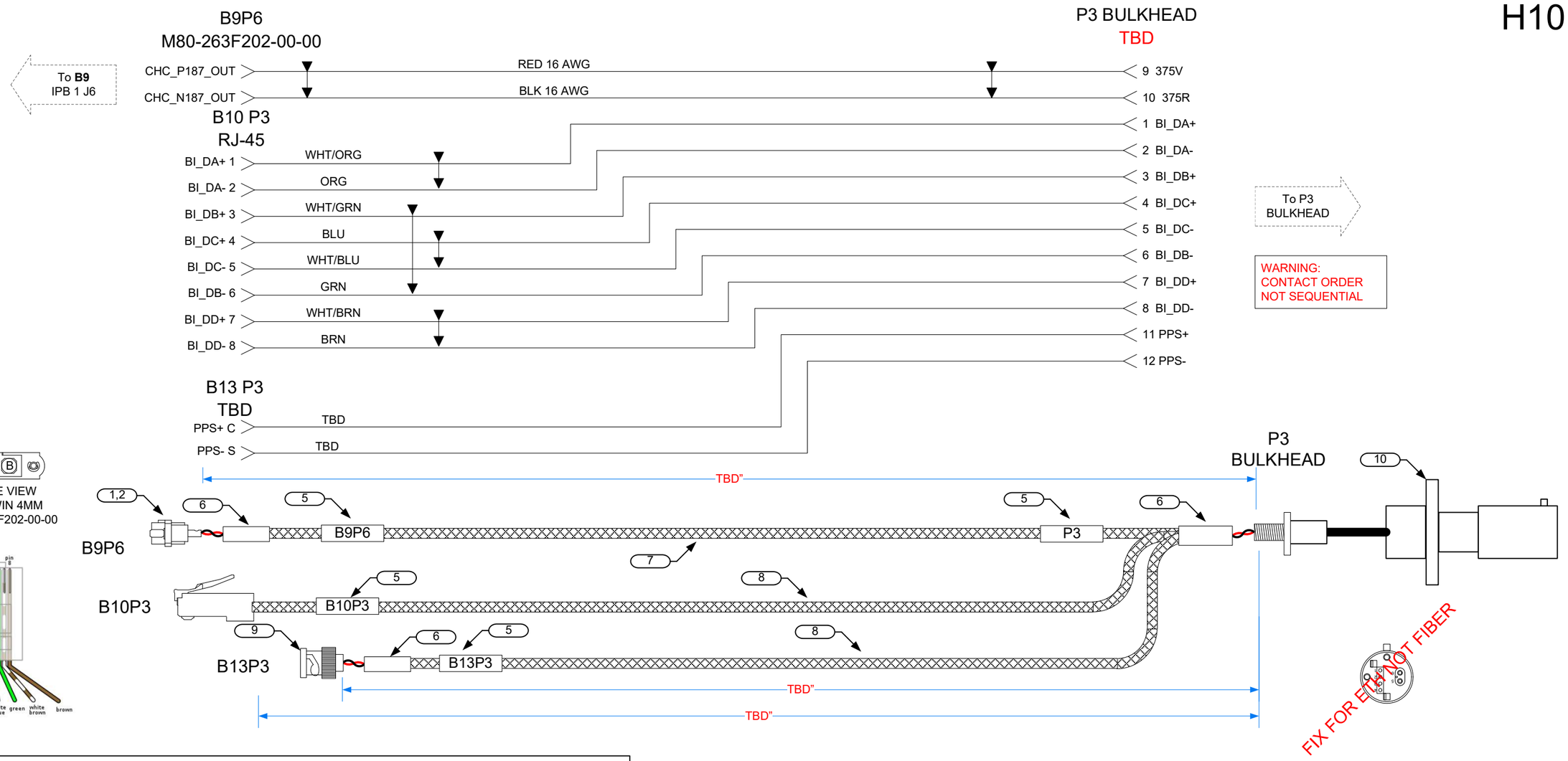



**TABLE A1H10: PARTS LIST**

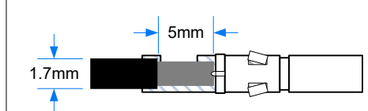
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 2 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 2 | 1 | STOCK | STOCK | RJ45 CONNECTOR |
| 5 | 2" | STOCK | STOCK | 1/2" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 3/4" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.50BK-200 | Techflex | Techflex 1/2"Flexo PET General Purpose Sleeving |
| 8 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |
| 9 | 1 | STOCK | STOCK | GENERIC BNC SOLDER |
| 10 | TBD | TBD | TBD | WET MATE PENETRATOR CONNECTOR |

**NOTE:**

*Power Contact (16AWG):*

Z80-290 - Extraction tool

5x – Contact Replacement In Insulator

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|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: H10 P3 BULKHEAD<br>IPS 1 CHC 375V OUTPUT<br>MARS | | | |
| DRAWN BY: | K. ZACK | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | SHEET 11 | OF 41 |

# H11

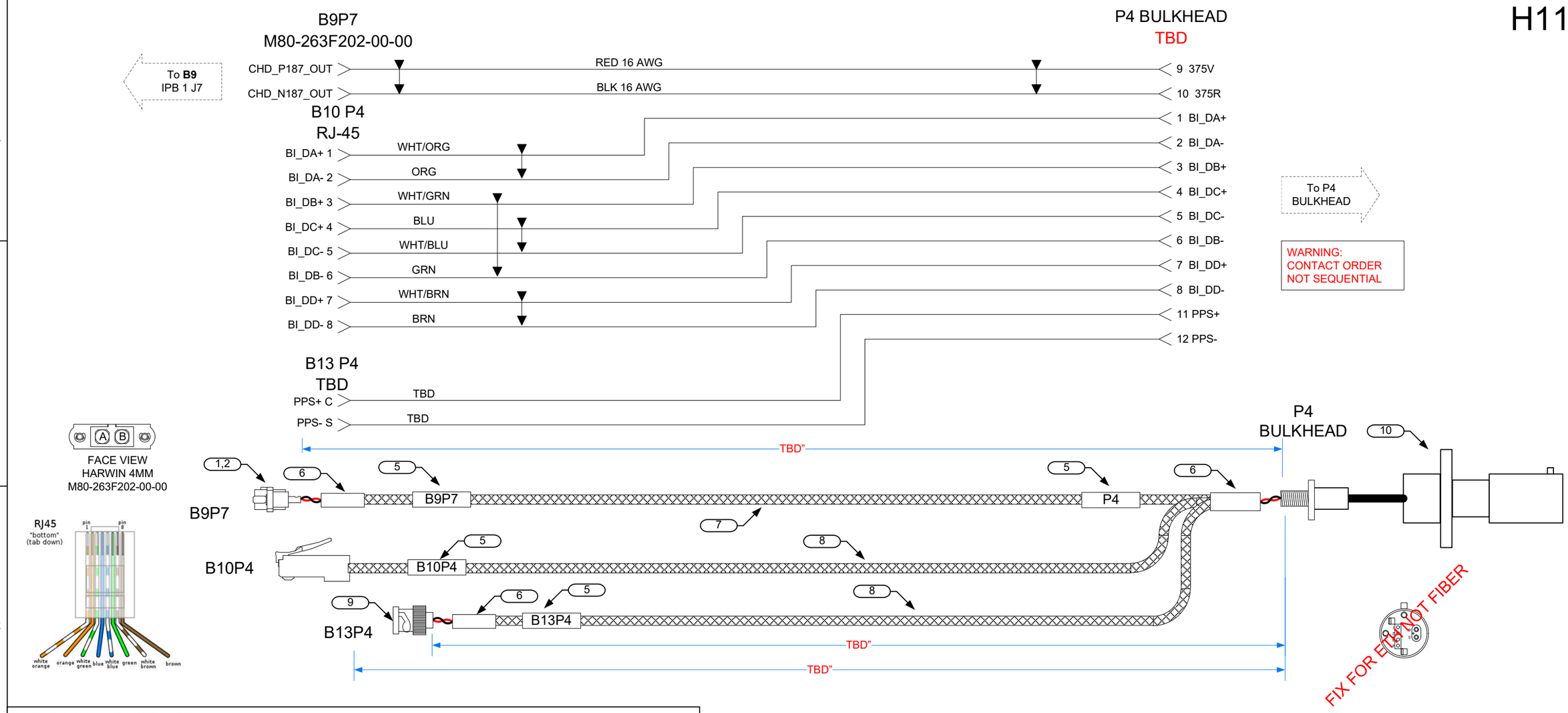



**TABLE A1H11: PARTS LIST**

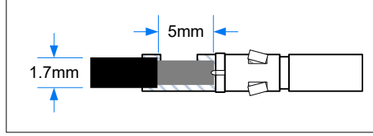
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 2 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 2 | 1 | STOCK | STOCK | RJ45 CONNECTOR |
| 5 | 2" | STOCK | STOCK | 1/2" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 3/4" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.50BK-200 | Techflex | Techflex 1/2"Flexo PET General Purpose Sleeving |
| 8 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |
| 9 | 1 | STOCK | STOCK | GENERIC BNC SOLDER |
| 10 | TBD | TBD | TBD | WET MATE PENETRATOR CONNECTOR |

**NOTE:**

*Power Contact (16AWG):*

Z80-290 - Extraction tool

5x – Contact Replacement In Insulator

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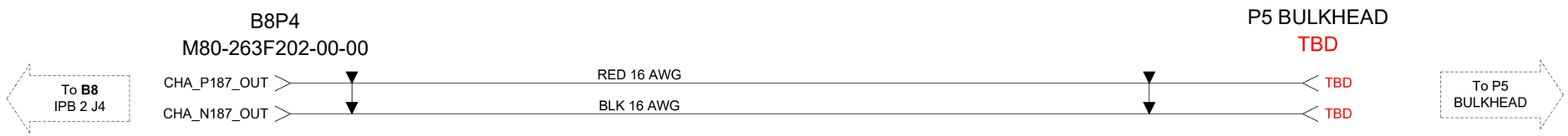
|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE:<br>H11 P4 BULKHEAD<br>IPS 1 CHD 375V OUTPUT<br>MARS | | | |
| DRAWN BY: | K. ZACK | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | SHEET 12 OF 41 | |

H12

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FIBER ??

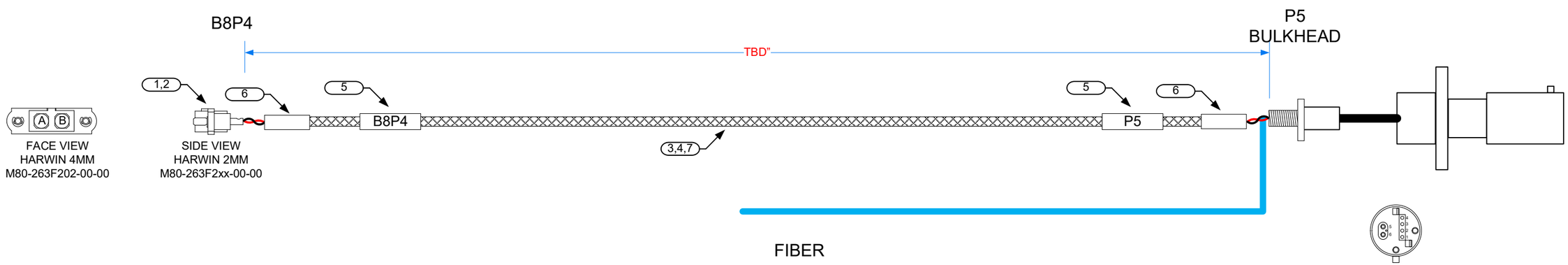



**TABLE A1H12: PARTS LIST**

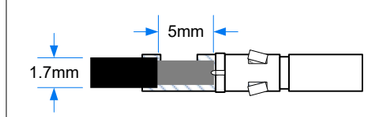
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 2 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 3 | TBD | AT161929 BK005 | HARWIN | 16 AWG BLACK WIRE PTFE |
| 4 | TBD | AT161929 RD005 | HARWIN | 16 AWG RED WIRE PTFE |
| 5 | 2" | STOCK | STOCK | 1/2" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 3/4" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.50BK-200 | Techflex | Techflex 1/2"Flexo PET General Purpose Sleeving |

**NOTE:**

*Power Contact (16AWG):*

Z80-290 - Extraction tool

5x – Contact Replacement In Insulator




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

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UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H12 P5 BULKHEAD
IPS 2 CHA 375V OUTPUT
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
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| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

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# H13

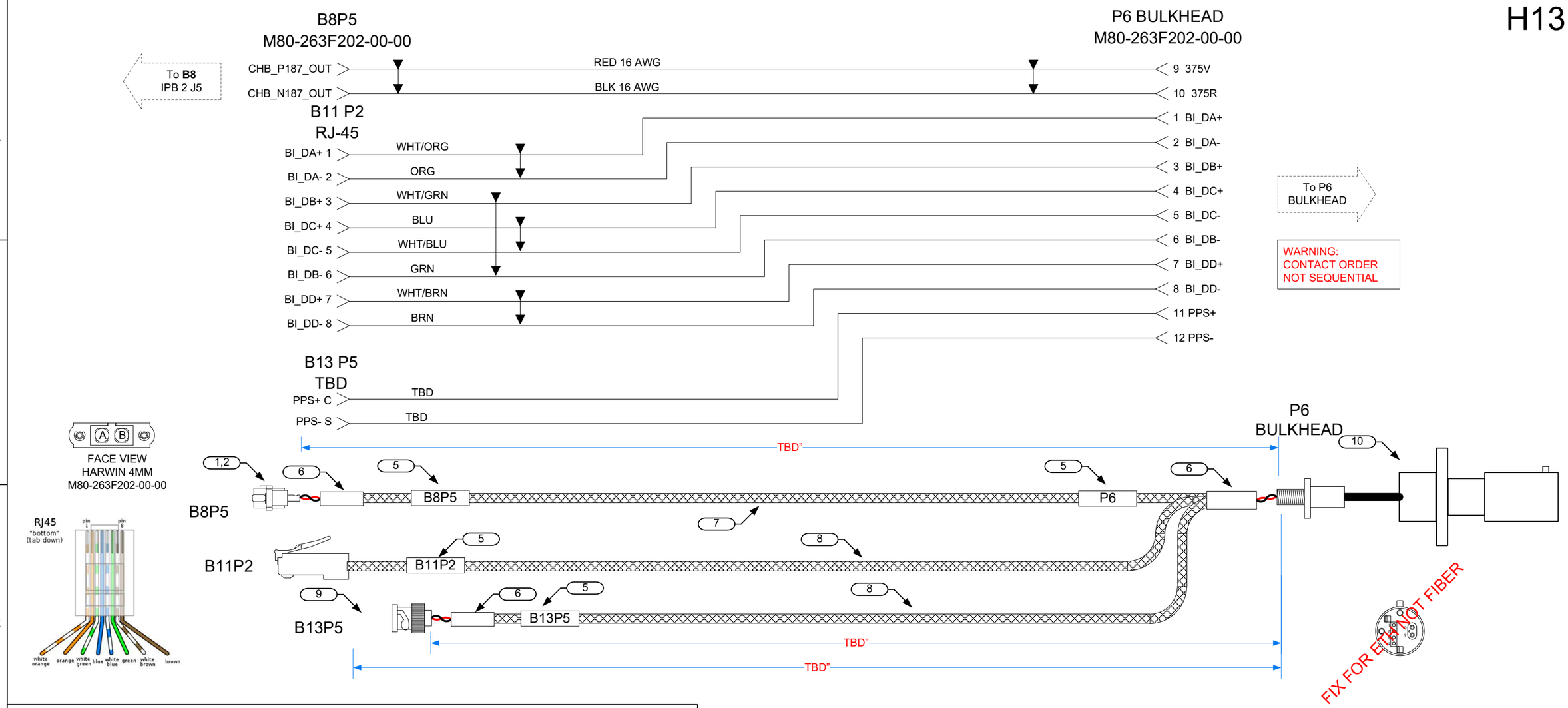



**TABLE A1H13: PARTS LIST**

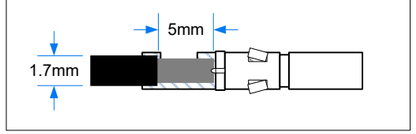
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 2 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 2 | 1 | STOCK | STOCK | RJ45 CONNECTOR |
| 5 | 2" | STOCK | STOCK | 1/2" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 3/4" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.50BK-200 | Techflex | Techflex 1/2"Flexo PET General Purpose Sleeving |
| 8 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |
| 9 | 1 | STOCK | STOCK | GENERIC BNC SOLDER |
| 10 | TBD | TBD | TBD | WET MATE PENETRATOR CONNECTOR |

**NOTE:**

*Power Contact (16AWG):*

Z80-290 - Extraction tool

5x – Contact Replacement In Insulator

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| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: H13 P6 BULKHEAD<br>IPS 1 CHB 375V OUTPUT<br>MARS | | | |
| DRAWN BY: | K. ZACK | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | SHEET 14 OF 41 | |

# H14

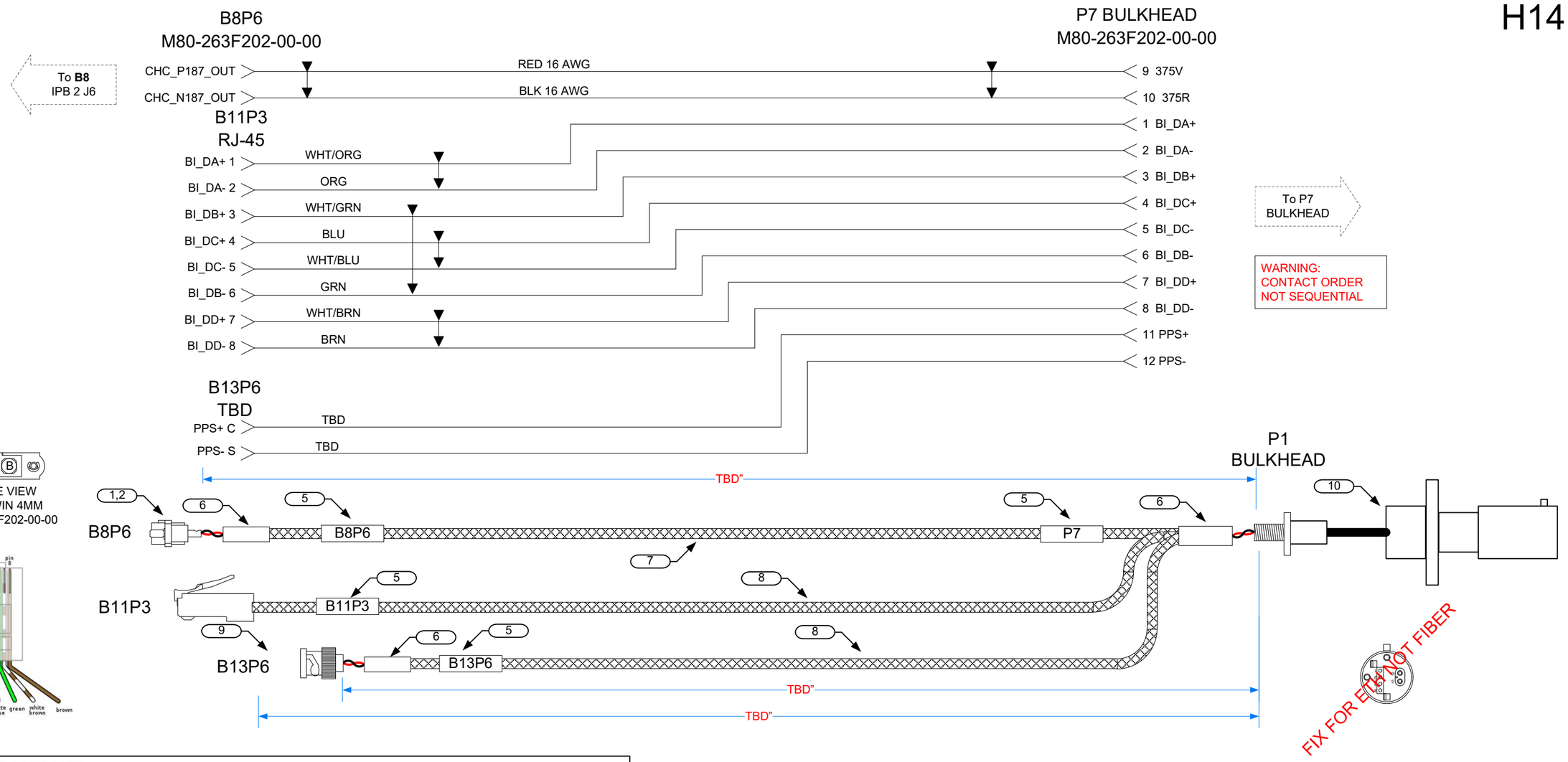



**TABLE A1H14: PARTS LIST**

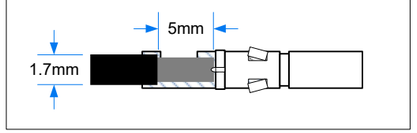
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 2 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 2 | 1 | STOCK | STOCK | RJ45 CONNECTOR |
| 5 | 2" | STOCK | STOCK | 1/2" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 3/4" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.50BK-200 | Techflex | Techflex 1/2"Flexo PET General Purpose Sleeving |
| 8 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |
| 9 | 1 | STOCK | STOCK | GENERIC BNC SOLDER |
| 10 | TBD | TBD | TBD | WET MATE PENETRATOR CONNECTOR |

**NOTE:**

*Power Contact (16AWG):*

Z80-290 - Extraction tool

5x – Contact Replacement In Insulator

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|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: H14 P7 BULKHEAD<br>IPS 2 CHC 375V OUTPUT<br>MARS | | | |
| DRAWN BY: | K. ZACK | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | REV 1.02 |
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# H15

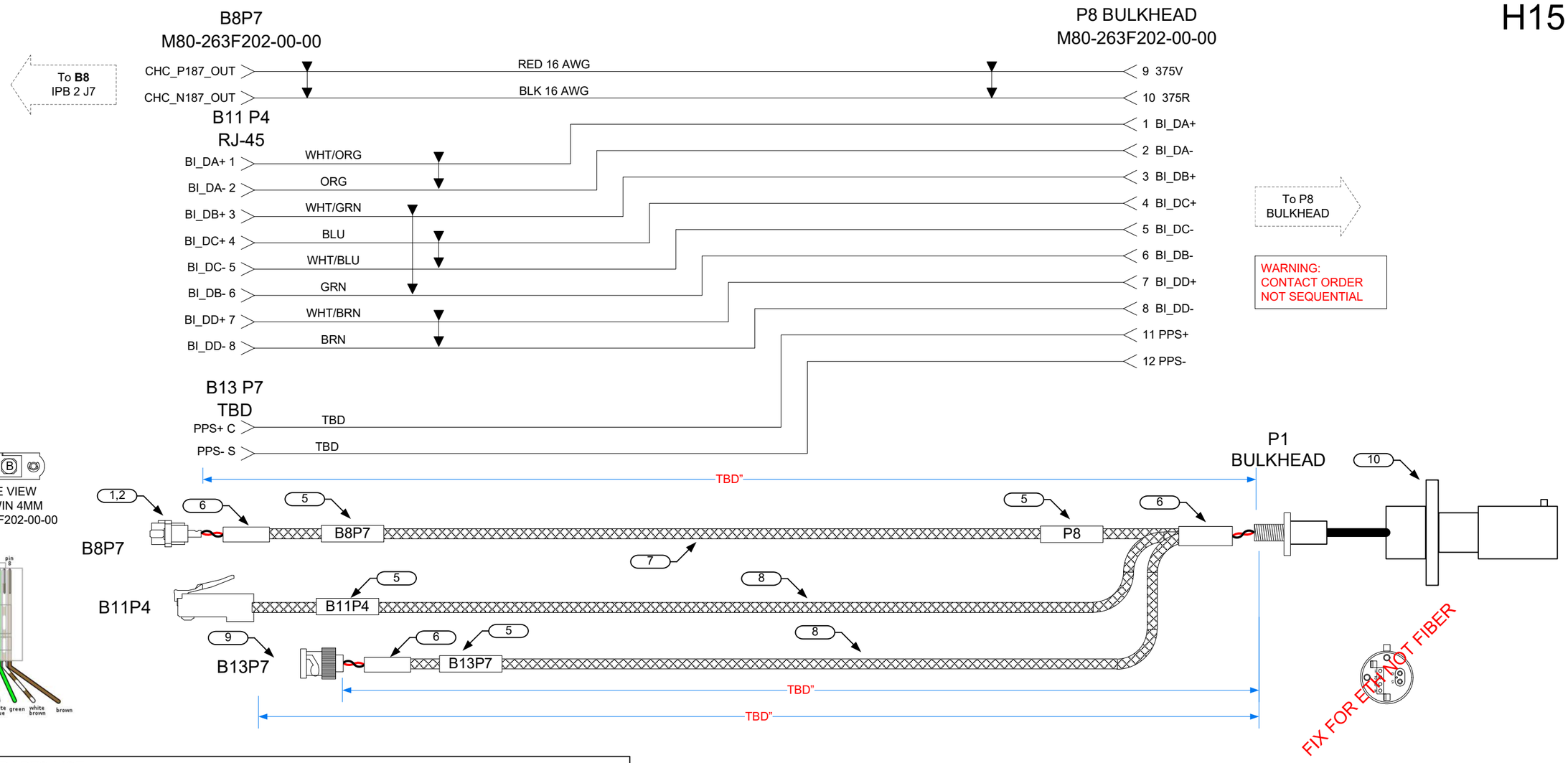
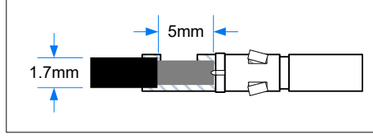



**TABLE A1H15: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-263F202-00-00 | HARWIN | 20A 2 PIN DATAMATE POWER |
| 2 | 2 | M80-327 | HARWIN | CONN SOCKET 16AWG CRIMP/SLD GOLD |
| 2 | 1 | STOCK | STOCK | RJ45 CONNECTOR |
| 5 | 2" | STOCK | STOCK | 1/2" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 3/4" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.50BK-200 | Techflex | Techflex 1/2"Flexo PET General Purpose Sleeving |
| 8 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |
| 9 | 1 | STOCK | STOCK | GENERIC BNC SOLDER |
| 10 | TBD | TBD | TBD | WET MATE PENETRATOR CONNECTOR |

**NOTE:**
*Power Contact (16AWG):*
Z80-290 - Extraction tool
5x – Contact Replacement In Insulator




| | | | | | |
|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: H15 P8 BULKHEAD<br>IPS 2 CHD 375V OUTPUT<br>MARS | | | |
| DRAWN BY: | K. ZACK | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | SHEET 16 OF 41 | |

B4J4
D89140-0031HK

B5J1.1
D89140-0031HK

To **B4**
CTI 1 P4

To **B5**
BOB P1.1

CONTINUED ON NEXT PAGE

| | | | |
|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | |
| MANAGER: | - | | |
| ENGINEER: | K. ZACK | TITLE: | |
| DRAWN BY: | K. ZACK | H16-PG1 CTI Xtreme I/O 1<br>ADC<br>MARS | |
| | | | |
| PRINT DATE: | 8/15/2023 | | |

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
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| 12/14/2021 | B | 98514 | 86253 | 1.02 |

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| MARS Harnessing.vsdx | 17 | 41 |

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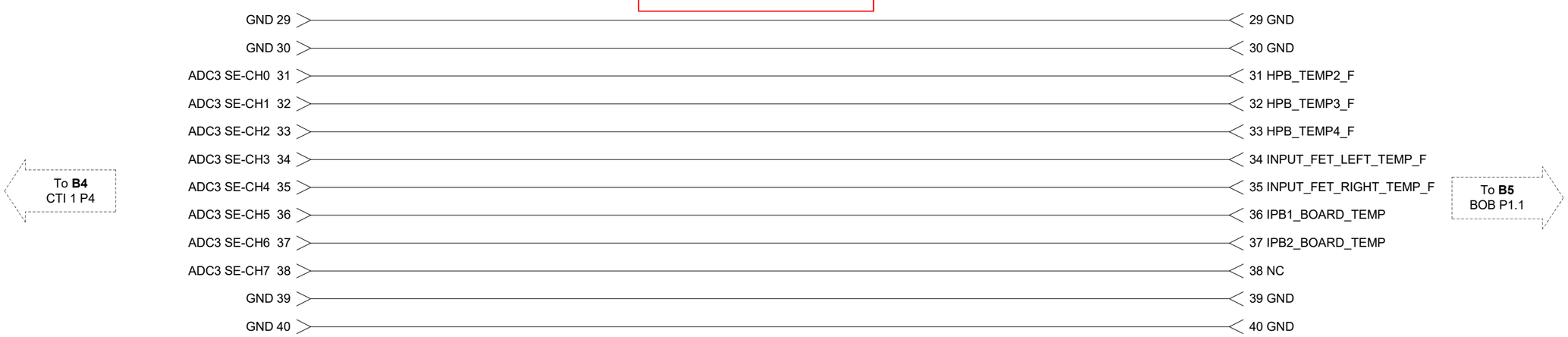


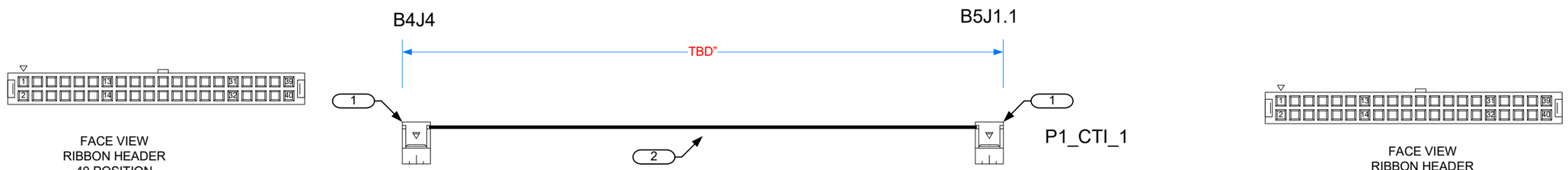


FACE VIEW
RIBBON HEADER
40 POSITION
D89140-0031HK

FACE VIEW
RIBBON HEADER
40 POSITION
D89140-0031HK

**TABLE A1H16: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | D89140-0031HK | 3M | CONN RCPT 40P IDC 26-28AWG GOLD |
| 2 | TBD" | 3302/40 100 | 3M | CBL RIBN 40COND 0.05 MULT 100' |

| | | |
|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 |
| MANAGER: | - | |
| ENGINEER: | K. ZACK | TITLE: H16-PG2 CTI Xtreme I/O 1<br>ADC<br>MARS |
| DRAWN BY: | K. ZACK | |
| | | |
| PRINT DATE: | 8/15/2023 | |

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
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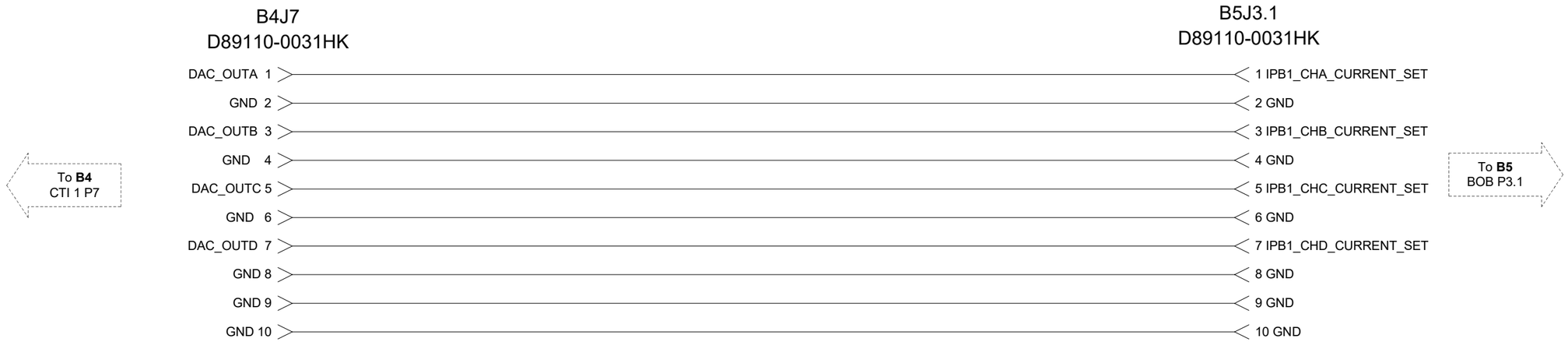
CAD FILE: MARS Harnessing.vsdx

# H17



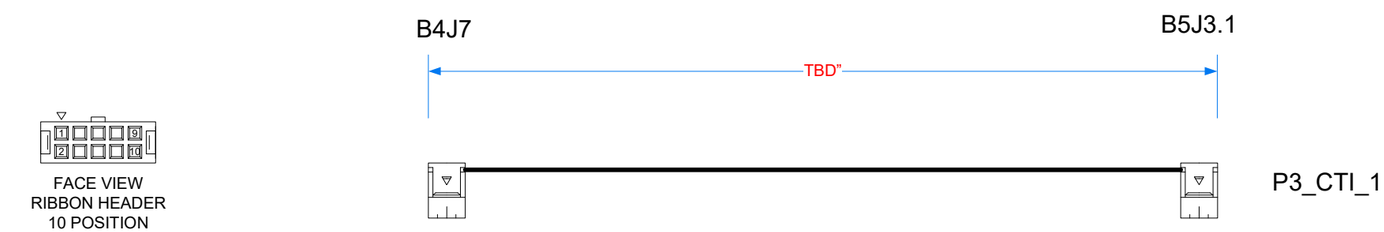




**TABLE A1H17: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | D89110-0031HK | 3M | CONN RCPT 10P IDC 26-28AWG GOLD |
| 2 | TBD" | 3302/10 300SF | 3M | CBL RIBN 10COND 0.05 MULT 100' |

| | | |
|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 |
| MANAGER: | - | |
| ENGINEER: | K. ZACK | TITLE: H17 CTI Xtreme I/O 1<br>DAC<br>MARS |
| DRAWN BY: | K. ZACK | |
| | | |
| PRINT DATE: | 8/15/2023 | |

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 19 OF 41

H18

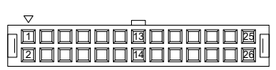
B4J3
D89126-0031HK

B5J2.1
D89126-0031HK

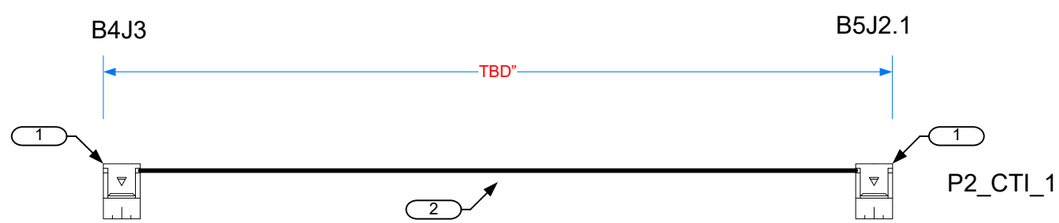
To **B4**
CTI 1 P3

To **B5**
BOB P2.1

| | |
|---|---|
| GPIO0 1 | 1 GF_SOURCE_SEL_A |
| GPIO1 2 | 2 GF_SOURCE_SEL_B |
| GPIO2 3 | 3 GF_SOURCE_SEL_C |
| GPIO3 4 | 4 GF_SOURCE_SEL_EN |
| GPIO4 5 | 5 GF_ANNODE_SEL_EN |
| GPIO5 6 | 6 GF_CHASSIS_SEL_EN |
| GPIO6 7 | 7 IPB1_CHA_RLY_EN |
| GPIO7 8 | 8 IPB1_CHA_FET_EN |
| GPIO8 9 | 9 IPB1_CHB_RLY_EN |
| GPIO9 10 | 10 IPB1_CHB_FET_EN |
| GPIO10 11 | 11 IPB1_CHC_RLY_EN |
| GPIO11 12 | 12 IPB1_CHC_FET_EN |
| GPIO12 13 | 13 IPB1_CHD_RLY_EN |
| GPIO13 14 | 14 IPB1_CHD_FET_EN |
| GPIO14 15 | 15 IPB1_RESET |
| GPIO15 16 | 16 NC |
| GND 17-26 | 17-26 GND |



FACE VIEW
RIBBON HEADER
26 POSITION
D89126-0031HK



FACE VIEW
RIBBON HEADER
26 POSITION
D89126-0031HK

**TABLE A1H18: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | D89126-0031HK | 3M | CONN RCPT 26P IDC 26-28AWG GOLD |
| 2 | TBD" | 3302/26 10 | 3M | CBL RIBN 26COND 0.05 MULT 100' |

| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

APPLIED PHYSICS LABORATORY
UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H18 CTI Xtreme I/O 1
GPIO
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE:
MARS Harnessing.vsdx

SHEET 20 OF 41

H19

B3J4
D89140-0031HK

B5J1.2
D89140-0031HK

| | |
|---|---|
| ADC0 SE-CH0 1 | 1 IPB2_CHA_I |
| ADC0 SE-CH1 2 | 2 IPB2_CHB_I |
| ADC0 SE-CH2 3 | 3 IPB2_CHC_I |
| ADC0 SE-CH3 4 | 4 IPB2_CHD_I |
| ADC0 SE-CH4 5 | 5 HPB_CISCO1_CURRENT |
| ADC0 SE-CH5 6 | 6 HPB_CISCO2_CURRENT |
| ADC0 SE-CH6 7 | 7 HPB_SYNCBOX_CURRENT |
| ADC0 SE-CH7 8 | 8 HPB_ISO24V_CURRENT |
| GND 9 | 9 GND |
| GND 10 | 10 GND |
| ADC1SE-CH0 11 | 11 HPB_24V_CURRENT |
| ADC1 SE-CH1 12 | 12 HPB_5V_CURRENT |
| ADC1 SE-CH2 13 | 13 HPB_24V_VOLTAGE |
| ADC1 SE-CH3 14 | 14 HPB_5V_VOLTAGE |
| ADC1 SE-CH4 15 | 15 24V_UNSWCH_BUS_CURRENT |
| ADC1 SE-CH5 16 | 16 MVC_L_CURRENT |
| ADC1 SE-CH6 17 | 17 MVC_R_CURRENT |
| ADC1 SE-CH7 18 | 18 MVC_L_VOLTAGE |
| GND 19 | 19 GND |
| GND 20 | 20 GND |
| ADC2 SE-CH0 21 | 21 MVC_R_VOLTAGE |
| ADC2 SE-CH1 22 | 22 NC |
| ADC2 SE-CH2 23 | 23 NC |
| ADC2 SE-CH3 24 | 24 NC |
| ADC2 SE-CH4 25 | 25 NC |
| ADC2 SE-CH5 26 | 26 NC |
| ADC2 SE-CH6 27 | 27 NC |
| ADC2 SE-CH7 28 | 28 NC |

To **B3**
CTI 2 P4

To **B4**
BOB P1.2

CONTINUED ON NEXT PAGE

| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

APPLIED PHYSICS LABORATORY
UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H19-PG1 CTI Xtreme I/O 2
ADC
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

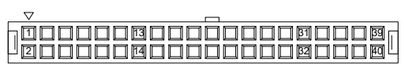
# H19

CONTINUED FROM PRIOR PAGE

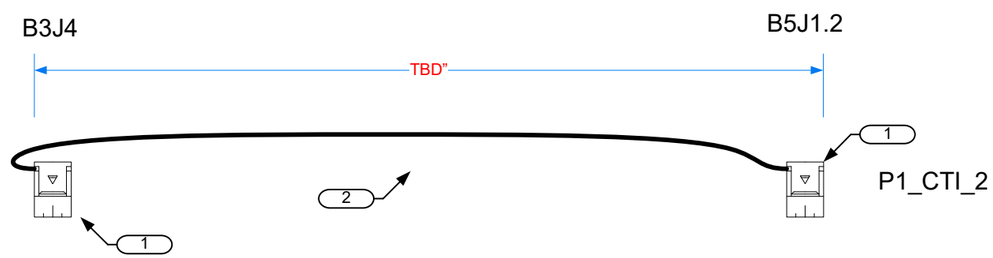
To **B3**
CTI 2 P4

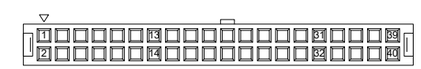
| B3J4 D89140-0031HK | | B5J1.2 D89140-0031HK |
|---|---|---|
| GND 29 | | 29 GND |
| GND 30 | | 30 GND |
| ADC3 SE-CH0 31 | | 31 FAULT_SENSE_HCB |
| ADC3 SE-CH1 32 | | 32 FAULT_SENSE_IPB1 |
| ADC3 SE-CH2 33 | | 33 FAULT_SENSE_IPB2 |
| ADC3 SE-CH3 34 | | 34 NC |
| ADC3 SE-CH4 35 | | 35 NC |
| ADC3 SE-CH5 36 | | 36 NC |
| ADC3 SE-CH6 37 | | 37 NC |
| ADC3 SE-CH7 38 | | 38 NC |
| GND 39 | | 39 GND |
| GND 40 | | 40 GND |

To **B5**
BOB P1.2



FACE VIEW
RIBBON HEADER
40 POSITION
D89140-0031HK



FACE VIEW
RIBBON HEADER
40 POSITION
D89140-0031HK

**TABLE A1H19: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | D89140-0031HK | 3M | CONN RCPT 40P IDC 26-28AWG GOLD |
| 2 | TBD" | 3302/40 10 | 3M | CBL RIBN 40COND 0.05 MULT 100' |

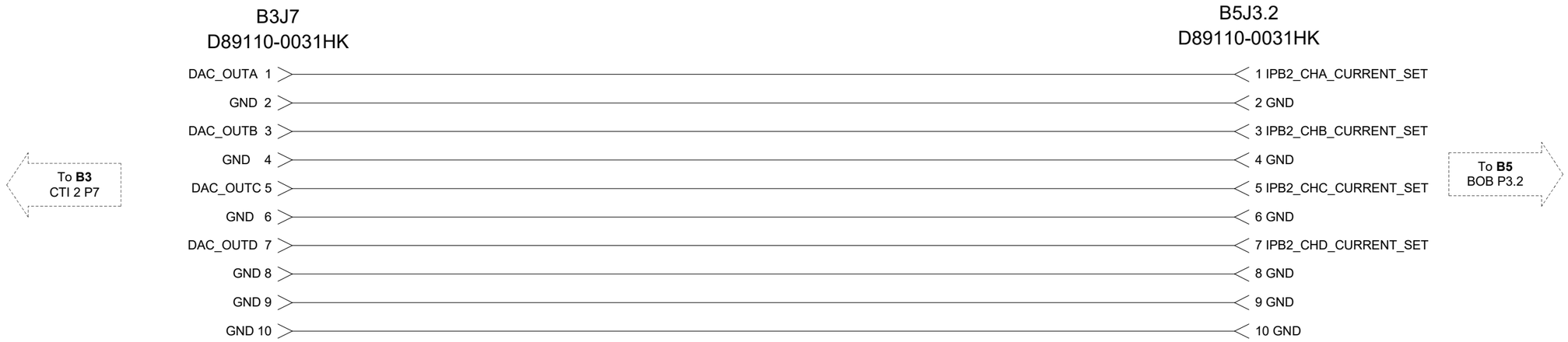
| | | |
|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 |
| MANAGER: | - | |
| ENGINEER: | K. ZACK | TITLE: H19-PG2 CTI Xtreme I/O 2<br>ADC<br>MARS |
| DRAWN BY: | K. ZACK | |
| | | |
| PRINT DATE: | 8/15/2023 | |

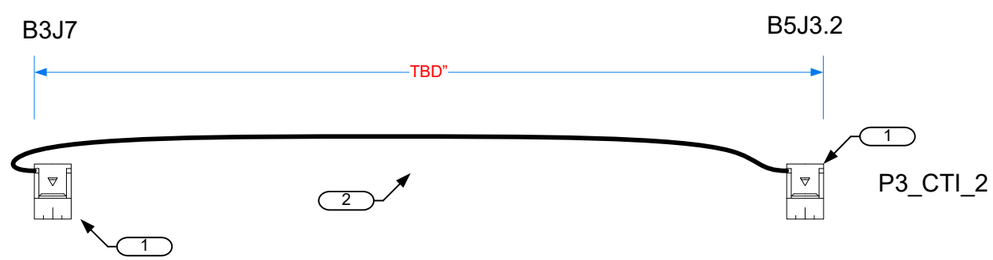
| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

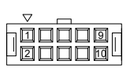
CAD FILE: MARS Harnessing.vsdx

SHEET 22 OF 41

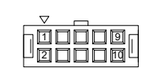
# H20



FACE VIEW
RIBBON HEADER
10 POSITION
D89110-0031HK



FACE VIEW
RIBBON HEADER
10 POSITION
D89110-0031HK

**TABLE A1H20: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | D89110-0031HK | 3M | CONN RCPT 10P IDC 26-28AWG GOLD |
| 2 | TBD" | 3302/10 300SF | 3M | CBL RIBN 10COND 0.05 MULT 100' |

| | | | | | |
|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: H20 CTI Xtreme I/O 2<br>DAC<br>MARS | | | |
| DRAWN BY: | K. ZACK | | | | |
| | | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | SHEET 23 OF 41 | |

H21

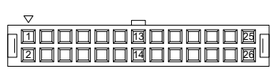
B3J3
D89126-0031HK

B5J2.2
D89126-0031HK

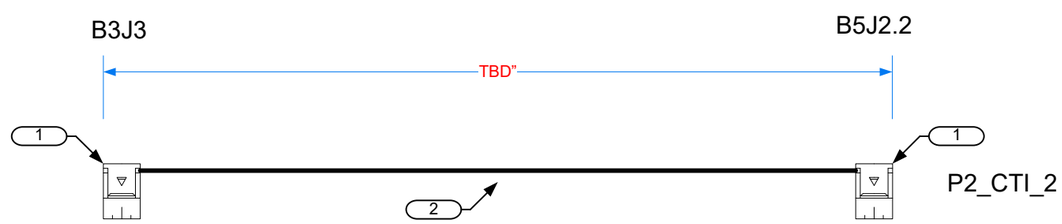
To **B3**
CTI 2 P3

To **B5**
BOB P2.1

| | |
|---|---|
| GPIO0 1 | 1 IPB2_CHA_RLY_EN |
| GPIO1 2 | 2 IPB2_CHA_FET_EN |
| GPIO2 3 | 3 IPB2_CHB_RLY_EN |
| GPIO3 4 | 4 IPB2_CHB_FET_EN |
| GPIO4 5 | 5 IPB2_CHC_RLY_EN |
| GPIO5 6 | 6 IPB2_CHC_FET_EN |
| GPIO6 7 | 7 IPB2_CHD_RLY_EN |
| GPIO7 8 | 8 IPB2_CHD_FET_EN |
| GPIO8 9 | 9 HPB_CISCO1_EN |
| GPIO9 10 | 10 HPB_CISCO2_EN |
| GPIO10 11 | 11 HPB_SYNCBOX_EN |
| GPIO11 12 | 12 HPB_MEDIA_EN |
| GPIO12 13 | 13 FAULT_MUX_A |
| GPIO13 14 | 14 FAULT_MUX_B |
| GPIO14 15 | 15 FAULT_MUX_C |
| GPIO15 16 | 16 IPB2_RESET |
| GND 17-26 | 17-26 GND |



FACE VIEW
RIBBON HEADER
26 POSITION
D89126-0031HK



FACE VIEW
RIBBON HEADER
26 POSITION
D89126-0031HK

**TABLE A1H21: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | D89126-0031HK | 3M | CONN RCPT 26P IDC 26-28AWG GOLD |
| 2 | TBD" | 3302/26 10 | 3M | CBL RIBN 26COND 0.05 MULT 100' |

| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

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UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

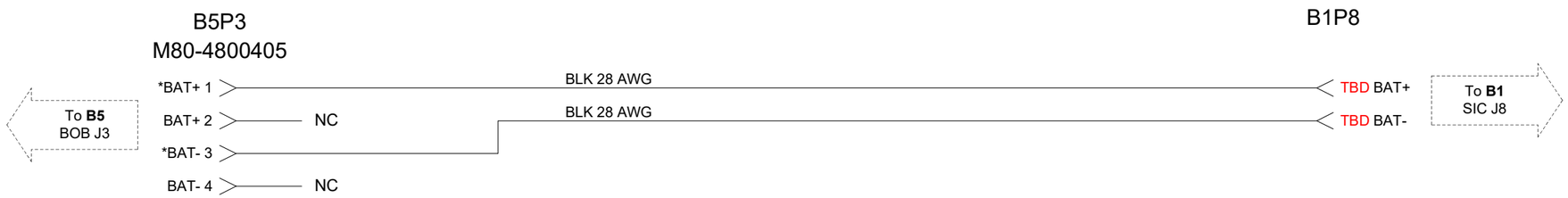
TITLE:
H21 CTI Xtreme I/O 2
GPIO
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE:
MARS Harnessing.vsdx

SHEET 24 OF 41

# H22




*TOOLING:
USE 28-32 AWG
DATAMATE CRIMP

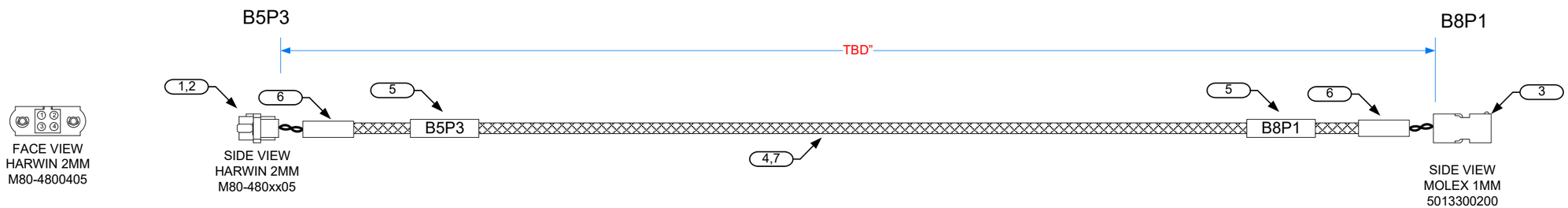
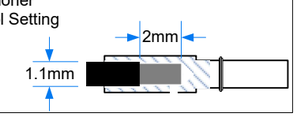



**TABLE A1H22: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-4800405 | HARWIN | DATAMATE FEMALE 4-PIN |
| 2 | 2 | M80-0130005 | HARWIN | CONN SOCKET 24-28AWG CRIMP GOLD |
| 3 | 1 | 5013300200 | Molex | CONN RCPT HSG 2POS 1.00MM |
| 4 | 2 | 0797581018 | Molex | PICO-CLASP 150MM 28AWG PRE-CRIMP |
| 5 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 1/4" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.13BK-200 | Techflex | Techflex 1/8"Flexo PET General Purpose Sleeving |

**SMALL Bore Signal Contact:**
M22520/2-01 - Hand Crimp Tool
T5747 – Positioner
6 – Crimp Tool Setting




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

APPLIED PHYSICS LABORATORY
UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

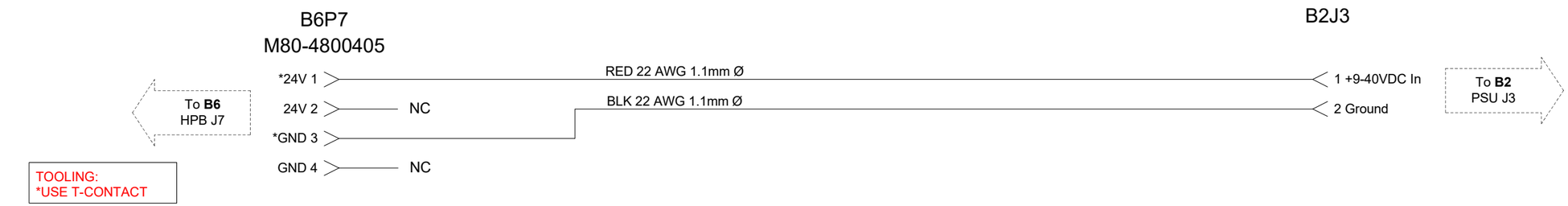
TITLE:
H22 BAYCAT BATTERY BACKUP
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 25 OF 41

# H23



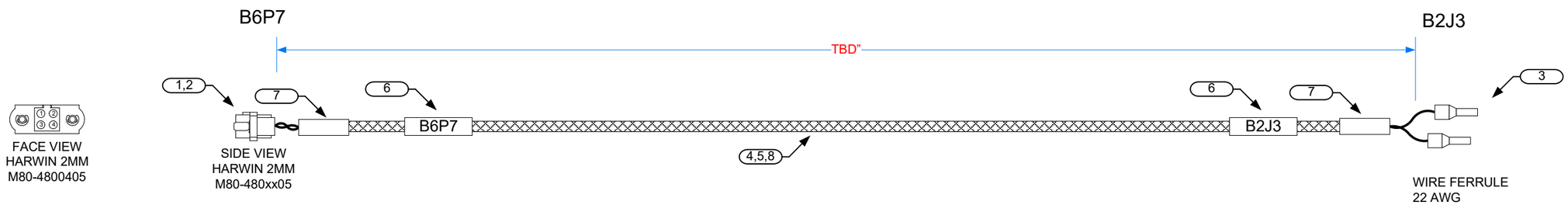
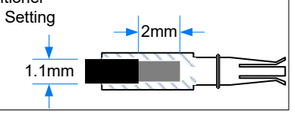




**TABLE A1H23: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-4800405 | HARWIN | DATAMATE FEMALE 4-PIN |
| 2 | 2 | M80-2060005 | HARWIN | DATAMATE 22AWG FEMALE CRIMP T-CONTACT |
| 3 | 2 | FSD75-8-D | Panduit Corp | CONN FERRULE DIN 22AWG WHITE |
| 4 | TBD | 2845/19 BK001 | Alpha | 22 AWG BLACK WIRE PTFE 1.07mm Ø |
| 5 | TBD | 2845/19 RD001 | Alpha | 22 AWG RED WIRE PTFE 1.07mm Ø |
| 6 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 7 | 2" | STOCK | STOCK | 1/4" ADHESIVE HEAT SHRINK |
| 8 | TBD | PTN0.13BK-200 | Techflex | Techflex 1/8"Flexo PET General Purpose Sleeving |

**T-Contact:**
M22520/2-01 - Hand Crimp Tool
Z80-444 – Positioner
6 – Crimp Tool Setting




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

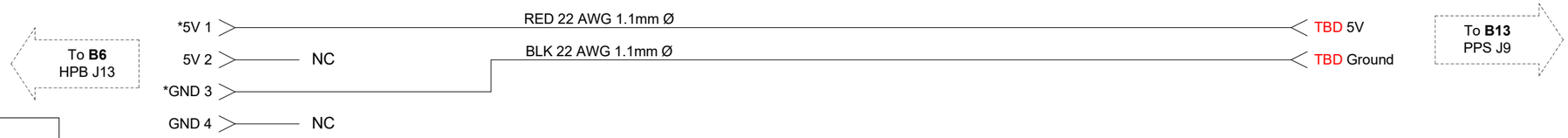
APPLIED PHYSICS LABORATORY
UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H23 PSU PC104 POWER
MARS

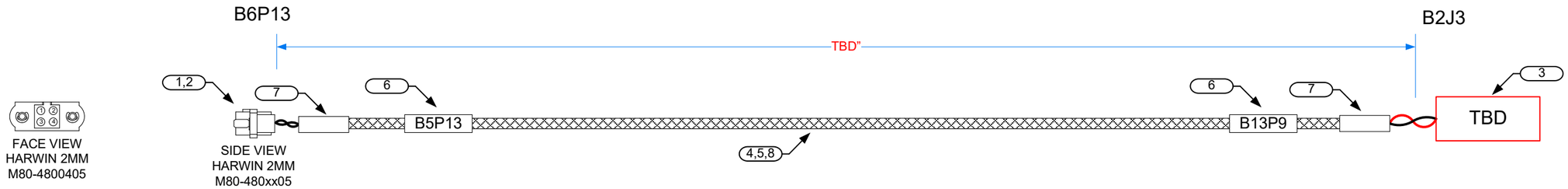
| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 26 OF 41




TOOLING:
*USE T-CONTACT

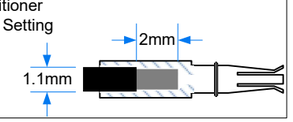



Need info about MBARI 1PPS DISTRO

**TABLE A1H24: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-4800405 | HARWIN | DATAMATE FEMALE 4-PIN |
| 2 | 2 | M80-2060005 | HARWIN | DATAMATE 22AWG FEMALE CRIMP T-CONTACT |
| 3 | 1 | TBD | TBD | TBD |
| 4 | TBD | 2845/19 BK001 | Alpha | 22 AWG BLACK WIRE PTFE 1.07mm Ø |
| 5 | TBD | 2845/19 RD001 | Alpha | 22 AWG RED WIRE PTFE 1.07mm Ø |
| 6 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 7 | 2" | STOCK | STOCK | 1/4" ADHESIVE HEAT SHRINK |
| 8 | TBD | PTN0.13BK-200 | Techflex | Techflex 1/8"Flexo PET General Purpose Sleeving |

**T-Contact:**
M22520/2-01 - Hand Crimp Tool
Z80-444 – Positioner
6 – Crimp Tool Setting




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

APPLIED PHYSICS LABORATORY
UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H24 MBARI 1PPS DISTRO POWER
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
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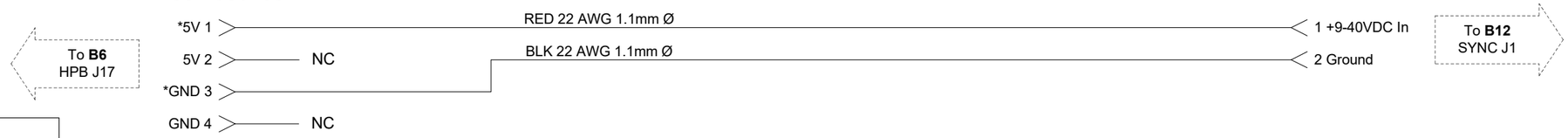
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

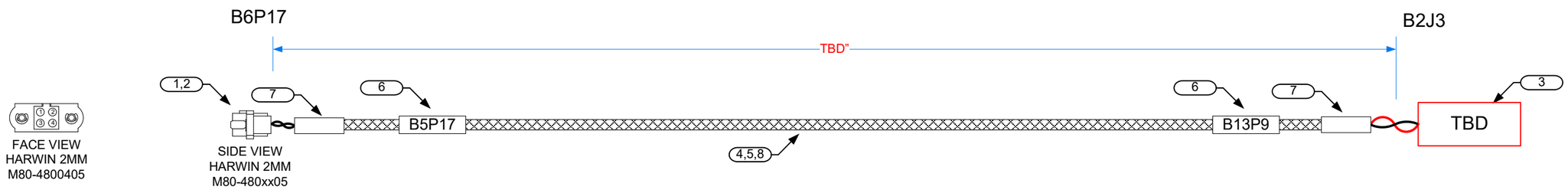
CAD FILE: MARS Harnessing.vsdx

SHEET 27 OF 41

# H25




TOOLING:
*USE T-CONTACT

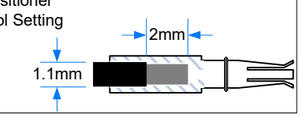



Need info about meinberg

**TABLE A1H25: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-4800405 | HARWIN | DATAMATE FEMALE 4-PIN |
| 2 | 2 | M80-2060005 | HARWIN | DATAMATE 22AWG FEMALE CRIMP T-CONTACT |
| 3 | 1 | TBD | TBD | TBD |
| 4 | TBD | 2845/19 BK001 | Alpha | 22 AWG BLACK WIRE PTFE 1.07mm Ø |
| 5 | TBD | 2845/19 RD001 | Alpha | 22 AWG RED WIRE PTFE 1.07mm Ø |
| 6 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 7 | 2" | STOCK | STOCK | 1/4" ADHESIVE HEAT SHRINK |
| 8 | TBD | PTN0.13BK-200 | Techflex | Techflex 1/8"Flexo PET General Purpose Sleeving |

**T-Contact:**
M22520/2-01 - Hand Crimp Tool
Z80-444 – Positioner
6 – Crimp Tool Setting




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

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1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H25 MEINBERG SYNC 1PPS
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 28 OF 41

H26

B12OUTA
BNC

B13P8

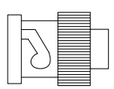
To **B12**
SYNC OUTA

SIG C — C SIG

GND S — S GND

To **B12**
SYNC J1

Need info about meinberg and
MBARI 1PPS DISTRO



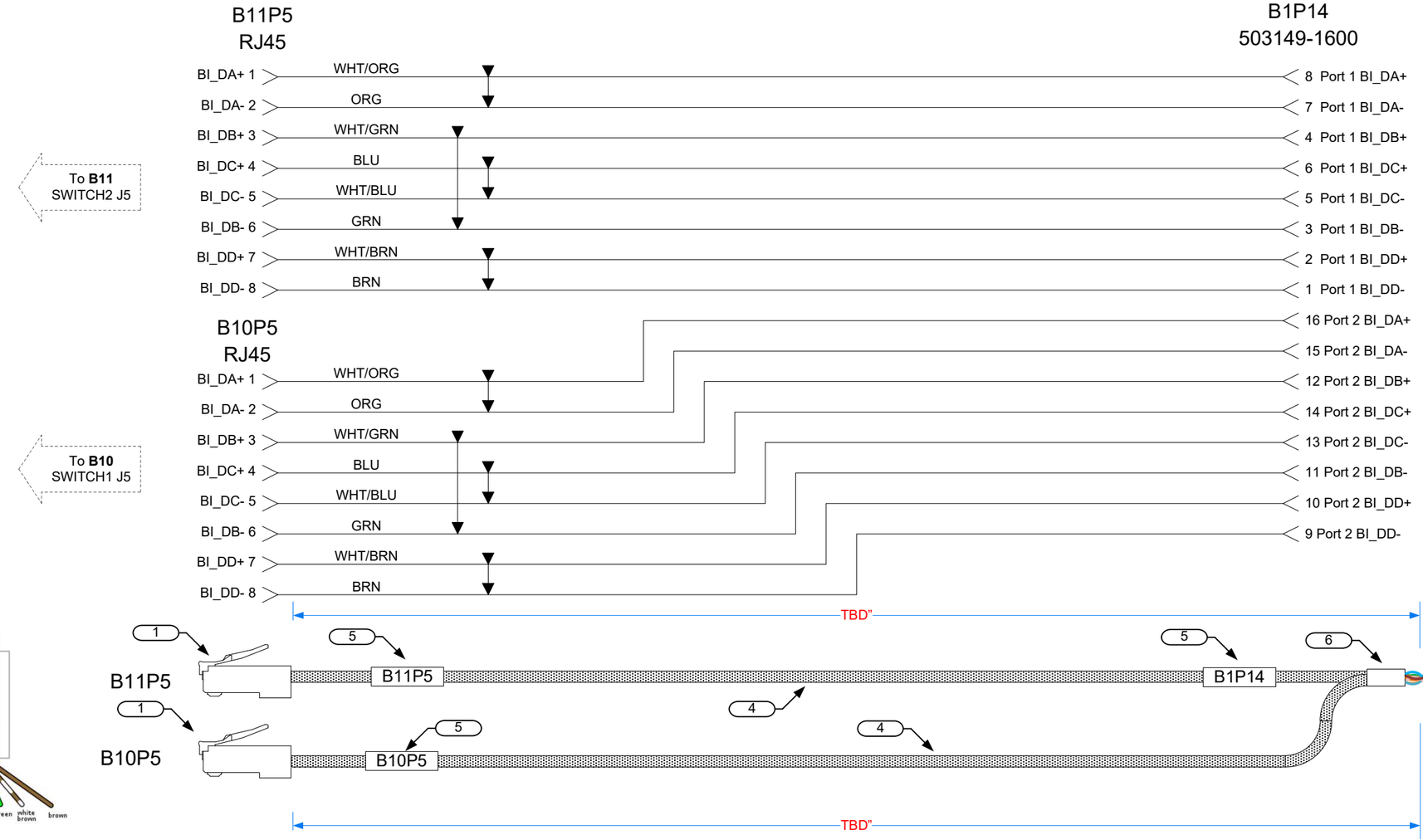
GENERIC BNC END

**TABLE A1H26: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: | | | |
| DRAWN BY: | K. ZACK | H26 1PPS SIGNAL<br>MARS | | | |
| | | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | | SHEET 29 OF 41 |

# H27




| TABLE A1H27: PARTS LIST | | | | |
|---|---|---|---|---|
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
| 1 | 2 | STOCK | STOCK | RJ45 CONNECTOR |
| 2 | 2 | 503149-1600 | Molex | Molex CLIK-Mate 503149 16 Pin |
| 3 | 16 | 2130287000 | Molex | CRIMP TERM 1.5 #24-26 C AU0.76 |
| 4 | TBD | 74006 BK002 | Alpha Wire | CABLE CAT5E 8COND 26AWG BLK 100' |
| 5 | 2" | STOCK | STOCK | 1/2" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 3/4" ADHESIVE HEAT SHRINK |

| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

APPLIED PHYSICS LABORATORY
UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

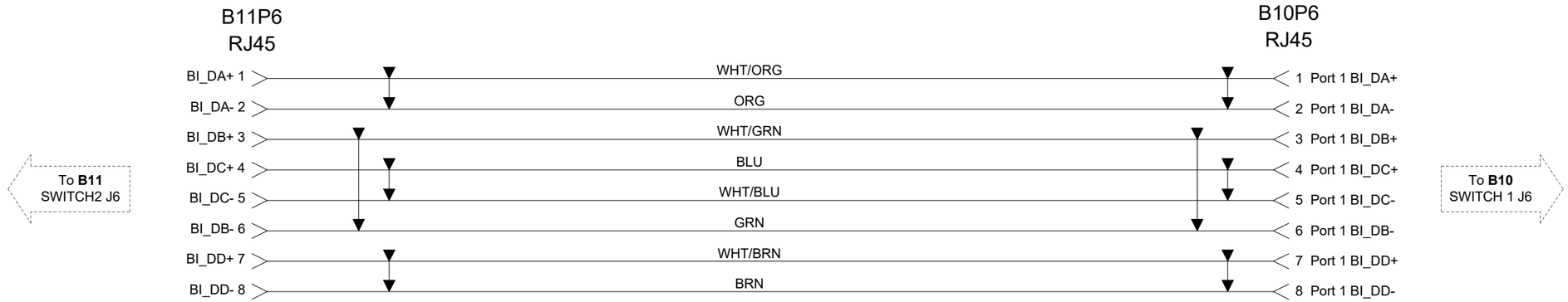
TITLE:
H27 SIC ETHERNET
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 30 OF 41

# H28



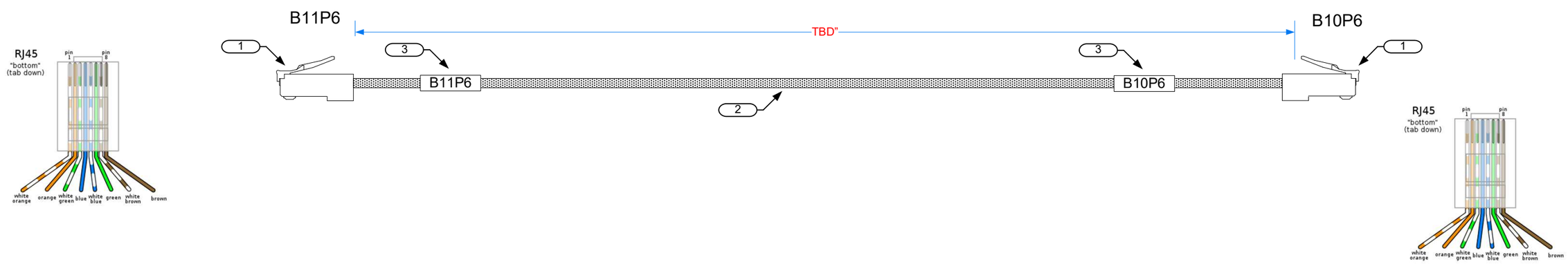




**TABLE A1H28: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| | 2 | STOCK | STOCK | RJ45 CONNECTOR |
| 2 | TBD | 74006 BK002 | Alpha Wire | CABLE CAT5E 8COND 26AWG BLK 100' |
| 3 | 2" | STOCK | STOCK | 1/2" HEAT SHRINK LABEL |

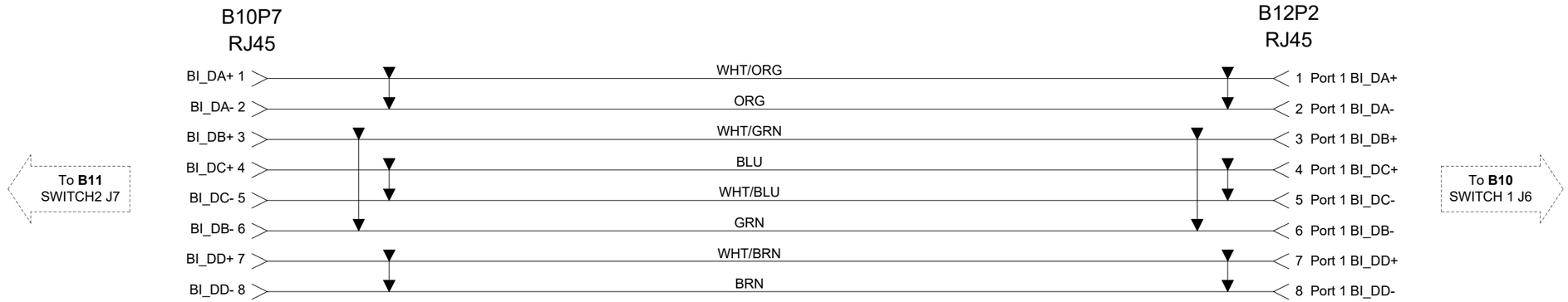
| | | |
|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 |
| MANAGER: | - | |
| ENGINEER: | K. ZACK | TITLE: |
| DRAWN BY: | K. ZACK | H28 SWITCH 1 SWITCH 2 BRIDGE<br>MARS |
| | | |
| PRINT DATE: | 8/15/2023 | |

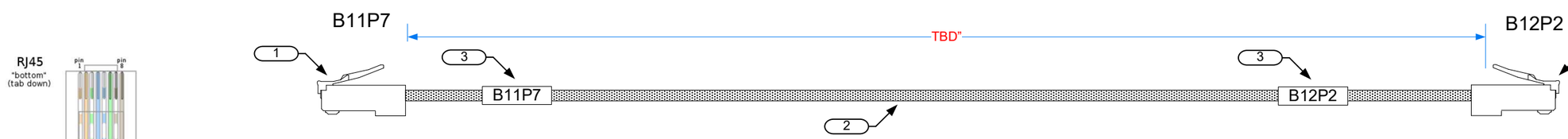
| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

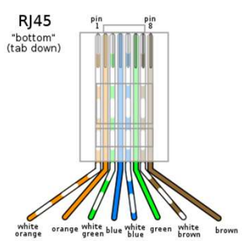
CAD FILE: MARS Harnessing.vsdx

SHEET 31 OF 41

# H29



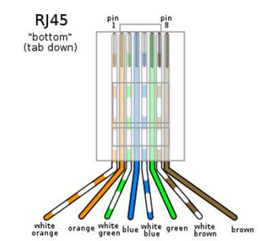




**TABLE A1H29: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| | 2 | STOCK | STOCK | RJ45 CONNECTOR |
| 2 | TBD | 74006 BK002 | Alpha Wire | CABLE CAT5E 8COND 26AWG BLK 100' |
| 3 | 2" | STOCK | STOCK | 1/2" HEAT SHRINK LABEL |

| | | |
|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 |
| MANAGER: | - | |
| ENGINEER: | K. ZACK | TITLE: |
| DRAWN BY: | K. ZACK | H29 Meinberg SyncBox Ethernet<br>MARS |
| | | |
| PRINT DATE: | 8/15/2023 | |

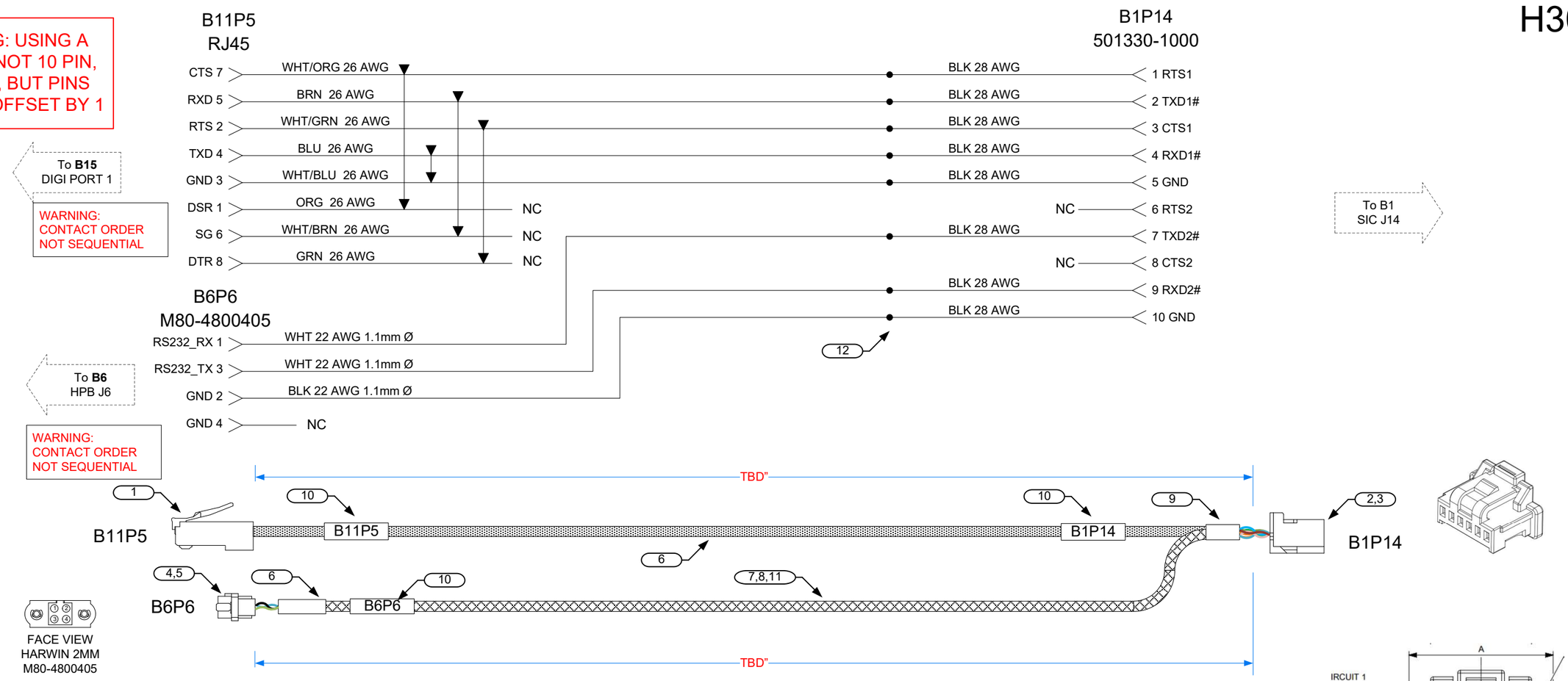
| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 32 OF 41

# H30

*WARNING: USING A 8PIN RJ45 NOT 10 PIN, OK TO DO, BUT PINS NUMBERS OFFSET BY 1



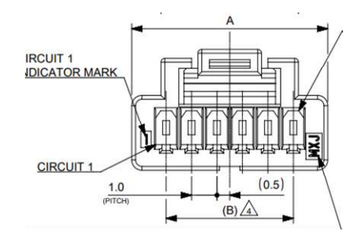



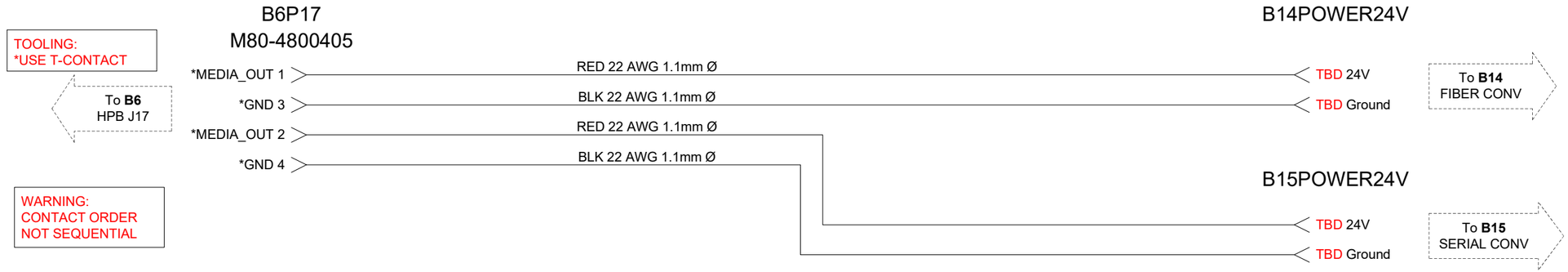

**TABLE A1H30: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | STOCK | STOCK | RJ45 CONNECTOR |
| 2 | 1 | 501330-1000 | Molex | Molex Pico-Clasp 501330 10 POS Connector |
| 3 | 10 | 0797581019 | Molex | PICO-CLASP 300MM 28AWG PRE-CRIMP |
| 4 | 1 | M80-4800405 | HARWIN | DATAMATE FEMALE 4-PIN |
| 5 | 2 | M80-0110005 | HARWIN | DATAMATE 22AWG FEMALE CRIMP |
| 6 | TBD | 74006 BK002 | Alpha Wire | CABLE CAT5E 8COND 26AWG BLK 100' |
| 7 | TBD | 2845/19 BK001 | HARWIN | 22 AWG BLACK WIRE PTFE 1.07mm Ø |
| 8 | TBD | 2845/19 WH001 | HARWIN | 22 AWG WHITE WIRE PTFE 1.07mm Ø |
| 9 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 10 | 2" | STOCK | STOCK | 1/2" ADHESIVE HEAT SHRINK |
| 11 | TBD | PTN0.25BK-200 | Techflex | Techflex 1/4"Flexo PET General Purpose Sleeving |
| 12 | 2" | STOCK | STOCK | 1/8" CLEAR HEAT SHRINK |

| From RJ-45 | Signal | Direction | Signal | To DB-9 |
|---|---|---|---|---|
| 10 | DCD | ← | DCD | 1 |
| 6 | RxD | ← | RxD | 2 |
| 5 | TxD | → | TxD | 3 |
| 9 | DTR | → | DTR | 4 |
| 7 | SG | ↔ | SG | 5 |
| 2 | DSR | ← | DSR | 6 |
| 3 | RTS | → | RTS | 7 |
| 8 | CTS | ← | CTS | 8 |
| 1 | RI | ← | RI | 9 |
| 4 | GND | ↔ | GND | Shell |

| | | | | | |
|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: | | | |
| DRAWN BY: | K. ZACK | H30 SIC SERIAL<br>MARS | | | |
| | | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | SHEET 33 OF 41 | |

# H31



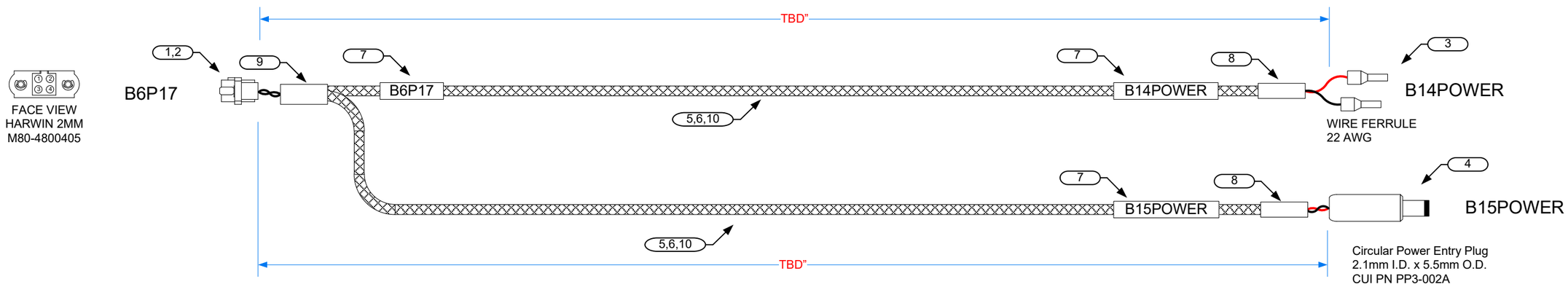
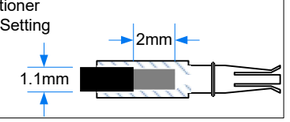




**TABLE A1H31: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-4800405 | HARWIN | DATAMATE FEMALE 4-PIN |
| 2 | 4 | M80-2060005 | HARWIN | DATAMATE 22AWG FEMALE CRIMP T-CONTACT |
| 3 | 2 | FSD75-8-D | Panduit Corp | CONN FERRULE DIN 22AWG WHITE |
| 4 | 1 | PP3-002A | CUI Devices | CONN PWR PLUG 2.1X5.5MM SOLDER |
| 5 | TBD | 2845/19 BK001 | Alpha | 22 AWG BLACK WIRE PTFE 1.07mm Ø |
| 6 | TBD | 2845/19 RD001 | Alpha | 22 AWG RED WIRE PTFE 1.07mm Ø |
| 7 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 8 | 2" | STOCK | STOCK | 1/4" ADHESIVE HEAT SHRINK |
| 9 | 2" | STOCK | STOCK | 1/2" ADHESIVE HEAT SHRINK |
| 10 | TBD | PTN0.13BK-200 | Techflex | Techflex 1/8"Flexo PET General Purpose Sleeving |

**T-Contact:**
M22520/2-01 - Hand Crimp Tool
Z80-444 – Positioner
6 – Crimp Tool Setting




| | | | | | |
|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: H31 FIBER TO ETH TO SERIAL POWER MARS | | | |
| DRAWN BY: | K. ZACK | | | | |
| | | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | SHEET 34 | OF 41 |

# H32

WARNING:
CONTACT MAY BE WRONG, NON STANDARD LACKING DOCUMENTATION

To **B11** SWITCH 2

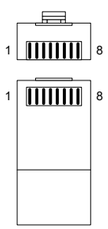
WARNING:
CONTACT ORDER NOT SEQUENTIAL

*WARNING: USING A 8PIN RJ45 NOT 10 PIN, OK TO DO, BUT PINS NUMBERS OFFSET BY 1

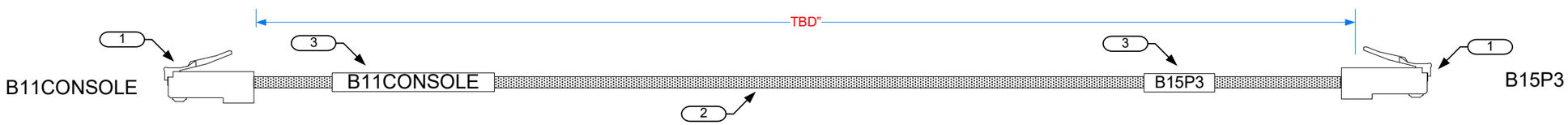
To **B15** DIGI PORT

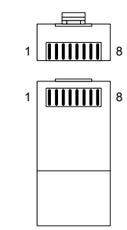
WARNING:
CONTACT ORDER NOT SEQUENTIAL

| B11CONSOLE RJ45 | | B15P3 RJ45 |
|---|---|---|
| CTS 7 | WHT/ORG 26 AWG | 2 RTS |
| RXD 5 | BRN 26 AWG | 4 TXD |
| RTS 1 | ORG 26 AWG | 7 CTS |
| TXD 3 | BLU 26 AWG | 5 RXD |
| GND 4 | WHT/BLU 26 AWG | 3 GND |
| DSR 6 | WHT/GRN 26 AWG | 8 DTR |
| NC 8 | WHT/BRN 26 AWG | 6 SG |
| DTR 2 | GRN 26 AWG | 1 DSR |




RJ45 PLUG FACE AND BOTTOM VIEWS




RJ45 PLUG FACE AND BOTTOM VIEWS

**B15P2**

| From RJ-45 | Signal | Direction | Signal | To DB-9 |
|---|---|---|---|---|
| 10 | DCD | ← | DCD | 1 |
| 6 | RxD | ← | RxD | 2 |
| 5 | TxD | → | TxD | 3 |
| 9 | DTR | → | DTR | 4 |
| 7 | SG | ↔ | SG | 5 |
| 2 | DSR | ← | DSR | 6 |
| 3 | RTS | → | RTS | 7 |
| 8 | CTS | ← | CTS | 8 |
| 1 | RI | ← | RI | 9 |
| 4 | GND | ↔ | GND | Shell |

**TABLE A1H32: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | STOCK | STOCK | RJ45 CONNECTOR |
| 6 | TBD | 74006 BK002 | Alpha Wire | CABLE CAT5E 8COND 26AWG BLK 100' |
| 9 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |

| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

APPLIED PHYSICS LABORATORY
UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H32 CISCO 2 CONSOLE
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 35 OF 41

# H33

WARNING:
CONTACT MAY BE WRONG, NON STANDARD LACKING DOCUMENTATION

To **B10** SWITCH 1

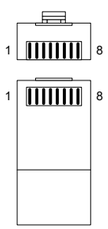
WARNING:
CONTACT ORDER NOT SEQUENTIAL

*WARNING: USING A 8PIN RJ45 NOT 10 PIN, OK TO DO, BUT PINS NUMBERS OFFSET BY 1

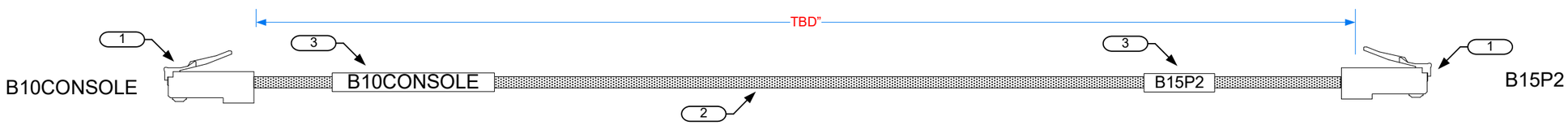
To **B15** DIGI PORT

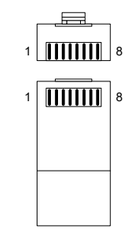
WARNING:
CONTACT ORDER NOT SEQUENTIAL

| B10CONSOLE RJ45 | | B15P2 RJ45 |
|---|---|---|
| CTS 7 | WHT/ORG 26 AWG | 2 RTS |
| RXD 5 | BRN 26 AWG | 4 TXD |
| RTS 1 | ORG 26 AWG | 7 CTS |
| TXD 3 | BLU 26 AWG | 5 RXD |
| GND 4 | WHT/BLU 26 AWG | 3 GND |
| DSR 6 | WHT/GRN 26 AWG | 8 DTR |
| NC 8 | WHT/BRN 26 AWG | 6 SG |
| DTR 2 | GRN 26 AWG | 1 DSR |




RJ45 PLUG FACE AND BOTTOM VIEWS




RJ45 PLUG FACE AND BOTTOM VIEWS

**B15P2**

| From RJ-45 | Signal | Direction | Signal | To DB-9 |
|---|---|---|---|---|
| 10 | DCD | ← | DCD | 1 |
| 6 | RxD | ← | RxD | 2 |
| 5 | TxD | → | TxD | 3 |
| 9 | DTR | → | DTR | 4 |
| 7 | SG | ↔ | SG | 5 |
| 2 | DSR | ← | DSR | 6 |
| 3 | RTS | → | RTS | 7 |
| 8 | CTS | ← | CTS | 8 |
| 1 | RI | ← | RI | 9 |
| 4 | GND | ↔ | GND | Shell |

**TABLE A1H33: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | STOCK | STOCK | RJ45 CONNECTOR |
| 6 | TBD | 74006 BK002 | Alpha Wire | CABLE CAT5E 8COND 26AWG BLK 100' |
| 9 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |

| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

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UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H33 CISCO 1 CONSOLE
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
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| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

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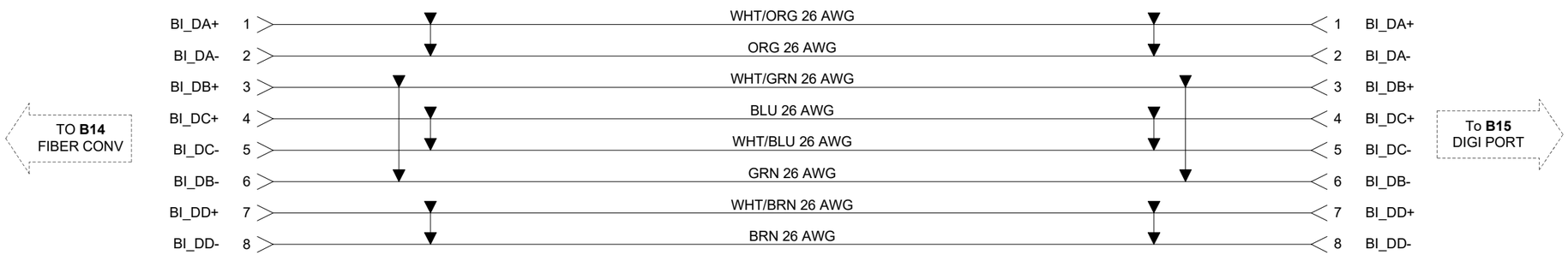
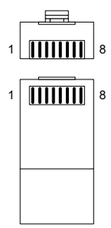
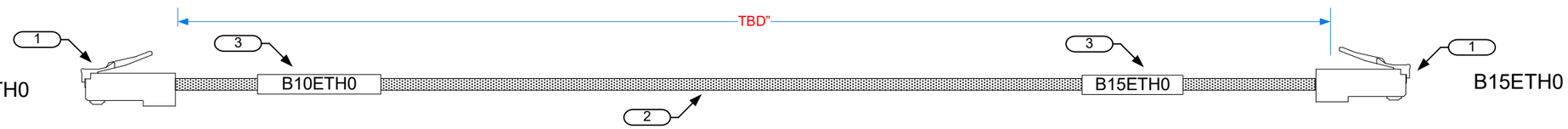
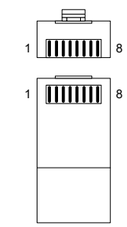
# H34




RJ45
PLUG
FACE AND
BOTTOM
VIEWS




RJ45
PLUG
FACE AND
BOTTOM
VIEWS

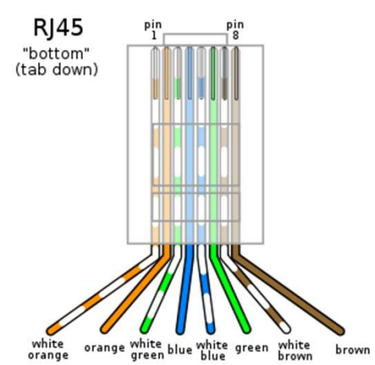



**TABLE A1H34: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 2 | STOCK | STOCK | RJ45 CONNECTOR |
| 6 | TBD | 74006 BK002 | Alpha Wire | CABLE CAT5E 8COND 26AWG BLK 100' |
| 9 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |

| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

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UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H34 FIBER CONVERTER TO SERIAL CONVERTER
PATCH CABLE
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

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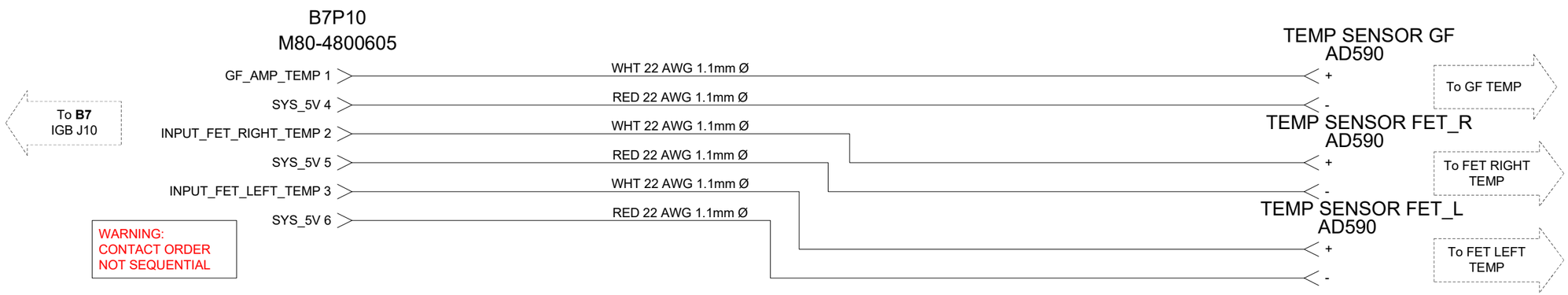
H35



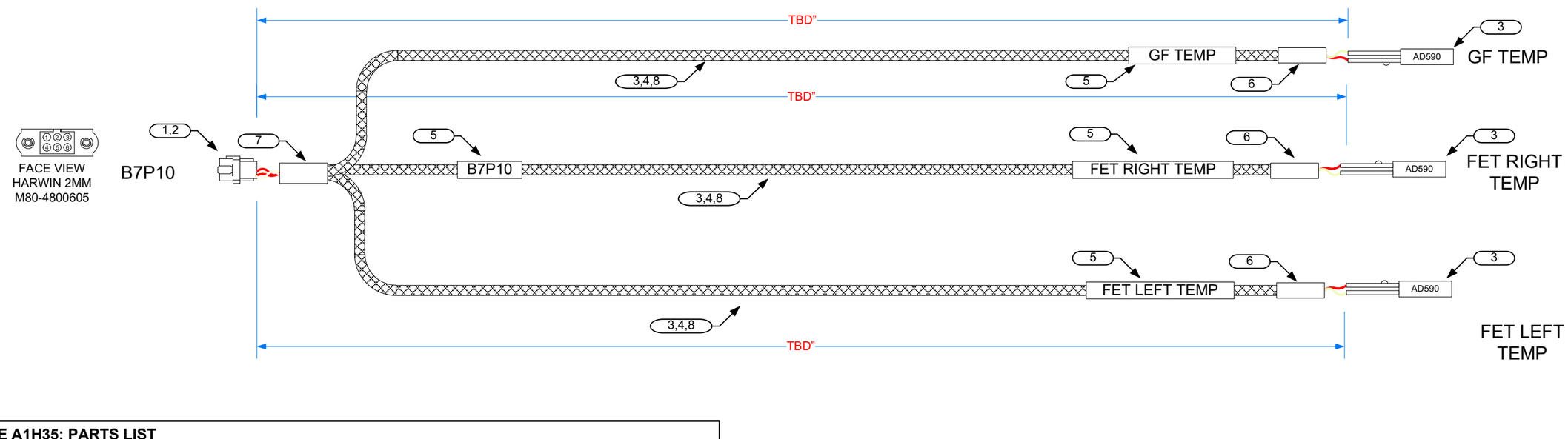
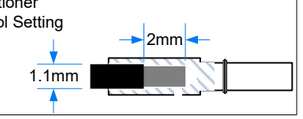




**TABLE A1H35: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-4800605 | HARWIN | DATAMATE FEMALE 6-PIN |
| 2 | 6 | M80-0110005 | HARWIN | DATAMATE 22AWG FEMALE CRIMP |
| 3 | 3 | AD590JF | Analog Devices Inc. | SENSOR ANALOG -55C-150C 2FLATPK |
| 3 | TBD | 2845/19 WH001 | Alpha | 22 AWG WHITE WIRE PTFE 1.07mm Ø |
| 4 | TBD | 2845/19 RD001 | Alpha | 22 AWG RED WIRE PTFE 1.07mm Ø |
| 5 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 1/4" ADHESIVE HEAT SHRINK |
| 7 | 2" | STOCK | STOCK | 1/2" ADHESIVE HEAT SHRINK |
| 8 | TBD | PTN0.13BK-200 | Techflex | Techflex 1/8"Flexo PET General Purpose Sleeving |

**Large Bore Signal Contact:**
M22520/2-01 - Hand Crimp Tool
T5747 – Positioner
6 – Crimp Tool Setting




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

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UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

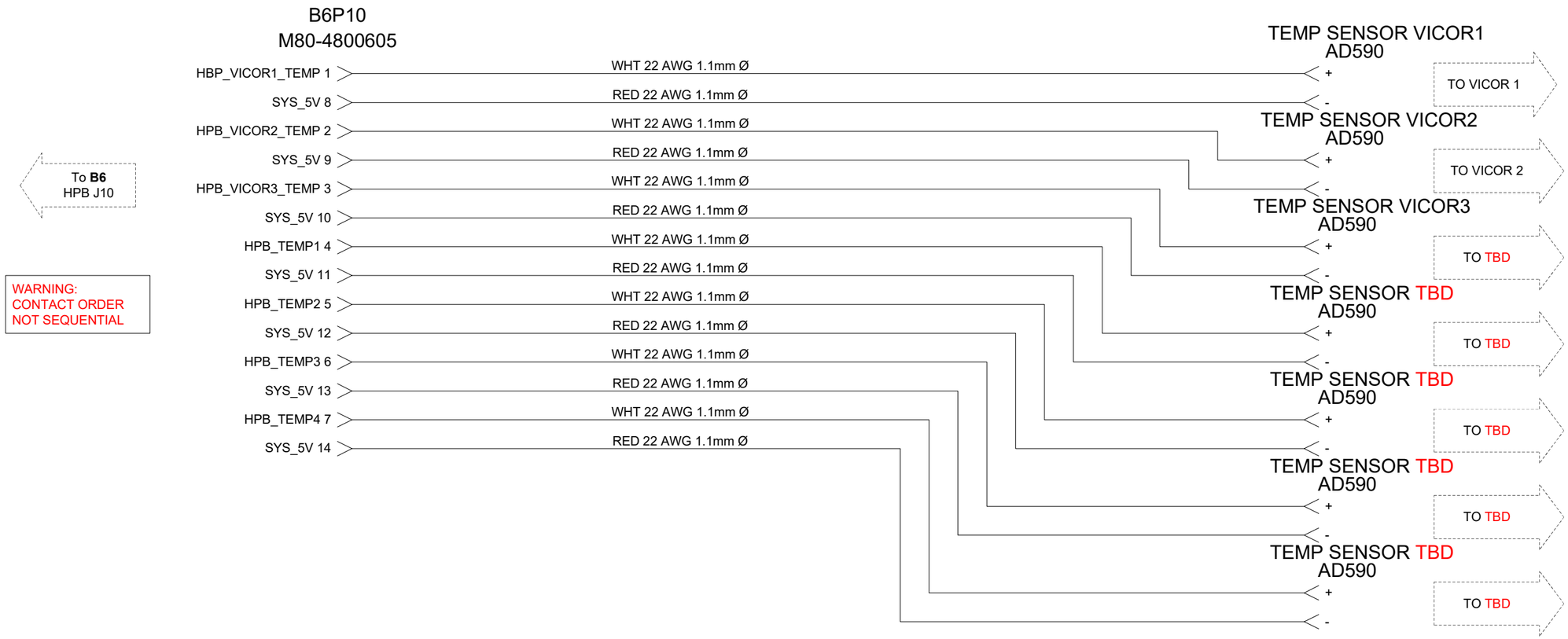
TITLE:
H35 IGB TEMPERATURE SENSORS
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

SHEET 38 OF 41

H36

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|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: H35 PG1 HPB TEMPERATURE SENSORS MARS | | | |
| DRAWN BY: | K. ZACK | | | | |
| | | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | | SHEET 39 OF 41 |

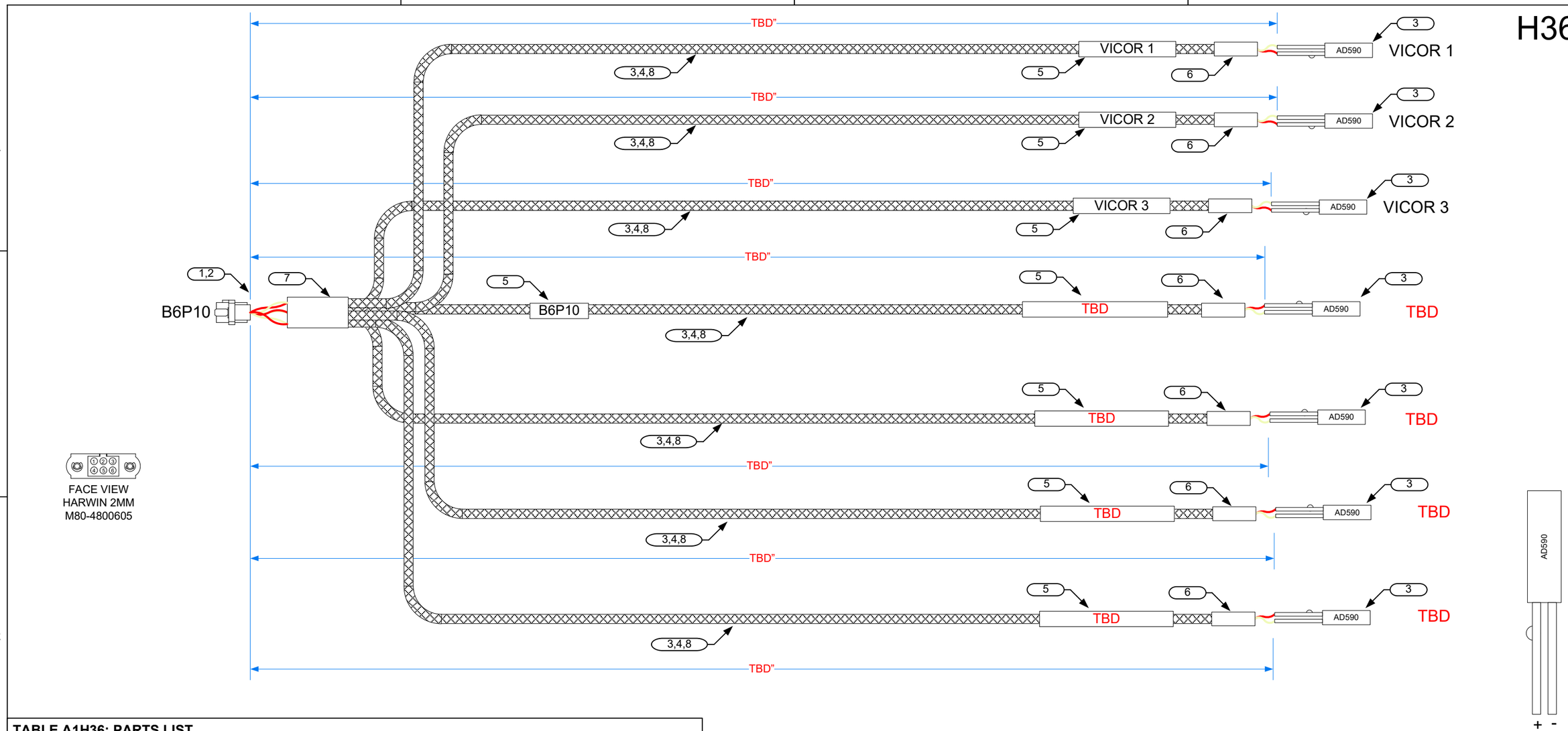
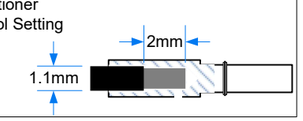



**TABLE A1H36: PARTS LIST**

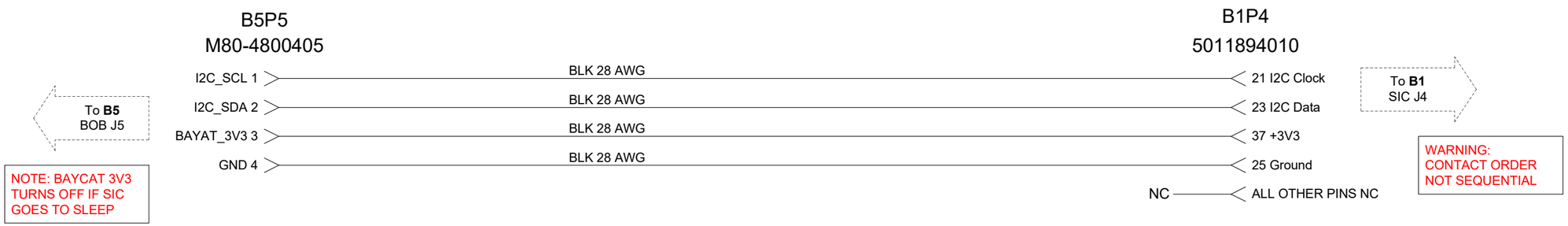
| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-4801405 | HARWIN | DATAMATE FEMALE 14-PIN |
| 2 | 14 | M80-0110005 | HARWIN | DATAMATE 22AWG FEMALE CRIMP |
| 3 | 3 | AD590JF | Analog Devices Inc. | SENSOR ANALOG -55C-150C 2FLATPK |
| 3 | TBD | 2845/19 WH001 | Alpha | 22 AWG WHITE WIRE PTFE 1.07mm Ø |
| 4 | TBD | 2845/19 RD001 | Alpha | 22 AWG RED WIRE PTFE 1.07mm Ø |
| 5 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 1/4" ADHESIVE HEAT SHRINK |
| 7 | 2" | STOCK | STOCK | 3/4" ADHESIVE HEAT SHRINK |
| 8 | TBD | PTN0.13BK-200 | Techflex | Techflex 1/8"Flexo PET General Purpose Sleeving |

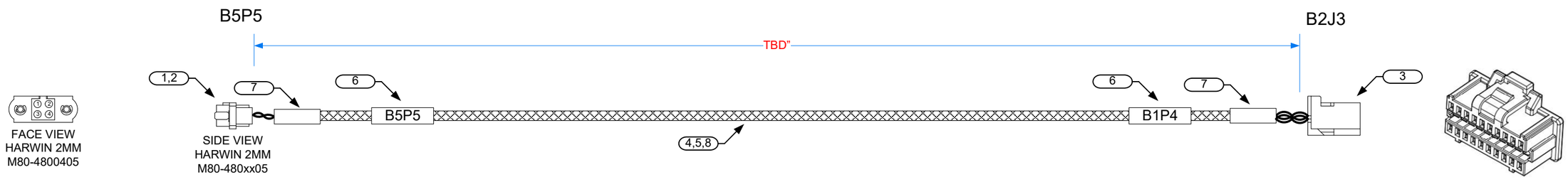
**Large Bore Signal Contact:**
M22520/2-01 - Hand Crimp Tool
T5747 – Positioner
6 – Crimp Tool Setting




| | | | | | |
|---|---|---|---|---|---|
| PI: | T. MCGINNIS | APPLIED PHYSICS LABORATORY<br>UNIVERSITY OF WASHINGTON<br>1013 NE 40TH ST. SEATTLE, WA 98105 | | | |
| MANAGER: | - | | | | |
| ENGINEER: | K. ZACK | TITLE: H36 PG2 HPB TEMPERATURE SENSORS MARS | | | |
| DRAWN BY: | K. ZACK | | | | |
| | | | | | |
| PRINT DATE: | 8/15/2023 | | | | |
| PAGE CREATION: 12/14/2021 | SIZE: B | CAGE CODE: 98514 | DWG NO: 86253 | | REV 1.02 |
| CAD FILE: MARS Harnessing.vsdx | | | | SHEET 40 | OF 41 |

# H37



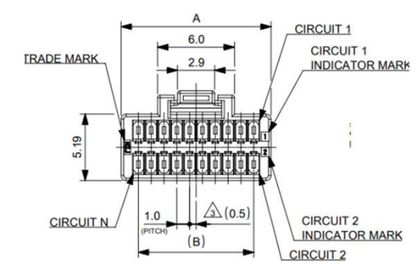
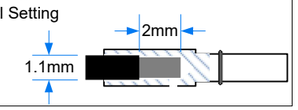




**TABLE A1H37: PARTS LIST**

| ITEM # | Qty. | Mfg. Part Number | Vendor | DESCRIPTION |
|---|---|---|---|---|
| 1 | 1 | M80-4800405 | HARWIN | DATAMATE FEMALE 4-PIN |
| 2 | 4 | M80-0130005 | HARWIN | CONN SOCKET 24-28AWG CRIMP GOLD |
| 3 | 1 | 5011894010 | Molex | CONN RCPT HSG 40POS 1.00MM |
| 4 | 4 | 0797581018 | Molex | PICO-CLASP 150MM 28AWG PRE-CRIMP |
| 5 | 2" | STOCK | STOCK | 3/8" HEAT SHRINK LABEL |
| 6 | 2" | STOCK | STOCK | 1/4" ADHESIVE HEAT SHRINK |
| 7 | TBD | PTN0.13BK-200 | Techflex | Techflex 1/8"Flexo PET General Purpose Sleeving |

**SMALL Bore Signal Contact:**
M22520/2-01 - Hand Crimp Tool
T5747 – Positioner
6 – Crimp Tool Setting




| | |
|---|---|
| PI: | T. MCGINNIS |
| MANAGER: | - |
| ENGINEER: | K. ZACK |
| DRAWN BY: | K. ZACK |
| | |
| PRINT DATE: | 8/15/2023 |

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UNIVERSITY OF WASHINGTON
1013 NE 40TH ST. SEATTLE, WA 98105

TITLE:
H37 SIC TO BOB I2C
MARS

| PAGE CREATION: | SIZE: | CAGE CODE: | DWG NO: | REV |
|---|---|---|---|---|
| 12/14/2021 | B | 98514 | 86253 | 1.02 |

CAD FILE: MARS Harnessing.vsdx

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