600/700 Series Profibus DP

Quick Install Guide

This Quick Install Guide is applicable for models: 640S, 760S, 780S, and 780S-UHP.

A copy of this Quick Install Guide, the GSD file, 3 bit map files, the 600/700 Series Profibus DP manual, and the 640S and 780S 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 to your device:
1. A Profibus DP equipped 600/700 Series flow meter
2. A Profibus network which consists of Profibus DP master, the software your master uses for configuration, and the Profibus cabling.
3. A General Station Description (GSD) file which contains the instrument specifications, telling the master configuration software which facilities/features the instrument offers to the Profibus system (http://www.sierrainstruments.com/userfiles/file/SIER0E13.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, 625 mA.
6. Network connection cables (see 600/700 Series Profibus DP manual, Chapter 2). The 600/700 Series Profibus DP uses M12 cables that must conform to the Profibus standards. Termination resistors are required at both ends of the network. 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, bitmap files, and update your software catalog.
3. Set the slave address with the binary dip switches under the enclosure lid. See figure 1.
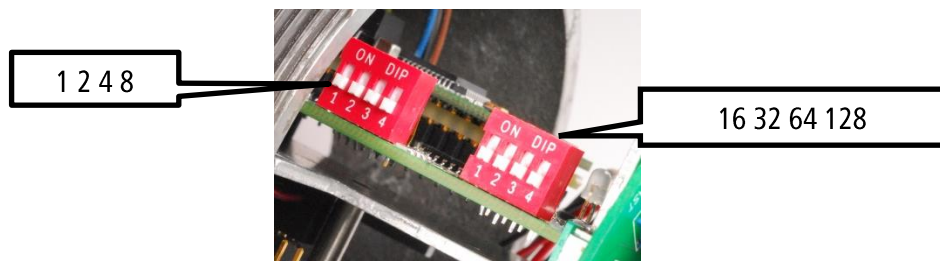
1 2 4 8

16 32 64 128

Figure 1: Dip switch

Address ID	Dip Switch							
	1	2	3	4	1	2	3	4
1	1	0	0	0	0	0	0	0
14	0	1	1	1	0	0	0	0
60	0	0	1	1	1	1	0	0
125	1	0	1	1	1	1	1	0

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. Set up your software for the cyclic address and data types per the matrix on the next page.

LED Status Matrix

Active	Description
Flashing green/red	Initializing
Steady green	Device operational
Flashing red	Recoverable hardware failure
Steady red	Hardware failure – attention required
NET	**Description**
Off	Not online – waiting for configuration
Steady green	Data exchange
Flashing red	Connection lost

Status LED

Network LED
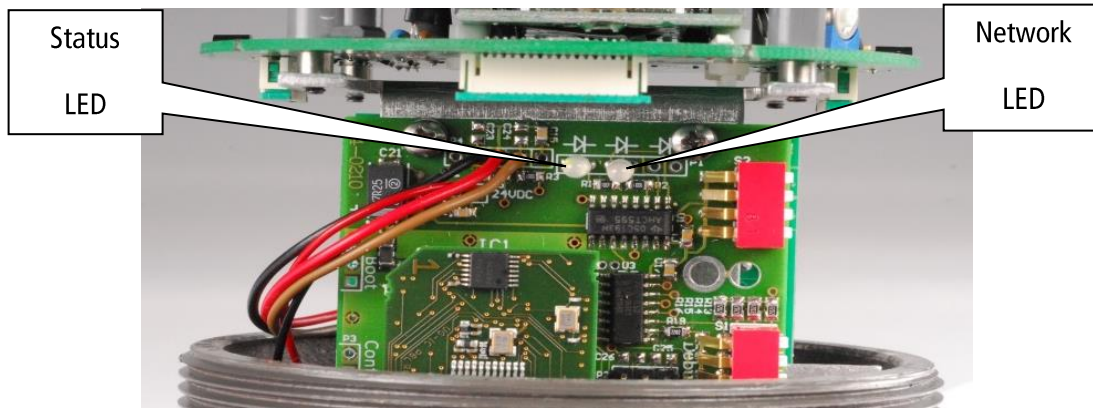
Figure 2: Profibus board

Input Cyclic Data Addressing

Data Address	Description	Size (bytes)	Format
0	Flow	4	REAL
4	Totalizer	4	REAL
8	User full scale	4	REAL
12	Factory full scale	4	REAL
16	K-factor	4	REAL
20	Serial number	12	ASCII
32	Flow unit	5	ASCII
37	Totalizer unit	3	ASCII
40	Status	2	INT

42 bytes

Output Cyclic Data Addressing

Data Address	Description	Size (bytes)	Format
0	Reset totalizer	4	REAL
4	User full scale	4	REAL
8	K-factor	4	REAL

12 bytes

PN: 47- number