



LDCBS1X4

Passive 1X4 GPS Splitter

Technical Product Data



Features

- **Excellent Gain Flatness**
 $|J1 - J4| < 1.0\text{dB}$,
- **Extremely Flat Group Delay**
Less than 1ns variation
- **Low Insertion Loss**
- **Passes all GNSS Frequencies (Entire L-band)**
- **DC Blocked Outputs Feature 200Ω Loads**
Prevent antenna alarm faults from connected devices
- **Phase Matched Outputs**
Phase (J1 – J4) < 1.0°
- **Special Configurations Available By Request**

Description

The LDCBS1X4 GPS Splitter (GNSS Splitter) is a one input, four output device based on the Wilkinson splitter design. The frequency response covers the entire L-band (all GNSS Frequencies) with excellent gain flatness. In the standard configuration, (J1) passes DC from the connected GPS device through the splitter to the input (antenna port). The other RF outputs (J2-J4) are DC blocked and loaded with a 200Ω resistor to simulate the antenna current draw to prevent false antenna alarm faults. Contact GPS Networking Technical Support for any questions regarding standard configurations or special configurations at salestech@gpsnetworking.com or 1-800-463-3063.

Electrical Specifications, $T_A = 25^{\circ}\text{C}$

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant – Any Output, Unused Outputs - 50 Ω	1.1		1.7	GHz
Input/Output Impedance	Ant, J1, J2, J3, J4		50		Ω
Input SWR	All ports - 50 Ω			2.0:1	-
Output SWR	All ports - 50 Ω			1.5:1	-
Insertion Loss	Ant – Any Output, Unused Outputs - 50 Ω	-7.5	-8.5	-9.5	dB
Gain Flatness	J1 – J4 ; Ant – Any Output, Unused Outputs - 50 Ω			1.0	dB
Amplitude Balance	J1 – J4 ; Ant – Any Output, Unused Outputs - 50 Ω			1.0	dB
Phase Balance	Phase (J1 – J4) ; Ant – Any Output, Unused Outputs - 50 Ω			1.0	deg
Isolation	Adjacent Ports: Ant - 50 Ω Opposite Ports: Ant - 50 Ω	15 22			dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$: Ant – J1 – J4 - 50 Ω ; Ant – J4, J1 - 50 Ω			1	ns

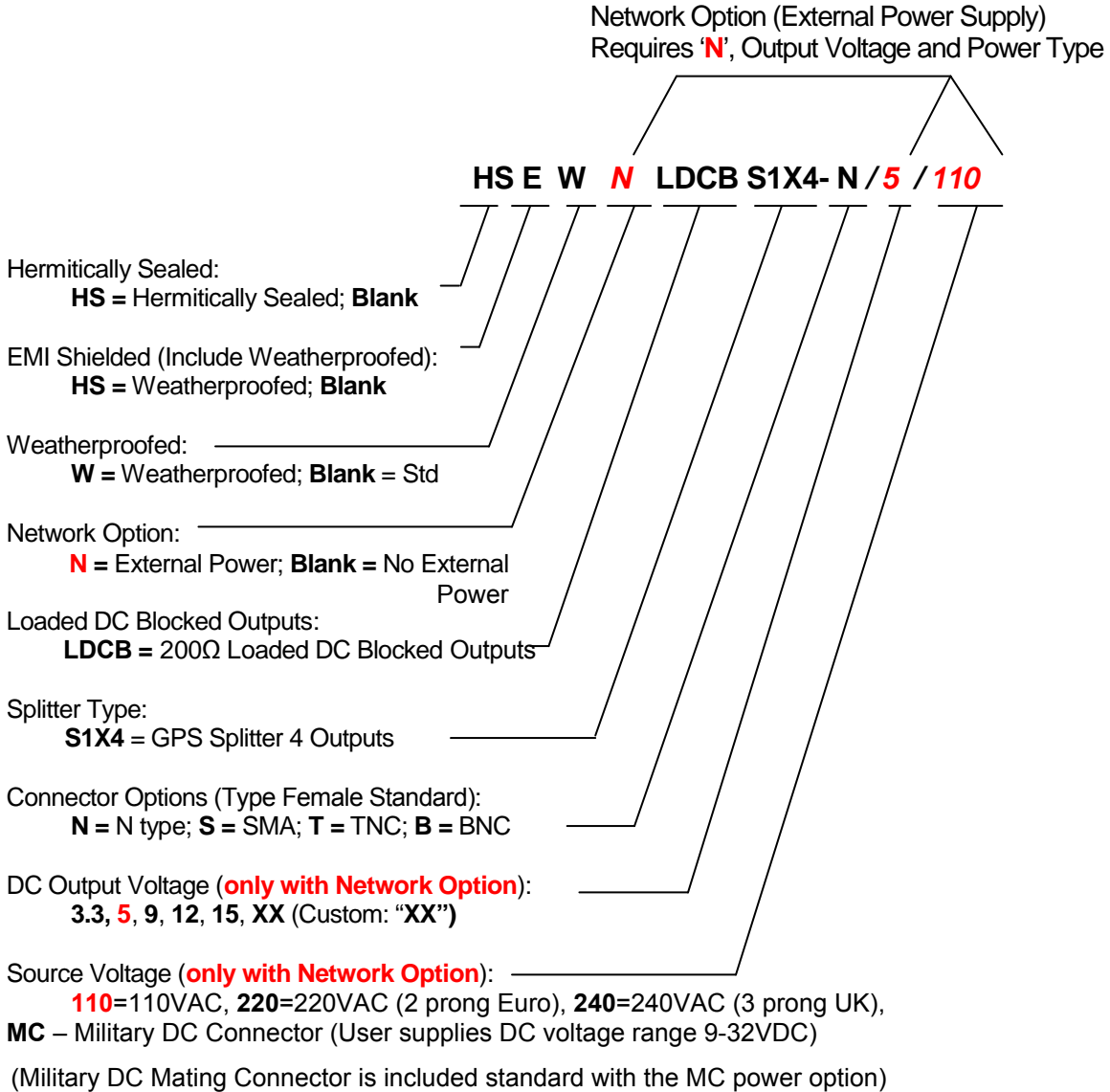
Available Power Options (Networked Option)

Network Power Supply		
Source Voltage Options	VOLTAGE INPUT	
	110VAC	Transformer (Wall Mount)
	220 VAC (2 prong Euro)	Transformer (Wall Mount)
	240 VAC (3 prong UK style)	Transformer (Wall Mount)
	Customer Supplied DC (9-32 VDC)	2-pin Military DC Connector
Output Voltage Options ⁽¹⁾	DC VOLTAGE OUT	
	MAX CURRENT OUT FOR CORRESPONDING Vout	
	3.3V	110mA
	5V	120mA
	9V	140mA
	12V	180mA
	15V	220mA
Custom	TDB	
Standard DC Configuration without External Power Option		
	J1/Output 1 Pass DC, J2-J4/Output 2-4 Block DC, Input Port Pass DC	
	200 ohm loads standard for all DC Blocked Outputs	
Standard DC Configuration with any External Power Option (AC/DC or Military DC)		
	All DC Blocked Outputs feature 200 Ω Load in Standard Configuration	
	User Selected Output DC Voltage	
RF Connector Options		
Connector Options	CONNECTOR STYLE	
	CHARGE	
	Type N-female	NC
	Type SMA-female	NC
	Type TNC-female	NC
Type BNC-female	NC	

(1) With Networked Option, any RF port (input or output) can be selected Pass DC or Block DC.

(Contact GPS Networking Technical Support at 719-595-9880 or salestech@gpsnetworking.com for any questions regarding non-standard configurations and corresponding part numbers)

Part Number Configuration



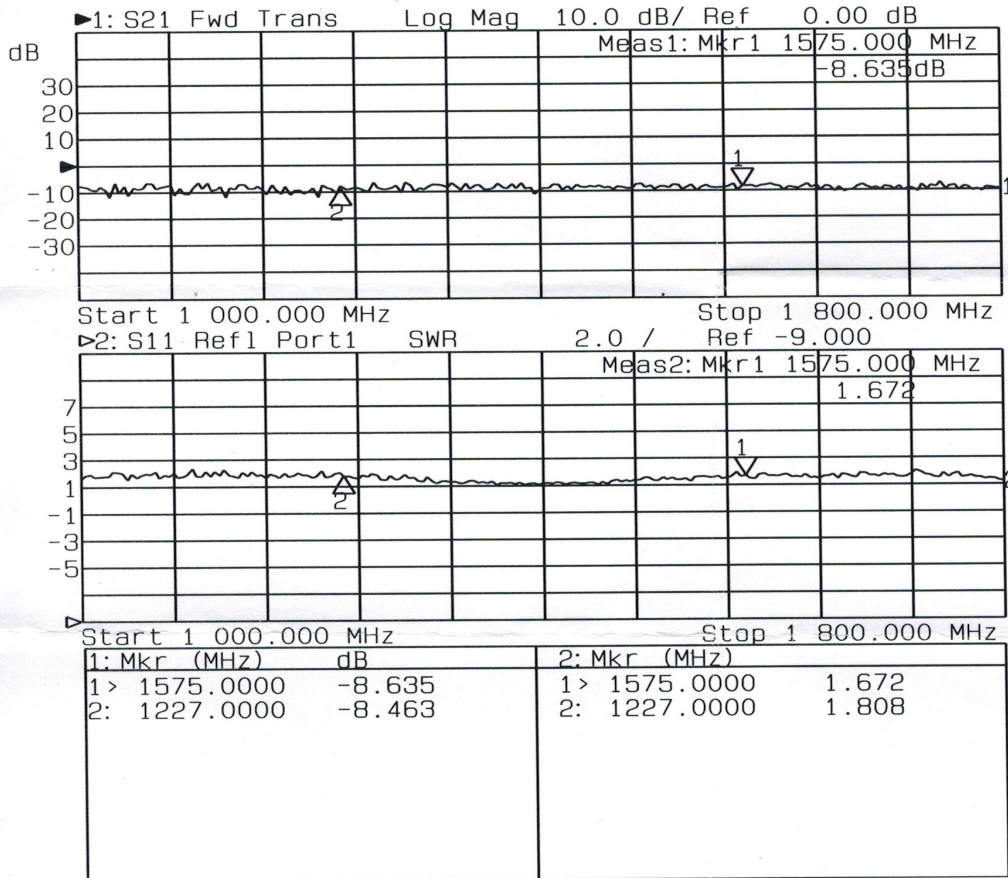
When no external power supply option (AC or DC) is selected, Output 1/J1 is Pass DC standard. Whenever an external power supply option is selected, all outputs are DC blocked standard.

(Contact GPS Networking Technical Support at 719-595-9880 or salestech@gpsnetworking.com for any questions regarding non-standard configurations and corresponding part numbers)

Performance

Typical Frequency Response: Ant. To J1, J2, J3, J4 (Type N connectors):

Input SWR: Ant. J1, J2, J3, J4 -50Ω (Type N connectors):



Mechanical

Dimensions: Height: 1.3"

Length (not including connectors) Body: 2.5"
Base Plate: 3.25"

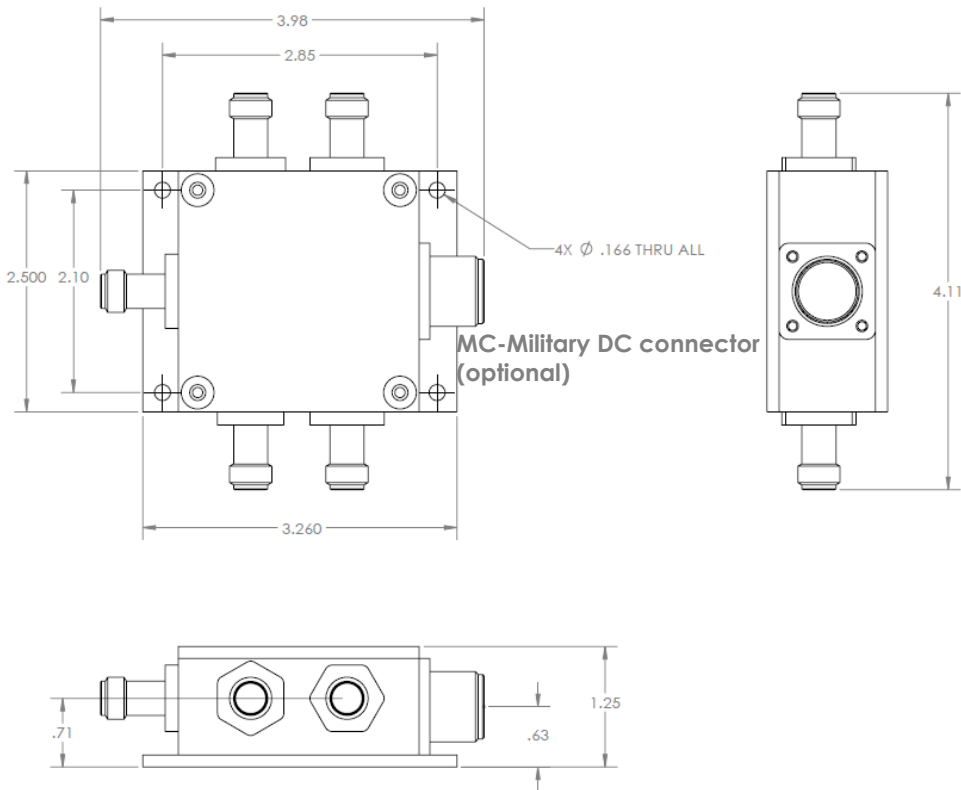
Width (not including connectors): 2.5"

Weight: 11.8 oz. (340 grams)

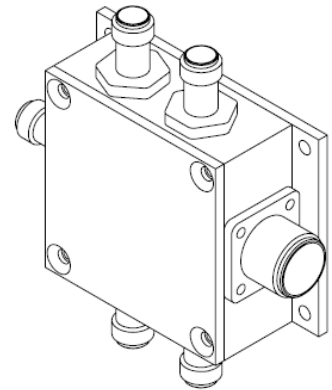
Operating Temp. Range: -40° to + 75°C

Finish Housing and Base Plate: ELECTROLESS NICKEL PLATED
MIL-C-26074C CLASS 1, .0001-.0003 MAX
Finish Lid: ANODIZE, TYPE II, CLASS 2, BLACK, per MIL-A-8625

NOTES:
1. CAD FILES AVAILABLE.



REVISIONS				
ZONE	REV.	DESCRIPTION	REV. BY	DATE
-	A	INITIAL RELEASE	-	-



GPS NETWORKING		Assy, 1x4 Military		Do Not Scale Sheet Remove All Burrs And Sharp Edges To .020 Root Max
Checked by	BPC	Date	07/02/15	Material
Scale		Quantity / Unit Assy		Part Number
Third Angle Projection		Material		See Note
Drwg Number		Rev	B	SHEET 1 OF 1
		Scale	1:1	Notes
		Material		Surface Finish Unless Indicated
		Part Number		Finish Dimensions Unless Indicated