System hardware
Measurement and automation products

Introduction

Because precisely is the ABB way, let's get straight to the bottom line: ABB Totalflow's remote measurement and automation systems are proven to dramatically increase the accuracy, efficiency, safety, and productivity of any natural gas operation.

Totalflow software and hardware systems go beyond mere integration. Not only are they designed to be compatible with each other, they are also compatible with your business— now and as your business grows. And when you trust ABB for your measurement and automation solutions, you can fully expect your business to grow.

There is not an engineer, sales representative, customer service professional, or technician on the ABB Totalflow team who doesn't believe in doing the job right every time. It's more than a matter of pride—it's a matter of responsibility.

When we tell a customer that our products will deliver the most accurate information in the most efficient manner possible, a lot is at stake. The customer's profitability, for one. And our reputation. Part of our reputation is making sure the customer is satisfied no matter what. So, if a standard product is not enough, our project engineers will create the right solution for your business.

Discover how much easier life can be when you go with the 'flow—ABB Totalflow.

Power and productivity
for a better world™

ABB

Measurement and automation products
XSeries flow computers and remote controllers

Integrated packages
– Battery powered
– Solar Panel or other DC voltage charging system
– Communications equipment in enclosure
– CSA C/US Class I, Div 2, Grp CD, (ATEX, pending)

Volume and energy calculations
– AGA 3 and AGA 7 orifice and linear meters.
– NX-19 and AGA 8 compressibility calculations
– AGA 5
– ISO 5167
– Other primary elements
– API 21.1

Expandable
– Plug-in I/O modules
– Control and alarming
– Data logging
– Optional keypad
– Standard and programmable applications
– General purpose logic and math "operators"
– IEC 61131 control language
– Multiple communication ports
– 40+ days historical records (user configurable up to 180+ days of hourly and daily data records)

Fully configured
– Assembled
– Factory calibrated
– Communications equipment installed
– Software configured

Applications
– Custody transfer measurement
– Multi-tube measurement
– Real time volume and energy metering
– Operations data and statistics
– Production automation
  – Rate/pressure control with DP overrides
  – Nominations
  – Plunger lift
  – Down hole liquid level control
  – Deliverability testing
  – Custom controls and alarming
  – Pipeline measurement and control
  – Industrial delivery metering
  – Storage in/out metering
– Compressor monitoring
– Engineering data logger
– Exception based alarming
– Multi-tube measurement and control
– An ever growing list

XFC integrated package for natural gas
– Integral smart, multivariable transmitters (Static pressure, RTD temperature, differential pressure, pulse input)
– Onboard user IO
    – 2 analog inputs
    – 2 digital inputs (high speed PI capable)
    – 2 digital outputs
    – Battery voltage
    – Charger voltage

XRC integrated package for general purpose
– Onboard user IO
    – 5 analog inputs
    – 4 digital inputs - (2 high speed PI capable)
    – 4 digital outputs
    – Battery voltage
    – Charger voltage

Measurement and automation products
Single tube and EX flow computers

µFLO 6213 – Single tube flow computer for differential meters

Integrated package for natural gas flow measurement
– Smart,multivariable transmitter (static pressure, differential pressure and RTD temperature)
– Battery powered, solar panel charged system
– Communications equipment mounting in enclosure
– CSA C/US Class I, Div 2, Grp CD, (ATEX, pending)

AGA calculations
– AGA 3 and AGA 7 orifice and linear meters
– NX-19 and AGA 8 compressibility calculations
– ISO calculations
– U.S. ormetric measurement units
– Supports API chapter 21 recommendations
– 40+ days historical records (user configurable)

Single meter run simplicity
– Local configuration port
– Optional single DI/DO
– Comprehensive software support
– Simple, accurate and productive chart replacement

Remote communications ready
– Radio mounting tray
– Software configurable RS232/RS485/RS422 port

XSeries EX flow computers – Div I / Zone 1

Explosion proof package for natural gas flow measurement
– 6200EX differential device with smart, multivariable transmitter (static pressure, differential pressure and RTD temperature)
– 9 to 30Vdc supply voltage compatible
– Hazardous area classifications of CSA C/US Class I, Div 1 Groups C/D, (ATEX EExd11B, IECEx Exd11B, pending)

AGA calculations
– AGA 3 and AGA 7 orifice and linear meters
– NX-19 and AGA 8 Compressibility calculations
– ISO Calculations
– U.S. or Metric measurement units
– Supports API chapter 21.1
– 40+ days historical records (user configurable up to 180+ days of hourly and daily data records)

Single meter run simplicity/multi run capability
– Local configuration port
– Comprehensive software support
– Simple, accurate and productive chart replacement

Features
– Two software configurable RS232/RS485/RS422 port
– One Analog In
– One Digital In/Pulse In
– One Digital Out

Optional I/O Daughter Card
– Four Digital Ins (also functions as event counter and are capable of accepting NAMUR type sensors)
– Four Digital Outs
– Three Analog Ins
– One Analog Out

Measurement and automation products
Multivariable transmitter

MODBUS multivariable transmitter for differential metering

Smart, multivariable transmitter

– Static pressure, differential pressure and RTD temperature
– Designed to meet hazardous area classifications of CSA C/US CI,D1 Groups C/D, ATEX EExd11B, IECEx Exd11B
– Intrinsically safe configuration available
– Accuracy: 0.075%
– RS-485 MODBUS protocol
– Optional LCD
– Can be configured with external keys
– Totalflow flow measurement products include pre-built, easy to use interface to multivariable
– Interchangeable electronics with self re-configuration
– Significant turndown capability

Measurement and automation products
Natural gas chromatographs

NGC natural gas chromatograph

Online, low power gas chromatograph
– Multiple communication ports
– C6+ gas analysis
– Class I, Div. 1 certified
– Four streams – Three streams + calibration stream or 2 and 2
– Five (5) minute analysis cycle time

Modular construction
– Dual electronic pressure regulators
– Interchangeable GC valve module
– Optional feed through heater
– Pre-designed sampling systems

Windows based software support
– Auto-start feature
– Auto calibrate
– Historical data records
– Remote and local operation
– SD Card memory storage

Btu calculations per:
– GPA
– ISO
– GOST

Remote and local communications ready
– Modbus slave
– Modbus host
– Ethernet
– USB (host and client)
– Medicon MODBUS
– Danalyzer MODBUS

BTU 8000/8100 NGC

First online, low power gas chromatograph
– Multiple communication ports
– C6+ gas analysis
– Class I, Div. 1 certified
– Three streams + calibration stream
– Three (3) minute analysis cycle time

Modular construction
– Electronic pressure regulator
– Interchangeable column module
– Integrated heater
– Pre-designed sampling systems

Windows based software support
– Auto-start feature
– Auto calibrate
– Historical data records
– Remote and local operation

Btu calculations per:
– GPA 5160
– ISO
– GOST

Remote and local communications ready
– Modbus slave

Measurement and automation products
LevelMaster

LevelMaster tank level sensor

Features

- Low power
- Patented standard 0.1 inch (2.5mm) high relative accuracy technology
- High precision .05 (1.25mm) relative accuracy option
- Measurement repeatability of plus or minus .05 inches (1.25mm)
- Resolution of .01 inches (.25mm)
- Utilizes simple ASCII communications protocol
- Easily interfaces to any RTU or PLC device
- Simple to install
- Simple one-time installation calibration (set it and forget it)
- Available in lengths from 2 foot (0.6 meters) to 25 foot (7.6 meters)
- Designed for single or dual floats
- Single RTD for fluid temperature measurement
- CSA and Certified for use in Division 1 Group C and Group D Hazardous Environments
- International approvals pending
- RS-485 communications port (up to 16 tanks can be connected in parallel on the same bus)
- Two year warranty
- Up to 4 LevelMasters can be powered with a single optional intrinsically safe barrier board for Div 1, Group D service

Applications

- Monitoring and control of liquid levels in tanks
- Leak detection and spill prevention
- Level and pump control
- Safely gauge H2S tanks
- Call-out exception reporting
- High and low alarm capability
- Meets or exceeds industry standards

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Note
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Product
webpage

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