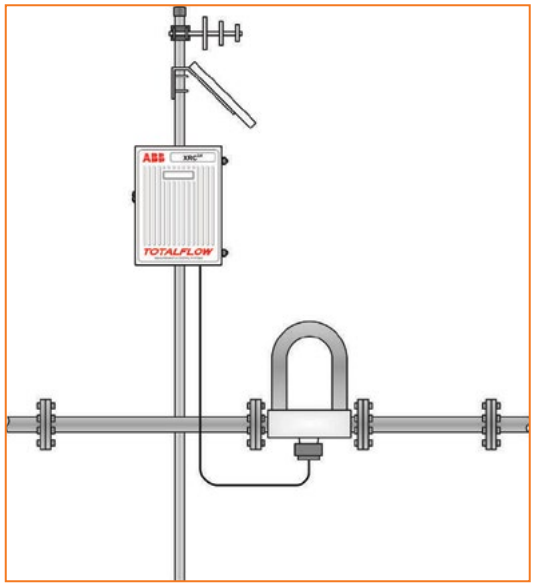
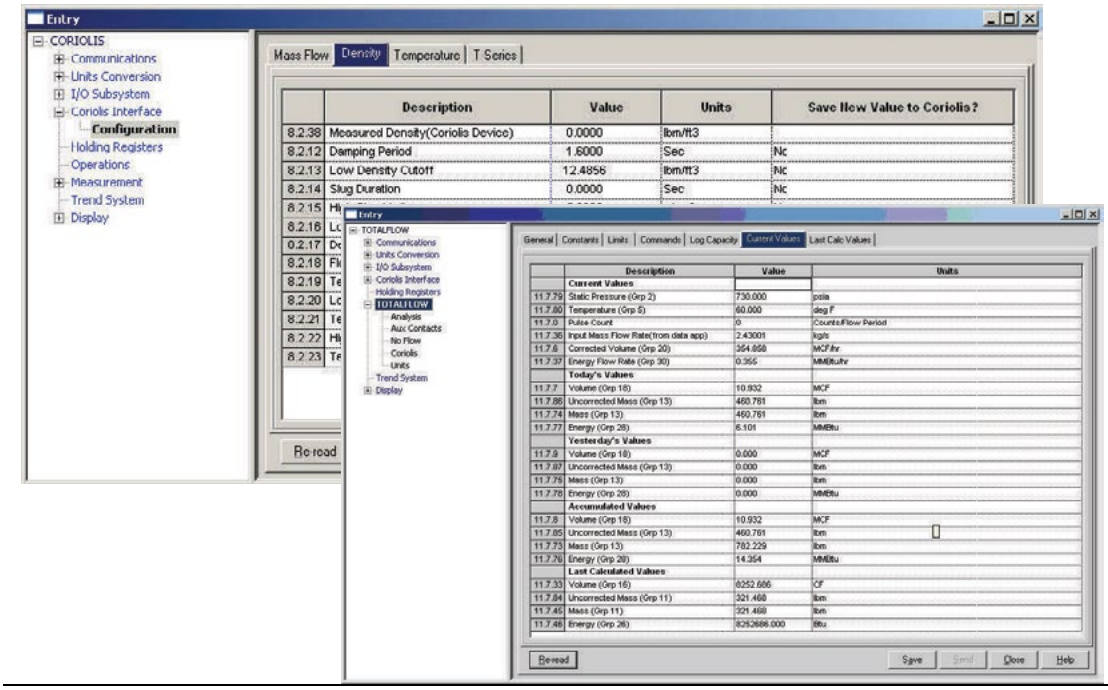
CORIOLIS *X*SERIES INTERFACE

The ABB Totalflow *X*Series Coriolis application allows an XSeries device (XFC or XRC) to interface with an Emerson Micro Motion® Coriolis transmitter and perform volume and corrected mass calculations. Mass flow output from the Coriolis device, retrieved via Modbus protocol, is requested and utilized by the interface application to calculate corrected volume. Daily logs, hourly logs, characteristics and event logs are collectable, both locally and remotely, from the Coriolis application's historical data (i.e. corrected volume, corrected mass, uncorrected mass, energy, and alarms). PCCU (local PC user Configuration and Collection software) provides the user interface to the Totalflow *X*Series device for configuration, calibration, collection and viewing of historical data, as well as the ability to view and edit parameters resident in the Micro Motion® Coriolis transmitter. The Coriolis Interface allows the user to enter the calibration pressure (PCal) and pressure effect (PEffect), which are then applied to mass flow to produce the corrected mass flow. A list of configurable parameters is shown on the back.



SOFTWARE REQUIREMENTS

1. *X*FC flash or *X*RC flash with Micro Motion® Coriolis support features
2. PCCU32 version 6.03
3. WinCCU version 6.04
4. Appropriate *X*FC or *X*RC Configuration Files



Coriolis *X*Series Interface

Application Sheet
2102772-AA

XSERIES/CORIOLIS INTERFACE CONFIGURATION

Each *X*Series/Coriolis interface uses one *X*Series measurement tube application. The measurement tube can be forward, reverse, or bi-directional. For two forward tube applications, two Coriolis interfaces are required. An *X*Series G3 device can support a maximum of either one bi-directional interface or two single direction flow interfaces.

CORIOLIS TRANSMITTER CONFIGURATION PARAMETERS

Many of the Micro Motion® transmitter parameters may be configured 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.

Mass Flow Correction Parameters			
Calibration Pressure (PCal)	R/W	Pressure Effect (PEffect)	R/W
Mass Flow Parameters			
Damping Period	R/W	Flow Temperature Coefficient (FT)	R/W
Low Flow Cutoff (lbm/s)	R/W	Meter Factor	R/W
Flow Calibration Factor (FCF)	R/W	Mechanical Zero	R only
Density Parameters			
Measured Density from Coriolis	R only	Flowing Density Factor (FD)	R/W
Damping Period	R/W	Temperature Coefficient (DTC)	R/W
Low Density Cutoff	R/W	Low Density Calibration (D1)	R/W
Slug Duration	R/W	Temperature Corrected Tube Period (K1)	R/W
High Slug Limit	R/W	High Density Calibration (D2)	R/W
Low Slug Limit	R/W	Temperature Corrected Tube Period (K2)	R/W
Density Meter Factor	R/W		
Temperature Parameters			
Damping Period	R/W	Calibration Offset	R/W
Calibration Slope	R/W	External Temperature	R/W
T-Series Parameters			
Temperature Corrected Tube Period (K3)	R/W	FFQ	R/W
Temperature Corrected Tube Period (K4)	R/W	DTG	R/W
Density Calibration (D3)	R/W	DFQ1	R/W
Density Calibration (D4)	R/W	DFQ2	R/W
FTG	R/W	*Note: Straight tube (T-Series) parameters are also supported.*	
R = Read ***R/W = Read/Write***			

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