

# BOX-TYPE, MULTI-STUB DATA BUS COUPLERS

North Hills manufactures a full line of multi-stub couplers for MIL-STD-1553 with up to 8 transformer coupled stub ports and industry standard connectors.

All North Hills couplers provide 55 dB common mode rejection (CMR) and are packaged in a hot-tinned cold rolled steel case which is solder-sealed for superior environmental, EMI and corrosion protection. These couplers are ideal for airborne applications and inexpensive enough for use in test and development applications.

A full environmental qualification report, including gunfire vibration, and mechanical drawings are available upon request for select products.



North Hills Model # DB50010 Box-Type, 5-Stub Data Bus Coupler.

## Features:

- Better than 45 dB common mode rejection (CMR)
- All industry standard connectors
- High EMI resistance

## Benefits:

- Flight qualified
- Low cost
- In stock

## Electrical Specifications:

All parameters are in accordance with MIL-STD-1553B and Notice 2.

Droop	20% Maximum (250 kHz)
Overshoot and Ringing	$\pm 1.0V$ Peak (250 kHz square wave with 100 ns max rise and fall)
Common Mode Rejection	-45.0 dB (Min) @ 1 MHz
Fault Protection	$59\Omega \pm 1\%$ , 1 Watt per MIL-R-39007
Turns Ratio	1:1.41
Stub Voltage	$1.0V_{PP}$ to $14.0V_{PP}$ transformer coupled
Operating Temperature	-55°C to +125°C
Storage Temperature	-55°C to +150°C
Electrical Notes	$R1=R2= 59\Omega$ (1 watt per MIL-R-39007), $Z_0 =$ Nominal Line Impedance of Bus $78\Omega$ , $N = 1.41$

Higher temperature units available.

Specifications subject to change without notice.



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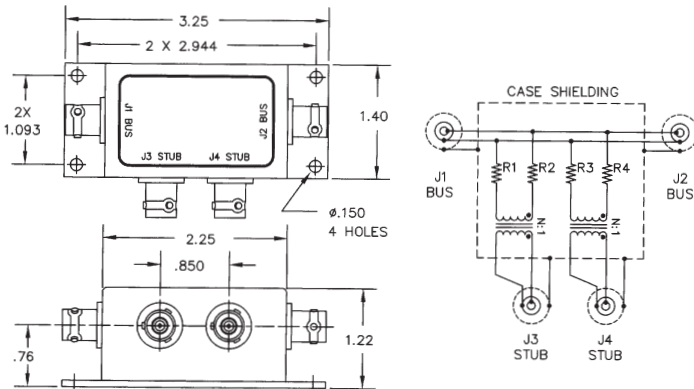


Fig. 1. Dimensions for Part# NH12864

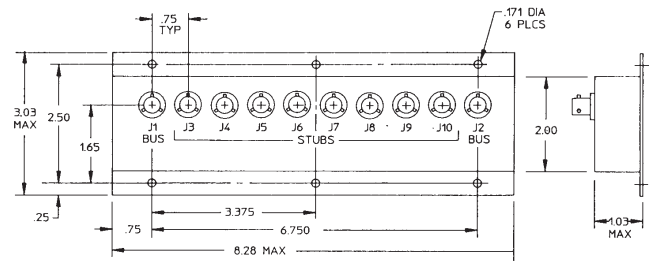


Fig. 2. Dimensions for Part#s DB80031, DB80091 (Same outline dimensions apply for DB60010)

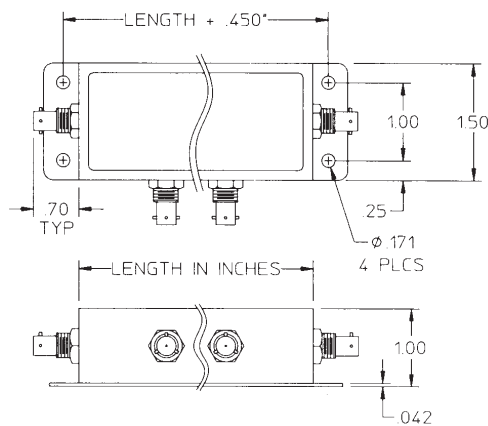
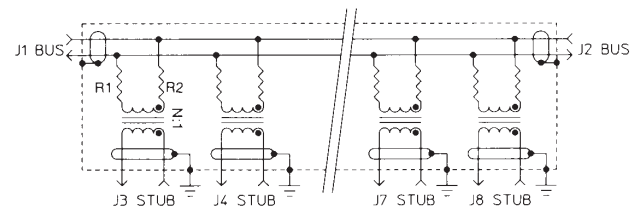


Fig. 3. Dimensions for Part #'s DB20010 to DB50040



## Ordering Information:

Model #	# of Stubs	Input Imp. (ohms)	Trompeter Connector (Or Equivalent)		Length (inch)	Weight (grams)	Recommended Terminator
			Female	Mating			
DB20010	2	(a) 1500	BJ77	PL75	3.125	160	RT500078
NH12864	2	1500	BJ77	PL75	2.25	150	RT500078
DB30010	3	1000	BJ77	PL75	4.000	206	RT500078
DB40010	4	750	BJ77	PL75	4.875	256	RT500078
DB50010	5	600	BJ77	PL75	5.750	300	RT500078
DB20020	2	1500	BJ371	PL375	3.125	160	RT600078
DB30020	3	1000	BJ371	PL375	4.000	206	RT600078
DB40020	4	750	BJ371	PL375	4.875	256	RT600078
DB50020	5	600	BJ371	PL375	5.750	300	RT600078
DB20030	2	1500	BJ157	PL155	3.125	175	RT700078
DB30030	3	1000	BJ157	PL155	4.000	196	RT700078
DB40030	4	750	BJ157	PL155	4.875	276	RT700078
DB50030	5	600	BJ157	PL155	5.750	316	RT700078
DB20040	2	1500	BJ3150	PL3155	3.125	175	RT800078
DB30040	3	1000	BJ3150	PL3155	4.000	196	RT800078
DB40040	4	750	BJ3150	PL3155	4.875	276	RT800078
DB50040	5	600	BJ3150	PL3155	5.750	286	RT800078
DB60010	6	500	BJ77	PL75	8.28	500	RT500078
DB80031	8	375	BJ157	PL155	8.28	590	RT700078
DB80091	8	375	BJ77	PL75	8.28	590	RT500078

(a) 75 kHz to 1.0 MHz (Stub Open Circuited)

[Click here for a full list of accessories](#)

## Material Specifications:

(unless otherwise specified)

Case	0.031 CRS
Base Plate	0.043 CRS
Finish	Hot Tin Dip
Color	MIL-E-15090 Lt. Blue Enamel
Bottom surface is unpainted.	
All dimensions are in inches, nominal dimensions shown.	

### Terminations

Part #	Plug Description
RT500078	PL75
RT600078	PL375
RT700078	PL155
RT800078	PL3155

### RFI Caps

Part #	Plug Description
RT500000	PL75
RT600000	PL375
RT700000	PL155
RT800000	PL3155

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