GroPoint™
Growing innovation.

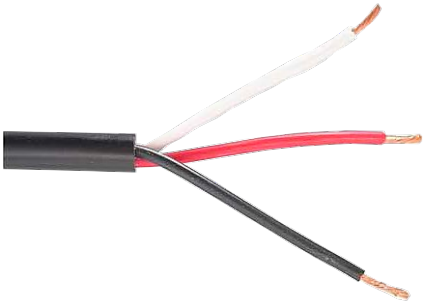
GroPoint Lite

TECHNICAL INFORMATION

The GroPoint Lite soil sensor is robust, reliable and highly accurate, providing cost effective soil moisture and temperature measurements. The sleek light weight design installs quickly with minimal soil disruption. When installed vertically, the sensor averages volumetric moisture content over a soil layer of about 6” (15cm). When installed horizontally, the sensor can be used to measure moisture at a specific soil depth.

Wiring Legend

0-5mA and 4-20mA



- Red: DC input voltage
- White: Analog output
- Black: Ground/Common

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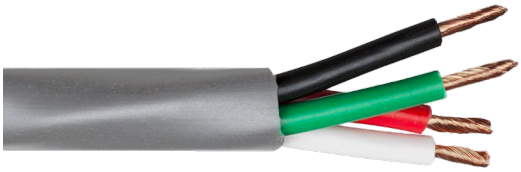
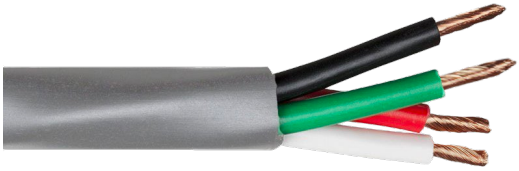
SDI-12



- Red: DC input voltage
- White: SDI-12 I/O
- Green: Ground/Common
- Black: no connection

RS-485



- Red: DC input voltage
- Black: RS-485 I/O A
- White: RS-485 I/O B
- Green: Ground/Common

Rugged Connector

Environmental sealing:
- Integral O-Ring gasket
- IP68 seal rating

Materials:
- Connector shell: thermoplastic
- Shell interior: Elastomeric
- Contacts: Copper alloy
- Contact plating: Gold over nickel

Mounting procedure:
Align connector, push on, rotate bayonet ring until tight.

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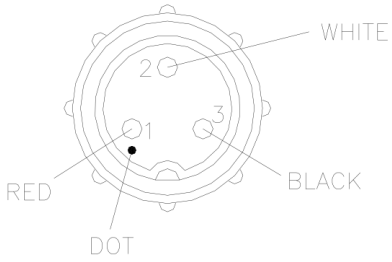
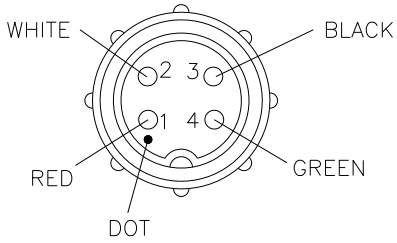
Connector Pinout

Analog



Digital



SDI-12 Command Set

The GroPoint Lite (SDI-12 and RS-485 version) conforms to/implements all aspects of the SDI-12 V1.3 protocol specification (a = sensor address).

Command	Meaning	Response
`a!`	Acknowledge	Device address (default address is '0')
`aI!`	Send identification	Identification string
`aAb!`	Change address	Change device address to ‘b’
`?!`	Address query	Device address
`aM!`	Start moisture measurement	Measurement time and count (e.g. “a0026”)
`aM1!`	Start temperature measurement	Measurement time and count (e.g. “a0023”)
`aC!`	Start concurrent measurement	Measurement time and count (e.g. “a00206”)
`aD0!`	Send data	Measurement results
`aD1!`	Send data	Additional data (if necessary)

All other commands received by the sensor will be acknowledged with the device address only.

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Sensor Start-up Time / Measurement Time

The time from application of power to the SDI-12 power bus until the sensor is ready to receive a command is approximately 75ms. The reported measurement time in response to the `aM!` measure command (where a is sensor address) is 3 seconds, measured from the end of `aM!` command response (`a0022<CR><LF>`) where n is the number of segments. Actual measurement times are less, and a service request is issued as soon as the measurement is completed. Current is at active level (15-20 mA) only during measurement time, otherwise current is less than 0.1 mA.

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