Coriolis (gas) interface
XSeries and *X*CORE applications

Uncorrected mass from the Coriolis device is requested and utilized by the interface application to calculate corrected mass and volume.

Measurement made easy

—
01 Totalflow applications can be used with etiher a Totalflow XSeries device, or a Totalflow *X*CORE device.

Coriolis (gas) interface and tube application

The ABB Totalflow Coriolis (gas) application allows an XSeries/*X*CORE device to interface with a Micro Motion® Coriolis transmitter serially using Modbus protocol. Uncorrected mass from the Coriolis device is requested and utilized by the interface application to calculate corrected mass and volume. Daily logs, hourly logs, characteristics and event logs are collectible, both locally and remotely, from the Coriolis tube application's historical data (i.e. uncorrected mass, corrected mass, corrected volume, energy, and RTU alarms).

PCCU (local PC user Configuration and Collection software) provides the user interface to the Totalflow XSeries/*X*CORE device for configuration, calibration, collection and viewing of historical data, as well as the ability to modify supported parameters resident in the Micro Motion® Coriolis transmitter.

These parameters are viewable in the Coriolis Interface Application. The Coriolis Interface allows the user to enter the calibration pressure (PCal) and pressure effect (PEffect), which are then applied to uncorrected mass flow to produce the corrected mass flow. The user may also choose to use a Frequency input if preferred or when connecting to another brand of Coriolis meter. The user can not view or modify the Coriolis meter's parameters when using the frequency only.

Coriolis (gas) interface configuration

Each RTU/Coriolis (Gas) interface can support up to eight Coriolis meters on a common RS485 serial Modbus communications port. Bidirectional flow is supported for each Coriolis meter. Mass, measured density, and alarm status of the Coriolis are polled once per second. Any active alarms are shown in the interface and may be polled by SCADA systems.

Coriolis transmitter configuration parameters

Many of the Micro Motion® transmitter parameters may be configured via the device using Totalflow's PCCU 6.03 or newer MMI software. Below are some of the Micro Motion® Curved Tube Coriolis configuration parameters that may be read from or written to the Micro Motion® transmitter using the Totalflow Coriolis interface and PCCU software.

Recommended equipment

- XSeries/*X*CORE flash with Micro Motion® Coriolis (gas) support features
- PCCU32 version 7.15.4 or newer
- WinCCU version 6.04 or newer
- Appropriate XSeries/*X*CORE configuration files

Mass flow correction parameters	
Calibration pressure (PCal)	R/W
Pressure effect (PEffect)	R/W
Mass flow parameters	
Damping period	R/W
Low flow cutoff (lbm/s)	R/W
Flow calibration factor (FCF)	R/W
Flow temperature coefficient (FT)	R/W
Meter factor	R/W
Mechanical zero	R
Density parameters	
Measured density from coriolis	R
Damping period	R/W
Low density cutoff	R/W
Slug duration	R/W
High slug limit	R/W
Low slug limit	R/W
Density meter factor	R/W
Flowing density factor (FD)	R/W
Temperature coefficient (DTC)	R/W
Low density calibration (D1)	R/W
Temperature corrected tube period (K1)	R/W
High density calibration (D2)	R/W
Temperature corrected tube period (K2)	R/W
Temperature parameters	
Damping period	R/W
Calibration slope	R/W
Calibration offset	R/W
External temperature	R/W
T-Series parameters	
Temperature corrected tube period (K3)	R/W
Temperature corrected tube period (K4)	R/W
Density calibration (D3)	R/W
Density calibration (D4)	R/W
FTG	R/W
FFQ	R/W
DTG	R/W
DFQ1	R/W
DFQ2	R/W

R = Read only; R/W = Read/Write
Note: straight tube (t-series) parameters
are also supported.