



The ModBus option module has been specifically designed for use with the DHC-100 Positioner via plug and socket installation. This module provides an isolated RS-485 bus connection using the ModBus protocol. The on-board screw terminal strip provides easy connection to the bus (Terminals A, B, & Common). With an input impedance of 96K ohms, up to 256 units can be connected on the bus. On-board dip switches allow configuring the module for various bus settings: mode, baud rate, parity, node address, and line terminating resistor.

Standard Features

- ModBus option module plugs directly into DHC-100 positioner card
- Selectable RTU or ASCII mode
- Selectable Even Parity or No Parity
- Selectable Baud Rate: 9600, 19.2K, 57.6K, 115.2K
- Node Address Setting: 0 - 255
- Selectable Line Terminating Resistor

Specification

BUS CONNECTION

Type: ANSI TIA/EIA RS-485 (electrically isolated up to 1500 Vrms)

Protocol:

ModBus (selectable RTU or ASCII mode)

Logic "1": +VBA

Logic "0": -VBA

Selectable Address: 0 - 255 (1 to 247 usable)

Selectable Line Terminating Resistor (RBA): 150 ohm

Line Polarization: not required

CABLE CHARACTERISTIC IMPEDANCE

A value of 100 ohms or greater may be preferred, especially for 19.2K and higher baud rates

TRANSMITTER OUTPUT

Differential Output Voltage (VBA):

5V max @ no load

1.5V min @ 54 ohm load

Output Short Circuit Current:

A to B: 95mA typical

A or B to COM: 113mA typical

TRANSMITTER INPUT

Input Impedance (RBA): 96K ohms min (1/8 node)

Input Logic Threshold Voltage (VBA): 30mV min, 200 mV max

Input Hysteresis: 20mV typical

ENVIRONMENTAL

Operating Temperature Range: 0 C to 60 C

Storage Temperature Range: -40 C to 85 C

Relative Humidity Range: 0 to 90% (noncondensing)

| BAUD RATE | RTU MODE CHARACTER PERIODS | |
|-----------|----------------------------|-------------|
| | T1.5 (usec) | T3.5 (usec) |
| 9800 | 1.719 | 4.010 |
| 18.2 | 859 | 2.005 |
| 57.6K | 286 | 688 |
| 115.2K | 143 | 334 |

Wiring Diagram

