



Quick Install Guide

This Quick Install Guide is applicable for the QuadraTherm® 640i/780i.

A copy of this Quick Install Guide, the GSD file, 3 bit map files, the QuadraTherm 640i/780i Profibus DP manual, and the 640i and 780i product manuals are included on the digital communication information CD included in your shipment. The information is also available for [download](#).

Connecting to a Profibus DP Network

You will need the following to connect Profibus DP to your device:

1. A Profibus DP equipped 640i/780i flow meter
2. A Profibus DP network which consists of the Profibus DP master, the software your master uses for configuration, and the Profibus DP cabling
3. A General Station Description (GSD) file which contains the instrument specifications to tell the master configuration software which facilities/features the instrument offers to the Profibus DP system
(<http://www.sierrainstruments.com/userfiles/file/manuals/sier0e14.gsd>)
Note: Sierra does not currently support Device Type Managers (DTM's)
4. [Bit map files](#) used to enhance the GSD file with images
5. A power supply for the flow meter rated at 24 VDC, 1.0A
6. Network connection cables (see QuadraTherm 640i/780i Profibus DP manual, Chapter 2): The 640i/780i Profibus DP1 option uses M12 cables that must conform to the Profibus standards; Termination resistors are required at both ends of the network; DP2 option only needs 2 wire cable; A detailed cabling guide can be found on the Internet at: http://verwertraining.com/wp-content/uploads/InstallationGuideV9_2.pdf.

Installation Steps

1. Install your DP master hardware and supporting software
2. Load the GSD files, bit map files, and update your software catalog
3. Set the slave address with the binary dip switches under the enclosure lid. The dip switches are located to the left of the LEDs (see Figure 1)



Figure 1: Dip switch

Address ID	Dip Switch							
	1	2	3	4	1	2	3	4
1	On	Off	Off	Off	Off	Off	Off	Off
14	Off	On	On	On	Off	Off	Off	Off
60	Off	Off	On	On	On	On	Off	Off
125	On	Off	On	On	On	On	On	Off

Table 1: Address examples

4. Make physical connections with the network and power supply cables
5. Apply power to the instrument. Note: Dip switch address is only set on power up
6. With your software, configure your master and then the instrument slave
7. Setup your software for the cyclic address and data types per the matrix (see Table 3)

LED Status Matrix

Status	Description
Flashing Green/red	Initializing
Steady Green	Device operational
Flashing Red	Recoverable hardware failure
Steady Red	Hardware failure – attention required
Network	Description
Off	Not online – waiting for configuration
Steady Green	Data exchange
Flashing Red	Connection lost

Table 2: LED Status Matrix

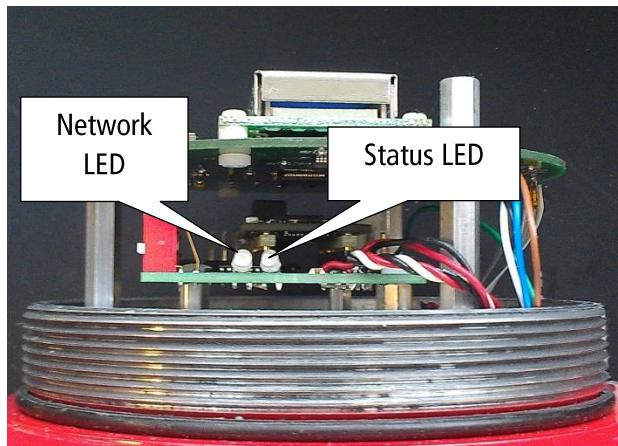


Figure 2: Profibus Board

Input DPV0 Cyclic Data Addressing with Module 6 Configured (Module 1+2+3)

Data Address	Description	Size (bytes)	Format
0	Flow	4	Real
4	Temperature	4	Real
8	Pressure	4	Real
12	Totalizer	4	Real
16	Totalizer	4	UNS-INT
20	Alarm status	1	Byte

21 bytes

Table 3: Input DPV0 Cyclic Data

Acyclic DPV1 Setup/Info Data

Slots	In/Out	Description
0 - 5	Write	Reset total, keypad password, meter tune, change gas, UFS, Pipe ID
7-15	Read	UFS, meter tune, gas name, pipe ID, gas index, engineering units, S/N, Cal date, T1 wattage

Table 4: Acyclic DPV1 Setup/Info Data

Note: See QuadraTherm 640i/780i Profibus DP manual, Chapter 3 for details.