

evolution
Driven
by demand

evolution
Driven
by demand

*An Evolutionary
Advancement in
Load Control*

evolution
Driven
by demand

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Smith Meter
AccuLoad III[®]

AccuLoad III-S
Single or Dual Arm
Straight Product or Blending

AccuLoad III QUAD
Four Arms
Straight Product or Blending

AccuLoad I-to-III Upgrade

AccuLoad III with
AddPak Additive Control Expansion

AccuLoad III with
Civacon Overfill/Ground

FMC Energy Systems
FMC Measurement Solutions

Smith Meter

AccuLoad® III-S

*It's More Than a Preset –
You Get Total Load Control*

Select a Configuration...



**AccuLoad III
Two Arm
Display**



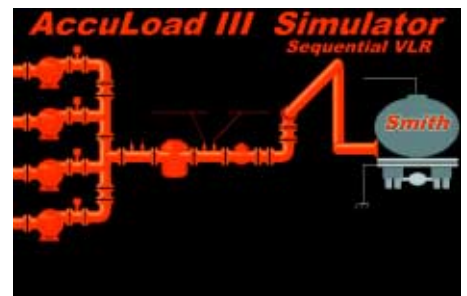
Single Arm Standard



Single Arm Ratio



Single Arm Sequential



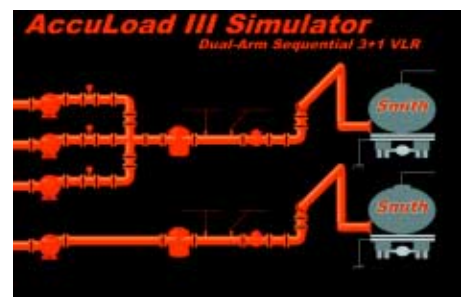
Dual Arm Standard 1+1



Dual Arm Sequential 2+2



Dual Arm Sequential 3+1



**In the world of electronic presets
Smith Meter AccuLoad I and AccuLoad II set the standards.
Now unleash the power with AccuLoad III...
evolution driven by demand**

AccuLoad III[®]

Combining late-breaking technologies and the superlative features of its predecessor AccuLoad II, AccuLoad III brings the Smith Meter family of electronic controls to new heights. With AccuLoad III, FMC Measurement Solutions redefines its own high standards for providing you with the leading edge in measurement control.

The extensive flexibility and customization of AccuLoad III surpasses all available preset devices. In fact, it's more than a preset. With AccuLoad III, you get total load control:

- ◆ Loading, unloading and blending
- ◆ Management of grounding and overflow
- ◆ Exclusively from FMC – additive control for all types of additive injectors

The ability to custom configure the device to meet your business needs is yet another advantage of AccuLoad III:

- ◆ Configure AccuLoad III yourself, on-site
- ◆ Customize I/O to minimize your PLC requirements
- ◆ Full-graphic display with multiple language capability
- ◆ Select Modbus or Smith protocol

AccuLoad III QUAD

And now with the introduction of Smith's AccuLoad III QUAD you can QUADuple your power with the most advanced, most configurable load controller available.

Approvals

UL/CUL

Class I, Division 1, Groups C & D; Class II, Groups E, F & G, UNL-UL Enclosure 4X, CNL-CSA Enclosure 4.
Class I, Zone 1, Group IIB, IP65.
Class I, Zone 1, AEx d IIB T6, IP65.
UL/CUL File E23545 (N).

CENELEC

EEx d IIB T6, IP65.
DEMKO A/S Certificate No. 99.E.125227.



One or Two Arm Operation



Four Arm Operation
Six Product
Sequential Blending

AccuLoad III Features

- One, Two, Three or Four Arm Operation
- Straight Product and/or Sequential or Ratio Blending
- Ground and Overflow
- Additive Expansion
- Up to 50 Recipes
- User Configurable Inputs and Outputs
- Block Valve Control and Feedback (Sequential Blending)
- Controls Additive Systems (Either via Pulse or Communications)
- Four Communication Ports
- Programmable Pulse Outputs
- Configurable Load Ticket/BOL Emulation Printing
- Continuous Monitoring of Critical Functions
- Two-Way Data Communication; Built-in Communication Analyzer
- Automatic Temperature and Pressure Compensation and Density Correction
- Meter Factor Calculation
- Five Levels of Security
- Automatic Adjustment of Final Trip Point
- Automatic Flow Control with Recovery
- API Tables From LPG to Crude Oil
- GPA Tables TP-15 and TP-16
- Explosion-Proof
- Programmable Languages/Messages
- LCD Graphics Display with Backlight
- Turbine Meter Diagnostics
- Boolean/Algebraic Processing
- Event Logging
- Stand-Alone Operation
- Y2K Compliant

With AccuLoad III QUAD you get all the benefits of AccuLoad III plus:

- ◆ Integration with more automation suppliers than any other preset device
- ◆ Simultaneous control of up to four arms in any combination of straight products or blending:

- Up to six component sequential blending (four arm)
- Up to four component ratio blending (one arm)

AccuLoad III – an evolutionary advancement that gives you the power to meet the challenges of the new world.

Yet another reason why only one company – FMC Measurement Solutions – can surround you with the best possible solutions.

Communications

General

Number of Ports: Four.

Configuration: Multi-drop network. Up to 32 AccuLoad IIIs can be connected onto the same transmit and receive data lines.

Data Rate: Keypad-selectable to asynchronous data rates of 1,200; 2,400; 3,600; 4,800; 7,200; 9,600; 19,200; or 38,400 bps.

Data Format: Programmable one-start bit, programmable seven or eight data bits-even, odd, or no parity, one stop bit.

Line Protocol: Half-duplex, full-duplex, no character echo.

Data Structure: ASCII character-oriented, modeled after ISO Standard 1155.

Protocol: Smith Mini, Smith Terminal, and Modbus.

EIA-232 (1 dedicated, 2 programmable)

Type: Interfaces with EIA-232 data communication standards. Data transmitters are tri-state design.

EIA-485 (1 dedicated, 2 programmable)

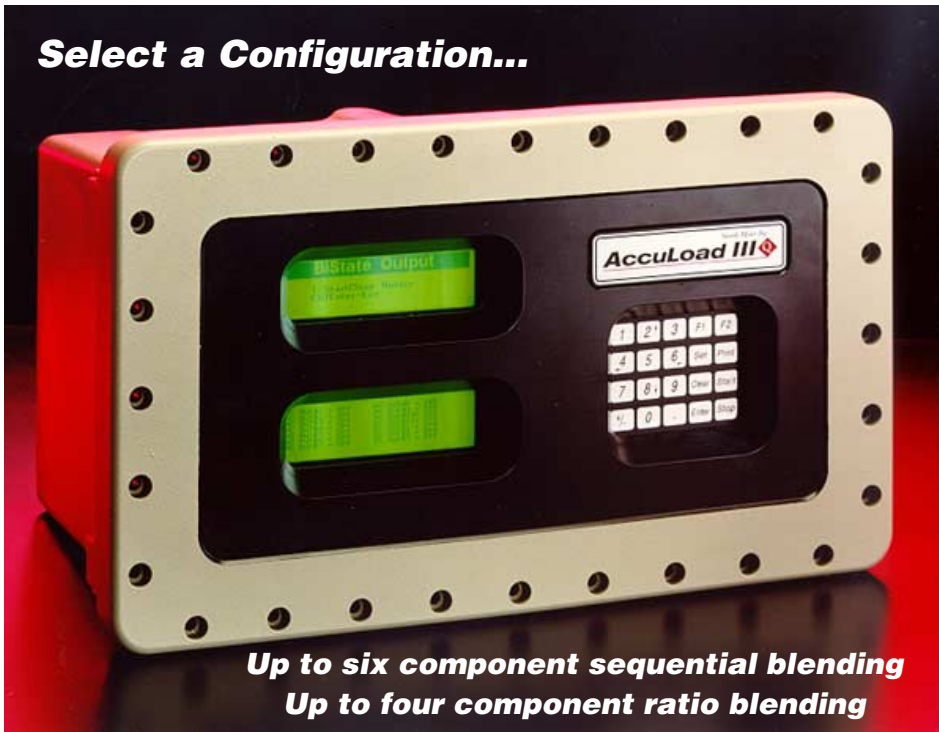
Type: Interfaces with EIA-485 data communication standards.

Smith Meter

AccuLoad[®] III QUAD

The Most Configurable Load Controller Available

Select a Configuration...

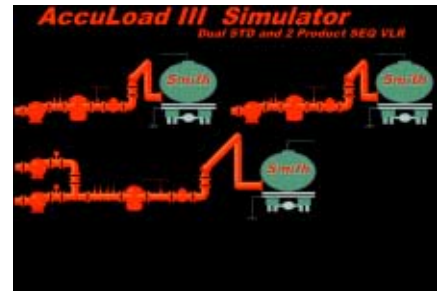


**Up to six component sequential blending
Up to four component ratio blending**

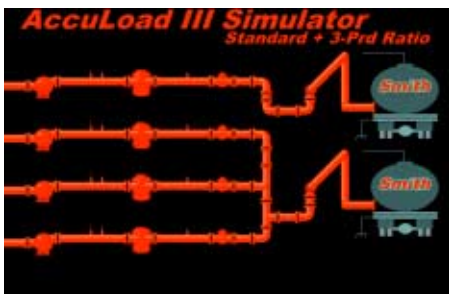
Quad Arm Standard



Dual STD + 2 Product Sequential



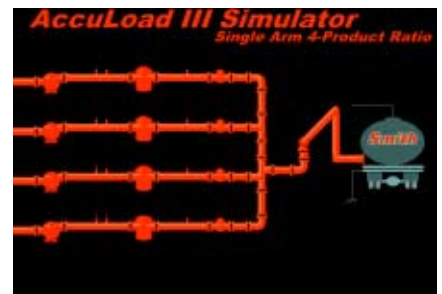
Standard + 3 Product Ratio



6 Product Sequential



4 Product Ratio



Single Arm Standard



Single Arm Ratio



Single Arm Sequential



**QUADruple the Power
of AccuLoad III-S...
AccuLoad QUAD
the Most Advanced,
Most Configurable
Load Controller
Available**

Dual Arm Standard 1+1



Dual Arm Sequential 2+2



Dual Arm Sequential 3+1



Smith Meter

AccuLoad[®] I-to-III Upgrade

You relied on Smith Meter when you chose your first electronic preset, and with good reason. Smith Meter Inc., now FMC Measurement Solutions, is the world leader in the design and manufacture of state-of-the-art measurement equipment and controls. Smith Meter AccuLoad III, our newest advancement in preset control, gives terminal operators the power of total load control.

Now, by way of direct replacement electronics, AccuLoad I users have the opportunity to protect their operation and take advantage of the leading edge features of AccuLoad III – without having to change existing terminal automation or conduit system.

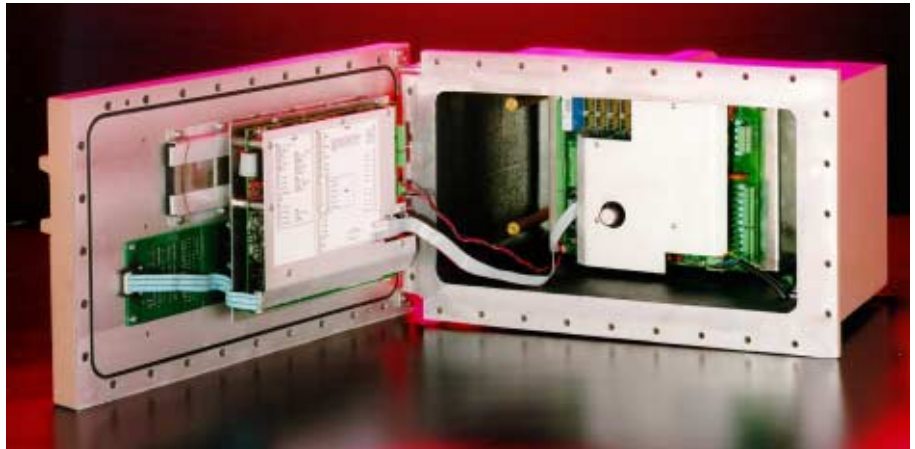
Choose the best option for your operation and upgrade AccuLoad I – as easily as 1-2-3:

Option 1. Board upgrade – use existing conduit installation and wiring

Option 2. Board upgrade – wiring reconfiguration and additions

Option 3. Board and Terminal Automation System (TAS) upgrade for extended software features

Get more than you thought possible from your existing installation while improving and protecting your operation.



Upgrade Options and Features

Option 1

Board Upgrade, No Wiring Changes

- New multi-line graphic display
- AFO with rate recovery
- Automatic meter factor calculation when proving
- Improved meter factor linearization
- 6 digit preset
- Automatic – final trip set-up
- Programmable additive stop
- Additional dynamic displays
- Local alarm clearing
- Replaceable relays
- Level A dual pulse security
- Boolean (how much depends on current functions and I/O used)
- Programmable languages
- Automatic proving
- Five security levels
- Zero flow timer (no stem switch)
- Start-stop timers for valve operation
- Flexible additive selection

Option 2

Board Upgrade, Wiring Changes and Additions

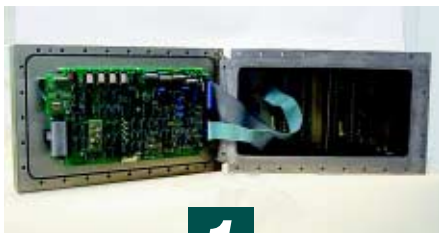
- Three permissive inputs
- Smart additive control (up to 12)
- Metered injector control (2)
- Additive feedback (piston injectors)
- Programmable additive outputs
- Shared printer
- Three additional communication ports (485 now available)
- Transmitter power sensing
- Total Boolean capability
- Densitometer capability

Option 3

Board and TAS Upgrade

- Time reports and event logging
- Additional transaction archiving
- Maintenance logging
- MODBUS protocol
- Driver prompting
- Increased baud rate
- Prompts

Take AccuLoad I to the next level of load control... as easy as



1

AccuLoad I with original board



2

New board being installed



3

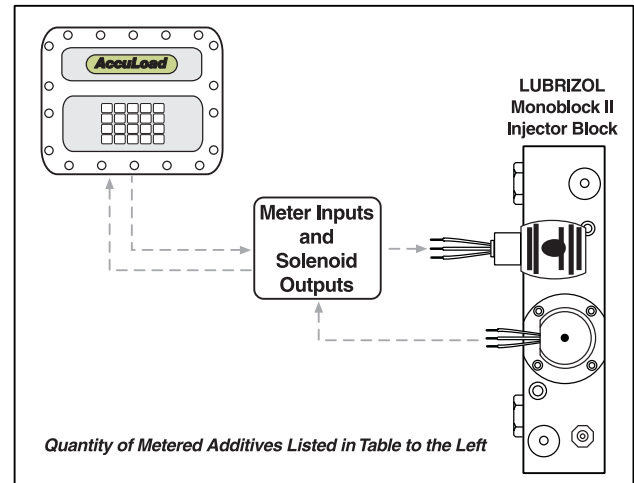
AccuLoad I-to-III upgrade complete

Smith Meter

AccuLoad[®] III with AddPak Additive Expansion

AccuLoad III controls a wide range of types and quantities of additive systems. The AddPak is a specific addition to accommodate an increase in the number of metered additives. The AddPak can be installed in the AccuLoad (providing the unit is not equipped with an overflow and ground option board), or it can be mounted remotely as desired. The AddPak has sufficient I/O to handle an additional 10 metered additives. The following is a list of types and quantities.

	Piston	Smart	Metered
AccuLoad III-S/ALS	11	12	2
AccuLoad-S/ALS1 & D1	11	12	2 (Option up to 12)
AccuLoad QUAD All versions	24	24	4 (Option up to 24)



Smith Meter

AccuLoad[®] III with **civacon** Overflow/Ground

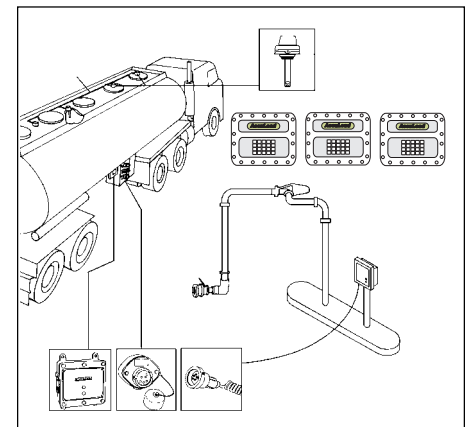
Integral Overflow and Ground Rack Monitoring System

By consolidating technologies, FMC Measurement Solutions and Civacon have joined together to create an automatic overflow protection system designed to protect and streamline your loading operation. Integrating Civacon's overflow/ground monitor into the architecture of the Smith Meter AccuLoad III allows state-of-the-art electronics to work to your advantage in an efficient and reliable monitoring system:

- ◆ Internally mounted Civacon OPTI-THERM Rack Monitor
- ◆ Eliminates need for costly, explosion-proof electrical boxes
- ◆ Automatic recognition of overflow sensor type (optic or thermistor)

- ◆ Automatic overflow detection for each compartment
- ◆ Automatic verification of ground connection
- ◆ Automatic shut-down on overflow and/or ground fault
- ◆ Display of overflow/ground status and operator prompting
- ◆ Master AccuLoad communicates peer-to-peer with other AccuLoads at the lane

AccuLoad III with Civacon Overflow/Ground – automatic, streamlined and essential for overflow protection.



Typical System Configuration

The Most Trusted Name In Measurement



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