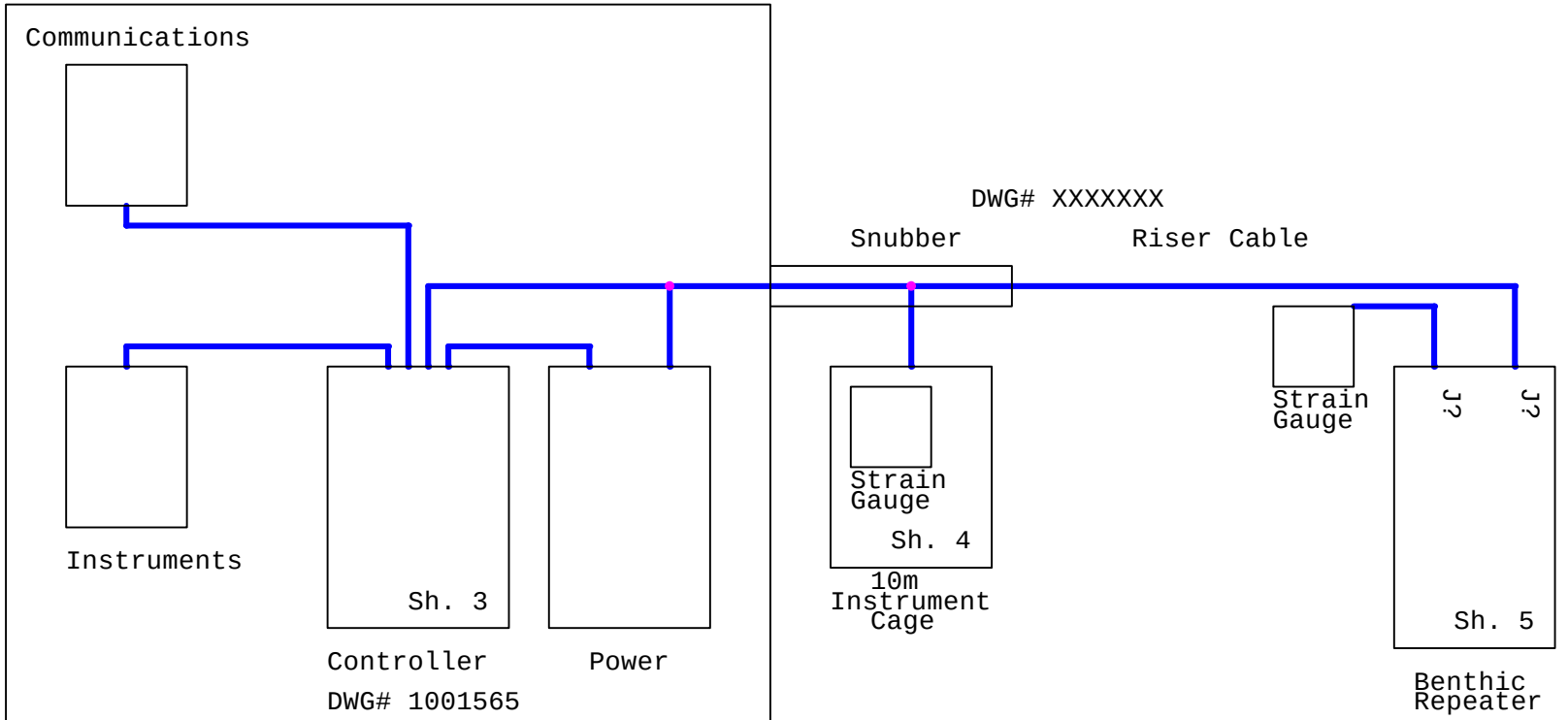
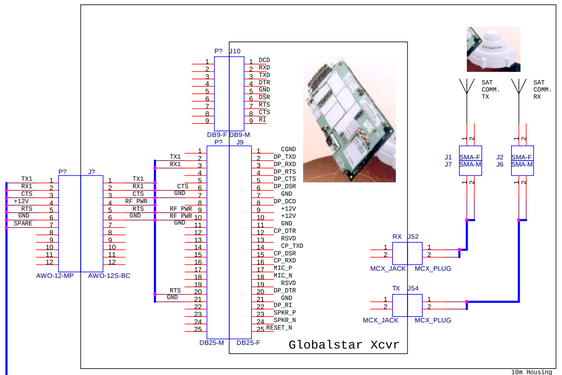
Drawing Index:

1.....Top Level
2.....Buoy (DWG# 1001566)
3.....Controller (DWG# 1001565)
4.....Instrument Cage
5.....Benthic Repeater
6.....Snubber & Riser Cable (DWG# XXXXXXX)
7.....Power (DWG# XXXXXXX)

Notes (Unless otherwise specified):



Title: Test Deployment MOOS Block Diagram		
Size: A	Document Number: 101450	Rev: XD.1
Date: Tuesday, July 16, 2002	Sheet 1 of 6	



F (female) or BNC (male)

F (male) or BNC (female)

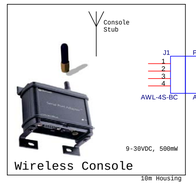
1001534-001

P? DGO 1150446-103

1001532-001

J5 DGO 1100001-101

J6 DGO 1100001-101



1001533-001

P1A J1A GND TX1 RX1 +12V CTS RTS SPARE
AWL-7/42-MP

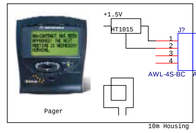
P1B J1B GND TX RX +12V
AWL-7/42-MP

P1C J1C GND RELAY+ RELAY- +12V
AWL-7/42-MP

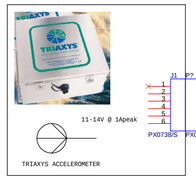
P1D J1D DRTN TX RX +12V EN
AWL-7/42-MP

P1E J1E Cont_PWR- Cont_PWR- Cont_PWR- Cont_PWR+ Cont_PWR+ SWGND
AWL-7/42-MP

P1F J1F OUTPUT+ OUTPUT- SUPPLY+ SUPPLY- SPARE SPARE SPARE
AWL-7/42-MP
AWQ-7/42-S-BC AWQ-FBLS-D

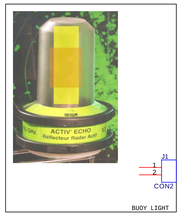


1001533-002

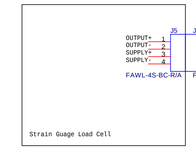


1001531-001

1001535-001



Power
DWG# XXXXXXX (Ed Mellinger)



P? J4 Fiber1 Fiber2 Fiber3 Fiber4 CC232TX CC232RX CC232COM CCPWR+ CCPWRCOM Braid HVPWR+ HVPWRCOM
MSSP-4FO/8#16-CCP MSSP-4FO/8#16-BCR

Controller

Sheet 3

J3A P3A
J3B P3B
J3C P3C
J4D P3D
J4E P3E
J4F P3F
AWL-4/24-MP
AWQ-4/24-S-BC AWQ-FBLS-D

J2A P2A
J2B P2B
J2C P2C
J2D P2D
J2E P2E
J2F P2F
AWL-4/24-MP
AWQ-4/24-S-BC AWQ-FBLS-D
P2E: SMARTSTAR_GND, TX, RX, SMARTSTAR_+12V

1001536-001

Riser Cable
DWG# 1001xxxSCH-1.0 (Mark Chaffey)

P9 Fiber1 Fiber2 Fiber3 Fiber4 CC232Tx CC232Rx CC232Com CCPWr+ CCPwrCom Braid HVPWr+ HVPwrCom
CON12

Buoy

Title	Test Deployment MOOS Buoy - Wiring Assembly	
Size D	Document Number 1001566	Rev XD.1
Date: Tuesday, July 16, 2002	Sheet 2 of 6	

Parts List # MOOS Buoy

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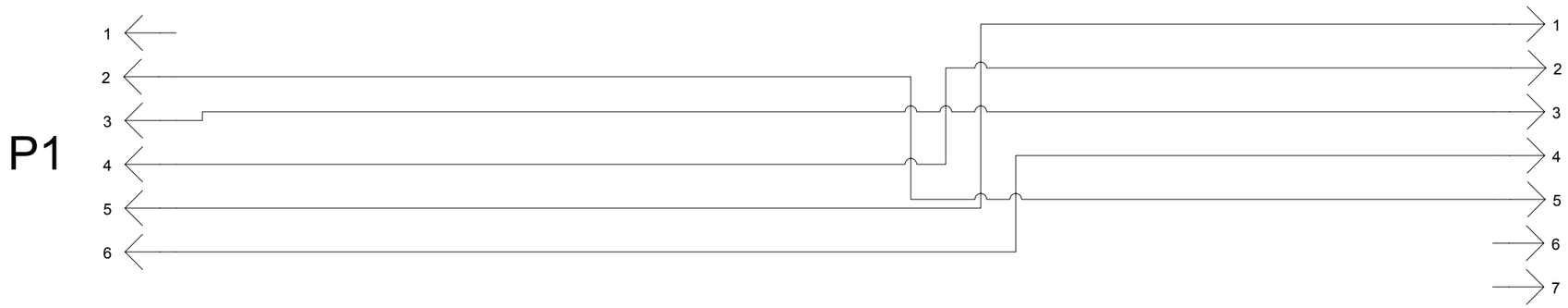
7700 Sandholdt Rd.
Moss Landing, CA 95039-9644

Drawn by:	Lance McBride
Date:	7/16/2002
Doc. #:	1001566
Rev:	A

SORT	Item	Designator	Qty	Manufacturer	Part Number	Digikey Part Number	Part Description	Status	Delivery Date
1	1		1	MBARI			Controller Can	being designed (Jon)	
1	2		1	MBARI			Power Can	being designed (Jon)	
1	3		1	MBARI			Wireless Console Can	on hold - wireless units here	
1	4		1	MBARI			Pager Reset Can	on hold - pager here	
1	5		1	MBARI			Satellite Transceiver Can	on hold - modem here	
2	6		1	TriAxys			Instrument, Heave Sensor	ordered	
2	7		1				Light, High Intensity Strobe	here	n/a
2	8		1				Sensor, PAR	?? Ed	
2	9		1				Sensor, Temperature	?? Ed	
3	10		1	Technocean			Communications, ARGOS PTT location transmitter "Global Tracker PTT"	ordered need ARGOS # (Francisco)	
3	11		1	Garmin			Antenna, GPS	here	n/a
4	12		1	MBARI	1001531-001		Cable, MOOS Controller can to Triaxys Heave Sensor	not ordered - CDR	
4	13		1	SEACON	1001532-001		Cable, MOOS Controller can to Globalstar Satellite Modem	not ordered - CDR	
4	14		1	SEACON	1001533-001		Cable, MOOS Controller can to Wireless Console	not ordered - CDR	
4	15		1	SEACON	1001533-002		Cable, MOOS Controller can to Pager	not ordered - CDR	
4	16		1	MBARI	101433ASM-1.2		Cable, MOOS Mooring Snubber Assembly	being assembled	
4	17		1	MBARI	1001534-001		Cable, MOOS Controller can to GPS Antenna	here	n/a
4	18		2	SEACON	1001535-001		Cable, MOOS Controller can to MOOS Power Can - 7 conductor	not ordered - CDR	
4	19		1	SEACON	1001536-001		Cable, MOOS Controller can to MOOS Power Can - 4 conductor	not ordered - CDR	
4	20		1				Cable, MOOS Power Can to High Intensity Strobe Light	?? Ed	
4	21		1				Cable, MOOS Power Can to PAR Sensor	?? Ed	
4	22		1				Cable, MOOS Power Can to Temperature Sensor	?? Ed	
	23								



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	-	-	-	
2	5	20	Orange	
3	3	20	Green	
4	2	20	Black	
5	1	20	White	Ground
6	4	20	Red	Power, +12V

Ref.Des.	Mfgr.	Mfgr P/N	Description
P1	BULGIN	PX0739/S	Bucanneer Plug 6-Pin 3-Amp
P2	SEACON	AWL-7/42-MP	ALL WET Split 7 Pin
--	?	?	Neoprene Cable with 5 20AWG wires

Notes (unless otherwise specified):

---

1. Cable jacket to be neoprene per B/A X5727
2. Cable to meet minimum current capacity of 4.9 Amps
3. All lengths are +2.0" -0.5"

Config	L	Description
-xxx	x”	
-001	87.0"	Controller to Heave sensor MOOS Engr. Dep.

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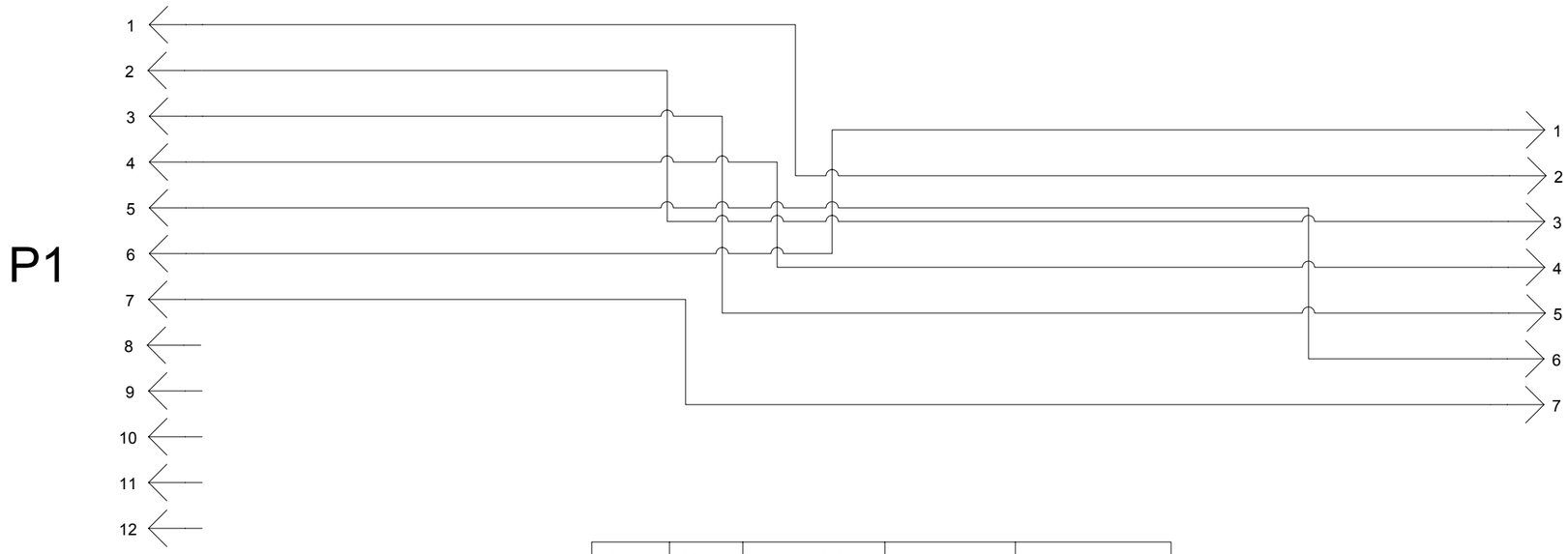
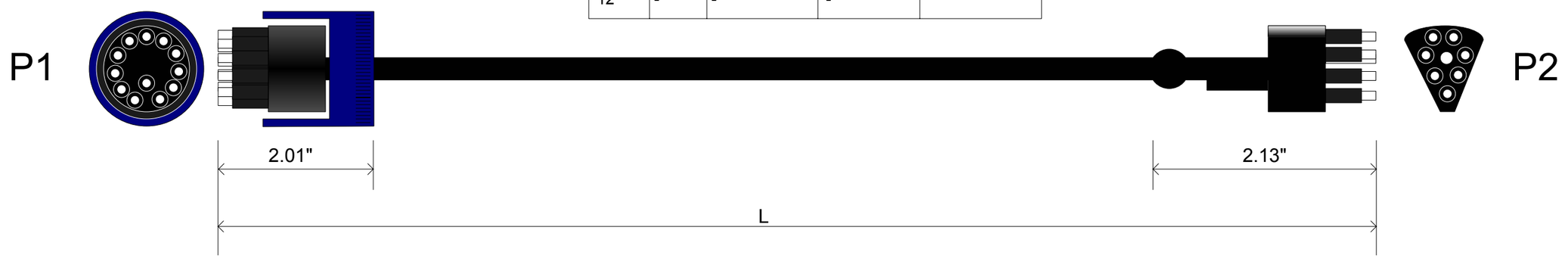
Cable, MOOS Controller can to Triaxys Heave Sensor

Drawn By: Lance McBride | DOC #: 1001531 | REV. A

Date: 6/20/02 | Sheet: 1 of 1



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	2	20	Black	
2	3	20	Green	
3	5	20	Orange	
4	4	20	Red	Power, +12V
5	6	20	Blue	
6	1	20	White	Ground
7	7	20	White/Black	SPARE
8	-	-	-	
9	-	-	-	
10	-	-	-	
11	-	-	-	
12	-	-	-	



Ref.Des.	Mfgr.	Mfgr P/N	Description
P1	SEACON	AWO-12-MP	ALL WET Round 12 Pin
P2	SEACON	AWL-7/42-MP	ALL WET Split 7 Pin
--	?	?	Neoprene Cable with 6 20AWG wires

Config	L	Description
-xxx -001	x” 101.0"	Controller to satellite modem MOOS Engr. Dep.

Notes (unless otherwise specified):

---

1. Cable jacket to be neoprene per B/A X5727
2. Cable to meet minimum current capacity of 3.5 Amps
3. All lengths are +2.0" -0.5"

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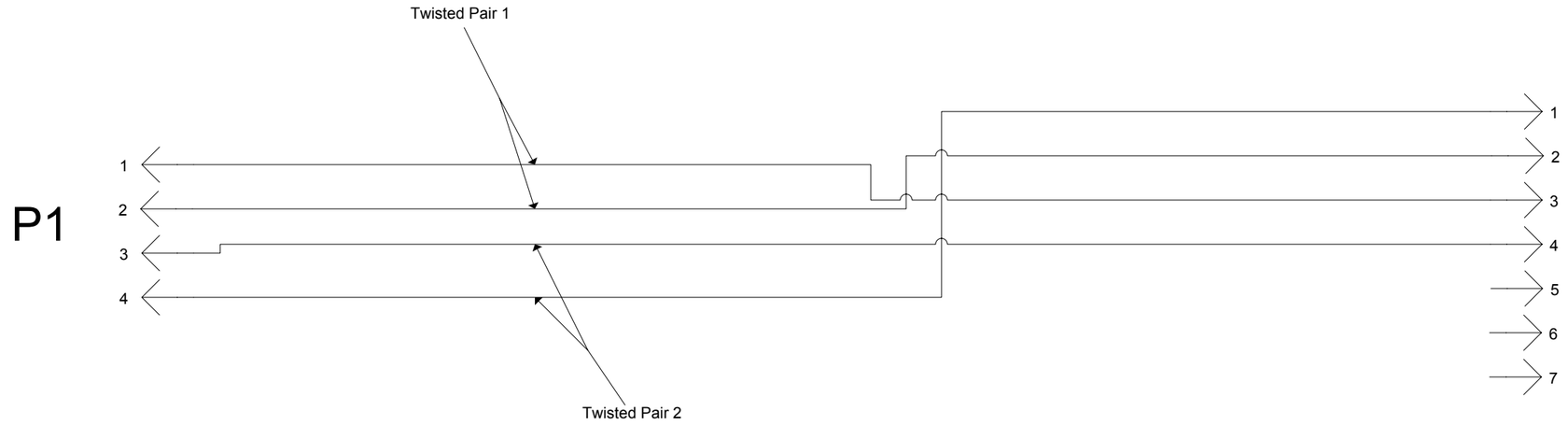
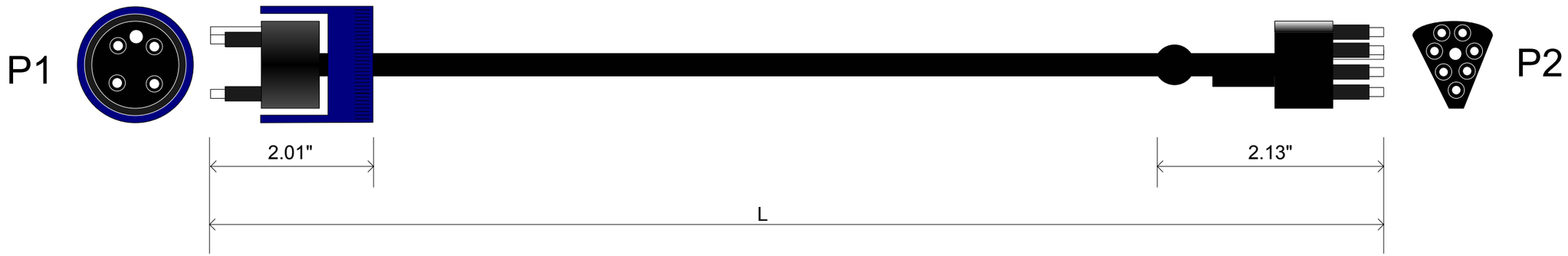
Cable, MOOS Controller can to Globalstar Satellite Modem

Drawn By: Lance McBride | DOC #: 1001532 | REV. A

Date: 6/20/02 | Sheet: 1 of 1



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	3	20	Green	Twist with Black
2	2	20	Black	Twist with Green
3	4	20	Red	Power, +12V; Twist with White
4	1	20	White	Ground; Twist with Red



Ref.Des.	Mfgr.	Mfgr P/N	Description
P1	SEACON	AWL-4-MP	ALL WET Round 4 Pin
P2	SEACON	AWL-7/42-MP	ALL WET Split 7 Pin
--	?	?	Neoprene Cable with 4 20AWG wires

Config	L	Description
-xxx	x”	
-001	92.0"	Controller to wireless console MOOS Engr. Dep.
-002	162.0"	Controller to pager MOOS Engr. Dep.

Notes (unless otherwise specified):

---

1. Cable jacket to be neoprene per B/A X5727
2. Cable to meet minimum current capacity of 3.5 Amps
3. All lengths are +2.0" -0.5"

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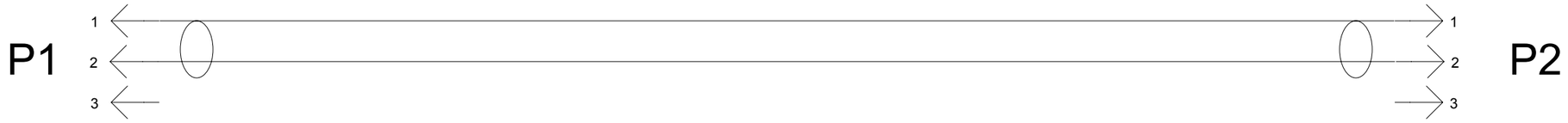
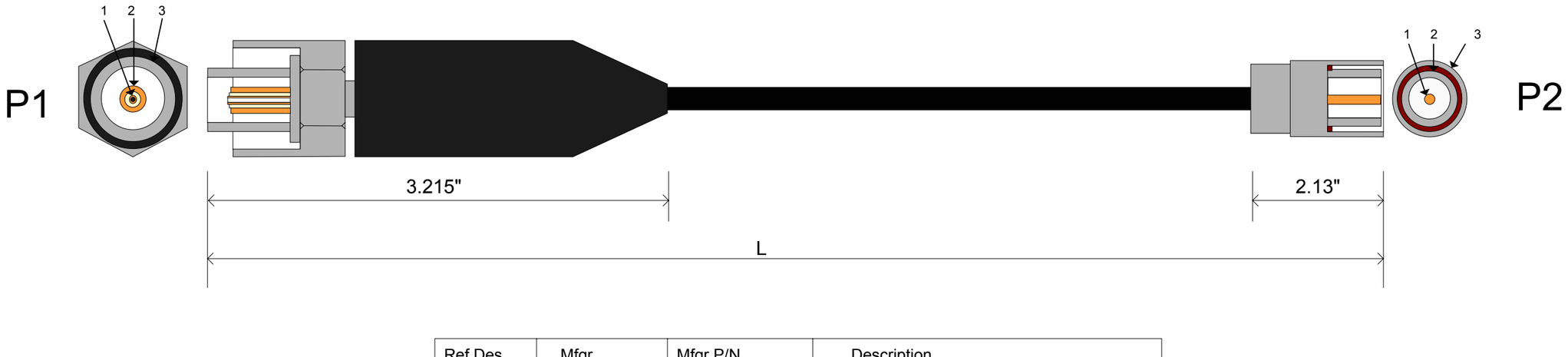
Cable, MOOS Controller can to Pager & Wireless Console

Drawn By: Lance McBride | DOC #: 1001533 | REV. A

Date: 6/20/02 | Sheet: 1 of 1



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	1	n/a	n/a	Coax shield
2	2	n/a	n/a	Coax center
3	-	n/a	n/a	Coupling



Ref.Des.	Mfgr.	Mfgr P/N	Description
P1	D.G.O'BRIEN	1150446-103	110 Series
P2	PASTERNAC		F (male)
--	D.G. O'BRIEN		RG-58 COAX (15ft.)

Config	L	Description
-xxx	x"	
-001	162.0"	Controller to GPS Antenna MOOS Engr. Dep.

Notes (unless otherwise specified):

---

1. All lengths are +2.0" -0.5"

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Cable, MOOS Controller can to GPS Antenna

Drawn By: Lance McBride | DOC #: 1001534 | REV. A

Date: 6/20/02 | Sheet: 1 of 1

P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	1	20	White	--
2	2	20	Black	--
3	3	20	Green	--
4	4	20	Red	--
5	5	20	Orange	--
6	6	20	Blue	--
7	7	20	White/Black	--

Ref.Des.	Mfgr.	Mfgr P/N	Description
P1	SEACON	AWL-7/42-MP	ALL WET Split 7 Pin
P2	SEACON	AWL-7/42-MP	ALL WET Split 7 Pin
--	SEACON	--	Neoprene Cable with 7 20AWG wires

Config	L	Description
-xxx	x”	
-001	89.0"	Controller to power can MOOS Engr. Dep.

Notes (unless otherwise specified):

---

1. Cable jacket to be neoprene per B/A X5727
2. Cable to meet minimum current capacity of 4.9 Amps
3. All lengths are +2.0" -0.5"

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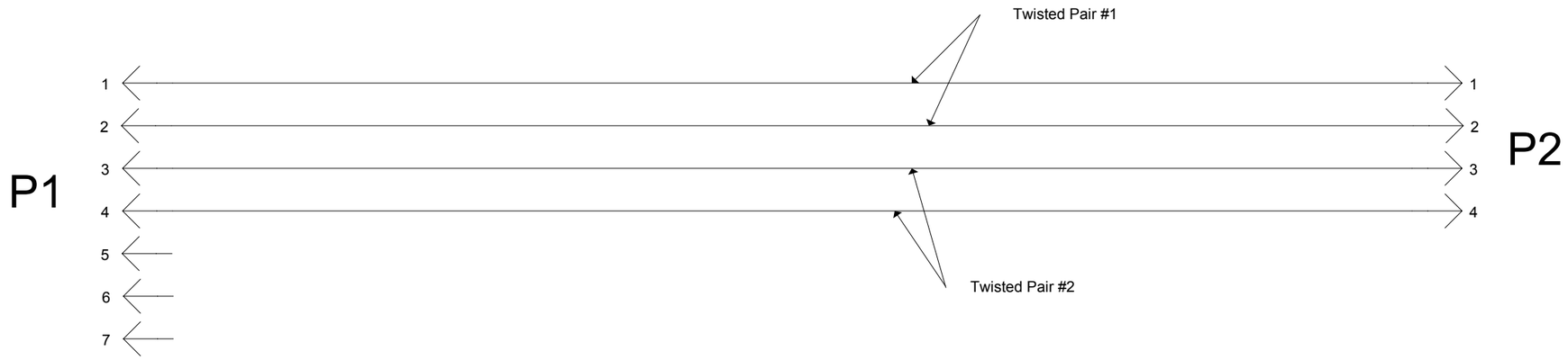
Cable, MOOS Controller can to MOOS Power can - 7 conductor

Drawn By: Lance McBride | DOC #: 1001535 | REV. A

Date: 07/08/2002 | Sheet: 1 of 1



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	1	20	White	Twists with Black
2	2	20	Black	Twists with White
3	3	20	Green	Twists with Red
4	4	20	Red	Twists with Green
5	-	-	-	--
6	-	-	-	--
7	-	-	-	--

Ref.Des.	Mfgr.	Mfgr P/N	Description
P1	SEACON	AWL-7/42-MP	ALL WET Split 7 Pin
P2	SEACON	AWL-4/24-MP	ALL WET Split 7 Pin
--	SEACON	--	Neoprene Cable with 4 20AWG wires

Config	L	Description
-xxx	x”	
-001	89.0"	Controller to power can MOOS Engr. Dep.

Notes (unless otherwise specified):

---

1. Cable jacket to be neoprene per B/A X5727
2. Cable to meet minimum current capacity of 4.9 Amps
3. All lengths are +2.0" -0.5"

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Cable, MOOS Controller can to MOOS Power can - 4 conductor

Drawn By: Lance McBride | DOC #: 1001536 | REV. A

Date: 07/08/2002 | Sheet: 1 of 1

TEMPORARY SERIAL
OPTO-ISOLATION
/INTERFACE/GFI BOARD

IBC-CERFBOARD
ADAPTER

SCH #101431

CERFBOARD

3GB
FLASH
MEMORY
STICK

FIBER
OPTIC
CABLE
TESTER
SCH#
XXXXXXX

Z-WORLD
SMART STAR
CPU

Z-WORLD SMART STAR BACKPLANE

SLOT 2

SLOT 1

SMART STAR
ADC 4-20mA

SMART STAR
ADC 0-10V

SLOT 0

LCD

DPA
SCH #101312

DPA
SCH #101312

NMC BACKPLANE
SCH #XXXXXXX

SIDEKICK

GPS Card

Controller Can

Title	Test Deployment MOOS Buoy Controller - Wiring Assembly	
Size: E	Document Number: 1001565	Rev: 003.1
Date: Tuesday, July 16, 2002	Sheet 3 of 6	

Parts List

MOOS Controller Can

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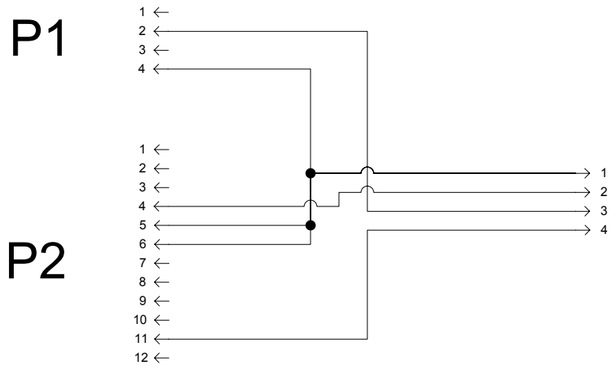
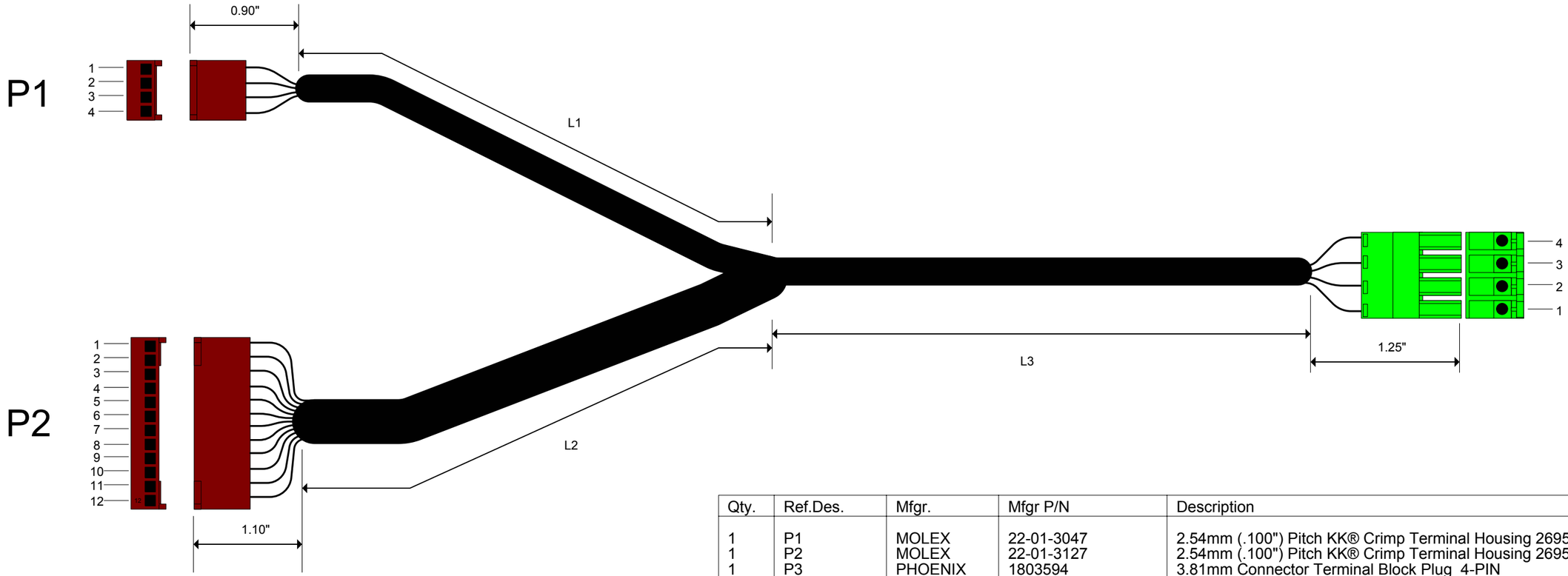
Drawn by:	Lance McBride
Date:	7/16/2002
Doc. #:	1001565
Rev:	A

SORT	Item	Designator	Qty	Manufacturer	Part Number	Digikey Part Number	Part Description	Status	Delivery Date
1	1		1			n/a	Controller Can	being designed	
3	8		1	MBARI		n/a	Board, NMC Backplane	here	n/a
3	9		1	MBARI	101431/101430	n/a	Board, IBC-Cerfboard Adapter	here	n/a
3	10		1			n/a	Board, 3GB Flash Memory for Cerfboard	here	n/a
3	11		1	Intrinsyc		n/a	Board, Cerfboard Controller	here	n/a
3	12		2	MBARI	101312	n/a	Board, Dual Port Adapter	being assembled	
3	13		1	MBARI		n/a	Board, SideKick	being assembled	
3	14		1	MBARI		n/a	Board, RF isolation/GFI/pager interface	being designed	
3	15		1			n/a	Board, Smart Star CPU	here	n/a
3	16		1			n/a	Board, Smart Star 3-slot Backplane	here	n/a
3	17		1			n/a	Board, Smart Star 0-10V ADC	here	n/a
3	18		1			n/a	Board, Smart Star 4-20mA ADC	here	n/a
3	19		2			n/a	Board, Smart Star ADC Field Wiring Terminals	here	n/a
3	20		1	MBARI	???	n/a	Board, Temporary Serial Opto-Isolation/Interface/GFI	not designed	
4	21		1	MBARI	???	n/a	Assembly, Fiber Optic Cable Tester	partially designed	
4	22		1	Garmin		n/a	Instrument, GPS	here	n/a
4	23		1	KVH		n/a	Instrument, Compass	here	n/a
5	24		1	MBARI	1001552-001	n/a	Cable, MOOS Compass to Backplane	partially here	
5	25		1	MBARI	1001553-001	n/a	Cable, MOOS GPS to Backplane	partially here	
5	26		1	MBARI	1001554-001	n/a	Cable, MOOS Controller Can Lid to GPS Receiver Board	partially here	
5	27		1	MBARI	1001555-001	n/a	Cable, MOOS Ethernet Crossover SideKICK - SideARM	designed (CDR)	
5	28		1	MBARI	1001556-001	n/a	Cable, MOOS Controller Water Sensor	designed (CDR)	
5	29		1	MBARI	1001557-001	n/a	Cable, PIE1 fanout MOOS	designed (CDR)	
5	30		1	MBARI	1001558-001	n/a	Cable, PIE3 fanout MOOS	designed (CDR)	
5	31		1	MBARI	1001559-001	n/a	Cable, MOOS Controller Console to interface board	designed (CDR)	
5	32		1	MBARI	1001560-001	n/a	Cable, MOOS controller RF to Interface Board	designed (CDR)	
5	33		1	MBARI	1001561-001	n/a	Cable, MOOS Controller to Serial ADC	designed (CDR)	
5	34		1	MBARI	1001562-001	n/a	Cable, MOOS Fiber Optic sensor to Serial ADC	designed (CDR)	
5	35		1	MBARI	1001563-001	n/a	Cable, MOOS Controller Can Riser Fanout	designed (CDR)	
5	36		1	MBARI	1001564-001	n/a	Cable, MOOS GPIO Fanout	designed (CDR)	



P1 Pin	P2 Pin	P3 Pin	Size (AWG)	Color	Description
1	--	--	24	Red	--
2	--	3	24	White	Power
3	--	--	24	Green	--
4	--	1	24	Black	Ground
--	1	--	24	Brown	--
--	2	--	24	Red	--
--	3	--	24	Orange	--
--	4	2	24	Yellow	Backplane Tx
--	5	1	24	Green	Ground
--	6	1	24	Black	Ground
--	7	--	--	--	--
--	8	--	24	Dark Grey	--
--	9	--	24	Light Grey	--
--	10	--	24	Blue	--
--	11	4	24	Pink	Backplane Rx
--	12	--	24	Tan	--



Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1	P1	MOLEX	22-01-3047	2.54mm (.100") Pitch KK® Crimp Terminal Housing 2695 4-pin Ribbed
1	P2	MOLEX	22-01-3127	2.54mm (.100") Pitch KK® Crimp Terminal Housing 2695 12-pin Ribbed
1	P3	PHOENIX	1803594	3.81mm Connector Terminal Block Plug 4-PIN
16	--	MOLEX	08-50-0114	Terminal, Crimp for 0.100" Center MOLEX Housings
cut	--	--	--	24AWG stranded wire - black
cut	--	--	--	24AWG stranded wire - white
cut	--	--	--	24AWG stranded wire - yellow
cut	--	--	--	24AWG stranded wire - pink

Notes (unless otherwise specified):

---

1. P1 & P2 ship with the KVH compass with 18" of wire

Config	L1	L2	L3	Description
-xxx	x”	x”	x”	--
-001	??	??	??	Controller to compass board MOOS Engr. Dep.

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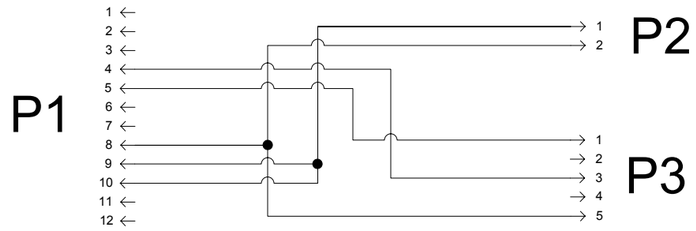
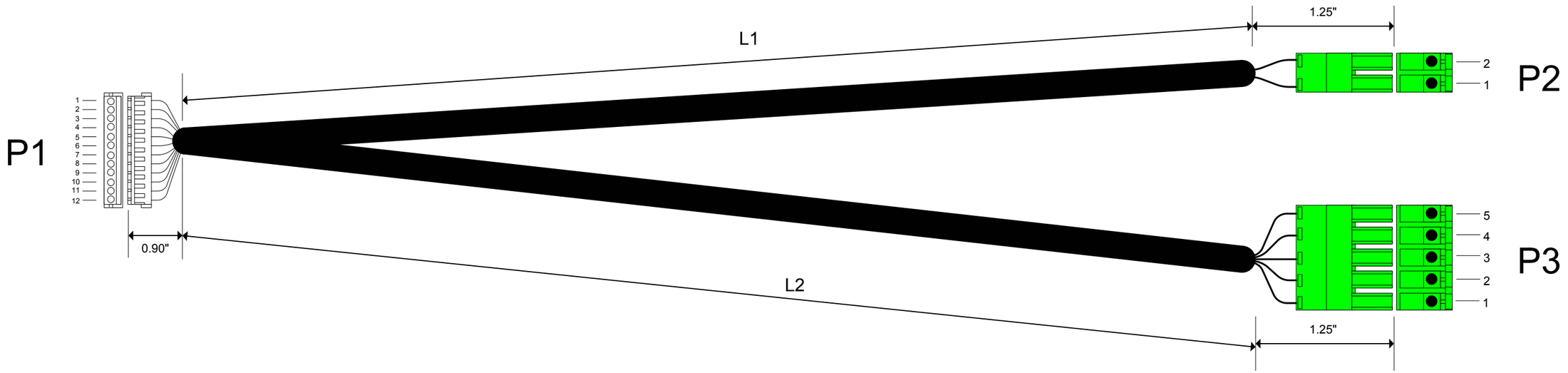
Cable, MOOS Compass to Backplane

Drawn By: Lance McBride | DOC #: 1001552 | REV. A

Date: 07/08/2002 | Sheet: 1 of 1



P1 Pin	P2 Pin	P3 Pin	Size (AWG)	Color	Description
1	--	--	28	Purple	--
2	--	--	28	Green	--
3	--	--	28	Brown	--
4	--	3	28	White	Backplane Rx
5	-	1	28	Blue	Backplane Tx
6	--	--	28	Orange	--
7	--	--	28	Yellow	--
8	2	5	28	Black	Ground
9	1	--	28	White	Power
10	1	--	28	Red	Power
11	--	--	28	Blue	--
12	--	--	28	Grey	--



Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1	P1	JST Corp.	ZHR-12	1.5mm Disconnectable Crimp Connector Housing
1	P2	OST	EDZ950/2	5.08mm Connector Terminal Block Plug - 2 pin
1	P3	OST	EDZ1550/5	3.81mm Connector Terminal Block Plug - 5 pin
12	--	JST Corp.	SZH-002T-P0.5	Terminal, Crimp for 1.5mm JST Housing (26-28AWG wire)
cut	--	--	--	28AWG stranded wire - black
cut	--	--	--	28AWG stranded wire - white
cut	--	--	--	28AWG stranded wire - blue
cut	--	--	--	28AWG stranded wire - red

Notes (unless otherwise specified):

---

1. Alternatively, buy Garmin P/N 325-00026-00 and attach the two OST connectors

Config	L1	L2	Description
-xxx	x”	x”	
-001	??	??	Controller to GPS board MOOS Engr. Dep.

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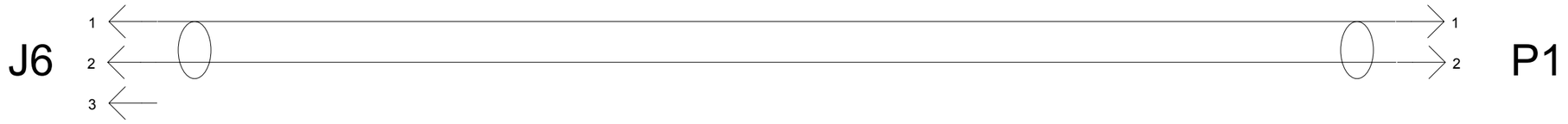
Cable, MOOS GPS to Backplane

Drawn By: Lance McBride | DOC #: 1001553 | REV. A

Date: 07/08/2002 | Sheet: 1 of 1



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	1	n/a	n/a	Coax shield
2	2	n/a	n/a	Coax center
3	-	n/a	n/a	Coupling

Ref.Des.	Mfgr.	Mfgr P/N	Description
J6	D.G.O'BRIEN	1150446-103	110 Series
P1	PASTERNAC	PE4882	MCX (male)
--	D.G. O'BRIEN		RG-58 COAX (5ft.)

Config	L	Description
-xxx	x"	
-001	??	Controller Lid to GPS Board MOOS Engr. Dep.

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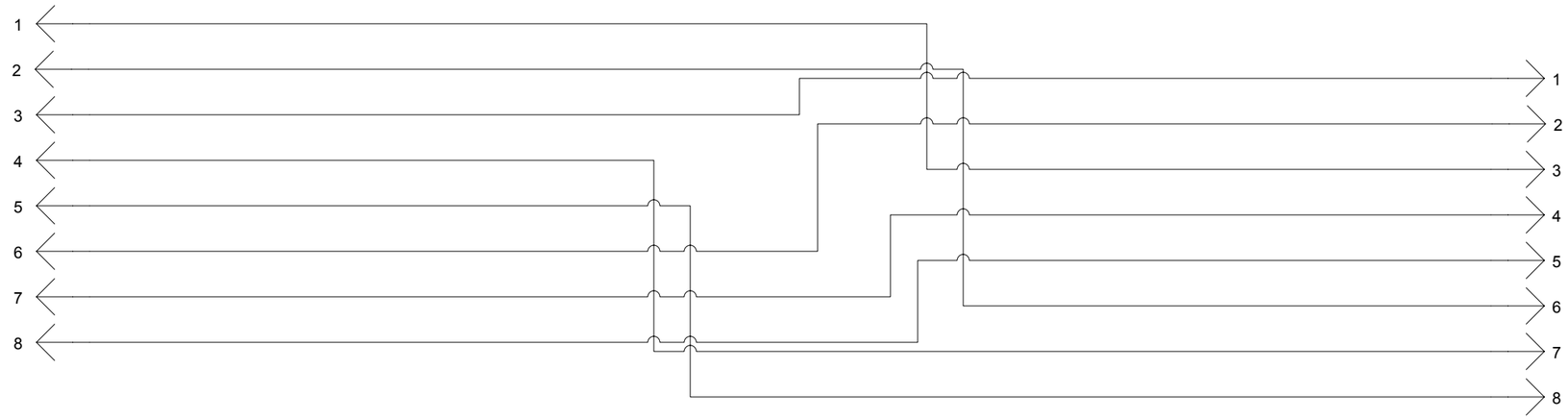
Cable, MOOS Controller Can Lid to GPS Receiver Board

Drawn By: Lance McBride | DOC #: 1001554 | REV. A

Date: 6/20/02 | Sheet: 1 of 1



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	3	24	white/orange	TX+
2	6	24	orange/white	TX-
3	1	24	white/green	RX+
4	7	24	blue/white	--
5	8	24	white/blue	--
6	2	24	green/white	RX-
7	4	24	white/brown	--
8	5	24	brown/white	--

Ref.Des.	Mfgr.	Mfgr P/N	Description
P1	ASSMAN	AT-AG-8/8	Connector, Modular 8 pin CAT5
P2	ASSMAN	AT-AG-8/8	Connector, Modular 8 pin CAT5
CUT	ALPHA	9504C SL021	CAT5 Ethernet Cable

Config	L	Description
-xxx	x”	
-001	??	SideKICK to SideARM MOOS Engr. Dep.

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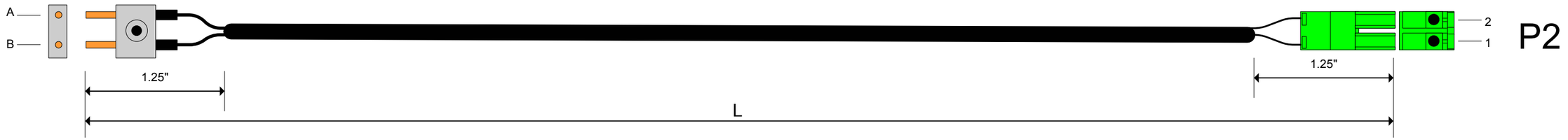
Cable, MOOS Ethernet Crossover SideKICK - SideARM

Drawn By: Lance McBride | DOC #: 1001555 | REV. A

Date: 6/20/02 | Sheet: 1 of 1

P1 Pin	P2 Pin	Size (AWG)	Color	Description
A B	1 2	28 28	black white	



Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1 1 cut cut	P1 P2 -- --	Winchester OST -- --	JFA2P EDZ950/2 -- --	Gold Plated Plug Connector 5.08mm Connector Terminal Block Plug - 2 pin 28AWG stranded wire - black 28AWG stranded wire - white

Notes (unless otherwise specified):

Config	L	Description
-xxx -001	x” ??	Water Sensor MOOS Engr. Dep.

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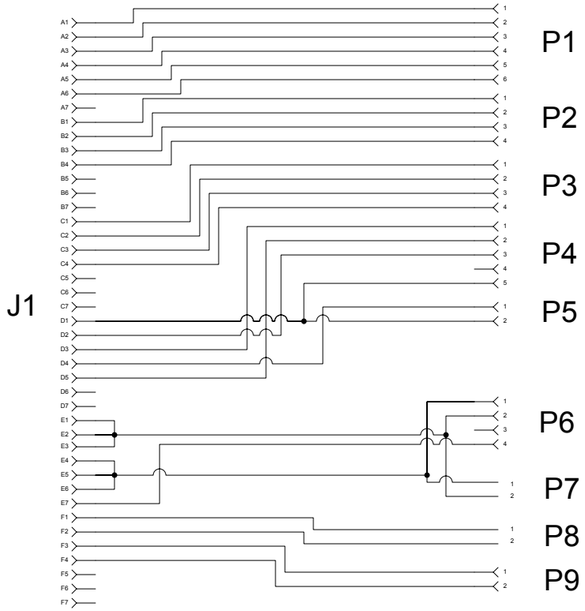
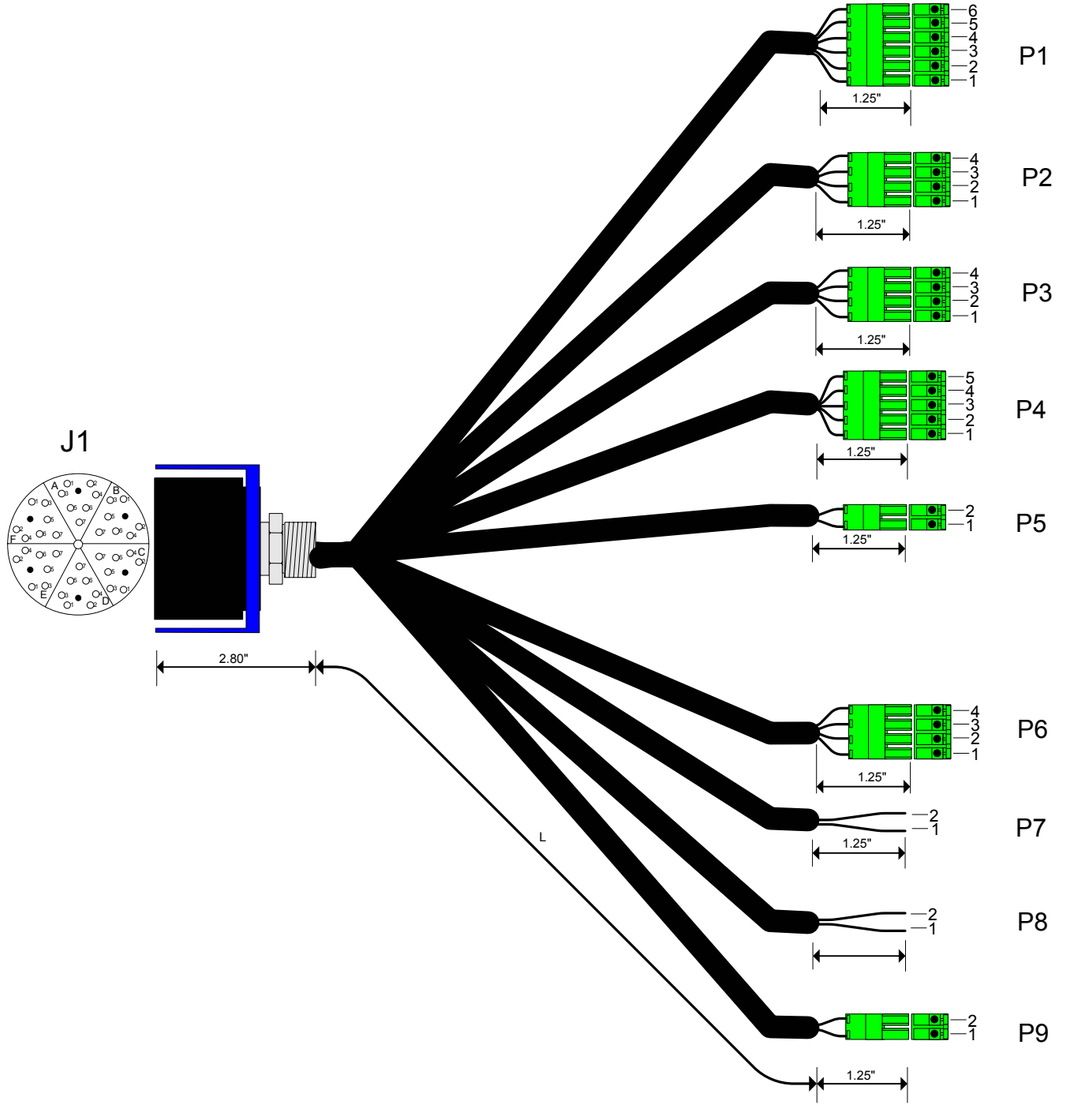
Cable, MOOS Controller Water Sensor

Drawn By: Lance McBride | DOC #: 1001556 | REV. A

Date: 07/08/2002 | Sheet: 1 of 1





J1 Pin	P1 Pin	P2 Pin	P3 Pin	P4 Pin	P5 Pin	P6 Pin	P7 Pin	P8 Pin	P9 Pin	Size (AWG)	Color	Description
A1	1	--	--	--	--	--	--	--	--	20	White	Satcom Isolated Ground
A2	2	--	--	--	--	--	--	--	--	20	White	TX from Satcom Data Port
A3	3	--	--	--	--	--	--	--	--	20	White	RX into Satcom Data Port
A4	4	--	--	--	--	--	--	--	--	20	White	Satcom Isolated +12V
A5	5	--	--	--	--	--	--	--	--	20	White	Satcom DSR Data Port
A6	6	--	--	--	--	--	--	--	--	20	White	Satcom DTR Data Port
A7	--	--	--	--	--	--	--	--	--	20	White	--
B1	--	1	--	--	--	--	--	--	--	20	White	Wireless Console Ground
B2	--	2	--	--	--	--	--	--	--	20	White	TX from controller to wireless console
B3	--	3	--	--	--	--	--	--	--	20	White	RX from wireless console to controller
B4	--	4	--	--	--	--	--	--	--	20	White	Wireless Console Power (+12V)
B5	--	--	--	--	--	--	--	--	--	20	White	--
B6	--	--	--	--	--	--	--	--	--	20	White	--
B7	--	--	--	--	--	--	--	--	--	20	White	--
C1	--	--	1	--	--	--	--	--	--	20	White	Pager Reset Ground
C2	--	--	2	--	--	--	--	--	--	20	White	Pager Relay +
C3	--	--	3	--	--	--	--	--	--	20	White	Pager Relay -
C4	--	--	4	--	--	--	--	--	--	20	White	Pager Reset Power (+12V)
C5	--	--	--	--	--	--	--	--	--	20	White	--
C6	--	--	--	--	--	--	--	--	--	20	White	--
C7	--	--	--	--	--	--	--	--	--	20	White	--
D1	--	--	--	5	2	--	--	--	--	20	White	Heave Sensor Ground
D2	--	--	--	3	--	--	--	--	--	20	White	RX into Heave Sensor
D3	--	--	--	1	--	--	--	--	--	20	White	TX from Heave Sensor
D4	--	--	--	--	1	--	--	--	--	20	White	Heave Sensor Power (+12V)
D5	--	--	--	2	--	--	--	--	--	20	White	Heave Sensor Enable
D6	--	--	--	--	--	--	--	--	--	20	White	--
D7	--	--	--	--	--	--	--	--	--	20	White	--
E1	--	--	--	--	--	2	2	--	--	20	White	Controller Ground from Power Can
E2	--	--	--	--	--	2	2	--	--	20	White	Controller Ground from Power Can
E3	--	--	--	--	--	2	2	--	--	20	White	Controller Ground from Power Can
E4	--	--	--	--	--	1	1	--	--	20	White	Controller Power from Power Can
E5	--	--	--	--	--	1	1	--	--	20	White	Controller Power from Power Can
E6	--	--	--	--	--	1	1	--	--	20	White	Controller Power from Power Can
E7	--	--	--	--	--	4	--	--	--	20	White	Seawater Ground from Power Can
F1	--	--	--	--	--	--	--	1	--	20	White	Surface Strain Gauge Output +
F2	--	--	--	--	--	--	--	2	--	20	White	Surface Strain Gauge Output - (GND)
F3	--	--	--	--	--	--	--	--	1	20	White	Surface Strain Gauge Power + (24V)
F4	--	--	--	--	--	--	--	--	2	20	White	Surface Strain Gauge Power - (GND)
F5	--	--	--	--	--	--	--	--	--	20	White	
F6	--	--	--	--	--	--	---	--	--	20	White	
F7	--	--	--	--	--	--	--	--	--	20	White	

Item	Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1	1	J1	SEACON	AWQ-7/42-S-BC	ALL WET Split Series Bulkhead 7/42-pin with 18" 20AWG wire
2	1		SEACON	AWQ-FBLS-D	ALL WET Locking Sleeve for 7/42-pin connector
3	1	P2	OST	EDZ1550/6	3.81mm Connector Terminal Block Plug - 6-PIN
4	3	P3, P4	PHOENIX	1803594	3.81mm Connector Terminal Block Plug 4-pin
5	2	P5	OST	EDZ1550/5	3.81mm Connector Terminal Block Plug - 5 pin
6	2	P6, P9	OST	EDZ950/2	5.08mm Connector Terminal Block Plug - 2 pin

Config	L	Description
-xxx -001	x” CUT	MOOS Controller Internal wiring to Main Connector J1

Notes (unless otherwise specified):

---

1. Cut or extend wires attached to J1 as required
2. Strip and Tin the ends of all specified bare wires for use in screw terminals
3. Terminate the ends of all unused loose wire with heat-shrink tubing to prevent shorts
4. Mark pin #’s on specified bare wires with a label

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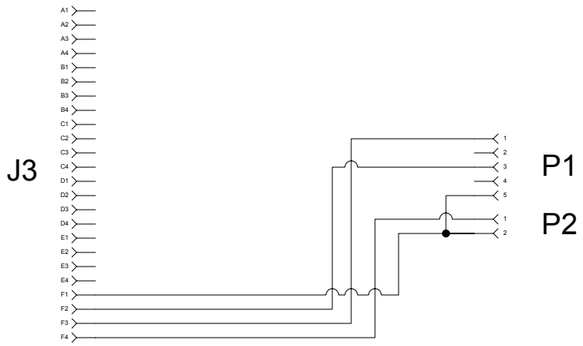
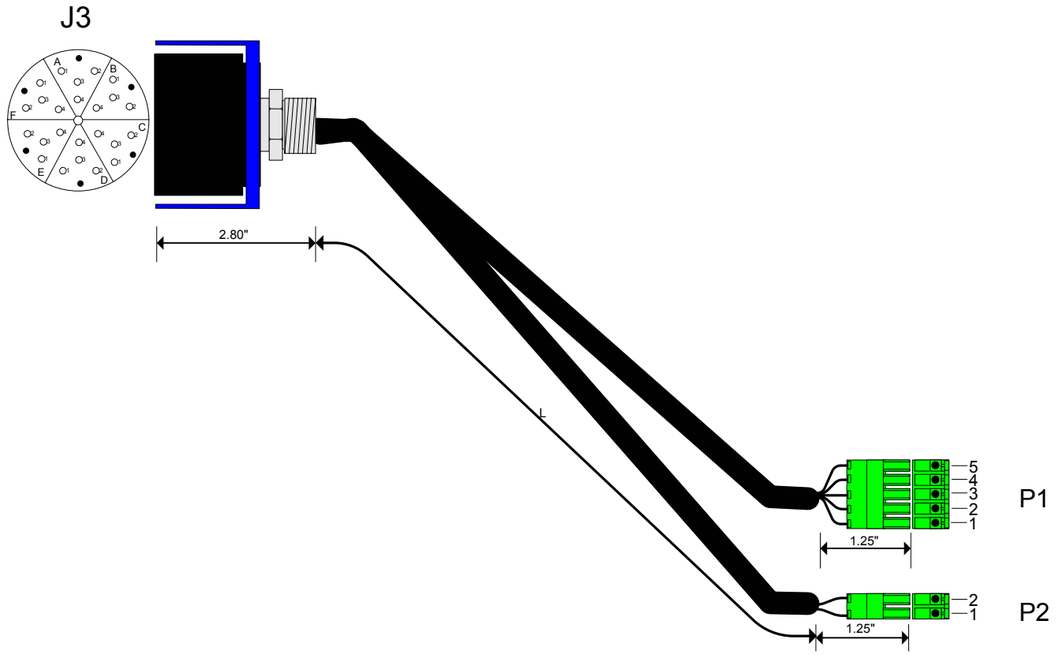
Cable, PIE1 fanout MOOS

Drawn By: Lance McBride | DOC #: 1001557 | REV. A

Date: 07/11/2002 | Sheet: 1 of 1



J3 Pin	P1 Pin	P2 Pin	Size (AWG)	Color	Description
A1	--	--	18	White	--
A2	--	--	18	White	--
A3	--	--	18	White	--
A4	--	--	18	White	--
B1	--	--	18	White	--
B2	--	--	18	White	--
B3	--	--	18	White	--
B4	--	--	18	White	--
C1	--	--	18	White	--
C2	--	--	18	White	--
C3	--	--	18	White	--
C4	--	--	18	White	--
D1	--	--	18	White	--
D2	--	--	18	White	--
D3	--	--	18	White	--
D4	--	--	18	White	--
E1	--	--	18	White	--
E2	--	--	18	White	--
E3	--	--	18	White	--
E4	--	--	18	White	--
F1	5	2	18	White	Ground
F2	3	--	18	White	Receive into backplane
F3	1	--	18	White	Transmit from backplane
F4	--	1	18	White	Power (+12V)



Config	L	Description
-xxx -001	x” CUT	MOOS Controller Internal wiring to Main Connector J1

Notes (unless otherwise specified):

---

1. Cut or extend wires attached to J3 as required
2. Tin the ends of all specified bare wires for use in screw terminals
3. Terminate the ends of all unused loose wire with heat-shrink tubing to prevent shorts
4. Mark pin #’s on specified bare wires with a label

Item	Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1	1	J3	SEACON	AWQ-4/24-S-BC	ALL WET Split Series Bulkhead 4/24-pin with 18" 18AWG wire
2	1		SEACON	AWQ-FBLS-D	ALL WET Locking Sleeve for 7/42-pin connector
3	1	P1	OST	EDZ1550/5	3.81mm Connector Terminal Block Plug - 5 pin
4	1	P2	OST	EDZ950/2	5.08mm Connector Terminal Block Plug - 2 pin

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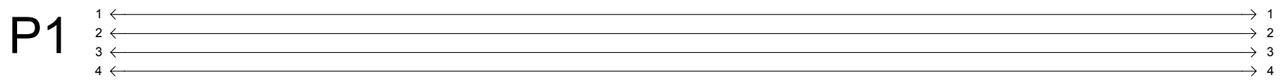
Cable, PIE3 fanout MOOS

Drawn By: Lance McBride | DOC #: 1001558 | REV. A

Date: 07/11/2002 | Sheet: 1 of 1



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	1	20	black	Ground
2	2	20	white	RX into SideARM SP3
3	3	20	yellow	TX from SideARM SP3
4	4	20	orange	RESET_N

Item	Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1	2	P1, P2	PHOENIX	1803594	3.81mm Connector Terminal Block Plug 4-PIN
2	cut	--	--	--	20AWG stranded wire - black
3	cut	--	--	--	20AWG stranded wire - white
4	cut	--	--	--	20AWG stranded wire - yellow
5	cut	--	--	--	20AWG stranded wire - orange

Notes (unless otherwise specified):

Config	L	Description
-xxx	x”	Console to Interface Board MOOS Engr. Dep.
-001	??	

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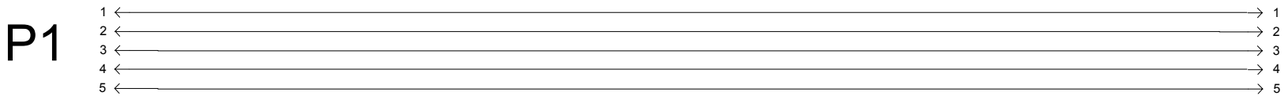
Cable, MOOS Controller Console to interface board

Drawn By: Lance McBride | DOC #: 1001559 | REV. A

Date: 07/08/2002 | Sheet: 1 of 1



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	1	20	black	--
2	2	20	white	--
3	3	20	yellow	--
4	4	20	orange	--
5	5	20	blue	--

Item	Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1	2	P1, P2	OST	EDZ1550/5	3.81mm Connector Terminal Block Plug - 5 pin
2	cut	--	--	--	20AWG stranded wire - black
3	cut	--	--	--	20AWG stranded wire - white
4	cut	--	--	--	20AWG stranded wire - yellow
5	cut	--	--	--	20AWG stranded wire - orange
6	cut	--	--	--	20AWG stranded wire - red

Notes (unless otherwise specified):

Config	L	Description
-xxx	x”	

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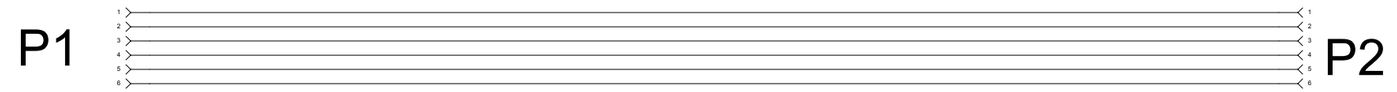
Cable, MOOS 5-pin

Drawn By: Lance McBride | DOC #: XXXXXXX | REV. A

Date: 07/08/2002 | Sheet: 1 of 1



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	1	20	blue	TX from SideARM SP1
2	2	20	white	RX into SideARM SP1
3	3	20	yellow	RF CTS
4	4	20	orange	RF RTS
5	5	20	red	RF POWER (+12V)
6	6	20	black	RF GROUND

Item	Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1	2	P1, P2	OST	EDZ1550/6	3.81mm Connector Terminal Block Plug - 6 pin
2	cut	--	--	--	20AWG stranded wire - black
3	cut	--	--	--	20AWG stranded wire - white
4	cut	--	--	--	20AWG stranded wire - yellow
5	cut	--	--	--	20AWG stranded wire - orange
6	cut	--	--	--	20AWG stranded wire - red
7	cut	--	--	--	20AWG stranded wire - blue

Notes (unless otherwise specified):

Config	L	Description
-xxx -001	x” ??	RF link between Controller & Interface board

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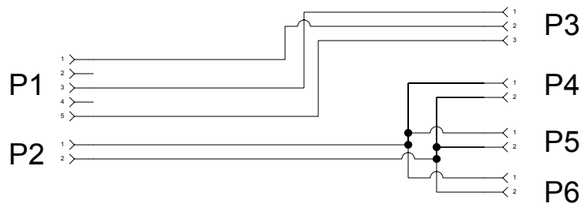
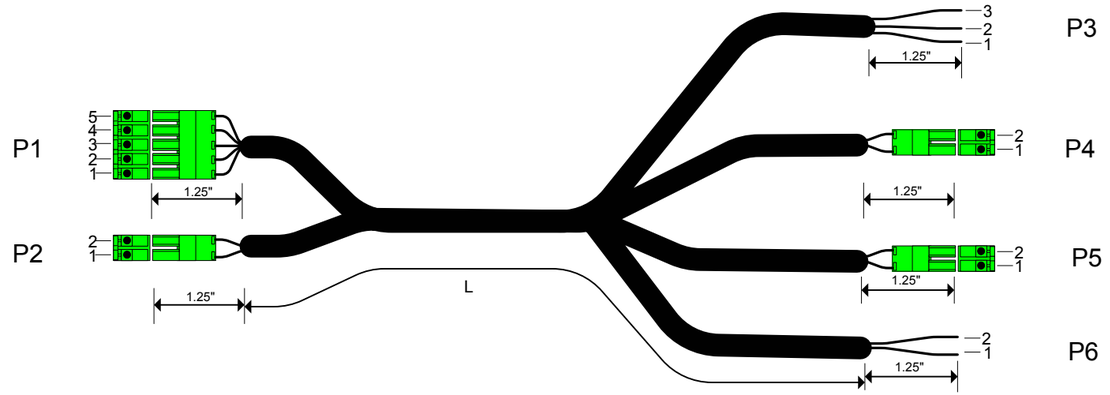
Cable, MOOS Controller RF to Interface Board

Drawn By: Lance McBride | DOC #: 1001560 | REV. A

Date: 07/08/2002 | Sheet: 1 of 1



P1 Pin	P2 Pin	P3 Pin	P4 Pin	P5 Pin	P6 Pin	Size (AWG)	Color	Description
1	--	2	--	--	--	20	Yellow	TX from backplane
2	--	--	--	--	--	--	--	--
3	--	1	--	--	--	20	Blue	RX into backplane
4	--	--	--	--	--	--	--	--
5	--	3	--	--	--	20	Black	Ground
--	1	--	1	1	1	20	Red	+12V
--	2	--	2	2	2	20	Black	Ground



Config	L	Description
-xxx -001	x” CUT	MOOS Controller Internal wiring to Main Connector J1

Item	Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1	1	P1	OST	EDZ1550/5	3.81mm Connector Terminal Block Plug - 5 pin
2	3	P2, P4, P5	OST	EDZ950/2	5.08mm Connector Terminal Block Plug - 2 pin
3	CUT	--	--	--	Wire, stranded 20AWG - Yellow
4	CUT	--	--	--	Wire, stranded 20AWG - Blue
5	CUT	--	--	--	Wire, stranded 20AWG - Black
6	CUT	--	--	--	Wire, stranded 20AWG - Red

Notes (unless otherwise specified):

---

1. Cut or extend wires attached to P1 and P2 as required
2. Strip and Tin the ends of all specified bare wires for use in screw terminals
3. Mark pin #'s on specified bare wires with a label
4. Tie wire bundle together when able

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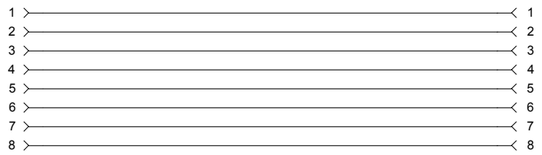
Monterey Bay Aquarium Research Institute
7700 Sandholdt Rd. Moss Landing, CA 95039-9644

Cable, MOOS Controller to Serial ADC

Drawn By: Lance McBride | DOC #: 1001561 | REV. A

Date: 07/11/2002 | Sheet: 1 of 1



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	1	20	Pink	Fiber Optic 1 +
2	2	20	White	Fiber Optic 1 -
3	3	20	Green	Fiber Optic 2 +
4	4	20	Black	Fiber Optic 2 -
5	5	20	Brown	Fiber Optic 3 +
6	6	20	Grey	Fiber Optic 3 -
7	7	20	Orange	Fiber Optic 4 +
8	8	20	Yellow	Fiber Optic 4 -

Item	Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1	1	P1	OST	EDZ1550/8	3.81mm Connector Terminal Block Plug - 8 pin
2	CUT	--	--	--	Wire, stranded 20AWG - Yellow
3	CUT	--	--	--	Wire, stranded 20AWG - Blue
4	CUT	--	--	--	Wire, stranded 20AWG - Grey
5	CUT	--	--	--	Wire, stranded 20AWG - Pink
6	CUT	--	--	--	Wire, stranded 20AWG - White
7	CUT	--	--	--	Wire, stranded 20AWG - Green
8	CUT	--	--	--	Wire, stranded 20AWG - Brown
9	CUT	--	--	--	Wire, stranded 20AWG - Orange

Notes (unless otherwise specified):

---

1. Cut or extend wires attached to P1 as required
2. Strip and Tin the ends of all specified bare wires for use in screw terminals
3. Mark pin #'s on specified bare wires with a label
4. Tie wire bundle together when able

Config	L1	Description
-xxx	x”	--
-001	??	Fiber Optic sensor to Serial ADC MOOS Engr. Dep.

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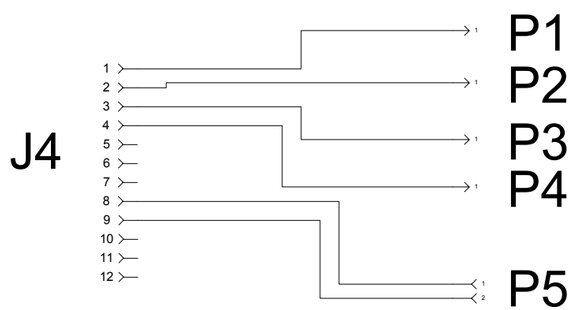
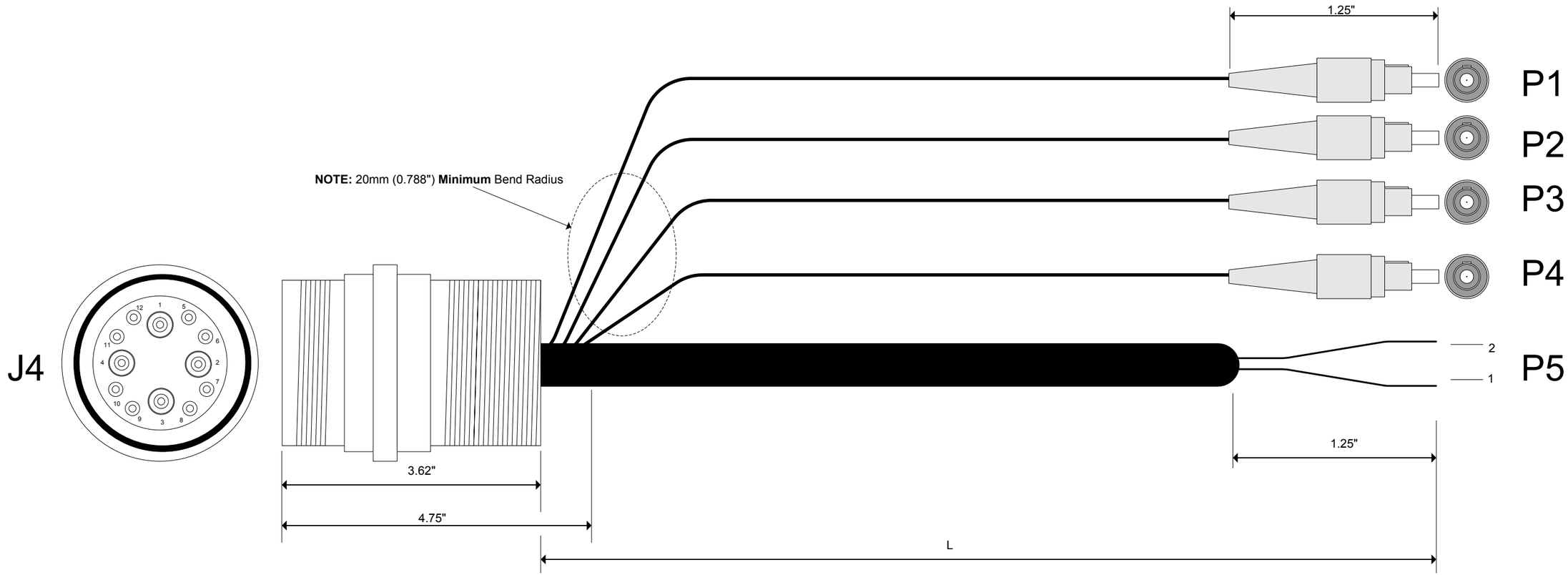
Cable, MOOS Fiber Optic sensor to Serial ADC

Drawn By: Lance McBride | DOC #: 1001562 | REV. A

Date: 07/08/2002 | Sheet: 1 of 1



J3 Pin	P1 Pin	P2 Pin	P3 Pin	P4 Pin	P5 Pin	Size (AWG)	Color	Description
1	1	--	--	--	--	SM Fiber	--	Fiber Optic #1
2	--	1	--	--	--	SM Fiber	--	Fiber Optic #2
3	--	--	1	--	--	SM Fiber	--	Fiber Optic #3
4	--	--	--	1	--	SM Fiber	--	Fiber Optic #4
5	--	--	--	--	--	22	Blue	--
6	--	--	--	--	--	22	Orange	--
7	--	--	--	--	--	22	Yellow	--
8	--	--	--	--	1	20	White	Benthic Strain Gauge Output +
9	--	--	--	--	2	20	Green	Benthic Strain Gauge Output -
10	--	--	--	--	--	20	Brown	--
11	--	--	--	--	--	20	Red	--
12	--	--	--	--	--	20	Black	--



Reference MBARI Drawing XXXXXXX when ordering J1 →

Item	Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1	1	J1	SEACON	MSSP-4F0/8#16-FBR	Fiber Optic Series Bulkhead Connector

Notes (unless otherwise specified):

---

1. Cut or extend copper wires attached to J4 as required
2. Strip and Tin the ends of all specified bare wires for use in screw terminals (P5)
3. Mark pin #'s on specified bare wires with a label
4. Tie wire bundle together when able
5. Ensure all bends in the fiber optic lines exceed the minimum bend radius of 20mm (0.788")

Config	L1	Description
-xxx	x"	--
-001	36"	Benthic Riser Fanout in the Controller Can MOOS Engr. Depl.

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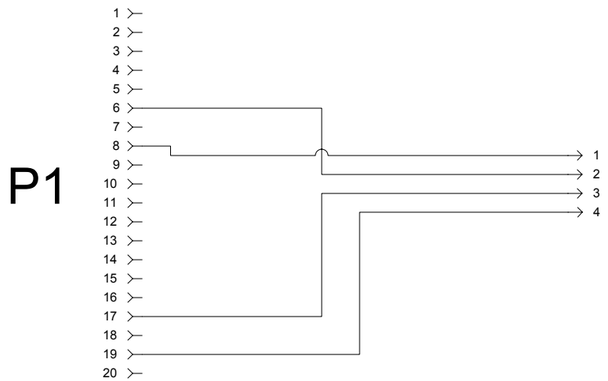
7700 Sandholdt Rd. Moss Landing, CA 95039-9644

Cable, MOOS Controller Can Riser Fanout

Drawn By: Lance McBride | DOC #: 1001563 | REV. A

Date: 07/08/2002 | Sheet: 1 of 1



P1 Pin	P2 Pin	Size (AWG)	Color	Description
1	--	24	--	--
2	--	24	--	--
3	--	24	--	--
4	--	24	--	--
5	--	24	--	--
6	2	24	Orange	Ground Fault Error Interupt
7	--	24	--	--
8	1	24	white	Test Ground Fault Circuit
9	--	24	--	--
10	--	24	--	--
11	--	24	--	--
12	--	24	--	--
13	--	24	--	--
14	--	24	--	--
15	--	24	--	--
16	--	24	--	--
17	3	24	Yellow	Ground Fault Warning Interupt
18	--	24	--	--
19	4	24	Black	Ground
20	--	24	--	--

Item	Qty.	Ref.Des.	Mfgr.	Mfgr P/N	Description
1	1	P1	MOLEX	22-55-2201	C-Grid Crimp Connector Housing
2	1	P2	PHOENIX	1803594	3.81mm Connector Terminal Block Plug 4-PIN
3	4	--	MOLEX	16-02-1114	Terminal, C-Grid Crimp Box
4	cut	--	--	--	24AWG stranded wire - black
5	cut	--	--	--	24AWG stranded wire - white
6	cut	--	--	--	24AWG stranded wire - yellow
7	cut	--	--	--	24AWG stranded wire - orange

Config	L	Description
-xxx	x"	Console to Interface Board MOOS Engr. Dep.
-001	??	

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Cable, MOOS GPIO Fanout

Drawn By: Lance McBride | DOC #: 1001564 | REV. A

Date: 07/08/2002 | Sheet: 1 of 1