

## Using the Rosemount 3420 for Bulk Inputs and Skid Mounted Monitoring Solutions

### Products

Rosemount 3420 FIM

Any Emerson Foundation Fieldbus Transmitters including:- Pressure, Temperature, DP Level, Radar Level, DP Flow, Magnetic Flow, Vortex, Micromotion etc.

### Application

Bulk monitoring applications or any remote area of plant with a need to monitor high density of signals in a localized plant area.

### Details

The 3420 allows up to 16 Emerson Foundation Fieldbus Transmitters to be connected to each of its 4 segments. For single PV transmitters this gives up to 64 PV's per 3420 unit.

Using the 3420 in conjunction with the 8 channel 848T Temperature Transmitter this would allow over 400 Process Variables and their associated Status Alarms to be communicated to any Process Automation System using Modbus RTU

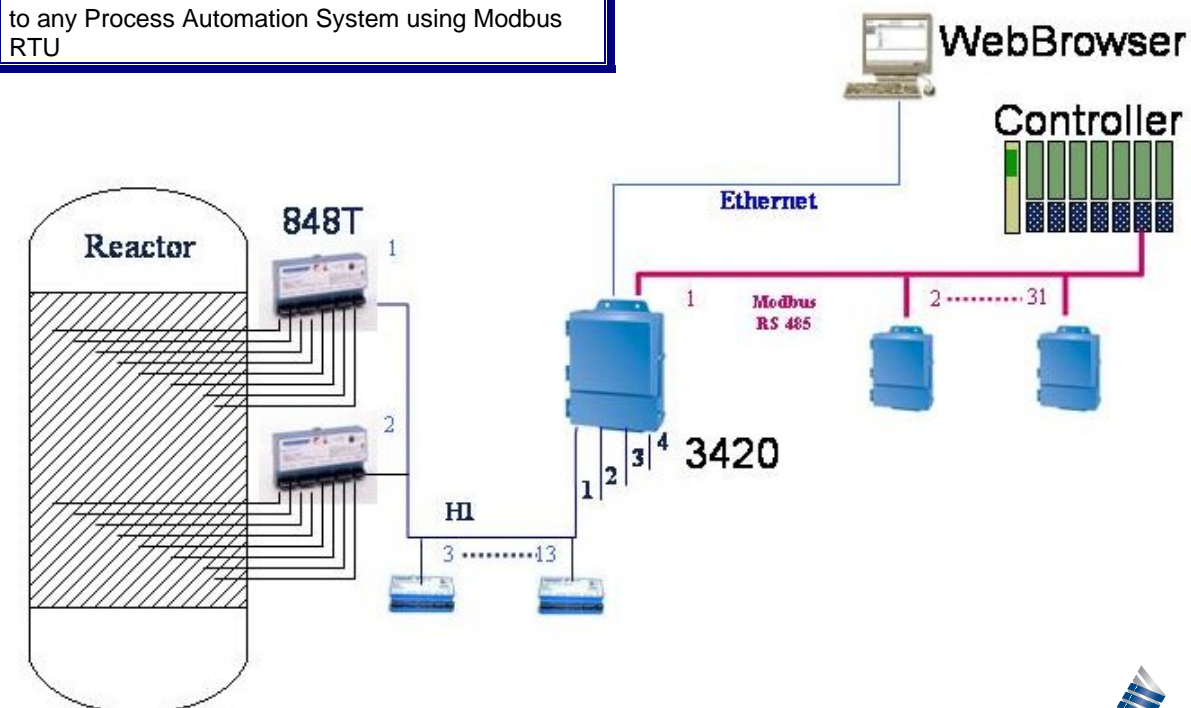
### Bulk Monitoring

The 3420 in conjunction with the 848T is the ideal solution for bulk temperature monitoring applications and replacement/retrofit projects for any older, no longer supported Temperature multiplexers. The 848T can also be utilized as a 4-20mA input module allowing any signal type to be connected to it.

Utilization of the 3420 FIM will allow you to experience a more cost effective solution when compared to remote I/O, It is also easier to configure and install giving a much lower overall cost of ownership.

The 3420 also allows access to device diagnostics and configuration options not otherwise available with other solutions

The 3420 and 848T multi channel transmitter, when used in the application shown below will allow over 12,000 point to be communicated back over a single Modbus Network.



## Application Note

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# Rosemount 3420 FIM

### Skid Mounted Monitoring Solutions

When a large number of Process signals have been incorporated into a complex skid, the 3420 is the ideal solution as it provides a single point of connection for up to 64 devices also providing the instrument power and allows easy access to device set-up and diagnostic information via its built in Web Browser.

The Web Browser is accessed via the Ethernet, a PC can be connected directly to the 3420 or the FIM can be configured to sit on any company LAN/WAN to allow remote access to the information worldwide if required.

There is no proprietary software required and the Web Server can be interrogated by any standard Internet Browser. The software can then be used to carry out typical maintenance activities such as commissioning, process scaling or device diagnostic functions.

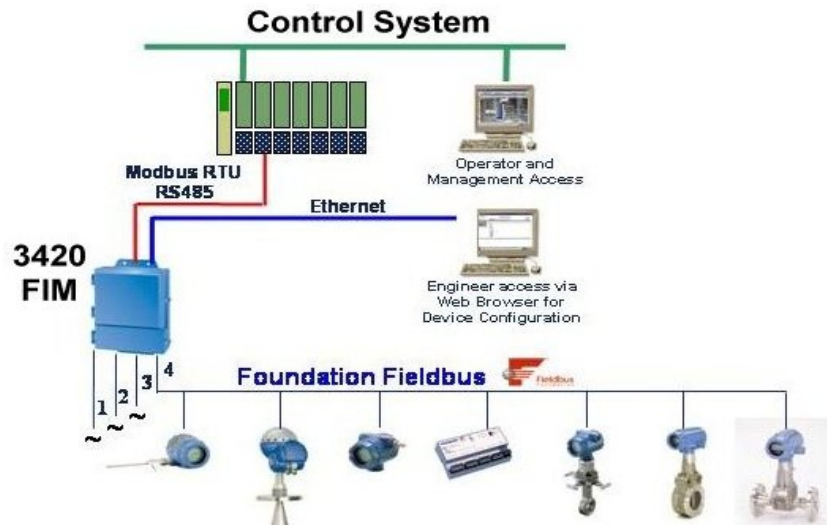


### 3420 FIM Architecture Overview

The 3420 allows up to 64 devices to be connected via 4 Foundation Fieldbus segments (Shielded twisted pairs) these 4 segment cables are then brought back to the single junction box built into the 3420 FIM housing. The 3420 FIM provides DC power to the 4 Foundation Fieldbus segments, this provide instrument power to all connected devices and allow the device PV's and Status information to be communicated back to the 3420 FIM.

All the connected devices can have their Process Variable and Status condition mapped to Modbus RTU registers within the 3420 itself. The registers can then be read by any Process Automation System that has a Modbus RTU serial Interface.

Up to 31 x 3420 FIM's can be connected together on a single Modbus RTU, Multi-drop RS485 serial Network, allowing up to 1984 devices to be connected together on the Modbus Network.



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