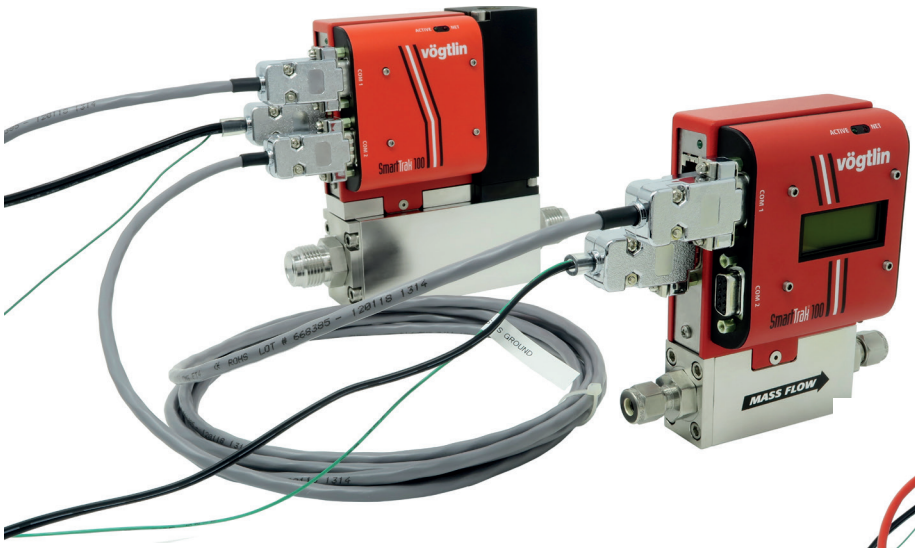
Power Supply and Cabling Options

SmartTrak®100/101/140



vögtlin instruments

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SmartTrak 100/101/140

Table of Contents

Power Supplies

100-T8D

The 100-T8D is a 2-lead, 24 VDC power supply with a 15-pin HD-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)

100-T8D

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.

* 15-pins HD connectors have 15 pins in the size of the 9-pin d-sub connector. +You find these type of connectors also used a lot for VGA monitor connectors. All 100 series use these as their main connector plug.

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

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)

100-T8F

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.

Model	Part No.	Power	Mains plug				Secondary connection		Compatibility	
			US	EU	UK	CH	Flying Lead	15pin Connector	M101, M100, C101,C100L	C100M, C100H, C100H1, C100H2, C140
100-T8D (US)	126-7101	24V 0.75A 18W	x					x	x	
100-T8D (EU)	126-7102	24V 0.75A 18W		x				x	x	
100-T8D (UK)	126-7103	24V 0.75A 18W			x			x	x	
100-T8D (CH)	126-7104	24V 0.75A 18W				x		x	x	
100-T8F (US)	126-7105	24V 0.75A 18W					x		x	
100-T8F (EU)	126-7106	24V 0.75A 18W					x		x	
100-T8F (UK)	126-7107	24V 0.75A 18W					x		x	
100-T8F (CH)	126-7108	24V 0.75A 18W					x		x	
100-T10D (US)	126-7109	24V 1.25A 30W	x					x	x	x
100-T10D (EU)	126-7110	24V 1.25A 30W		x				x	x	x
100-T10D (UK)	126-7111	24V 1.25A 30W			x			x	x	x
100-T10D (CH)	126-7112	24V 1.25A 30W				x		x	x	x
100-T10F (US)	126-7113	24V 1.25A 30W	x				x		x	x
100-T10F (EU)	126-7114	24V 1.25A 30W		x			x		x	x
100-T10F (UK)	126-7115	24V 1.25A 30W			x		x		x	x
100-T10F (CH)	126-7116	24V 1.25A 30W				x	x		x	x

Communication Cables

100-Analog Cable

Model Codes | C1, C3, C10, C25, C(x)

This cable is a 15-conductor "do everything" cable with fly leads. You can order the standard 1-foot, 3-foot, 10-foot, 25-foot or custom-length cable by specifying 100-Analog Cable C(x) where x is the length in feet. The fly leads on this cable allow 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.

100-Analog Cable

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

Model Code	Partnumber	Length
100-C1	126-7123	300 mm
100-C3	126-7124	1 meter
100-C10	126-7125	3 meter
100-C25	TBD	8 meter

100-RS232 Digital Cable

Model Code | 100-CRN | Part No. 126-7127

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, 101, and 140 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, 101, and 140 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).

100-RS232 Digital Cable

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

Accessory Options

Serial to USB

Model Code | 100-SerialUSB | Part No. 126-7131

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.

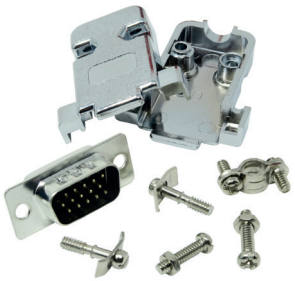
See Figures 4, and 5 in Appendix A for configuration diagrams.

Serial to USB

15-pin Connector D-kit

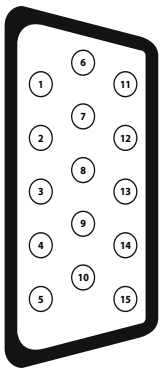
Model Code | 100-C0 | Part No. 126-7122

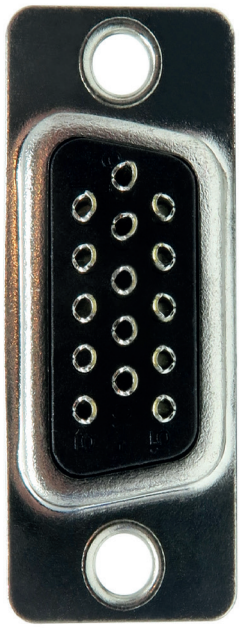
This connector set includes a 15-pin connector if you prefer to construct your own cable for power and/or signals going in or out of your device. If ordering after sale, this is called a 100-15pin D-kit (100-C0). If ordering with a flow meter or controller, C0 will appear at the end of the model number.



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 | Part No. 126-1717

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
Model Code | 100-RDO

Remote Pilote Module
Rear view

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 | Part No. 126-7129

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 | Part No. 126-7130

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.

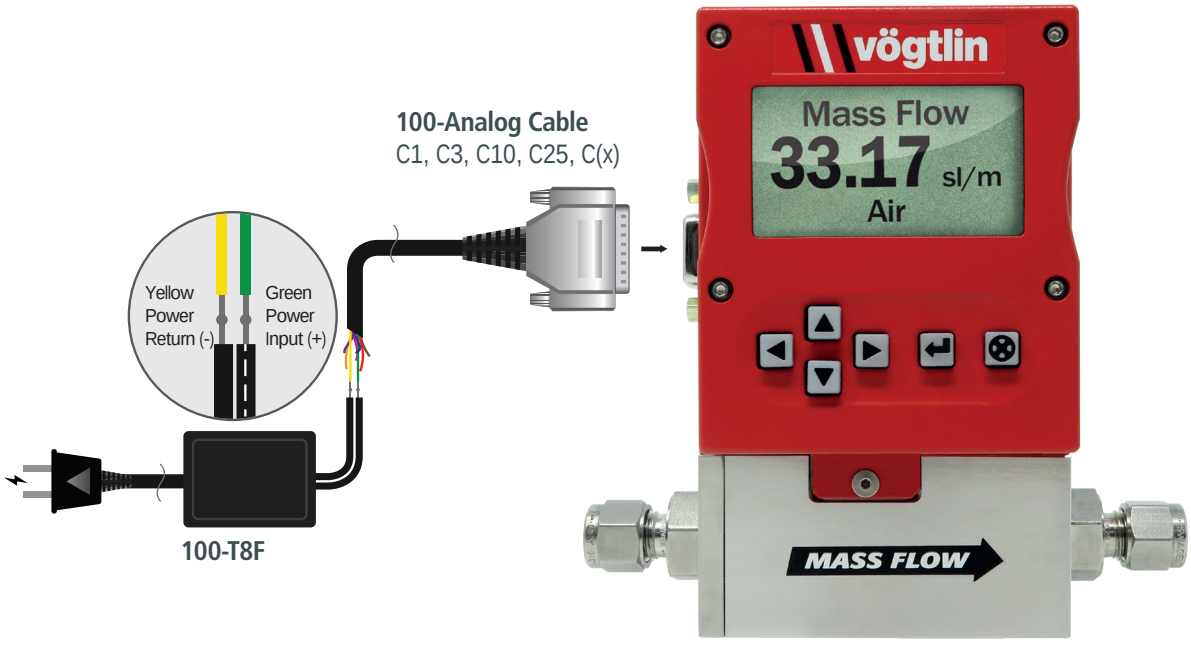
See Figure 7 in Appendix A for configuration diagram.

100-CMDD

Appendix A Communication Cable / Power Supply Configurations

Figure 1 | 100-T8D Power Supply

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



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

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

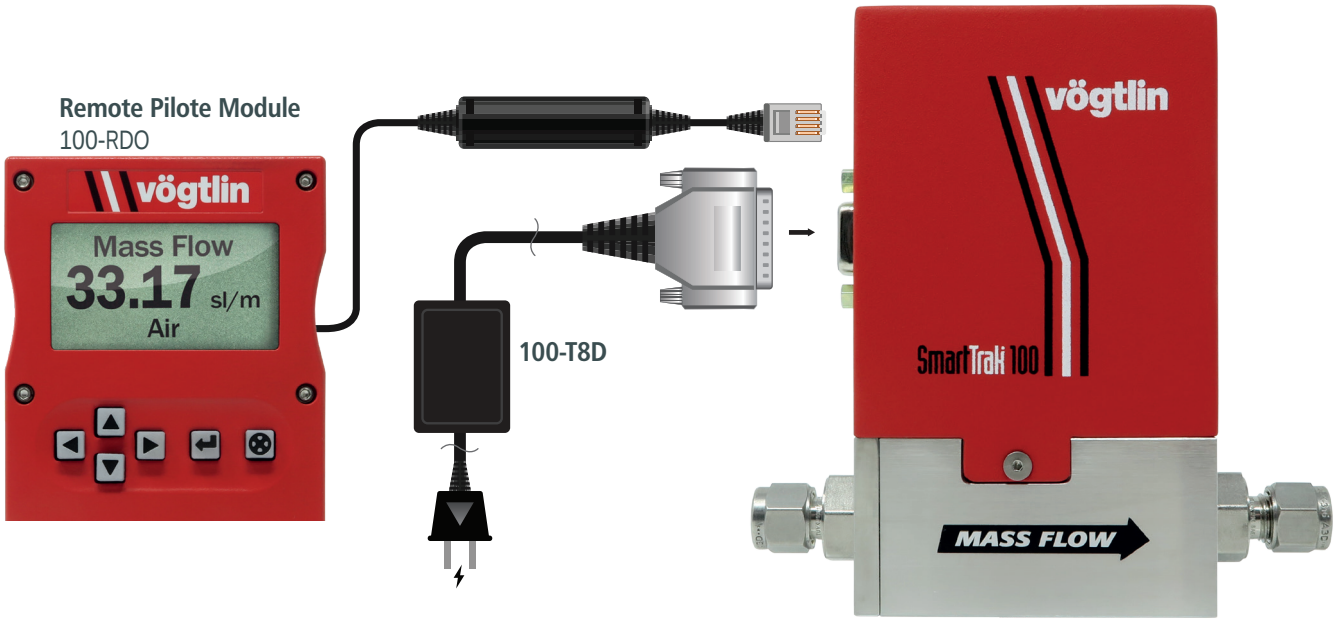
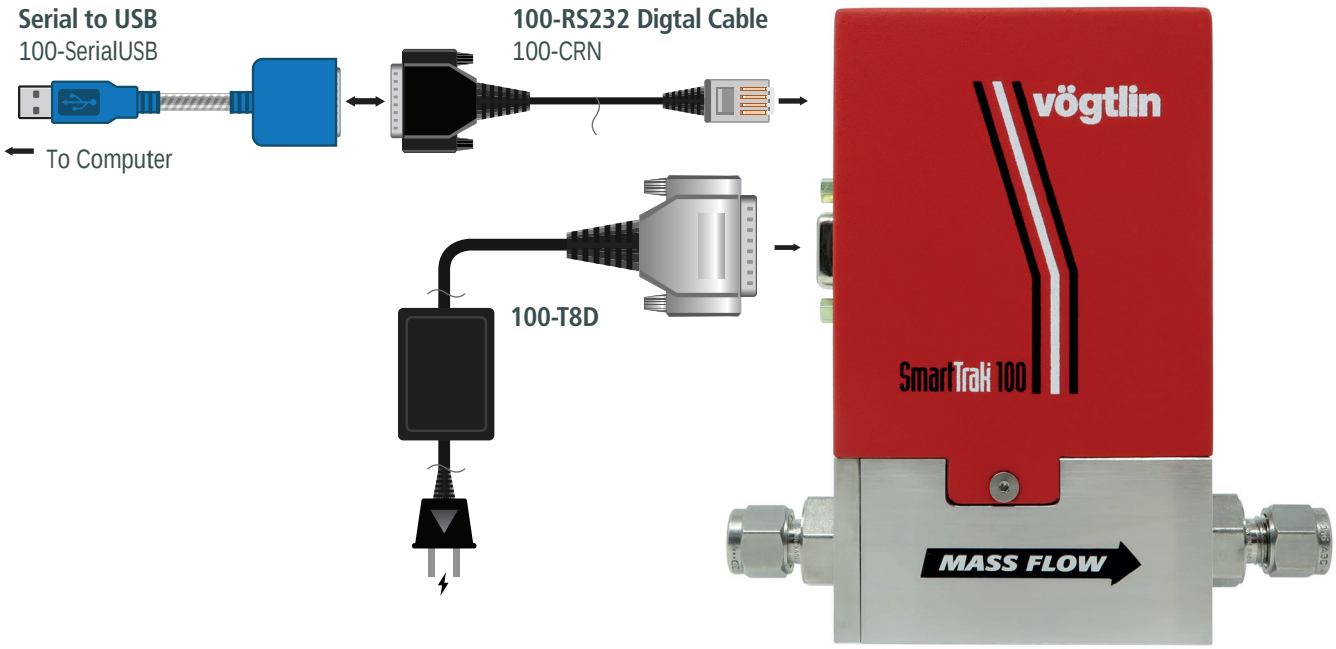
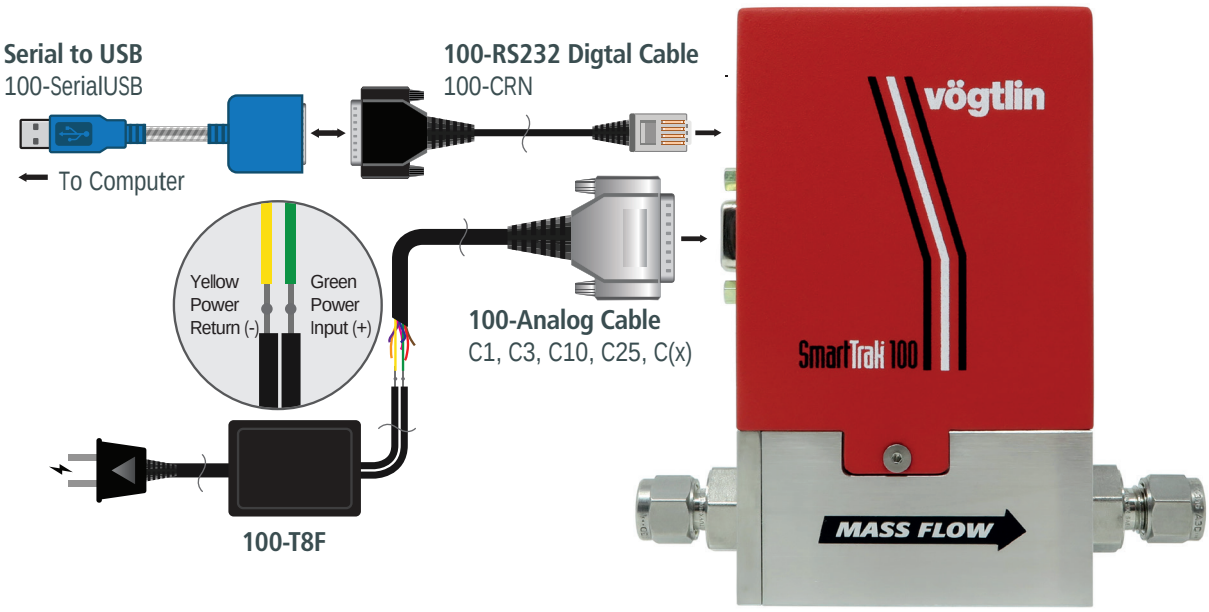


Figure 4 | 100-RS232 Digital Cable/Serial to USB/100-T10 Power Supply



If you make use of the local or remote display or a compod module, we recommend you use the RS232 connection of the D15 plug and not the RJ45 RS232 connection. See manual for more details.

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



If you make use of the local or remote display or a compod module, we recommend you use the RS232 connection of the D15 plug and not the RJ45 RS232 connection. See manual for more details.

Figure 6 | Compod Computer Cable/100-T8D Power Supply

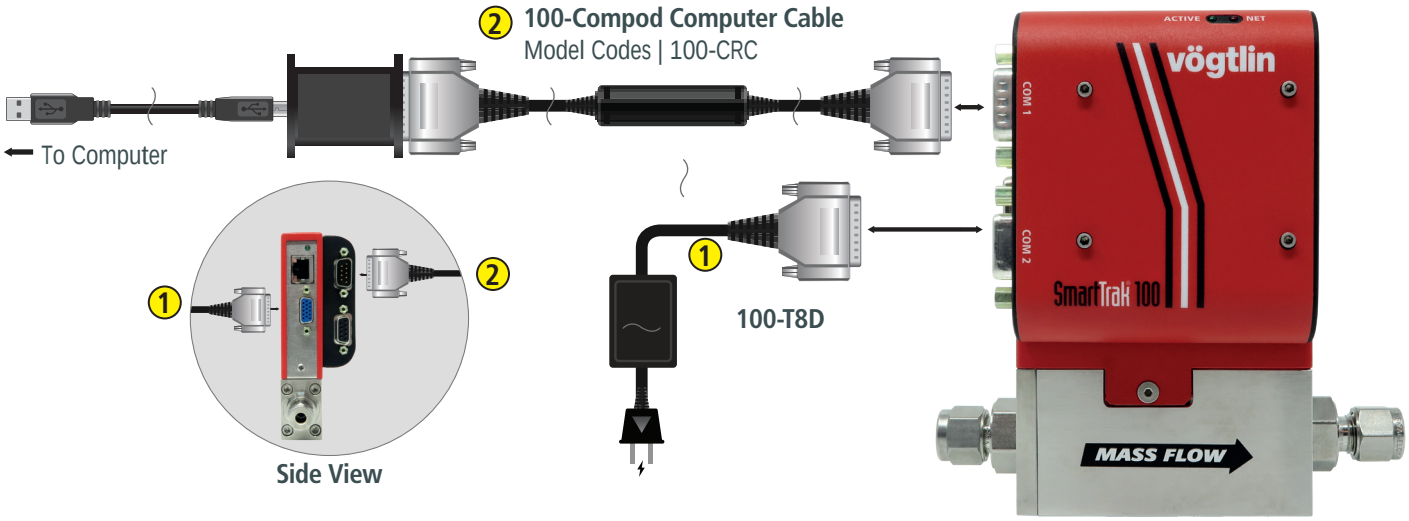
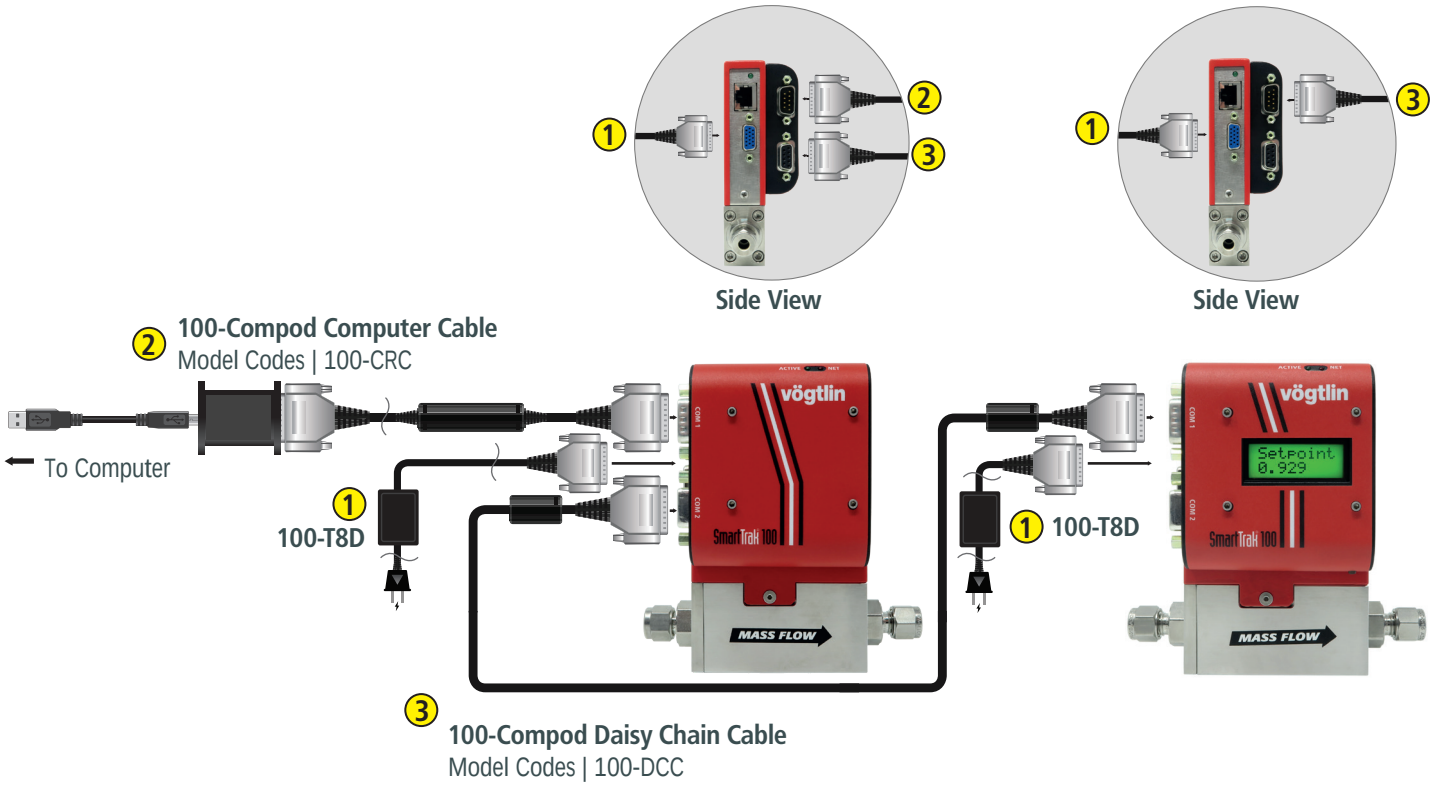
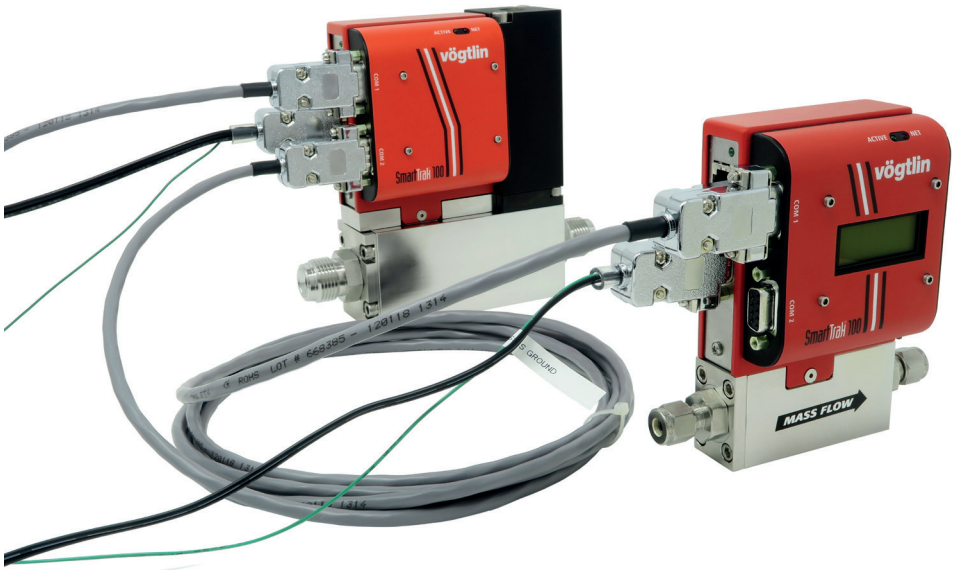


Figure 7 | Compod Computer Cable/100-Compod Daisy Chain Cable/100-T8D Power Supply





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