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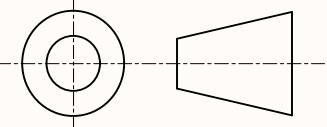
NOTES:

- 1 LABEL AS INDICATED.
- 2 ALL DIMENSIONS IN mm.
- 3 LENGTH TOLERANCE IS ±10 mm EXCEPT AS NOTED.
- 4 ON J1-J7, USE AN 8mm ±1mm LENGTH OF 1.2mm I.D. HEATSHRINK, ITEM 7, ON THE INSULATION OF EACH INDIVIDUAL WIRE TO ENSURE A GOOD SEAL WITH THE CONNECTOR HOUSING.
- 5 USE MANUFACTURER SPECIFIED TOOLING FOR ITEMS 1, 4, AND 5.
- 6 STRIP CABLE JACKET AND WIRE INSULATION PER NASA-STD-8739.4A, SECTION 10. (TMT.CTR.TEC.16.052.DRF01)
INSPECT PER NASA-STD-8739.4A, SECTIONS 20.5.1a, 20.5.2a, A.3, A.4, AND A.5. (TMT.CTR.TEC.16.052.DRF01)
- 7 USE ADHESIVE-LINED HEAT SHRINK TUBING, ITEM 9 ON BOTH ENDS OF EACH CABLE TO SEAL IT.
- 8 CRIMP ITEM 1 CONTACTS PER NASA-STD-8739.4A, SECTION 12. (TMT.CTR.TEC.16.052.DRF01)
INSPECT PER NASA-STD-8739.4A, SECTIONS 20.5.1c, 20.5.2c, A.8, A.9, AND A.10 (TMT.CTR.TEC.16.052.DRF01)
- 9 CRIMP AND INSPECT ITEM 5 PER JST "PRECAUTION FOR CRIMPING PROCESS." (TMT.CTR.TEC.16.051.DRF01)
- 10 WIRE PULLOUT TEST: VALIDATE CRIMPING PROCESSES PER NASA-STD-8739.4A, SECTION 12. (TMT.CTR.TEC.16.052.DRF01)
- ITEM 1, AXIAL FORCE = 36 N
- ITEM 5, AXIAL FORCE = 20 N (PER WWW.JST-MFG.COM)
- 11 CONTACT RETENTION TEST: EACH CONTACT SHALL BE PUSH OR PULL TESTED 100% FOR SEATING PER NASA-STD8739.4A SECTION 13. (TMT.CTR.TEC.16.052.DRF01)
- ITEM 1, AXIAL FORCE = 22.1 N - 31.1 N (PUSH) or 13.3 N - 22.2 N (PULL)
- ITEM 5, AXIAL FORCE = 10 N
- 12 SPOT TIE CABLE BUNDLE TOGETHER UNDER BLACK HEAT SHRINK AS NEEDED USING ITEM 12.
- 13 USE FUSION WRAP, ITEM 11, AS NEEDED TO BUILD UP DIAMETER OF THE WIRE BUNDLE FOR THE STRAIN RELIEF INSIDE OF THE P1 BACKSHELL, ITEM 2.

REVISION HISTORY

LTR	DESCRIPTION	CLASS	DWN	ENGR	SEE JPL DATA MANAGEMENT SYSTEM FOR APPROVAL SIGNATURES AND DATES.
A	----- INITIAL RELEASE -----	E			
B	CHANGED TO IP64+ RATED CONNECTORS.	E			

14. EACH CABLE SHALL BE 100% ELECTRICALLY TESTED.
- CONNECTION RESISTANCE LESS THAN 5 OHMS.
- INSULATION RESISTANCE MORE THAN 5 MOHMS.
- 15 P1 BACKSHELL SUPPORTS CABLE EGRESS FROM EITHER SIDE.
CONNECT AS SHOWN.
- 16 JST CONTACT SWPR-001T-P025 (TIN FINISH) CAN BE USED FOR PROTOTYPES WITH TMT PERMISSION.

		MATERIAL:		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO _____		JET PROPULSION LABORATORY			
		PER SPECIFICATION		LINEAR TOLERANCES:		APPD _____ DATE _____		CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CA 91109			
				.XX ± .03		DWN D. PALMER		CABLE ASSEMBLY, WARPING HARNESS MOTOR HYDRA			
				.XXX ± .010		ENGR D. PALMER					
				ANGULAR TOLERANCE: ± 0.5°		SEE JPL DATA MANAGEMENT SYSTEM FOR APPROVAL SIGNATURES AND DATES.		SIZE B CAGE CODE 23835 10398530 REV B			
		THIRD ANGLE PROJECTION		SURFACE ROUGHNESS (MICROMETERS) ✓							
TMT				DO NOT SCALE DRAWING INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5-2009 INTERPRET DWG PER ASME Y14.100							
NEXT ASSEMBLY		USED ON						SCALE: 1/1 UNCLASSIFIED SHEET 1 OF 4			
APPLICATION											

LEGEND

AL = ADHESIVE LINED
QL = QUICK LOCK
PBT = POLYBUTYLENE TEREPHTHALATE
POS = POSITION
REC = RECEPTACLE
SOC = SOCKET
UJ = UNSHIELDED JACKETED

	AR	12		92194	LTN-4C	LACING TAPE, 0.05" WIDE	ALPHA WIRE	NYLON
	AR	11	P1	62081	P36728 OR EQUIV.	SEAL-TITE FUSION WRAP	LAWSON PROD.	
	AR	10	P1	92194	F2213/4 BK105	HEAT SHRINK, 19mm I.D. BLACK	ALPHA WIRE	POLYOLEFIN
	AR	9		92194	F3211/4 BK103	HEAT SHRINK, 6.4mm I.D. BLACK, AL	ALPHA WIRE	POLYOLEFIN
	AR	8		92194	F221B3/16 CL100	HEAT SHRINK, 4.8mm I.D. CLEAR	ALPHA WIRE	POLYOLEFIN
	AR	7	J1-J7	92194	F221B3/64 CL100	HEAT SHRINK, 1.2mm I.D. CLEAR	ALPHA WIRE	POLYOLEFIN
	AR	6		92194	78062	CABLE, UJ, 2 PAIR, 26AWG	ALPHA WIRE	
	28	5	J1-J7	67D17	SWPR-001GH-P025	TERMINAL, SOC, 22-26 AWG	JST SALES AMER.	
	7	4	J1-J7	67D17	04R-JWPF-VSLE-S	HOUSING, 4 POS, REC, 2mm	JST SALES AMER.	PBT
	1	3	P1	00779	1-2308272-4	CABLE CLAMP, SIZE 1-4, 11-14 mm	TE CONNECTIVITY	ZINC ALLOY
	1	2	P1	00779	1-2308330-1	BACKSHELL, 37 POSITION D-SUB, QL	TE CONNECTIVITY	ZINC ALLOY
	1	1	P1	28198	EVD37P00000/AA-1289.2	PLUG, D-SUB 37 PIN MALE CRIMP	POSITRONIC	INCLUDES PINS
	-1	ITEM	REF	CAGE	PART OR	NOMENCLATURE		
	QTY REQD	NO	DES	CODE	IDENTIFYING NO	OR DESCRIPTION	SPECIFICATION	MATERIAL OR NOTE
PARTS LIST								

TABLE 1: FINISHED CABLE LENGTHS

CONNECTOR	LENGTH
J1	840 mm
J2	660 mm
J3	750 mm
J4	625 mm
J5	945 mm
J6	680 mm
J7	1010 mm

