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Signet 9900 Modbus Module

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3-9900.270.091   Rev 4   07/20

Instruction Sheet

3-9900-1P Panel Mount

The Signet 9900 Modbus Module allows the Signet 9900 SmartPro® Transmitter to connect to a Modbus master compatible device. The Modbus Module supports RTU or ASCII modes over serial RS485 communication links.

The Modbus Module has an internal programmable network termination for the communication link enabled by Modbus command.

⚡ **CAUTION**
Exercise care when installing module.
Do not bend connecting pins.

Installation

- **If the 9900 Base Unit will be mounted in a panel**, plug-in modules may be installed either before or after the base unit is mounted.

- **If the 9900 Base Unit will be mounted using the accessory wall mount kit (3-9900.392)**, install plug-in modules first.

- **If the Direct Conductivity/Resistivity Module or Current Loop Module will be included in your unit**, install the Modbus module first and then install Conductivity/Resistivity Module over the Modbus Module.

- Attach the output connector to the terminal block on the Modbus Module prior to installing in the 9900. When inserting the Modbus module with the wiring connector ensure the wires are not pinched by the power or open collector terminal blocks of the 9900.

  1. Disconnect power from the 9900.
  2. Attach the wire harness prior to installing the module.
  3. Carefully align pins and connectors then push module firmly into place (see illustration).
  4. **Ensure the cable is not crimped between the module housing and the 9900 Power or OC terminals.**
  5. To uninstall, squeeze tabs, grasp the module and pull straight out.
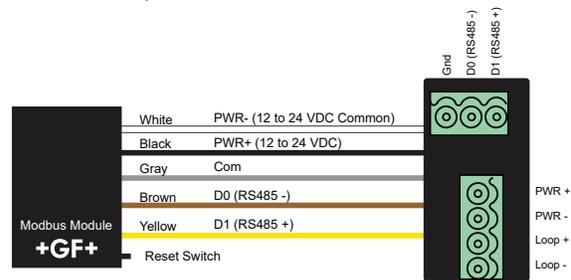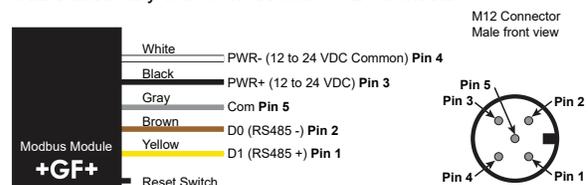
Example showing M2 version
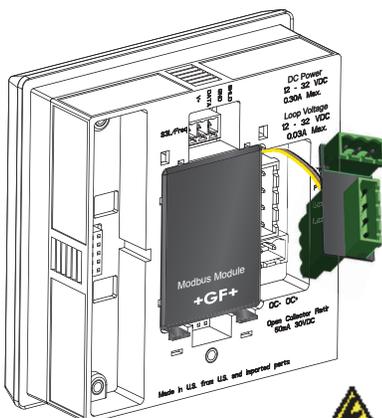
3-9900 Panel Mount Transmitter

Plug in Module, directing wires <u>around</u> Power/OC terminals. **Do not pinch wires!**

⚡ For M2 panel installation. Restrain terminal block assembly prior to shipping.

⚠️ **Avoid Electrostatic Discharge (ESD)**

- Minimize handling of module to reduce the possibility of damage due to ESD.
- Handle module by the edges.
- Never touch any exposed circuitry or contacts.
- Wear an anti-static wristband, stand on an anti-static mat, or keep one hand touching a properly grounded pipe or other properly grounded piece of metal when handling module.

⚡ Important! Do not exceed 32 VDC or permanent damage to the Modbus Module will occur.

3-9900.270-M2 version: Terminal board (Panel Mount Only)
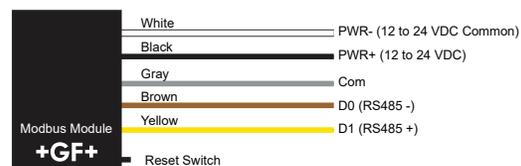Cable assembly with 3" wires, inner-connect to board

3-9900.270-M3 version: with M12 Connector (Field Mount Only)
Cable assembly with 6" wires with M12 Connector

3-9900.270-M4 version: Wire Cable
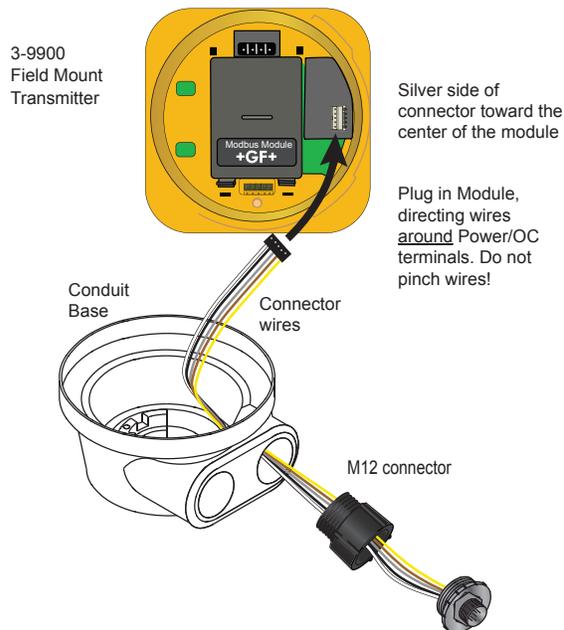Cable assembly with 6" Wires - pig tail

Reset

The 3-9900.270 Modbus Module can be reset back to factory defaults. The diagrams below show the reset procedure for the three versions of the Modbus Module.
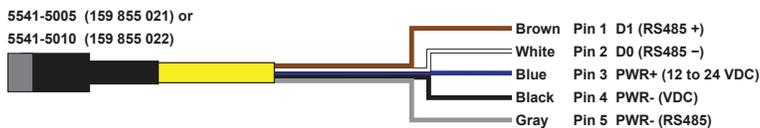
Default Values

Setting	Default Value
Modbus Address	34
Modbus Network Termination	Off
Modbus Mode	RTU
Baud Rate	19200
Parity	Even
Endian	Big

Example showing M3 version

3-9900 Field Mount Transmitter

Silver side of connector toward the center of the module

Plug in Module, directing wires <u>around</u> Power/OC terminals. Do not pinch wires!

Conduit Base

Connector wires

M12 connector

M12 Cable Wiring Diagram

5541-5005 (159 855 021) or
5541-5010 (159 855 022)

Brown	Pin 1	D1 (RS485 +)
White	Pin 2	D0 (RS485 −)
Blue	Pin 3	PWR+ (12 to 24 VDC)
Black	Pin 4	PWR- (VDC)
Gray	Pin 5	PWR- (RS485)

**To Reset the 3-9900.270-M2, 3-9900.270-M3 and 3-9900.270-M4**

1. Located on the Modbus Module, move the reset switch in down position, away from the Open Collector Terminals
2. Cycle power on the unit. This resets unit to factory settings. Once reset, move the reset switch to the up position, toward the Open Collector Terminals.

> **IMPORTANT**
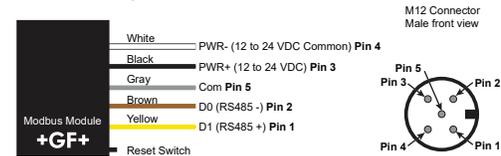> **For normal operation the reset switch must be up, near the Open Collector Terminals.**

3-9900.270-M2 version: Terminal board (Panel Mount Only)
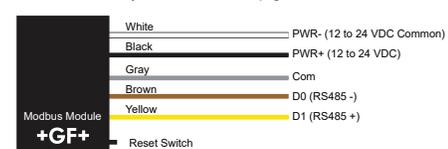Cable assembly with 3" wires, inner-connect to board
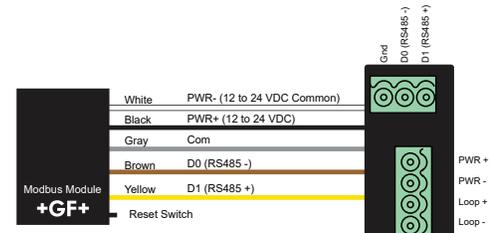
3-9900.270-M3 version: with M12 Connector (Field Mount Only)
Cable assembly with 6" wires with M12 Connector

3-9900.270-M4 version: Wire Cable
Cable assembly with 6" Wires - pig tail

Ordering Information

Mfr. Part No.	Code	Description
3-9900.270-M2	159 200 121	Modbus Module with Terminal Block Assembly
3-9900.270-M3	159 200 122	Modbus Module with M12 Connector Assembly
3-9900.270-M4	159 200 128	Modbus Module with 5 Wire Cable Assembly
3-9900.270-CB1	159 200 123	Replacement Wire Cable Assembly for M1
3-9900.270-CB2	159 200 124	Replacement Terminal Block Assembly for M2
3-9900.270-CB3	159 200 125	Replacement M12 Connector Assembly for M3
3-9900.270-CB4	159 200 129	Replacement Cable Assembly for M4
5541-5005	159 855 021	5 meter (16 ft) M12 cable
5541-5010	159 855 022	10 meter (32 ft) M12 cable

For programming information, please download the Installation and Programming manual at www.gfsignet.com

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