



SIERRA®

SmartTrak® 50 Series

PURCHASING GUIDE

Configuration, Cables, & Power Supplies



This guide is intended to offer information to help you make purchasing decisions regarding the type of SmartTrak[®] mass flow meter or controller that will best suit your application and budgetary needs.

Choose the Economical SmartTrak 50[®] or Premium SmartTrak 100[®]

The economical SmartTrak 50 mass flow meter or controller, offers a single gas calibration and a display with no local touchpad or control (See Figure 1). For multiple gas selection and integral touchpad, customers should choose the Premium SmartTrak 100, providing more flexibility for university or lab use. See comparison chart below.

	Lower Cost	Multi-Gas	Display	Local Touchpad Control	Turndown	Controllable Range
SmartTrak 50	✓		✓		20:1	5%-100%
SmartTrak 100		✓	✓	✓	50:1	2%-100%



Figure 1. SmartTrak 50 Low Flow Controller with Display (C50L)



Figure 2. SmartTrak 50 Medium Flow Controller with Display (C50M)

If you have chosen the economical SmartTrak 50, please follow the steps below to correctly build your model code.

CONFIGURE PRODUCT

- 1 Decide if you want to control or meter the gas flow.
 - C50** SmartTrak 50 mass flow controller. (See Figure 1)
 - M50** SmartTrak 50 mass flow meter (looks identical, but no internal valve)
 - Learn more at: sierrainstruments.com/50 Series

- 2 Determine your application conditions.
 - What is your application gas?
 - What is your maximum flow rate?
 - For meters, what is your inlet pressure?
 - For controllers, what is your inlet & outlet pressure?
 - Note: If you would like Dial-A-Gas[®] multiple gas capability, select the SmartTrak 100.
 - Learn more at: sierrainstruments.com/100 Series

- 3 Determine the required body size which is based on your application flow rate.
 - L** Flow rates up to 50 slpm Air equivalent, choose low flow (L)
 - M** Flow rates up to 200 slpm, choose the medium flow (M), controllers only (See Figure 2)
 - Note: For flow rates higher than 200 slpm (up to 1000 slpm), choose the SmartTrak 100.
 - Learn more at: sierrainstruments.com/100 Series

- 4 Choose flow body material, either aluminum or stainless steel. See availability in chart below.

	Aluminum (AL)	Stainless Steel (SS)
M50L	✓	
C50L	✓	✓
C50M	✓	✓



Figure 3. SmartTrak 50 Low Flow Mass Flow Meter, Aluminum, without Display (M50L-AL-NR)

- 5 Decide on a display option.
 - DD Digital display (See Figure 4)
 - NR No display (See Figure 3)
- 6 Choose your inlet/outlet fittings depending on the line size and flow rate. See SmartTrak 50 series data sheet for options. Learn more at: sierrainstruments.com/50 Series
- 7 Decide on an output signal/(and setpoint (controller)).
 - V0 Computer only, RS-232 (no analog out, one device per port, software provided)
 - V1 Computer plus 0-5 VDC linear analog output signal and setpoint if controller
 - V4 Computer plus 4-20 mA linear analog output signal and setpoint (controller)
 - V6 Computer only, RS-485 (multi-drop capability, no analog out or RS-232)



Figure 4. SmartTrak 50 Medium Flow Mass Flow Controller, Stainless Steel, with Display (C50M-SS-DD)



Figure 5. 50-C9 Cable with DB9 Mating Connector and Fly Leads



Figure 6. 50-CRN Digital Cable with DB9 Mating Connectors



Figure 7. 50-C9RS232 Digital/Analog Communication Cable with DB9 Mating Connector and Fly Leads



Figure 8. 50-Serial USB Cable is a USB to Serial RS-232 Connector

CABLE OPTIONS

- 8 Choose a cable option.

50-C9

Simplest analog cable with DB9 mating connector and fly leads for analog in/out and power input connection. (See Figure 5).

50-CRN

Simple 6-foot (2 m) digital cable with DB9 mating connector and DB9 computer connector (See Figure 6).

Note: Power input must connect to opposite side of the device on a low flow (L) body. This cable is not available on a medium flow body (M). It is provided free with 50L-V0 output signal option.

50-C9RS232

Combination analog, computer, and power input cable with DB9 mating connector, DB9 serial computer connector and fly leads. Custom length, maximum 50 feet, 15 m (See Figure 7).

50-SerialUSB

USB to serial RS-232 converter. Optional accessory, when a computer serial port is not available. Needed for use with the CRN. Many users elect to supply their own USB adaptors (See Figure 8).

Note: This should not be connected directly to the device.



Figure 9. 50-T8D Power Supply with D-Connector (for low flow controllers and meters)



Figure 10. 50-T8F Power Supply with Fly Leads (low flow controllers and meters)



Figure 11. 50-T10F Power Supply with Fly Leads (medium and high flow controllers)

POWER SUPPLY OPTIONS

- 9 Choose an input power method. Use a customer-supplied 24 VDC, 750 mA supply and wire it into the 50-C9 cable (See Figure 5). Or order a power supply from Sierra. See options below.

50-T8D

For low flow controllers and meters. 24 VDC power supply with D-connector, .75 Amps, 110-230 VAC, CE approved. Plugs into one of the two connectors on 50L low flow body (See Figure 9).

50-T8F

For low flow controllers and meters. 24 VDC power supply with fly leads, 110-230 VAC, CE approved. Bare wires to connect to wires of a cable on a 50L (See Figure 10).

50-T10F

For medium flow controllers, 24 VDC power supply with fly leads, 110-230 VAC, CE approved. Bare wires to connect to wires of a cable on a 50M (See Figure 11).

View Power Supply Cable Configurations pages 6-9.

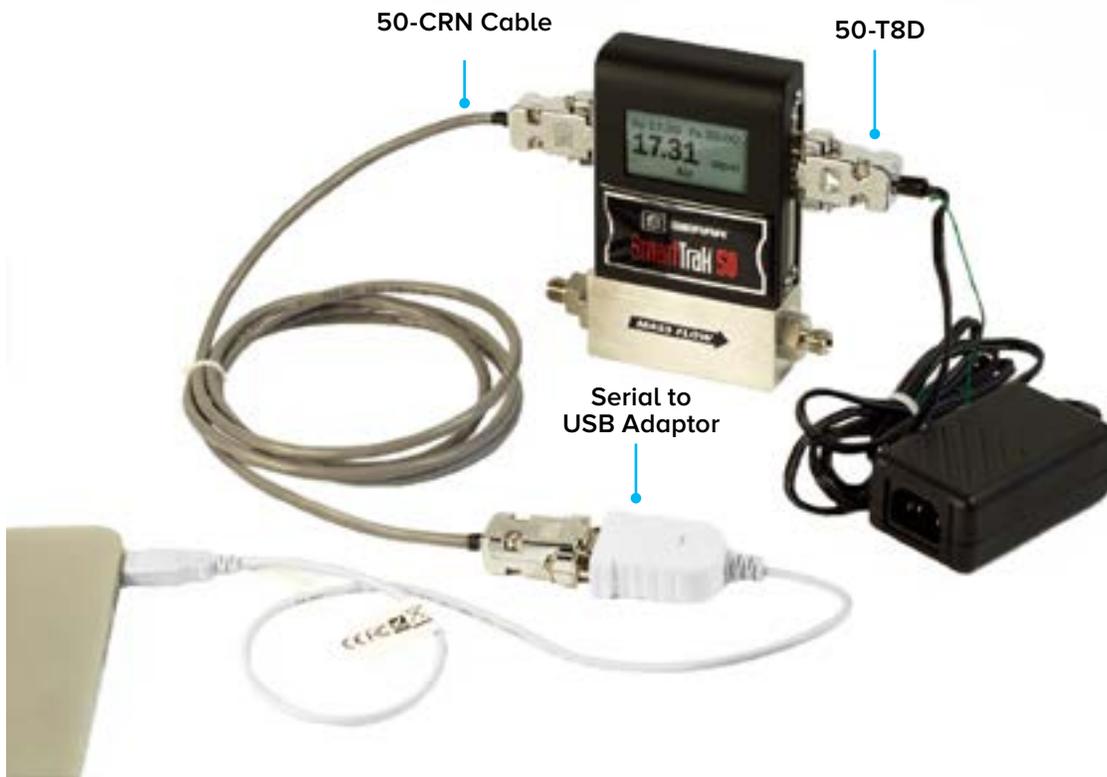


Figure 13. 50L with CRN Cable, USB Adaptor and T8D Power Supply

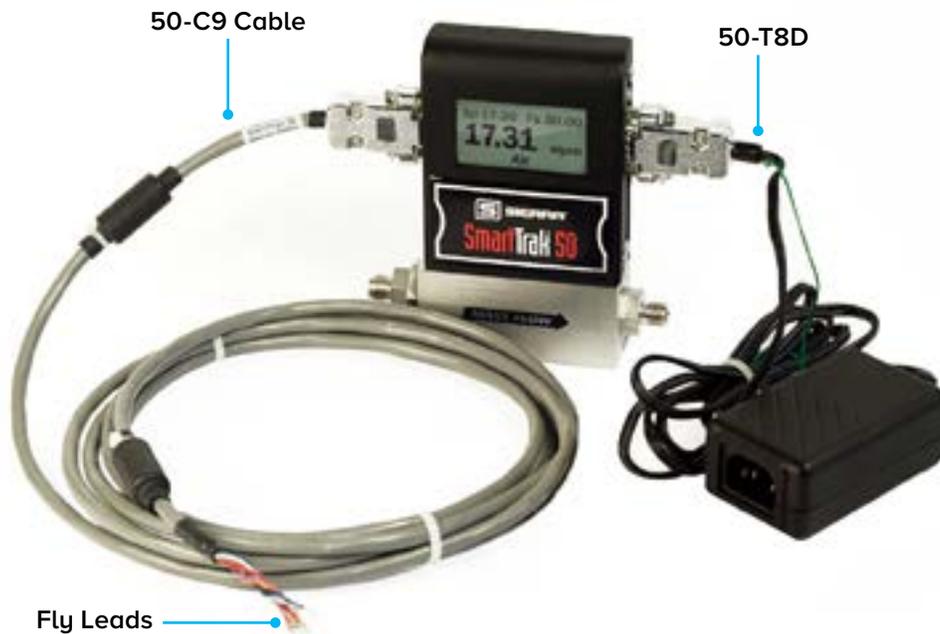


Figure 14. 50L with C9 Cable and T8D Power Supply



Figure 15. 50L with C9 Cable and T8F Power Supply



Figure 16. 50L with C9RS232 Cable, T8D Power Supply, and USB Adaptor

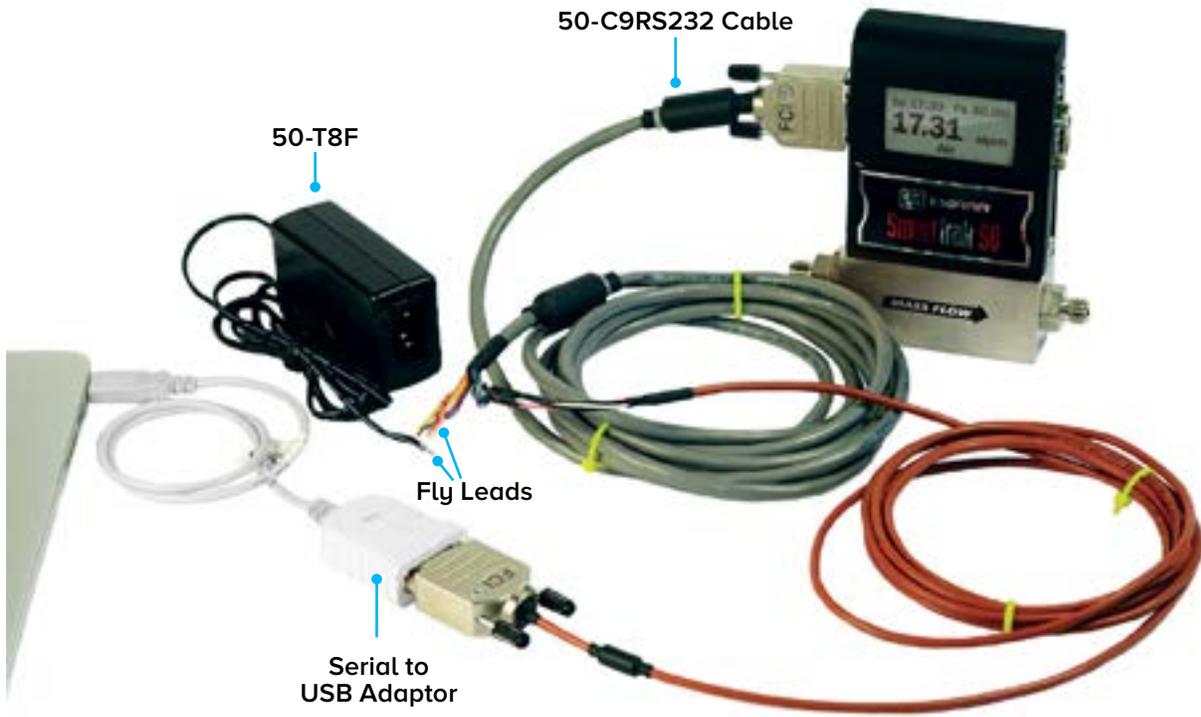


Figure 17. 50L with C9RS232 Cable, T8F Power Supply, and USB Adaptor



Figure 18. C50M (M has only one connection) with C9 Cable and T10F Power Supply



Figure 19. C50M (M has only one connection) with C9RS232 Cable, USB Adaptor and T10F Power Supply



SmartTrak[®] 50 Series

Purchasing Guide: Configuration, Cables, & Power Supplies

Sierra Instruments, North America • 5 Harris Court, Building L • Monterey, California 93940 • (831) 373-0200 • Fax (831) 373-4402 • www.sierrainstruments.com

Sierra Instruments, Europe • Bijlmansweid 2 • 1934RE Egmond aan den Hoef • The Netherlands • +31 72 5071400 • Fax: +31 72 5071401

Sierra Instruments, Asia • Second Floor Building 5 • Senpu Industrial Park • 25 Hangdu Road Hangtoun Town • Pu Dong New District • Shanghai, P.R. China 201316 • +8621 5879 8521/22 • Fax: +8621 5879 8586