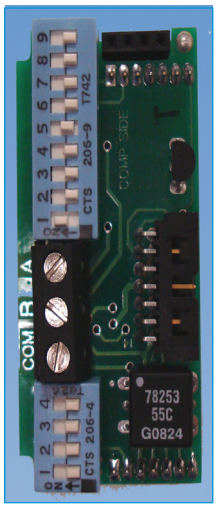
Series 92/94 Modbus Module



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

Specifications

BUS CONNECTION

Type: ANSI TIA/EIA RS-485 (electrically isolated up to 1500 V_{RMS})
Protocol:
ModBus (selectable RTU or ASCII mode)
Logic "1": $+V_{BA}$
Logic "0": $-V_{BA}$
Selectable Address: 0 – 255 (1 to 247 usable)
Selectable Line Terminating Resistor (R_{BA}): 150 ohm
Line Polarization: not required

BAUD RATE	RTU MODE CHARACTER PERIODS	
	t1.5 (usec)	t3.5 (usec)
9600	1,719	4,010
19.2	859	2,005
57.6K	286	668
115.2K	143	334

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 (V_{BA}):
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 (R_{BA}): 96K ohms min (1/8 node)
Input Logic Threshold Voltage (V_{BA}): 30mV min, 200 mV max
Input Hysteresis: 20mV typical

ENVIRONMENTAL

Operating Temperature Range: 0^0 C to 60^0 C
Storage Temperature Range: -40^0 C to 85^0 C
Relative Humidity Range: 0 to 90% (noncondensing)

Wiring Diagram