STRINGLINK™

GEOKON®

MODEL 8020-39



Model 8020-39 StringLink.

APPLICATIONS

The Model 8020-39 StringLink provides a portable interface between GEOKON Addressable Sensor Strings and a variety of systems, including:

- Personal computers
- Readouts
- Data loggers

OPERATING PRINCIPLE

The Model 8020-39 StringLink provides the means to interface GEOKON Addressable Sensor Strings with personal computers, readouts, and data loggers.

The StringLink acts as a bridge between USB-capable readers (USB 2.0 or greater) and GEOKON RS-485 enabled sensor strings. Placed in-line with the system, it provides bidirectional signal conversion between USB and RS-485.

Connection to the GEOKON addressable sensor string is made using a flying-lead or adapter cable.

ADVANTAGES AND LIMITATIONS

Unlike other converters that must be powered by the host or an external supply, the StringLink draws its power from an internal 7.2 V rechargeable Lithium-Ion battery pack, making it suitable for field use where no external power is available. It generates its own 15 volt supply for the RS-485 bus, which is used to power the connected sensor string.

The internal battery pack is recharged through the USB-C connector, which supports two charging rates: a low rate over any USB 2.0 or greater port, and a high rate when connected to a USB Power Delivery (USB-PD) capable source. The unit continues to charge while powered on, and a front-panel blue LED indicates power and charge status.

The StringLink incorporates a variety of safety features, including high-current surge protection, transient voltage suppression, electrostatic discharge protection, and battery pack over-voltage, under-voltage, charge, and temperature protection.

The StringLink operates at a fixed baud rate of 115200 bps and over a temperature range of –20 to +50 °C.

It is housed in a rugged die-cast aluminum enclosure rated to IP65.

COMMUNICATIONS

Communication with GEOKON Addressable Sensor Strings is performed over a half-duplex RS-485 connection using industry standard Modbus® RTU protocol.

The StringLink is designed for use with GEOKON Addressable String systems and operates at a fixed baud rate of 115200 bits per second.

Sensor discovery and readings are managed through the GEOKON Desktop application, which scans the string across addresses 1 to 500, lists detected sensors with their serial numbers and firmware versions, and takes readings on demand.

The StringLink accepts communication with the host over USB 2.0 or greater

TECHNICAL SPECIFICATIONS

Power Supply Input	USB: 5V DC 500 mA USB-PD: 12 V DC, 3 A	Baud Rate	115200 bps
Power Supply Output	15 V DC, 1 A (max)	Operating Temperature	–20 °C to +50 °C
Sleep (Off) Current	200 µA	Battery Charger Operating Temperature	0 °C to +45 °C
Operating Current	12 mA (max)	Enclosure	Die-cast aluminum, IP65
Internal Battery Pack	7.2 V, 6900 mAh Rechargeable Lithium-Ion	Dimensions	163 × 151 × 62 mm
Battery Pack Charging Current	USB 2.0 (low rate): 350 mA, ~24 h to full charge; USB-PD (high rate): 2 A, ~4 h to full charge	Weight	1,361 g
Interface	RS-485 (half-duplex, two-wire differential); USB 2.0 to USB 3.x	—	—

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