



Mining



Oil and Gas



Power and Utility



Rotating Equipment



Semiconductor



Water & Wastewater

MULTIPLE STREAM CHEMICAL INJECTION SYSTEM

TURNKEY SOLUTIONS

Using ABB's proven technology, Winn-Marion has engineered a turnkey solution for optimizing well production with chemical injection. Winn-Marion's solution provides the ability to monitor level and inventory of multiple chemical tanks.



Manifold Distributes chemical from a single tank across multiple wells utilizing the customers' existing pump, chemical tank, and chemical containment.

Smart Metering

- Others say they track volume, but it is likely an inferred measurement
- Using direct measurement, we are accurate to a 1/10 of a teaspoon
 - Regardless of pressure changes
 - Regardless of pump supply voltage changes
- Smart Metering protects your wells and your bottom line.

Inventory Management

- Winn-Marion's solution tracks and reports tank level
- The system not only detects a tank fill, but also records the volume that has been added
- The system easily integrates with existing SCADA systems to flag fill events, low tank levels, and more

LEADING TECHNOLOGY

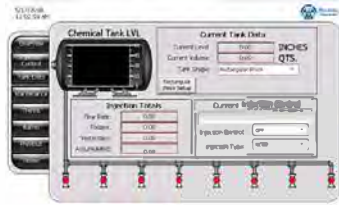


ABB Totalflow XRC Controller Monitors and controls the chemical injection process based on the programmed parameters and mode of operation selected. Control and I/O with a standard ABB G4 or ABB RMC.

Human Machine Interface (HMI) Graphical interface allows for operator control, configuration, and monitoring.

SPECIFICATIONS

The ABB Totalflow remote controller provides options to customize and configure specific parameters in order to run and manage the chemical injection process. I/O points and communication interfaces are supported on board and through TFIO expansion modules when supporting several chemical tanks.

Chemical Injection Application Supports:

- Automatic
- Manual
- Batch Mode
- Fixed Timer
- Chemical Volume Relative to Production

Display Application:

- Volumes
- Current & Previous Chemical Injection Gas Rate
- Pump Time
- Active Alarm Condition



**Winn-Marion
Companies**

Denver, CO – (303) 778-6767

Salt Lake City, UT – (801) 676-0155
 Phoenix, AZ – (480) 968-9344
 Billings, MT – (406) 259-9234
 Pittsburgh, PA – (412) 319-7392
 Roosevelt, UT – (435) 725-0082

Farmington, NM – (505) 326-4069
 Evans, CO – (970) 339-9211
 Gillette, WY – (307) 686-9196
 Arnegard, ND – (701) 586-3184
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SPECIFICATIONS

The remote controller's Trending Application is configurable to monitor and record the values of chemical injection variables during user-specified time periods.

Trending Application:

- Variables from a Pre-defined Library of Variables
 - *Pertinent to Chemical Injection
- User-defined Variables (Ad-hoc Trends)

I/O Communication Application:

- Scalable I/O Expansion to Support Connections System Components for Sites with Multiple Chemical Tanks
- Multiple Communication Options Supporting the Totalflow Remote Protocol to Integrate into Popular SCADA Systems:
 - Serial or TCP
 - MODBUS RTU (Host or Slave)
 - TCP (Server to Client)
 - Cygnet
 - ABB SCADA Vision



Pulse Accumulator Application:

- Separates the Chemical Being Injected by the Well
- Measures and Records the Flow Rate of Chemicals Per Well Exiting the Tank

Provides Measurement:

- Today's Values
- Yesterday's Values
- Accumulated Values



Pre-Defined Alarm Log:

- Tank Fill Notification
- Tank Leak Alarm
- No Flow Alarm
- Siphon Alarm

Name	Value	Enable	Alarm	Polarity	Reset Method	Time Limit	Register	Desc
182.3.8	Shutdown DO	True						
182.3.1	RESET Lvl/Flow	1	Reset	1->Reset				Reset from PCCO or
182.3.8	SHUTDOWN Lvl/Flow	0	Inactive	1->Shutdown				Shutdown Invt
182.3.2	Reset Button	0		1->Reset		8.0.0		Local Reset Button
182.3.7	Shutdown Button	0		1->Shutdown		8.0.0		Local Shutdown
182.22.0	CT-1 Low Flow	0	Enabled	No	High Alarm	No	15	91.6.26 DI 1
182.22.1	CT-1 HI Flow Siphon	0	Enabled	No	High Alarm	No	30	91.6.114 DI 2
182.22.2	Spare	0	Disabled	No	Low Alarm	No	30	8.0.0 DI 3
182.22.3	CT-1 Hand Mode	0	Enabled	No	High Alarm	No	600	91.5.12 DI 4
182.22.4	CT-1 Tank Fill	0	Enabled	No	High Alarm	No	60	91.5.5 DI 5
182.22.5	CT-1 Tank Leak	0	Enabled	No	High Alarm	No	600	91.6.198 DI 6
182.22.6	CT-1 Demo Tank Level	39	Disabled	No	High Alarm	No	10	8.0.0 DI 7
182.22.7		0	Disabled	No	High Alarm	No	1	8.0.0 DI 8

Alarms & Shutdowns:

- Pre-defined Alarms are Included:
 - Low Flow
 - High Flow
 - Tank Fill Notification
 - Tank Leak Notification
- Shutdown Registers can be Enabled to Shut Down the Pump and Close all Valves



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