ABB MEASUREMENT & ANALYTICS | FLOW COMPUTERS & REMOTE CONTROLLERS

XSeries products

Precise measurement and automation intelligence

Remote measurement and automation systems from ABB take you beyond mere integration through software and hardware solutions that are compatible with your business and with each other. Totalflow products deliver the most accurate information in the most efficient manner.

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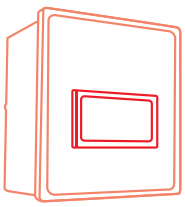
Benefits of using ABB's flow computers and RTUs

- Monitor, measure and control your facilities anywhere, anytime
- Measure and monitor gas and liquid flow in compliance with AGA, API, and ISO standards
- Reliable measurement, automation, monitoring, control and alarming applications for remote oil and gas systems
- Easy-to-use software systems for real-time measurement and control right from the office



Did you know?

ABB has over **300,000 flow computers and RTUs** installed in oil & gas worldwide.

Expertise in technology
Accuracy, efficiency, safety and productivity

We've built greater efficiency into every function of the XSeries products, resulting in exceptional productivity and profitability.

The challenge
Today's natural gas market requires high measurement accuracy and real-time gas/liquid custody-transfer and flow information, either from local or remote installations.

Rising prices for oil and gas have made it more important to have accurate and reliable measurements of flow. Custody transfer is one of the most important applications where the ownership of a fluid or gas is transferred from one person or company to another. In this transfer phase, it is critical that both parties agree on the type of flowmeter and on the conditions of use.

The solution
The XSeries flow computers target the oil and gas industry's custody-transfer and measurement needs. These low-power, highly reliable, microprocessor-based units meet a wide range of measurement, monitoring, and control applications for remote gas or oil systems.

All flow computers and RTUs comply with API, AGA, and ISO standards for custody-transfer electronic measurement devices and for flow rate, volume and energy calculations. In addition, all calculations are performed once per second and historical flow volumes and data logs can be stored for more than 40 days.

Easy installation, minimal calibration and accurate custody-transfer are just a few of the benefits of using ABB products.

- **Energy efficient**
- **Cost effective**
- **Backward compatible**
- **Flexible communications**
- **Quick, easy installation**
- **Extendable hardware and software**
- **Highly accurate**
- **Onboard Ethernet**
- **Multiple computer interface options**


ABB
Totalflow XRC


NOTICE
VENTILATE
BEFORE
ENTERING
NO
SMOKING

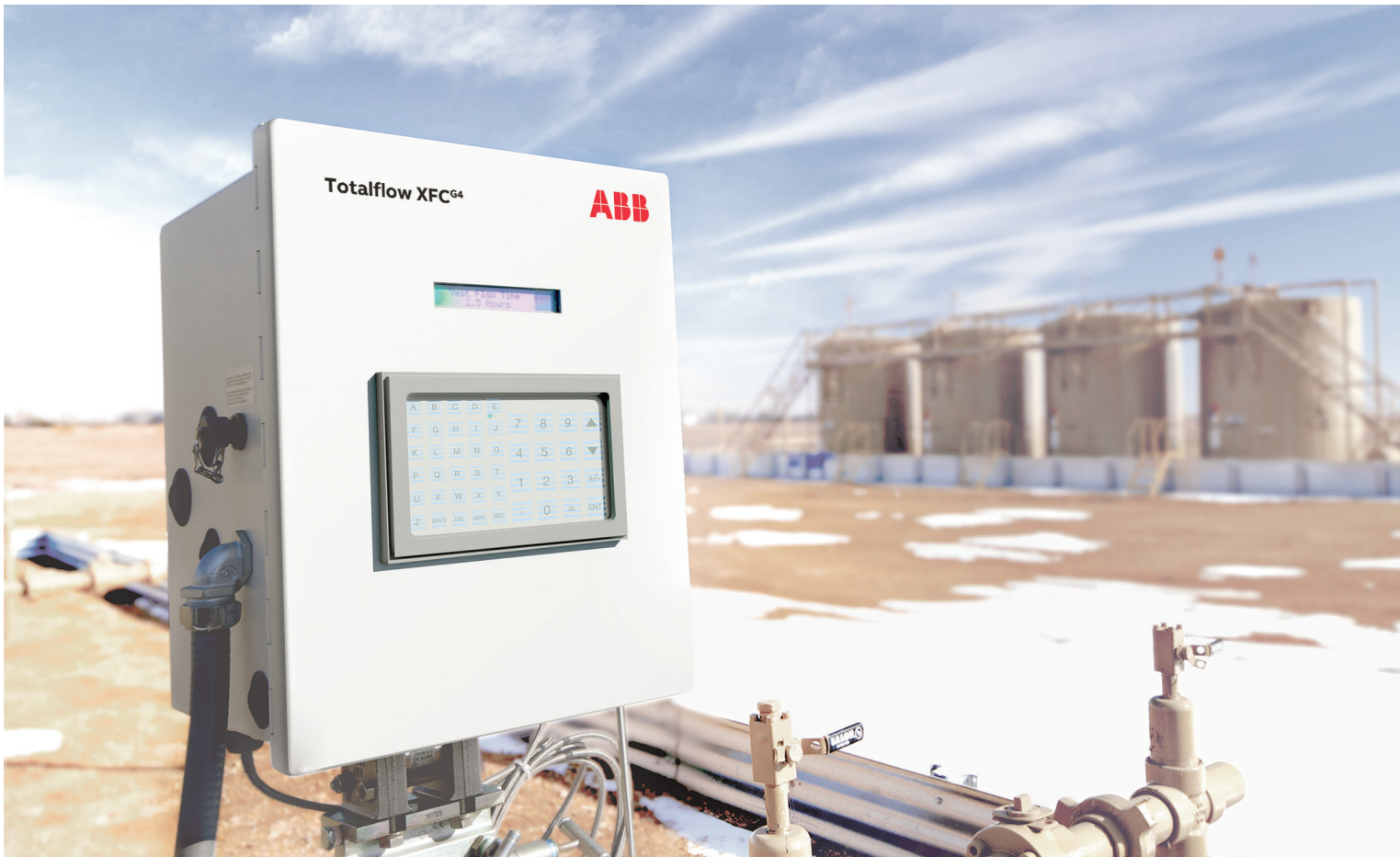
Absolute efficiency
Maximize quality and productivity

Choose from a complete portfolio of cutting-edge solutions to accurately, measure, record and control.

Representing a convergence of state-of-the-art technologies, ABB's XSeries products are scalable across all segments of oil and gas automation and measurement applications. Distributed control, wireless I/O, and data logging are among the many functions that seamlessly co-exist within ABB's XSeries products.

XSeries features

- Automate and control right from the office
- Measure in compliance with AGA / API standards
- Cost savings and increased revenues
- Multi-tube capabilities for control of large sites
- Explosion-proof, cast aluminum models available



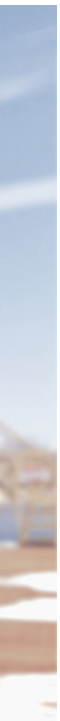
Measurement solutions

Flow computers: Measurement, monitoring, automation and control on site

XFC Extendable flow computer
XFC units include an Integrated Multivariable Transducer to meet a wide range of measurement, automation, monitoring, control, and alarming applications. The processing and memory capability of the devices allow the user to run more applications faster than ever before.

µFLO Basic flow computer
The microFLO (µFLO) series' main board and Integrated Multivariable Transducer comprise a single unit. This "smaller" version with limited expansion capabilities is ideal for single-tube applications, but can accurately measure and monitor gas flow in compliance with AGA, API and ISO standards.

XFC EX Explosion-proof flow computer
For metering and automation systems in extreme conditions, the 6200EX feature explosion-proof, cast-aluminum enclosures. They are extendable, include an Integrated Multivariable Transducer, and meet the needs of customers requiring a Class 1, Division 1 design.



Automation solutions

Remote controllers: Monitor, measure and control your facilities from anywhere

XRC Extendable remote controller
The XRC series is made up of full-featured units with standard I/O designed to meet the requirements of many low-cost measurement and automation projects. Devices can be extended in a flexible and simple way by adding modular IO as needed. They feature easy installation, and accurate custody transfer systems.

XRC Extendable panel-mount controller
We offer greater functionality and flexibility than competitors' custom products which require multiple companies to provide complex, engineered solutions. The XRC 6990 features a non-weatherproof enclosure that can be installed in a standard, 19-inch, vertical computer rack system.

Automation intelligence
Production optimization solutions

ABB's integrated automation solutions feature applications to optimize your site's efficiency and accuracy.

A lifecycle solution
Our goal is to optimize the productivity of your assets across their full lifecycle. The newest generation of powerful, fully extendable flow computers and RTUs can be configured to measure and control many types of facilities ranging from well pads to multi-tube meter runs. Regardless of what you're producing or where your fields may lie, ABB can help automate and enhance your production.

Applications that produce results
- Measure accurately
- Maximize production volume
- Increase ultimate recovery
- Minimize downtime
- Delay work-over expenses
- Reduce truck rolls

"In 2010 using the Totalflow system, we reduced our miles per meter by 17% across the field."

Independent Producer Northern Colorado

"Optimizing our plunger lift field using Totalflows, we were able to increase our reserves by 20% on an aging asset."

Production Engineer – South Texas

"With Totalflow Products we flat lined the decline curve for every well we put it on."
SCADA Manager – Alberta, Canada

ABB's flow computers and RTUs come standard with numerous applications built in. We offer a "credit" system that allows users to choose which applications best suit their needs. Each unit comes with a standard number of credits and more credits can be purchased if necessary.

= Included in purchase

$ = Credit required

		No. of credits included with purchase			
		4	4	4	2
Application	**Description**	**XFC**	**XRC**	**XFC EX**	**µFLO**
Operational applications					
Analysis Trend File	Gas composition logs from online GC	$	$	$	$
Communications	Used to set up communication				
Conversion Units	Converts units of measure				
Coriolis Data Interface	Communication interface for Coriolis meter				
Display	Controls data shown on LCD display				
Enron Interface	Enron Modbus support of AGA3 and AGA7				
Holding Registers	General purpose data registers				
IO Interface	Scans all I/O data, onboard and TFIO modules				
LevelMaster Interface	Interface to the LevelMaster product				
NGC Client	TCP/IP Modbus interface to NGC				
Operations	Configurable math and logic functions				
Protocol Multiplexer	Interfaces two host systems to one communications channel	$	$		
Pulse Accumulator	Scales and accumulates pulse inputs for basic volume totals				
RAMS (Alarm) System	Configurable alarm detection, logging, and reporting				
Therms Master	Gathers and sends gas analysis data via Modbus to Slaves				
Therms Slave	Receives gas analysis data from EFM with Therms Master				
Trend System	Configurable trending functionality				
WLIO Interface	Interface to the WellTell wireless products				
XMV Interface	Communications interface for an external multivariable				
Automation applications					
Gas Lift	Artificial lift for wells with liquid loading problems	$	$	$	
IEC Interface	IsaGraf Custom Logic	$†	$†	$†	
Pad Controller	Allows control of multiple wells	$	$	$	
PID Control	Allows the use of PID controllers				
Plunger Lift	Allows control of a plunger on a production well	$	$	$	
Pump Control Interface	Prebulit interfaces for various pumps	$	$	$	
Shutdown System	Shutdown a well or site				
Valve Control (AO/DO)	Allows control of flow / pressure using Valve Control Module				
Measurement applications					
AGA3	Orifice gas measurement	$	$	$	$
AGA7	Linear gas measurement	$	$	$	$
Coriolis Measurement	Coriolis gas flow measurement	$	$	$	$
Liquid Measurement	Linear liquid (API) measurement	$	$	$	$
NIST 14 Gas	CO^2 measurement	$†	$†	$†	$†
NIST 14 Liquid	CO^2 measurement	$†	$†	$†	$†
Nozzle Measurement	Flow nozzle gas and water measurement	$	$	$	$
Oil Transfer Measurement	Creates truck load ticket from tanks	$	$	$	$
VCone	VCone gas flow measurement	$	$	$	$
Wedge Gas	Wedge gas flow measurement	$	$	$	$

†A special credit is required for these applications. Contact your sales representative for more information on purchasing information.

Available accessories

Contact ABB for more information on available accessories.

Power systems

Solar panels
The XSeries products can be configured to work with solar panels. A variety of sizes are available to offer solutions for any circumstance. Solar panels are a cost-effective power source for remote locations that require equipment to withstand harsh conditions.

Internal batteries
ABB offers an assortment of battery capacities to choose from. Contact ABB for assistance in determining battery and solar requirements.

Miscellaneous accessories

- Pressure, temperature, & multivariable transmitters
- Manifolds
- I/P converters
- RTDs
- Thermowells
- Manifold test port kits
- Antennas & coax
- Tubing and fittings
- Pipe saddles

Touch-screen displays

Touch screen panels give you complete HMI functionality for capable devices. They also allow you to easily connect, monitor and control processes across a broad range of industries. Serial devices can easily be connected through Ethernet connection on all the touch panel models.

Communications kits

ABB offers an assortment of communication kit options including mounting brackets, wiring harnesses, and various brands of communication devices such as spread spectrum and licensed radios. Contact ABB for assistance in determining the kit that best suits your needs. Contact ABB for more information on available accessories.

XSeries product comparison

Touch screen XRC

XFC

Explosion-proof XFC

Panel-mount XRC

µFLO

	Enclosure type / size	Approximate weight (w/o battery)	Maximum Input/Output modules	Maximum battery capacity	Supports automation applications	Integrated Multivariable Transducer
Flow computers						
Differential flow computers						
XFC 6410	Small enclosure	13.5 lbs	0	26AH		
XFC 6413	Medium enclosure	15 lbs	3	26AH		
XFC 6713	Large enclosure	29 lbs	6	52AH		
µFLO 6213	Medium enclosure	15.1 lbs	4-Point I/O opt. expansion card	26AH		
XFC 6200 EX	Explosion-proof enclosure	16.5 lbs	12-Point I/O opt. expansion card	Internal battery not supported		
Linear flow computers						
XFC 6411	Small enclosure	11.5 lbs	0	26AH		
XFC 6414	Medium enclosure	12 lbs	3	26AH		
XFC 6714	Large enclosure	27 lbs	6	52AH		
µFLO 6213	Medium enclosure	15.1 lbs	4-Point I/O Opt. Expansion Card	26AH		
XFC 6201 EX	Explosion-Proof enclosure	16.5 lbs	12-Point I/O Opt. Expansion Card	Internal battery not supported		
RTUs						
XRC 6490	Small enclosure	15 lbs	3	26AH		
XRC 6790	Medium enclosure	29 lbs	6	52AH		
XRC 6890	Large enclosure	45 lbs	14	140AH		
XRC 6895*	X-Large enclosure	60 lbs	22	Internal battery not supported		
XRC 6990	Panel-mount	12 lbs	6 per board (max. 2 boards)	26/30AH		

*XRC 6895 also has 20 fused power terminals (DIN rail mounted) and 259 mini terminal connections (mini DIN rail mounted).

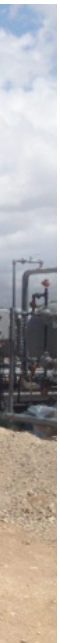


ABB Inc.
Measurement & Analytics
Quotes: totalflow.inquiry@us.abb.com
Orders: totalflow.order@us.abb.com
Training: totalflow.training@us.abb.com
Support: totalflowsupport@us.abb.com
+1 800 442 3097 (opt. 2)

Main Office
7051 Industrial Boulevard
Bartlesville, OK 74006
Ph: +1 918 338 4888

www.abb.com/upstream

California Office
4300 Stine Road
Suite 405-407
Bakersfield, CA 93313
Ph: +1 661 833 2030

Kansas Office
2705 Centennial Boulevard
Liberal, KS 67901
Ph: +1 620 626 4350

Texas Office – Odessa
8007 East Business 20
Odessa, TX 79765
Ph: +1 432 272 1173

Texas Office – Houston
3700 West Sam Houston
Parkway South, Suite 600
Houston, TX 77042
Ph: +1 713 587 8000

Texas Office – Pleasanton
150 Eagle Ford Road
Pleasanton, TX 78064
Ph: +1 830 569 8062

PB/2101115-EN – Rev. B 03.2019