

TABLE 1: WIRE RUN LIST				
P1	WIRE COLOR	WIRE COLOR	SIGNAL	P2
1	RED	BLACK	GND	A1, A12, B1, B12
2	BLACK	RED	VBUS	A4, A9, B4, B9
3	BROWN			
4	GREEN	GREEN	USB 2.0 D+	A6
5	WHITE	WHITE	USB 2.0 D-	A7
6	ORANGE	ORANGE	CC1	A5
SHELL	SHIELD	SHIELD	CHASSIS GND	SHELL

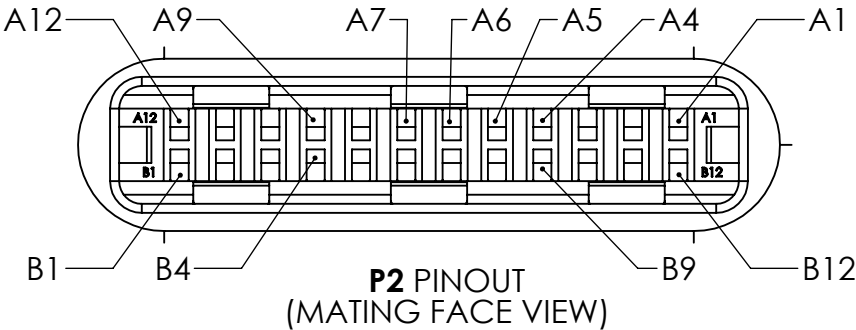
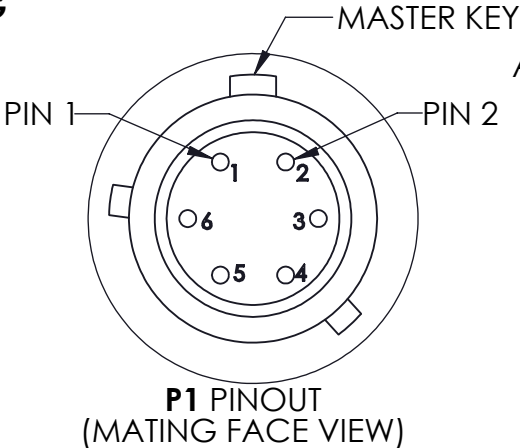
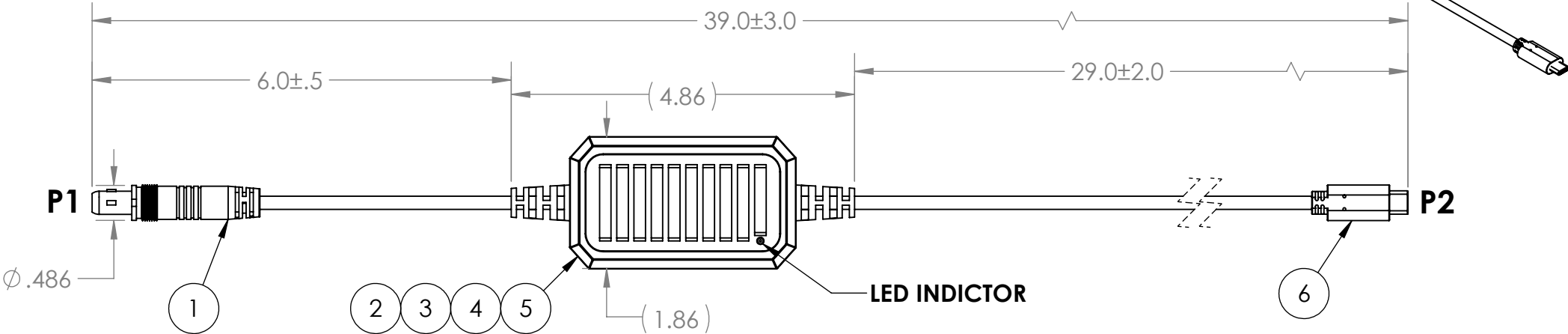
REVISIONS			
REV.	DESCRIPTION	DATE	ENG
A	INITIAL RELEASE	07/29/2026	MOB

TABLE 2: LED INDICATION TABLE	
LED INDICATION	MEANING/REMARKS
SOLID AMBER	BATTERY CHARGING
FLASHING GREEN	BATTERY CHARGED TO >90% OF CAPACITY
SOLID GREEN	BATTERY FULLY CHARGED (>95%)
SOLID AMBER FOR 1 SEC TO SOLID RED FOR 1 SEC ALTERNATING	BATTERY TEMPERATURE TOO HOT OR TOO COLD TO CHARGE
SOLID RED	BATTERY FAULT
FLASHING RED	CHARGER FAULT

P1:
CHARGES BATTERY AT 16.8VDC WHEN IN SINK MODE

P2:
SINK MODE: 20V/3A, 15V/3A, 9V/3A, 5V/3A
SOURCE MODE: 20V/3A, 15V/3A, 9V/3A, 5V/3A

WAIT UP TO 20 SECONDS BETWEEN PLUGGING AND UNPLUGGING THE P2 CONNECTOR TO ALLOW USB-C TO SWITCH MODES/VOLTAGES



BILL OF MATERIALS			
ITEM NO.	PART NO.	QTY	NAME/DESCRIPTION
1	SN-1087	0.5	MALE TO MALE NWB CABLE ALL SIGNALS 48"
2	C001-PCBA-00000014	1	PCBA, USB-C/NW, CHARGE/HARVEST, 60W
3	C0009-005-100	1	HOUSING, BOTTOM. AL 6061, BLK ANODIZED
4	C0009-005-101	1	HOUSING, TOP, AL 6061, BLK ANODIZED
5	C001-M-000002	1	OVERMOLD, INLINE PCBA/HOUSING MOLD
6	C001-C-000201	1	USB-C PD CABLE

- NOTES:**
- WIRING SHALL BE DONE IN ACCORDANCE WITH TABLE 1 WIRE RUN LIST.
 - PACKAGING REQUIREMENTS:
 - EACH COMPLETED ASSEMBLY SHALL BE PACKAGED IN A ZIP POLYBAG.
 - CONNECTOR(S) SHALL BE PACKAGED TO PREVENT DAMAGE DURING SHIPPING. BUBBLE WRAP OR PROTECTIVE COVER MUST BE USED.
 - POLYBAG SHALL BE MARKED WITH SUPPLYNET LOGO, PRODUCT QR CODE, PART NUMBER, CAGE CODE, AND LOT NO, PER SN-STD-LBL REQUIREMENTS.
 - WORKMANSHIP REQUIREMENTS:
 - MANUFACTURE TO IAW/WHMA A-620 CLASS 2 REQUIREMENTS.
 - SOLDERING SHALL BE COMPLIANT WITH IAW J-STD-001 AS APPLICABLE.
 - CONNECTOR(S) AND WIRE SHALL BE FREE FROM ANY SCRATCHES, CHIPS, AND DEFECTS.
 - INSPECTION REQUIREMENTS:
 - EACH COMPLETED ASSEMBLY TO BE 100% TESTED FOR SHORTS, CONTINUITY, AND JACKET RESISTANCE (250V @100MOHM MIN.)
 - INSPECT TO IPC/WHMA A-620 CLASS 2 REQUIREMENTS.
 - COMPATIBLE BATTERIES: CWB 3.6, CWB 3.6.2, IVENTUS POWER CWB 3.7, BREN-TRONICS CWB3.7, GALVION SOLOPACK 2**

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	SupplyNet		DESIGN ENGINEERING MANUFACTURING	
DIMENSIONS ARE IN: INCHES		DRAWN	CWA01/16/2025		TITLE: USB-C PD TO NETT WARRIOR CWB CHARGER AND HARVESTER CABLE		
TOLERANCES: .XX: ± 0.03		CHECKED	RB 01/16/2025				
ANGULAR: .X°: 1°		COMMENTS:					
.XX°: 0.5°							
BREAK EDGES: .005 - .020							
FILLETS: .005 - .020		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SUPPLYNET, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SUPPLYNET INC. IS PROHIBITED.		SIZE	DWG. NO.	REV	
SURFACE FINISH:				B	SN-2025-C5	A	
GEOMETRIC TOLERANCING PER: ASME Y14.5-2009							
MATERIAL: SEE DRAWING NOTES							
FINISH: SEE DRAWING NOTES							
DO NOT SCALE DRAWING		CAGE CODE: 1HJX9		SCALE: NA	WEIGHT:	SHEET 1 OF 1	

USB-PD Harvest/Charge Cable User Manual

(Part # SN-2025-C5)

Overview

The USB-C PD Harvest and Charge cable is a USB Type-C PD 3.2 charging and discharging cable designed for use with a conformal wearable battery system. The cable is a Dual Role Port (DRP) design, which means it can either provide power from the battery to a USB-C device or accept power from USB-C to charge the battery.

Main Features

- USB Type-C PD 3.2 interface.
- Dual Role Port (DRP) operation for both charging and discharging.
- Source mode output support at 5V/3A, 9V/3A, 15V/3A, and 20V/3A.
- Sink mode charging support at 5V/3A, 9V/3A, 15V/3A, and 20V/3A.
- Approximate overall cable length of 1 meter.
- Operating temperature range from -20°C to +55°C.
- Compatible with CWB 3.6, CWB 3.6.2, Inventus Power CWB 3.7, Bren-Tronics CWB 3.7, and Galvion Solopack 2.

Parts and Interfaces

The cable assembly includes a USB Type-C plug, an electronics package, and a Nett Warrior (NW) plug. The electronics package includes a Type-C PD controller, conversion electronics, an MCU, DC/DC conversion, an SMBus charge controller, and a status LED.

For the Nett Warrior plug, Pin 1 is used to draw power from the battery and Pin 3 is used to charge the battery.

How to Use

To power a USB-C device from the battery

1. Connect the Nett Warrior plug to the battery interface.
2. Connect the USB Type-C plug to the device that will be powered.
3. Confirm that the connected device begins normal USB-C PD power negotiation.

4. If you switch from one powered device to another, wait up to 20 seconds for the cable to reset and make all supported voltages available.

To charge the battery from a USB-C power source

1. Connect the Nett Warrior plug to the battery interface.
2. Connect the USB Type-C plug to a compatible USB-C power source.
3. Allow the cable and battery to negotiate an appropriate charging voltage and current.
4. Check the status LED to confirm charging state.

Status LED Guide

LED indication	Meaning
Rapid flashing amber	Battery pre-charge check.
Solid amber	Battery charging.
Flashing green	Battery charged to more than 90% of capacity.
Solid green	Battery fully charged, greater than 95%.
Solid amber for 1 second alternating with solid red for 1 second	Battery temperature is too hot or too cold to charge.
Solid red	Battery fault.
Flashing red	Charger fault.

Operating Notes

Use the cable only within the specified operating temperature range of -20°C to +55°C.

When changing devices to power, the cable may require up to 20 seconds to reset before all supported voltage levels become available. During this reset interval, a newly connected device may not immediately see every available voltage profile.

Safety and Handling

Inspect connectors and the cable body before use, and do not use the assembly if it appears damaged. Avoid forcing connectors, exposing the cable to conditions outside the stated temperature range, or using the cable in a way that could exceed its mechanical limits.