Rosemount™ 8800D Vortex Flow Meter Configuration Data Sheet

○   Select only one of the items provided

□   One or more of the listed items can be selected

*   Default value

Customer information	
Customer:	Contact name:
Quote/PO #:	Line #:

Fluid selection					
Steam:	○ Superheated	Saturated			
		○ Pressure-based		○ Temperature-Based	
Liquid:	○ Water*	○ Methanol		○ Ethanol	
	○ Ammonia	○ Oxygen		○ Other: _____	
Gas:	○ Air	○ Nitrogen		○ Hydrogen	
	○ Oxygen	○ Carbon Dioxide		○ Other: _____	

Fluid properties
Name:
Density or Specific Gravity:
Viscosity:
Vapor pressure (liquids):
Base density:

ROSEMOUNT™

EMERSON™

Process information

Flow rate, pressure, and temperature							
			Units	**Minimum**	**Normal**	**Maximum**	**Design**
Flow rate:							
Pressure:	Process	○ Absolute					
		○ Gauge [1]					
		(Atmospheric)[2] ○ 14.7 psi ○ Other _____					
Temperature:							

(1) *If gauge pressure is selected, provide atmospheric pressure.*
(2) *Atmospheric pressure is required when Gauge is selected and MPA or MCA option is selected.*

Base conditions (Required only if Standard Volumetric Flow Rate Units are used)				
	○ Standard*	○ Normal	○ Standard - Natural Gas	○ User Defined
Pressure	14.696 psia (101.3625 kPaa)	14.696 psia (101.3625 kPaa)	14.73 psia (101.3727 kPaa)	_____ ○ psia ○ kPaa
Temperature	60 °F (15.56 °C)	32 °F (0 °C)	60 °F (15.56 °C)	_____ ○ °C ○ °F

Mating pipe I.D.				
Process line size: _____	or Mating Pipe I.D. _____		○ Inches*	○ Millimeters
Mating pipe schedule ○ 10	○ 40	○ 80	○ 160	○ Other

Transmitter

Physical tag

Hardware Tag		
Type	**Line #**	**Characters (maximum number)**
Transmitter name tag:	1	_____ (21)
Transmitter wire-on tag	1	_____ (17)
	2	_____ (17)
	3	_____ (17)
	4	_____ (17)
	5	_____ (17)
Meter body name tag:	1	_____ (21)
Meter body wire-on tag	1	_____ (17)
	2	_____ (17)
	3	_____ (17)
	4	_____ (17)
	5	_____ (17)

Software tag for transmitters with HART protocol

Software Tag - choose one according to protocol	
HART 5	_____ (8)
HART 7	_____ (32)

Software tag for transmitters with FOUNDATION™ Fieldbus protocol

Software Tag	
FOUNDATION™ Fieldbus	_____ (32)

HART/Analog configuration

Variable mapping

Variable mapping for transmitters with HART protocol
Primary Variable: ○ Volumetric flow* ○ Mass flow ○ Corrected volumetric flow ○ Velocity flow ○ Process temperature[1]
Secondary (SV), Tertiary (TV), and Quaternary (QV) variables. Select up to three variables from the list. Mark the SV with a 2, TV with a 3, and QV with a 4.   _____ Volumetric flow (Units _____) _____ Flow totalizer   _____ Corrected volumetric flow (Units _____) _____ Electronics temperature   _____ Mass flow (Units _____) _____ Pulse output frequency   _____ Velocity flow (Units _____) _____ Shedding frequency   _____ Signal strength _____ Process temperature[1]   _____ Elapsed time meter[2] _____ Process pressure[3]   _____ Thermocouple CJ temperature[1] _____ Process density[4]

(1) *Requires MTA or MCA ordering option.*
(2) *Requires ETM ordering option.*
(3) *Requires MPA or MCA ordering option.*
(4) *Requires MTA, MPA, or MCA ordering option.*

Analog output scaling

Analog (4–20 mA) scaling for transmitters with HART protocol (Primary Variable selected will be assigned to the mA output)		
LRV:	URV:	UOM:

Pulse output

Pulse output for transmitters with HART protocol and Output option code P				
Pulse output based on:	○ Direct shedding frequency*	○ Volume flow	○ Mass flow	○ Corrected volumetric flow	○ Velocity flow
	Scaled:	1 pulse = _____ (e.g., 1 pulse = 10 gal)		
	OR:	_____ = _____ Hz (e.g., 10 gal/min = 100 Hz)		

Display

LCD configuration for transmitters with HART protocol (check all items to be displayed)		
☐ Volumetric flow rate	☐ Process temperature[1]	☐ Electronics temperature
☐ Shedding frequency	☐ Mass flow rate	☐ % range*
☐ Pulse output frequency	☐ Flow totalizer	☐ Velocity
☐ Primary variable*	☐ Analog output	☐ Thermocouple CJ temperature[1]
☐ Corrected volumetric flow	☐ Signal strength	☐ Process density[2]
☐ Process pressure[3]	☐ Elapsed time meter[4]	

(1)　*Requires MTA or MCA ordering option.*
(2)　*Requires MTA, MPA, or MCA ordering option.*
(3)　*Requires MPA or MCA ordering option.*
(4)　*Requires ETM ordering option.*

FOUNDATION Fieldbus configuration

Scaling

Scaling for transmitters with FOUNDATION Fieldbus protocol			
	Lower limit	Upper limit	UOM
Flow XD_Scale			

Display

LCD configuration for transmitters with FOUNDATION Fieldbus protocol (check all items to be displayed)	
☐ Flow	☐ Shedding frequency
☐ % range	☐ Integrator output (totalizer)
☐ Electronics temperature	☐ Calculated process density[1]
☐ Process temperature[1]	

(1)　*Requires MTA option code.*

Modbus configuration

Modbus protocol parameters

Modbus communication settings					
Modbus address _____			Range 1–247		Default: 1
Baud rate	○1200	○ 2400	○ 4800	○ 9600* ○ 19200	○ 38400
Parity	○ Even*		○ Odd		○ None
Stop bits	○ 1 Bit*		○ 2 Bits		

Variable mapping

Variable mapping for transmitters with Modbus protocol
Primary Variable (PV): ○ Volumetric flow*   ○ Mass flow   ○ Corrected volumetric flow   ○ Velocity flow   ○ Process temperature[1]
Secondary (SV), Tertiary (TV), and Quaternary (QV) variables. Select up to three variables from the list. Mark the SV with a 2, TV with a 3, and QV with a 4.
____ Volumetric flow (Units ____)   ____ Flow totalizer*** ____ Corrected volumetric flow (Units ____)   ____ Electronics temperature ____ Mass flow (Units ____)   ____ Pulse output frequency ____ Velocity flow (Units ____)   ____ Shedding frequency** ____ Signal strength****   ____ Process temperature[1] ____ Thermocouple CJ temperature[1]   ____ Process density[1]
** Default SV   *** Default TV   **** Default QV

(1)   *Requires MTA ordering option.*

Pulse output

Pulse output for transmitters with Modbus protocol				
Pulse output based on:	○ Direct shredding frequency*	○ Volume flow ○ Mass flow	○ Corrected volumetric flow	○ Velocity flow
	Scaled:	1 pulse = ____ (e.g., 1 pulse = 10 gal)		
	OR:	____ = ____ Hz (e.g., 10 gal/min = 100 Hz)		

Display

LCD configuration for transmitters with Modbus protocol (check all items to be displayed)		
☐ Volumetric flow rate	☐ Primary variable*	☐ Electronics temperature
☐ Shedding frequency	☐ Mass flow rate	☐ Pulse output frequency
☐ Flow totalizer	☐ Velocity	☐ Corrected volumetric flow
☐ Signal strength		

Special configuration options

Compensated Flow options (MTA, MPA, or MCA options)			
○ None	○ Temperature compensation only[1]	○ Pressure compensation only[2]	○ Pressure and Temperature compensation[3]

(1)   *Requires MTA or MCA option code.*
(2)   *Requires MPA option code.*
(3)   *Requires MCA option code.*

Temperature compensation

Temperature sensor configuration (requires MTA or MCA option code)	
Temperature sensor failure alarm:	○ Alarm* In the event of a temperature sensor failure, the vortex flow meter will go into an alarm mode. Note that if the Primary Variable is process temperature (HART only), Alarm is automatically selected. ○ Fixed process temperature In the event of a temperature sensor failure, the vortex meter will output an alert and will use the fixed process temperature as a backup for the density and compensated mass flow calculations.

Temperature compensated liquids (requires MTA or MCA option code and liquid fluid type)	
If liquid is not water, please specify between two and five custom temperature and density points. Add units of measure in the parenthesis.	
Temperature (unit of measure) 1. _____ (_____) 2. _____ 3. _____ 4. _____ 5. _____	Density (unit of measure) 1. _____ (_____) 2. _____ 3. _____ 4. _____ 5. _____

Pressure compensation

Pressure (MPA or MCA option only)	
Pressure mode:	○ Disable
	○ External*
Pressure source:	○ Catch*
Stale data detection:	_____ seconds (default is 5 seconds, range is 1 to 1,200 seconds) If no pressure values are received within the specified time, the meter will enable External Pressure Failure Mode: ○ Alarm*—The meter will go into alarm mode. ○ Fixed Process Pressure—The meter will output a HART alert and will continue to output an analog signal based on calculated mass flow of the the fixed process pressure.

Superheat (MCA option only with Steam Fluid type)	
Superheat diagnostics:	Allows for an alert or alarm to activate when the difference of the measured process temperature and the superheated temperature at the process pressure value drops below the superheat threshold. ○ Disable ○ Alert ○ Alarm
Superheat threshold	_____ ○ °F / ○ °C Default is 9 °F (5 °C), limit range is 9 °F to 180 °F (5 °C to 100 °C)

SMART Fluid Diagnostics

SMART Fluid Diagnostics (DS3 option)
Detects when the process fluid flow changes from liquid to gas.
Alert type:　　　　　　　　○ Analog　　　　○ Pulse　　　○ Analog & pulse　　　○ None
Analog alarm level (mA) _____ Pulse alarm level (Hz) _____ Expected gas density (lb/cu ft) _____

ROSEMOUNT™

EMERSON™