

RS485 Modbus Sensors ("Bus Probes")



BP#01

Bus Probes are a family of environmental sensors and a digital input (DI) with an RS485 interface. Bus Probes communicate using the standard Modbus RTU protocol.

At the moment, Tibbo offers six types of Bus Probes:

- An ambient temperature sensor (BP#01)
- An ambient temperature and humidity sensor (BP#02)
- An ambient light sensor (BP#03)
- A three-axis accelerometer (BP#04)
- A flood/leak sensor (BP#05)
- An opto-isolated digital input (BP#06)

Bus Probes are typically wired to a twisted-pair cable, which distributes power and carries the RS485 "+" and "-" lines. All probes accept a supply voltage in the 4V to 15V range. This allows you to power them from 5V sources (for example, the 5V output of the [Tibbit #00-3](#)), as well as standard 12V power supplies. The wide supply voltage range also means that you can allow for a significant voltage drop along the bus (i.e., use a bus cable of considerable length).

BP sensors are very compact (external dimensions only 40 x 36mm) and sport an attractive look and feel. Each sensor has two mounting holes for attaching it to walls and

other surfaces.

Tibbo supplies two [TPS2\(G2\)](#)-compatible Tibbo BASIC applications (see [BP-Tester-UI](#) and [BP-Tester-Web](#)) for convenient setup, testing, and maintenance of Bus Probes. In addition, two web apps ([Bus Probe Test App](#) and [Bus Probe Firmware Updater](#)) offer similar functionality when pairing a Bus Probe with a [Web485 board](#).

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