

# Rosemount 285 Annubar Primary Element

## Configuration Data Sheet (CDS)

### DP FLOW CDS

Complete this form to define a custom flow configuration for DP Flowmeters. Unless specified, the flowmeter will be shipped with the default values identified by the H symbol.

For technical assistance in filling out this CDS, call a Rosemount representative.

#### NOTE

Any missing information will be processed with the indicated default values.

\* = Required Item

★ = Default

#### Customer Information

Customer:	Contact Name:
Customer Phone:	Customer Fax:
Customer Approval Sign-Off:	Customer PO:

#### Calculation Approval

Check this box if a calculation for approval prior to manufacturing is required

#### Application and Configuration Data Sheet (Required with Order)

Tag:

Model No <sup>(1)</sup>

\* **Select fluid type**       Liquid       Gas       Steam

\* **Fluid name<sup>(2)</sup>**

#### Flowmeter Information (optional)

\* Failure Mode Alarm Direction (select one)       Alarm High★       Alarm Low

Software Tag: \_\_\_\_\_ (8 characters)

Descriptor: \_\_\_\_\_ (16 characters)

Message: \_\_\_\_\_  
 \_\_\_\_\_ (32 characters)

Date:                      Day \_\_\_ (numeric)                      Month \_\_\_ (numeric)                      Year \_\_\_ (numeric)

(1) A complete model number is required before Rosemount Inc. can process the order.  
 (2) If the Fluid is not located in Table 6 on page 14, the "" on page 11 must be completed.

#### For Rosemount Use Only

S.O.:	LI
CHAMP:	DATE:
	ADMIN:

\* = Required Item  
 ★ = Default

**Primary Element Information**

\* Select Differential Producer (Select One)

**Annubar**

- 485 Annubar/ 3095MFA Mass ProBar, 3051SFA ProBar
- 285 Annubar Primary Element Series
- Annubar Diamond II + / Mass Probar
- Long Radius Wall Taps, ASME
- Long Radius Wall Taps, ISO
- ISA 1932, ISO

**Venturi**

- Nozzle, ISO
- Rough Cast/Fabricated Inlet, ASME
- Round Cast Inlet, ISO
- Machined Inlet, ASME
- Machined Inlet, ISO
- Welded Inlet, ISO

**Other (All options require a discharge coefficient value)**

- Calibrated Orifice: Flange, Corner, or D & D/2 Taps.

Discharge coefficient: \_\_\_\_\_

- Calibrated Orifice: 2<sup>1</sup>/<sub>2</sub> D & 8D Taps

Discharge coefficient: \_\_\_\_\_

- Calibrating Nozzle

Discharge coefficient: \_\_\_\_\_

- Calibrating Venturi

Discharge coefficient: \_\_\_\_\_

- Area Averaging Meter

Discharge coefficient: \_\_\_\_\_

- V-Cone®

Discharge coefficient: \_\_\_\_\_

Diameter (d) \_\_\_\_\_  inch★      at \_\_\_\_\_  °F       °C  
 millimeters       68 °F★

Special Annubar dimension (required if customer supplies mounting hardware).       ODF \_\_\_\_\_       ODT \_\_\_\_\_

**Pipe Information**

\* Orientation / Flow Direction:     Vertical Up                       Vertical Down                       Horizontal

\* Line Size / Schedule: \_\_\_\_\_      Body I.D. (D): \_\_\_\_\_

**Materials of Construction**

\* Pipe Material                       Carbon Steel     304 SST     316 SST     Hastelloy     Other \_\_\_\_\_

\* Primary Element Material     316 SST     Hastelloy     Other \_\_\_\_\_ (Please verify material availability)

**Operating Conditions**

	4 mA value	Minimum	Normal	Maximum	Full Scale: 20 mA flow rate (design to P and T)	Design
Flow Rate	0	*(1)	*	*		
Pressure (P)	—	*(1)	*	*(1)	*(2)	
Temperature (T)	—	*(1)	*	*(1)	*	

**RTD Mode**

Normal Mode ★ (Requires a RTD to be connected. If the RTD is disconnected or fails, the 3095MV output goes to alarm value)

Fixed Temperature Mode:    Specify the fixed temperature value \_\_\_\_\_  °F       °C

Backup Mode (Uses the connected RTD for temperature measurement. If the RTD is disconnected or fails, the transmitter uses a fixed temperature value as a backup. This will not cause the mA output to go to alarm value and can potentially cause inaccurate flow measurement.)    Fixed temperature value to be used as backup \_\_\_\_\_  °F       °C

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★ = Default

## Base Conditions

Standard Base (P=14.696 psia / 101.325 kPa abs, T= 60 °F (15.56 °C))

Normal Base (P=14.696 psia / 101.325 kPa abs, T= 32 °F (0 °C))

Standard Base for Natural Gas (AGA) (P=14.73 psia, T= 60°F (15.56 °C))

User Defined: P= \_\_\_\_\_ Units: \_\_\_\_\_ T= \_\_\_\_\_ Units = \_\_\_\_\_

Compressibility at Base: \_\_\_\_\_ OR Density at Base: \_\_\_\_\_

(1) Operating ranges for pressure and temperature are needed for transmitter configuration.

(2) Required to verify that the product selection meets design criteria.

TABLE 6. Rosemount Fluids Database<sup>(1)</sup>

Acetic Acid	Divinyl Ether	Methane	n-Hexane	1-Heptanol
Acetone	Ethane	Methanol	n-Octane	1-Heptene
Acetonitrile	Ethanol	Methyl Acrylate	n-Pentane	1-Hexene
Acetylene	Ethylamine	Methyl Ethyl Ketone	Oxygen	1-Hexadecanol
Acrylonitrile	Ethylbenzene	Methyl Vinyl Ether	Pentafluorothane	1-Octanol
Air	Ethylene	m-Chloronitrobenzene	Phenol	1-Octene
Allyl Alcohol	Ethylene	Neon	Propadiene	1-Nonanol
Ammonia	GlycolEthylene	Neopentane	Pyrene	1-Pentadecanol
Argon	Oxide	Nitric Acid	Propylene	1-Pentanol
Benzene	Fluorene	Nitric Oxide	Styrene	1-Pentene
Benzaldehyde	Furan	Nitrobenzene	Sulfur Dioxide	1-Undecanol
Benzyl Alcohol	Helium-4	m-Dichlorobenzene	Propane	1-Nonanal
Biphenyl	Hydrazine	Nitroethane	Toluene	1,2,4- Trichlorobenzene
Carbon Dioxide	Hydrogen	Nitrogen	Trichloroethylene	1,1,2- Trichloroethane
Carbon Monoxide	Hydrogen Chloride	Nitromethane	Vinyl Acetate	1,1,2,2- Tetrafluoroethane
Carbon Tetrachloride	Hydrogen Cyanide	Nitrous Oxide	Vinyl Chloride	1,2-Butadiene
Chlorine	Hydrogen Peroxide	n-Butane	Vinyl Cyclohexane	1,3-Butadiene
Chlorotrifluoroethylene	Hydrogen Sulfide	n-Butanol	Water	1,3,5- Trichlorobenzene
Chloroprene	Isobutane	n-Butyraldehyde	1-Butene	1,4-Dioxane
Cycloheptane	Isobutene	n-Butyronitrile	1-Decene	1,4-Hexadiene
Cyclohexane	Isobutyl benzene	n-Decane	1-Decanal	2-Methyl-1-Pentene
Cyclopentane	Isopentane	n-Dodecane	1-Decanol	2,2-Dimethylbutane
Cyclopentene	Isoprene	n-Heptadecane	1-Dodecene	
Cyclopropane	Isopropanol	n-Heptane	1-Dodecanol	

(1) This list is subject to change without notice. Steam per ASME Steam tables. All other fluids per AIChE.

## Drawing/Notes