Power Supply and Cabling Options

SmartTrak® 100/101

Power Supply and Cabling Options
SmartTrak 100/101

**Table of Contents**

Power Supplies

100-T8D

The 100-T8D is a 2-lead, 24 VDC power supply with a 15-pin D-connector, 0.75 amp, 110-230 VAC, CE approved (see Figure 1 in Appendix A for basic configuration). This power supply/connector combination is the simplest option to power your meter or controller, compatible with low flow 100 Series controllers and all size 100 Series meters (see Power Supply Compatibility chart below). Use the provided display software to read the flow or provide a flow signal. This accessory provides power only. When ordering, specify your plug preference in parentheses: (US), (UK), (EU)

If additional wires are needed for analog or digital input/output signals, a full cable and bare fly lead power supply (100-T8F) to attach to the cable are required. See full cables such as the 100-Analog Cable and order with the 100-T8F power supply.

Note: The 100-T10D is a 2-lead, 24 VDC power supply with a 15-pin D-connector with a larger capacity, 1.25 amp, 110-230 VAC power supply, compatible with medium and high flow 100 Series controllers only, CE approved.

See Figures 1, 3, 4, 6, and 7 in Appendix A for configuration diagrams.
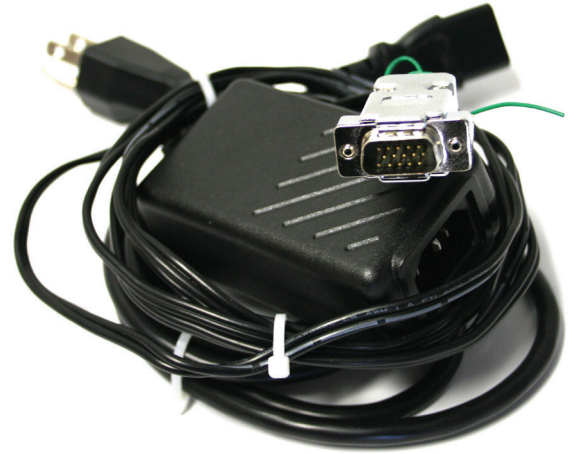
100-T8D

100-T8F

The 100-T8F is a 24 VDC power supply with two bare fly leads and no connector, 0.75 amp, 110-230 VAC, CE approved. This power supply is compatible with low flow 100 Series controllers and all size meters (see Power Supply Compatibility chart below). The two bare fly leads need to be soldered to the two appropriate wires of one of the communication cables below such as the 100-Analog Cable (see Figure 2 in Appendix A). When ordering, specify your plug preference in parentheses: (US), (UK), (EU)

Note: The 100-T10F is a 24 VDC power supply with two bare fly leads and no connector with a larger capacity, 1.25 amps, 110-230 VAC power supply compatible with medium and high flow 100 series controllers, CE approved.

See Figures 2 and 5 in Appendix A for configuration diagrams.

100-T8F

Power Supply Compatibility		
Power Supply	Max Output	Meter and Controller Compatibility
100-T8 (D or F)	24 VDC at 750 mA	All meters (M100 and M101) Low flow controllers (C100L and C101)
100-T10 (D or F)	24 VDC at 1.25 amp	Medium and high flow controllers (C100M, and C100H

Communication Cables

100-Analog Cable
Model Codes | C25

This cable is a 15-conductor "do everything" cable with flyleads . You can order the standard 25-foot cable. The fly leads on this cable allows you to create your own connection to your power supply, analog or digital output, control signals (controllers only), and your PLC. Consult your wiring diagram in the Instruction Manual or Installation Guide and use the wires you need or see Wiring Definition for Optional Communication Cable (pinout) chart on page 5, isolate and insulate any unused wires.

See Figures 2, and 5 in Appendix A for configurationdiagrams.

100-Analog Cable

100-RS232 Digital Cable
Model Code | 100-CRN

A 100-RS232 Digital Cable provides a simple RS-232, 3-wire connection to your computer. One end of this 6-foot cable plugs into the side of the SmartTrak® 100, and 101 device at the "RJ45" connector (Caution: this looks like an Ethernet connection but cannot be used as such), and the other end plugs into your computer's 9-pin serial port. If you do not have this port on your computer, and many new computers do not, you will need to convert to USB using an easily-available serial/USB adaptor such as Sierra's 100-SerialUSB on page 5. Since this cable does not connect to a power supply, your unit must still be powered using the 15-pin connection and a 24 VDC supply. See power supplies on page 3.

Note: The RJ45 connector on the side of the SmartTrak 100, and 101 can also be used for an optional Remote Pilot Module which eliminates the use of this 100-RS232 Digital Cable (see Figure 3 in Appendix A).

See Figures 4 and 5 in Appendix A for configuration diagrams.

100-RS232 Digital Cable

Accessory Options

Serial to USB
Model Code | 100-SerialUSB

The 100-SerialUSB is a USB to serial converter. When connecting the 100-RS232 Digital Cable to a computer, it must have a standard 9-pin serial port. If the computer does not have a 9-pin serial port, you will need to convert to USB using an adaptor such as this 100-SerialUSB.

*See Figures 4, and 5 in Appendix A for configuration diagrams.*

Serial to USB

15-pin Connector D-kit
Model Code | 100-C0

This connector set includes a 15-pin connector if you prefer to construct your own cable for power and/or signals going in or out of your device. If ordering after sale, this is called a 100-15pin D-kit (100-C0). If ordering with a flow meter or controller, C0 will appear at the end of the model number.
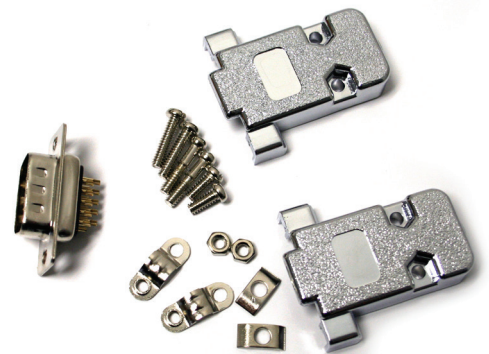
Serial to USB

Wiring Definition for Optional Communication Cable (pinout)		
Pin #	Wire color in cable	Function
1.	Brown	ground/output
2.	Red	0-5 VDC output (or 0-10, 1-5 VCD
3.	Orange	Analog ground/RS-232
4.	Pink	Valve override purge
5.	Yellow	Power return (-)
6.	Green	Power input (+)
7.	Green/White	RS-232 transmit (out)
8.	Blue	Setpoint
9.	Purple	Not used
10	Gray	Analog ground/setpoint
11.	White	Refrence voltage
12.	Black	Valve override close
13.	Brown/White	RS-232 recieve (in)
14.	Red/White	4-20 mA output
15.	Red/Black	Not used
	Shield Wire (no insulation)	Chassis (earth) ground
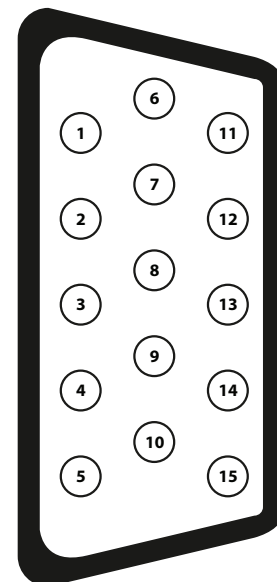
HD DB-15 Connector Pin Configuration (on the instrument)

Remote Pilot Module
Model Code | 100-RDO

This remote display/touchpad "Pilot Module" connects to the RJ45 socket and allows the user to control and read from a 10-foot distance. This module can also be panel mounted (panel mount bracket and rear connections shown at right).

See Figure 3 in Appendix A for configuration diagram.

Remote Pilote Module
Rear View

Remote Pilote Module
Model Code | 100-RDO

Panel Mount Bracket

Compod Modbus Communication Module
Model Codes | 100-CMNR, 100-CMDD

The 100-CMNR is a Compod with RS-485 MODBUS communication mounted on the enclosure. The 100-CMDD is the Compod with RS-485 MODBUS communication and display mounted on the enclosure. If your meter or controller was ordered with a "Compod" module for Modbus RTU, you will need one or more additional cables:

100-COMPOD COMPUTER CABLE Model Code | 100-CRC
The Compod Computer Cable is a 10-foot compod cable that connects your mounted Compod (9-pin) to your computer via the included RS-485/USB converter.
See Figures 6 and 7 in Appendix A for configuration diagrams.

100-COMPOD DAISY CHAIN CABLE Model Code | 100-DCC
The Compod Daisy Chain Cable is a 10-foot cable that runs from one 9-pin Compod connector to the next. This cable has no power, just RS-232 Tx, Rx, and shield/ground. You will still need a separate power supply with a 15-pin connection and 24 VDC power for each device. See power supplies above.
See Figure 7 in Appendix A for configuration diagram.

100-CMDD

Appendix A | Communication Cable / Power Supply Configurations
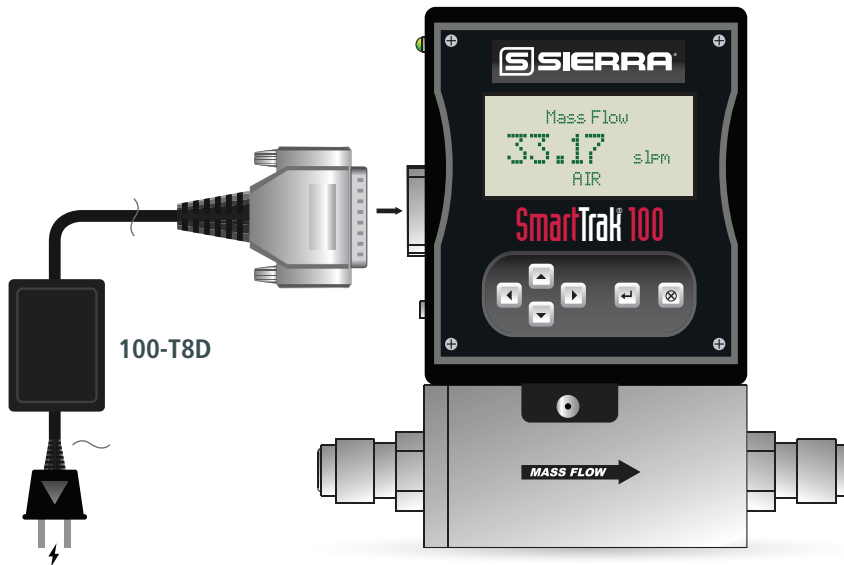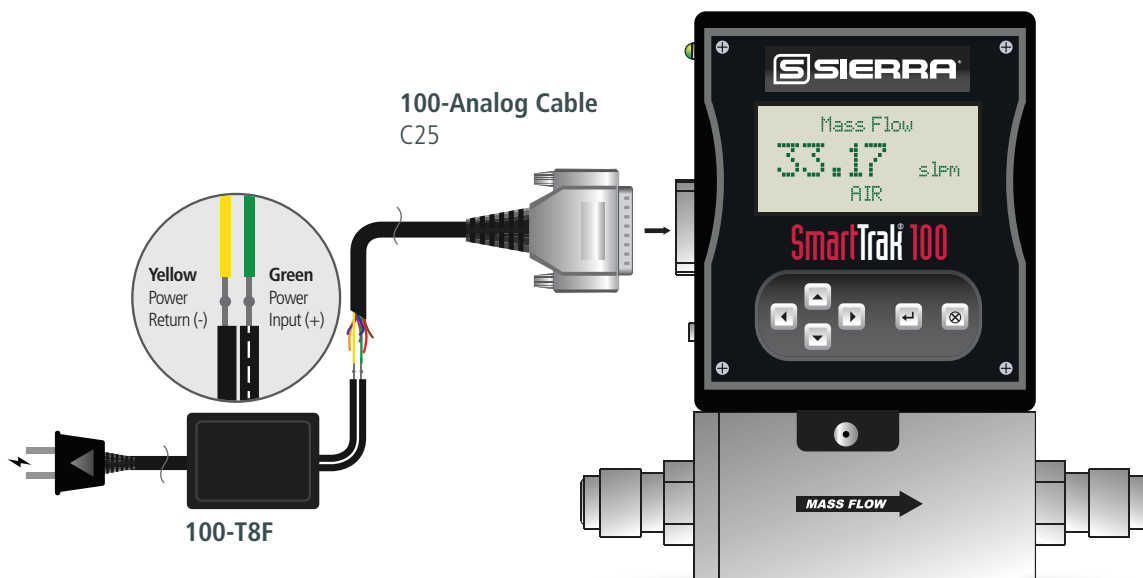
Figure 1 | 100-T8D Power Supply

100-T8D

Figure 2 |100-Analog Cable/100-T8F Power Supply

100-Analog Cable
C25

Yellow Power Return (-)

Green Power Input (+)

100-T8F

Note: It is best to verify + and - power supply wires with a voltmeter.

Figure 3 | Remote Pilot Module/100-T10D Power Supply

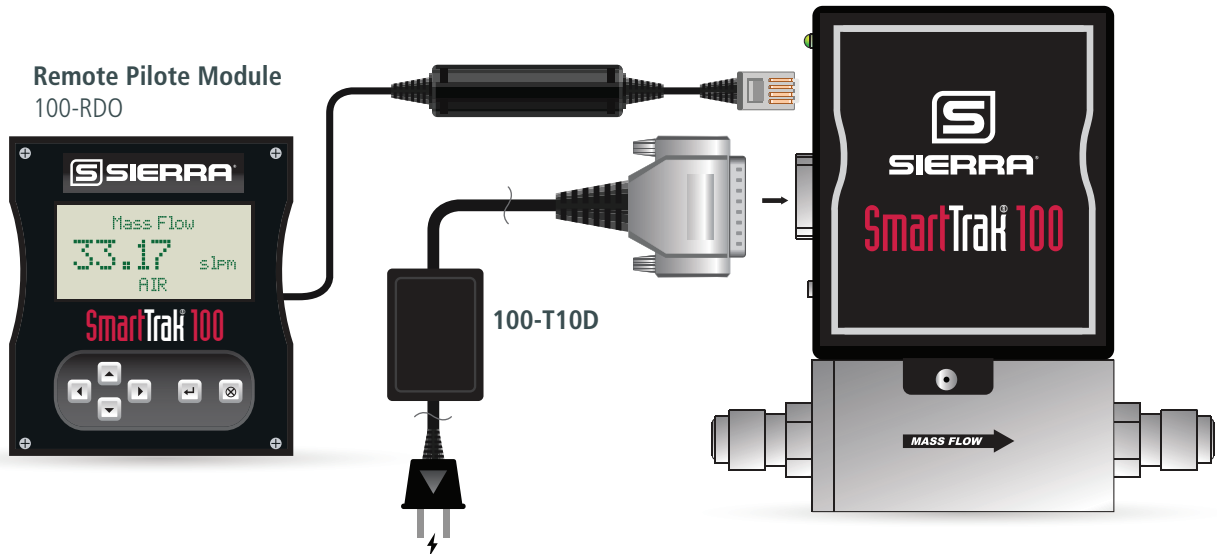**Remote Pilote Module**
100-RDO

100-T10D

Figure 4 | 100-RS232 Digital Cable/Serial to USB/100-T10 Power Supply

Serial to USB
100-SerialUSB

← To Computer

100-RS232 Digtal Cable
100-CRN
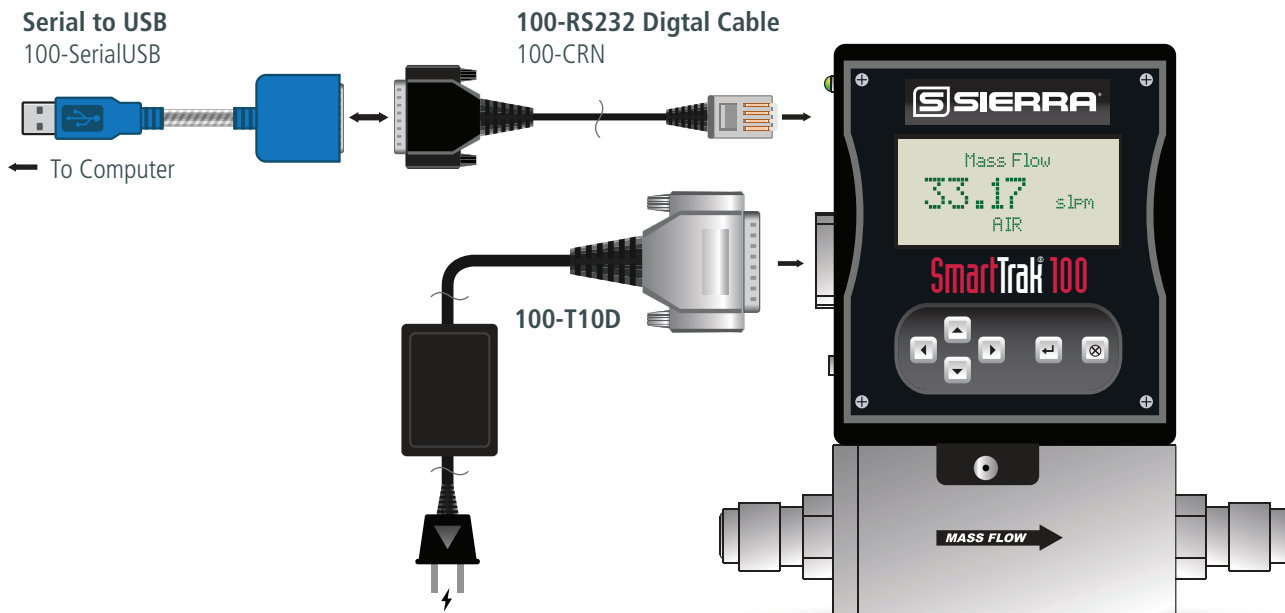
100-T10D

Figure 5 | 100-Analog Cable/100-RS232 Digital Cable/Serial to USB /100-T10F Power Supply

Serial to USB
100-SerialUSB

← To Computer

100-RS232 Digtal Cable
100-CRN

Yellow Power Return (-) **Green** Power Input (+)

100-Analog Cable
C25

100-T10F

Mass Flow
33.17 slpm
AIR
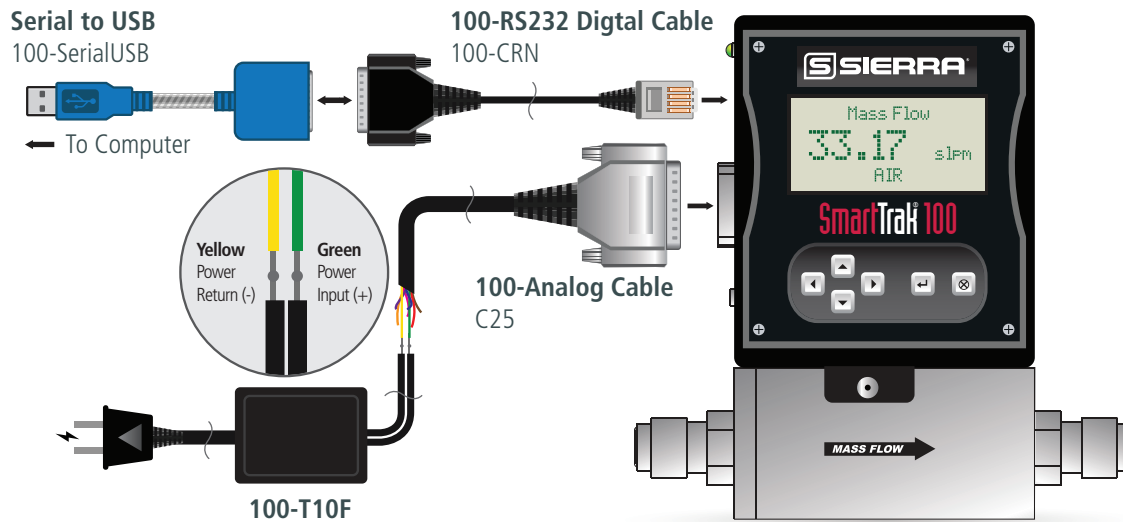
Figure 6 | Compod Computer Cable/100-T8D Power Supply

② **100-Compod Computer Cable**
Model Codes | 100-CRC

← To Computer

① **100-T8D**

Side View
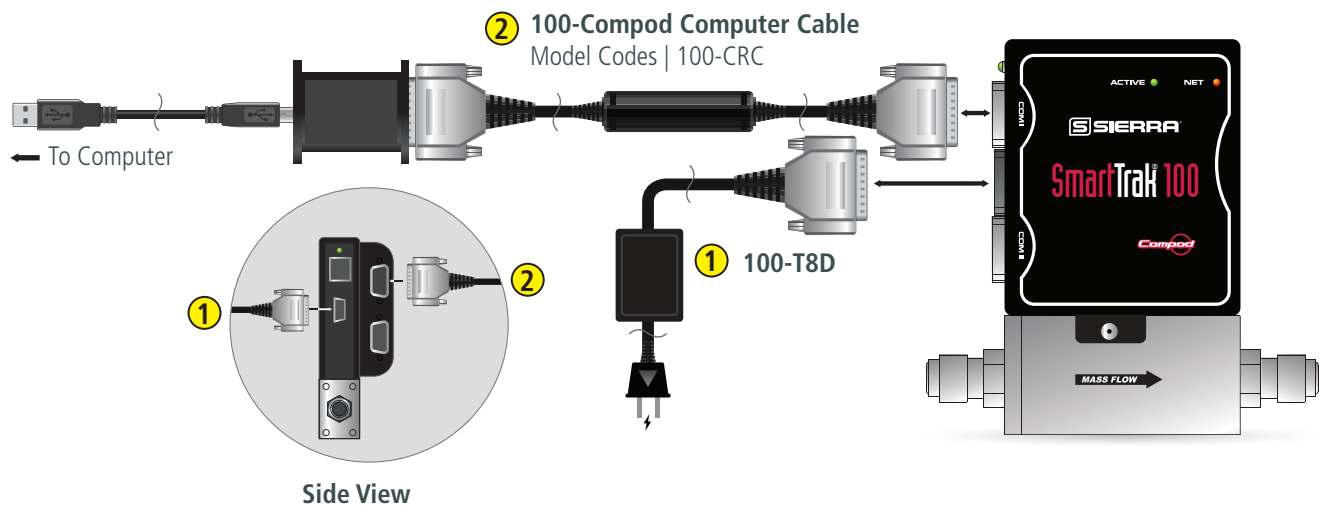
Figure 7 | Compod Computer Cable/100-Compod Daisy Chain Cable/100-T8D Power Supply

Side View

Side View

100-Compod Computer Cable
Model Codes | 100-CRC

To Computer

100-T8D

100-T8D

100-Compod Daisy Chain Cable
Model Codes | 100-DCC

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