

FBxStation Control™

FBxStation Control™ is an application for the Emerson FB3000 RTU that works alongside the FB3000 firmware to perform station control for up to 24 meter runs, distributed across up to 24 stations. FBxStation Control is ideal for both new installations as well as station upgrades, where it replaces a mix of outdated RTUs and PLCs.

The FBxStation Control application allows users to easily configure additional control features for existing FB3000 stations and meter runs.

Features

FBxStation Control includes the following features:

- Support for up to 24 meter runs, distributed across up to 24 stations
- Multiple PID control loops are available for each station that allows control of up to 24 control valves.
- Run switching.
- Easily configurable to meet your specific control requirements
- Easy-to-use interface

Run Configuration

You can configure up to 24 meter runs and assign those meter runs to any one of the 24 stations. The software allows you to configure the meter type, measurement source, and run staging.

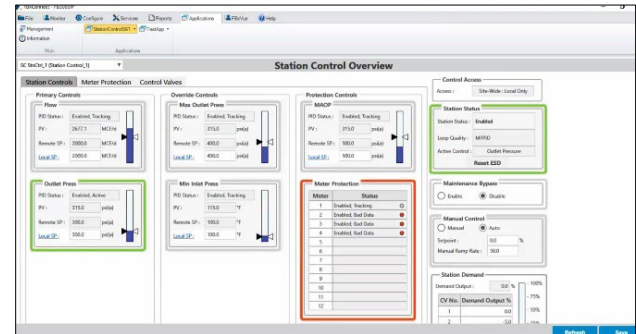
Once you configured the meter runs and stations in the FB3000 firmware, you can now save the needed stations or meters in the FBxStation Control application.

Station Configuration

You can configure up to 24 stations to utilize the station control functionality.

For Run Switching, a station must include multiple meter runs with up to 12 in a station.

Bi-directional flow control is supported by creating two stations: one for the forward flow direction and one for the reverse flow direction. You can configure up to 12 forward stations and 12 reverse stations. If bi-directional flow control is not required, you can configure all 24 stations as forward-flow stations.



FBxStation Control Configuration Screen

Control

FBxStation Control allows four methods of performing station control. These four methods are not mutually exclusive; any combination of the methods may be used simultaneously. Possible methods are:

- Mainline Valve
- Tube Stage Valves
- Shut-In of Control Valves
- Bi-directional Control Valves

You can configure up to 12 remote control valves assigned in any combination across 24 stations. These non-modulating, open/close valves may be driven remotely, and have the option of operating in an arm-and-execute or execute-only mode.

You can configure up to 24 modulating control valves that can be controlled by the PIDs available in each station. The following PIDs are available for each station:

- Flow or energy primary control
- Outlet pressure primary control
- User-configurable primary control
- Meter Protection Override with user-configurable PVs
- MAOP override control
- User-configurable override control defaulted to maximum outlet pressure
- User-configurable override control defaulted to minimum inlet pressure

- Minimum outlet pressure override control

Two configurable overrides: one defaults to maximum outlet pressure, and one to minimum inlet pressure.

Meter run (or meter tube) switching control is available for each station. A tube switching valve is available for each run.

Valve control for bi-directional flow control is available for up to eight valves for each bi-directional station. You can configure the operation of these valves to change the flow direction from forward to reverse and reverse to forward.

For additional custom controls, users can create an additional custom application using FBxDesigner, the FB3000's IEC61131 programming environment. The FB3000 also allows users to run up to eight applications per device.

Configuration User Interface

As part of the FB Automation Platform, FBxStation Control includes a comprehensive set of User Interface displays to configure and monitor the application. The configuration for one RTU site can be simply saved and copied to other control sites.

FBxStation Control

Station Capacity	
Number of Runs	24
Number of Stations	24
Flow Direction	Forward and Reverse
Control	
Control Valves	24 Tube Switching valves (up to 12 in a station), 12 remote control valves
Flow Control Modes	Flow, energy, pressure, MAOP, meter protection, inlet/outlet pressure, user-configurable PV
Bi-directional Control	Up to 8 valves per Bi-di Station Set
Software Operating Environment	
Operating System	32- or 64-bit Microsoft® Windows® 10 Professional, Windows 10 Enterprise, Windows 11 Professional, Windows 2012 Server, Windows 2016 Server, Windows 2019 Server
Hardware Operating Requirements	
CPU	Intel® Core™ 2 Duo T7100 or similar specification Intel CPU (minimum)
Hard Disk Space	2.5 GB
RAM	8 GB
Display	1366 x 768 or better resolution (OS Compatible)
Network Ports	USB port and/or Ethernet

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