

# IN-LINE MINI DATA BUS COUPLER

North Hills has developed a series of miniature data bus couplers for programs that are weight sensitive and have limited space and volume for installation. The couplers meet all MIL-STD-1553 electrical requirements and are manufactured using North Hills transformers and MIL-R-39007 one Watt minimum resistors. The parts can be purchased with internal termination resistors to further reduce installation complexity and parts count.

The couplers are supplied with one foot lengths of MIL-C-17/176-00002 cable without connectors for in-line splicing. Other lengths are readily available and connectors can be added if required. The couplers can also be provided as a fully tested harness assembly ready for installation.



North Hills Model # DB20015 In-Line Mini Coupler.

## Features:

- Internal terminating resistor
- New slender design

## Benefits:

- Easy to install -- reduces part count
- Ideal for programs that are weight sensitive and have limited space

## Electrical Specifications:

All parameters are in accordance with IAW MIL-STD-1553B, Notice 1.

Droop	20% Maximum @ 250 kHz
Overshoot and Ringing	$\pm 1.0V$ Peak (250 kHz square wave input with 100 ns maximum rise and fall time)
Common Mode Rejection	-45.0 dB (Max.) @ 1 MHz
Fault Protection	$59\Omega \pm 1\%$ , 1 Watt per MIL-R-39007
Input Impedance of Transformer <sup>1</sup>	3000 $\Omega$ minimum (75 kHz to 1.0 MHz)
Stub Voltage	1.0V to 14.0V <sub>pp</sub> transformer coupled
Operating Temperature	-55°C to 125°C
Storage Temperature	-55°C to 155°C
Electrical Notes	Isolation Resistors $R_S = 0.75 Z_o$ (1W Min. Per MIL-R-39007) Termination Resistor $R_T = 76.8 \text{ ohms} \pm 1\%$ (1W Min. Per MIL-R-39007) Nominal Line Impedance of Bus $Z_o = 77\Omega$ Transformer Turns Ratio = $1:1.41 \pm 3\%$

Higher temperature units available.

<sup>1</sup> Individual input open-circuit

*Specifications subject to change without notice.*



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Ideal for programs that are weight sensitive and have limited space and volume for installation.

## DB 20015

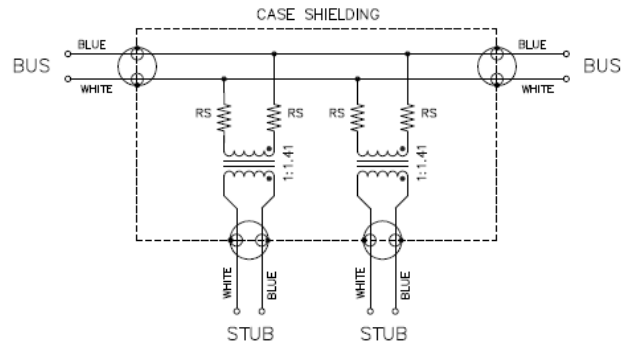
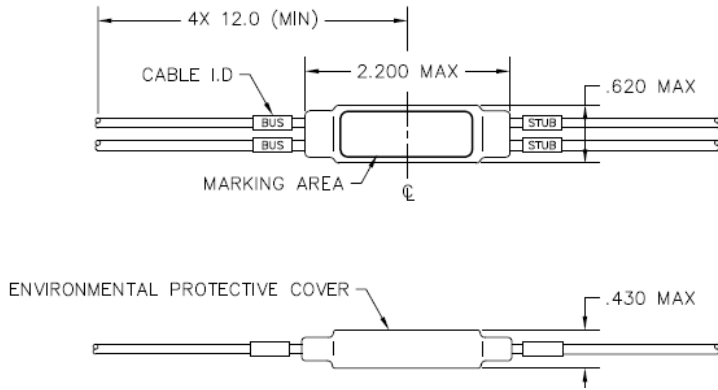


Figure 1.

## DB 22015

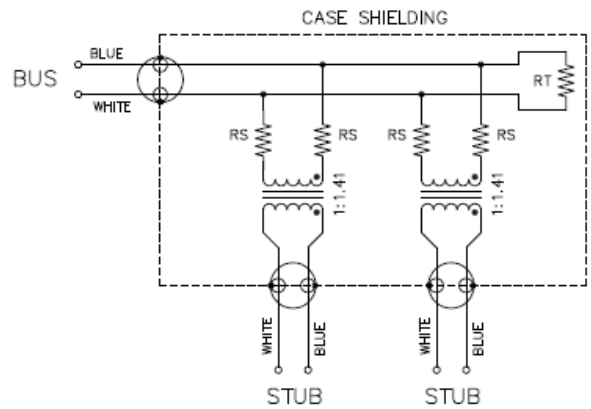
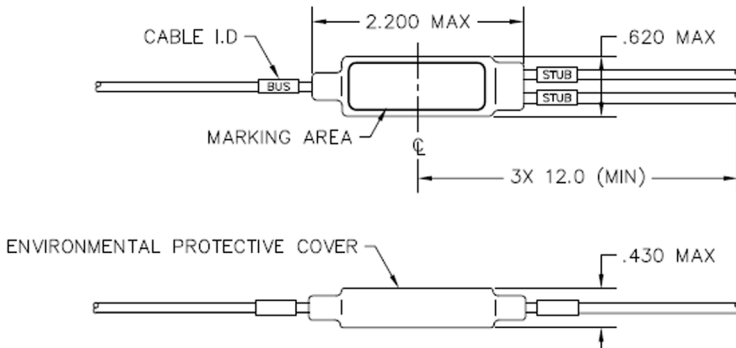


Figure 2.

### MATERIAL SPECIFICATIONS:

*Unless otherwise specified*

Cable:	Per MIL-C-17/176-00002
Case Material:	Cold Rolled Steel, Hot Tinned
Weight :	15 grams (excluding cables)
Environmental Sleeve:	Per MIL-DTL-23053/5, Color: Black.
All cables identified with marked heat shrink sleeves.	
Dimensions include environmental protective cover.	

### ORDERING INFORMATION:

Model #	Description	Figure
DB20015	2 Stub	1
DB22015	2 Stub with Terminator	2

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