Digital Setpoint Control for Fisher™ FIELDVUE™ DVC6200 and DVC6000 Digital Valve Controllers

1. Digital Valve Controller Setup

A. Electrical Power

Set the digital valve controller to PT-PT or MULTI-DROP.

For example, figure 1 shows the PT-PT/MULTI-DROP switch, which is located on the main electronics board, for the DVC6200 HW2 digital valve controller.
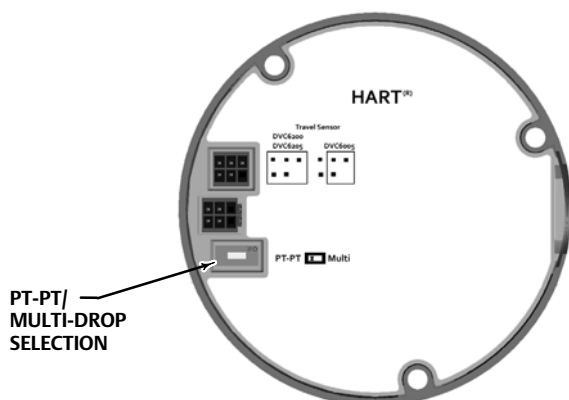
> **Voltage** -- ensure the switch is set in the "MULTI-DROP" position. The current will be fixed around 8.3 mA with a 24 V power source.

> **Milliamp current** -- ensure the switch is set in the "PT-PT" position. Milliamp signal power to the instrument should be set to a value between 6 and 20 mA.

Notes

- Factory default is switch set to PT-PT.

- For Multi-Drop and 24 V power a LC340 Line Conditioner may be required to ensure quality HART® communications.

- For Point-to-Point and a milliamp powered system a HF340 HART filter may be required to ensure quality HART communications.

Figure 1. PT-PT or MULTI-DROP Selection

Using a Field Communicator or AMS Device Manager verify or set the following:

B. **Control Mode** set to "Digital"

C. **Restart Control Mode** set to "Digital"

D. **Instrument mode** set to "In Service"

If additional product information is needed refer to Related Documents on page 5.
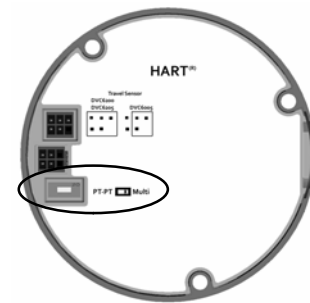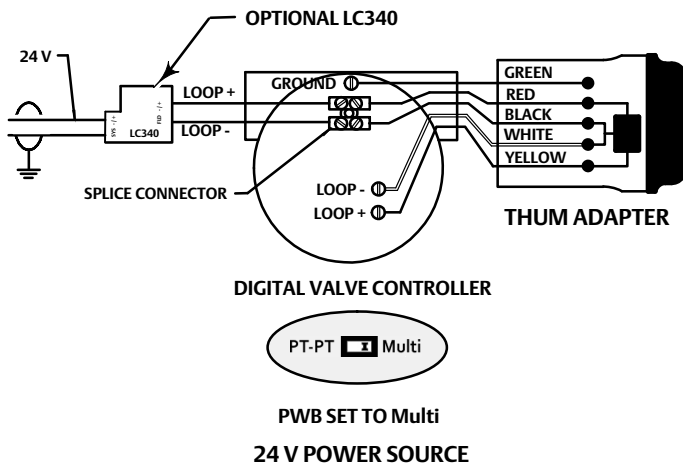
2. 775 THUM™ Setup

A. Electrical
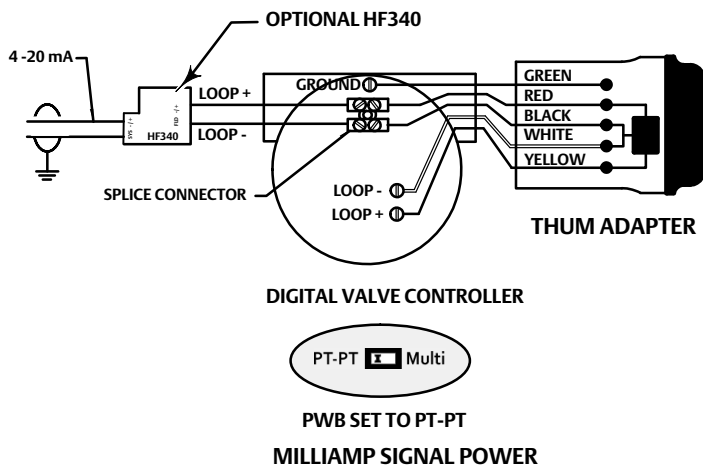
Wiring diagrams are shown in figure 2.

Notes

● This configuration is only appropriate for one digital valve controller and one THUM adapter.

● The THUM adapter requires up to 2.5 VDC additional compliance voltage above and beyond the digital valve controller requirements.

Figure 2. Wiring Diagrams

B. Configuration

Using a 775 THUM *Wireless*HART® adapter, map either "PV, SV, TV, QV" or "Process Variable with STATUS"; this allows the Gateway to see TRAVEL_SETPOINT.

3. Wireless Gateway Setup

A. Map TRAVEL_SETPOINT

See figure 3 and 4 for Gateway settings.

Notes

- Requires a Rosemount™ 1410 or 1420 Smart Wireless Gateway version 4.5 or later.

- Best practice is to use the latest available software or firmware version for all products.

- Do not map to the THUM adapter.

- If TRAVEL_SETPOINT does not show up in the drop-down selection box in Modbus or OPC select Run Command Configuration on the THUM and reset update rates.

Refer to Annex B of the appropriate HART Field Device Specification supplement for additional information on joining a digital valve controller to a wireless network using the THUM adapter. See Related Documents on page 5.

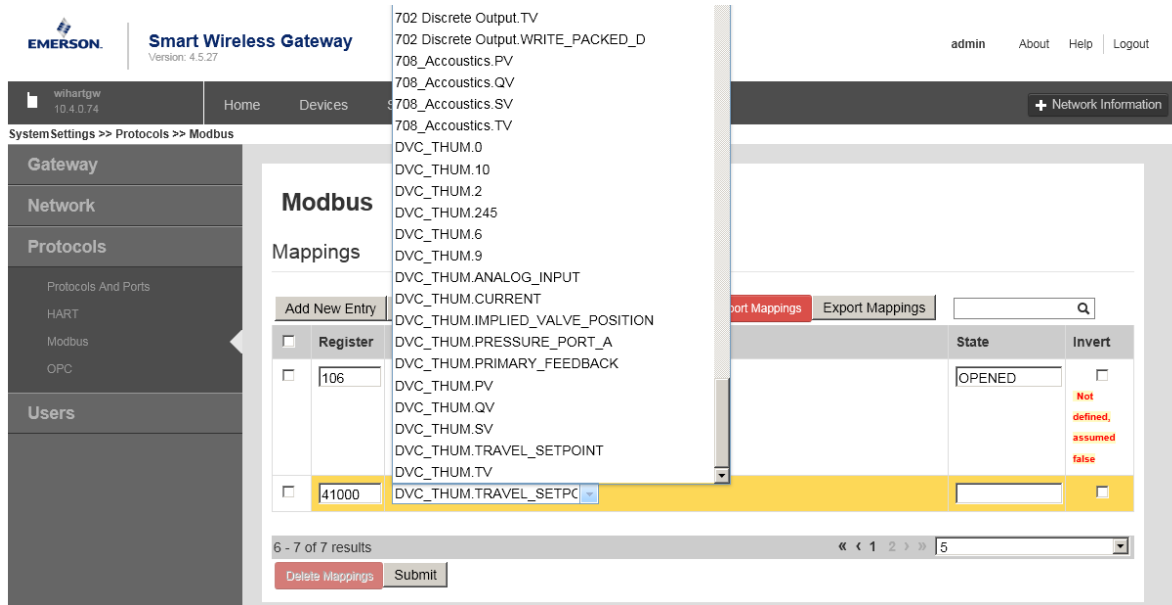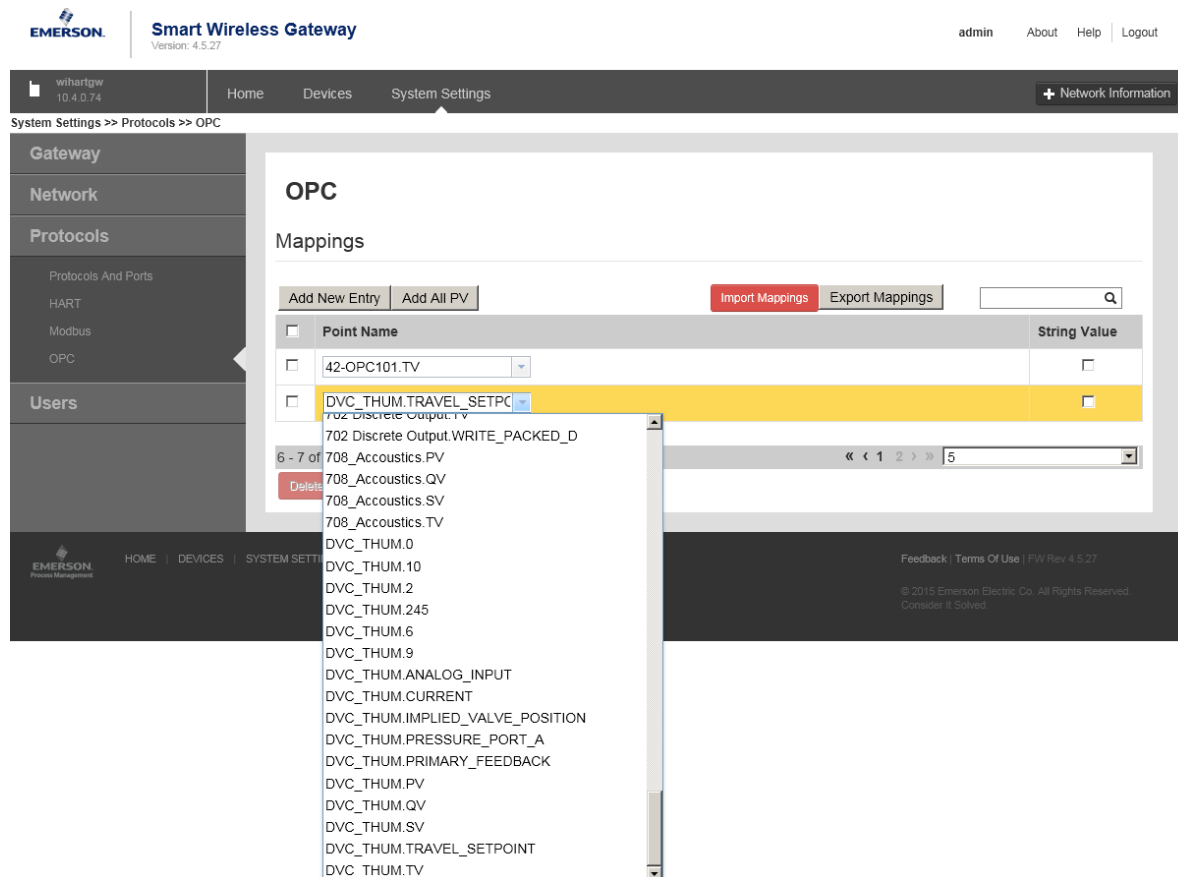Figure 3. Mapping TRAVEL_SETPOINT in Modbus

Figure 4. Mapping TRAVEL_SETPOINT in OPC

Related Documents

DVC6200

- DVC6200 Series Digital Valve Controller Quick Start Guide ([D103556X012](#))

- DVC6200 HW2 Digital Valve Controller Instruction Manual ([D103605X012)](#)

- HART Field Device Specification for DVC6200 Digital Valve Controller ([D103639X012](#))

- DVC6200 HW1 Digital Valve Controller Instruction Manual ([D103409X012](#))

- HART Field Device Specification for DVC6000 and DVC6200 HW1 Digital Valve Controller ([D103649X012](#))

DVC6000 HW2

- DVC6005 Series Remote Mount Digital Valve Controllers Quick Start Guide ([D103784X012](#))

- DVC6000 HW2 Digital Valve Controller Instruction Manual ([D103785X012](#))

- HART Field Device Specification for DVC6000 HW2 Digital Valve Controller ([D103782X012](#))

DVC6000 (Supported)

- DVC6000 Digital Valve Controllers Instruction Manual ([D102794X012](#))

- HART Field Device Specification for DVC6000 and DVC6200 HW1 Digital Valve Controller ([D103649X012](#))

Miscellaneous

- HF340 Filter Instruction Manual ([D102796X012](#))

- LC340 Line Conditioner instruction manual ([D102797X012](#))

Documents are available from your [Emerson sales office](#) or at Fisher.com.

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