FEATURES

- ASCII command support for all 1-Wire devices.
- RS485 Multidrop with user selectable address, (1 of 26).
- 30 1-Wire sub-networks each individually dampened.
- All connections are quick-connect screw connectors.
- Automatically adjusts for variable 1-Wire bus conditions.
- Automatically provides smart strong-pull-up for sensors.
- 2000 feet, 200 devices per CAT-5 twisted pair 1-Wire bus.
- Supports up to 26 1-Wire networks per host serial port.
- User selectable Baud rates from 1200 to 115K Baud.
- User selectable error-check mode.
- Pass Through RS485 and Power for easy network connection.
- Provides Search, Conditional Search and Family Search commands.
- Supports Touch Memory File Structure for Dallas Semiconductor iButtons.
- Automatically generates and checks CRC16 for TMEX files.
- Block mode commands support all 1-Wire device functions.
- ESD Protection more than 27kV (IEC801-2 Reference Model.) on the 1-Wire bus.
- Enclosed electronics.

DESCRIPTION

The HA5-30 is an RS485 to 1-Wire interface, which provides an ASCII command set for embedded controller and DOS based applications that need to accommodate Dallas Semiconductor iButton and EDS 1-Wire sensors and controls. The HA5-30 provides 30 independently dampened 1-Wire sub-networks providing a total of up to 2000 feet of CAT-5 network cable and up to 200 1-Wire devices. This design allows an RS485 backbone of up to 4000 ft. of CAT-5 cable to connect as many as 26 HA5-30 sub-network junctions of up to 200 1-Wire devices each. This arrangement provides a workable topology for wiring large buildings.

The HA5-30 relieves the host of the burden of generating the time–critical 1–Wire communication waveforms while supporting all 1-Wire devices with simple ASCII commands that can be easily generated. The HA5-30 does all the hard work of interfacing 1-Wire networks. RS485 multidrop provides as many as 26 1-Wire networks from a single host serial-port, broadcast radio or modem. The HA5-30 can perform Search, Conditional search and Family search functions making it easy to acquire the unique 64 bit serial numbers of all connected devices. The HA5-30 constantly performs a dynamic analysis of the network and adjusts the network timing to allow for variable conditions. This results in good performance with both short and long networks with many or only a few devices attached. Many sensor devices require that extra power be delivered during periods of data conversions (DS1920 and DS1820 temperature sensors for example). The HA5-30 automatically provides the extra current these devices require with a built in smart strong-pull-up. Dallas Semiconductor iButtons, which store data in TMEX Touch Memory File format, can be read or written with simple ASCII commands. The HA5-30 will automatically generate and check the CRC16 error checks from Touch Memory File records. The HA5-30 supports analog, digital, and temperature 1-Wire devices and all Dallas Semiconductor iButtons.