

The CarnesLink option is factory installed and gives you the ability to monitor and control your Carnes humidifier(s) by using your building management system (BMS). CarnesLink can terminate a network for end-of-line units and isolate power from the main controllers, thus providing added protection to both the network communication lines and the humidifier control board. CarnesLink also provides a relaying function to the network by pulling the communication lines to proper voltage levels if voltage sag exists. The CarnesLink communication protocols included are BACnet® (MS/TP), Modbus® (RTU), Metasys® (N2), and Siemens® (FLN).

CarnesLink features include:

- Control multiple humidifier(s) settings
- Monitor 26 primary humidifier functions
- Internal network terminator selections
- Power supply isolation for increased protection of network and humidifier(s)
- Communication relay functionality to help with network voltage sag

Primary Humidifier Functions:

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| <ul style="list-style-type: none"> • On, Off, Drain Control • Cylinder Life Counter Time Value (hours) • Service Required Indication • Water Filling Indication • Water Draining Indication • Contactor Indication • Air Flow Indication • Control Setpoint Value • High Limit Value • Door Interlock Indication • Fan Speed Indication & Control (%) • Filling Timeout Value & Control (mins) • Boil Down Timer Value & Control (mins) | <ul style="list-style-type: none"> • Steam Output Value (lb/hr, kg/hr) • Reduced Setpoint Value • Max Setpoint Value (lb/hr, kg/hr) & Control • Humidistat Type Indication & Control • Humidistat Value (%RH) • Humidity Setpoint Value & Control (%RH) • High Water Indication • Auto Dim Indication & Control • Hibernation Drain Indication & Control • Drain Pulse Indication & Control • Output Units Indication & Control (lb/hr, kg/hr) • Drain Length Value & Control (mins) • Reduced Setpoint Timer Value & Control (hours) |
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Table 1: Wiring Type and Description

Protocol	Signal Type	Recommended Cable	Polarity		Max. Distance of Wire Run
			Data- (D-)	Data+ (D+)	
BACnet® MS/TP	RS-485 Half Duplex	18 to 24 AWG Shielded Twisted Pair 120 Ohms (max.)	Net-	Net+	Unterminated 1000 ft. (~300 m.)
Modbus® RTU					Terminated 4000 ft. (~1200 m.)
Metasys® N2			TX- RX-	TX+ RX+	2000 ft. (~600 m.)
Siemens® FLN			D-	D+	

Table 2: Communication Settings

Protocol	Address Range (Default: 86)	Baud Rate Range (Default: 9600)	Parity (Default: No Parity, 1 Stop-Bit)	Device Instance (Default: 869)
BACnet® MS/TP	1 - 127	9600 - 115200	Fixed at: 0 = No Parity, 1 Stop-Bit	0 - 9999
Modbus® RTU	1 - 247	2400 - 115200	0 = No Parity, 1 Stop-Bit 1 = Odd Parity, 1 Stop-Bit 2 = Even Parity, 1 Stop-Bit 3 = No Parity, 2 Stop-Bit	Not Applicable
Metasys® N2	1 - 255	Fixed at 9600	Fixed at: 0 = No Parity, 1 Stop-Bit	
Siemens® FLN	1 - 98	2400 - 115200	Fixed at: 0 = No Parity, 1 Stop-Bit	

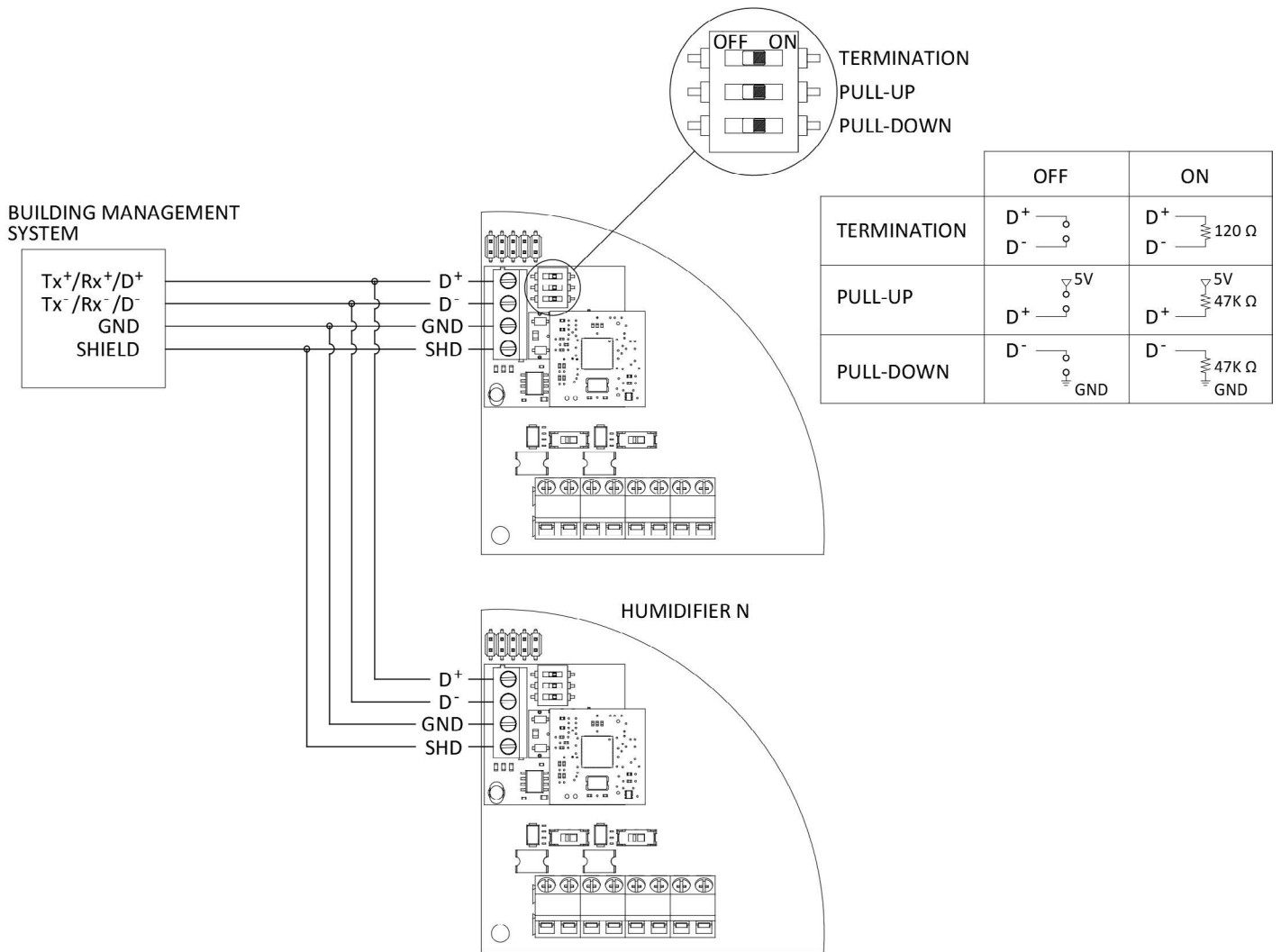


Figure 1: BMS and CarnesLink System Wiring Diagram and Module Functions for Multiple Units