

## Product Set

Modbus Communication for Vortex 84C w/ & w/o Temperature;  
NPT threaded 84CN

## Unique Messages

- Ideal solution for O&G with Modbus RS485 communication protocol and NPT threaded end-connections with the same face-to-face lay length to replace turbine meters
- The 84C Model is an extension and eventually a replacement of the existing Model 84 vortex flow meters.
- The 84C includes the unique advantages of *DirectSense*<sup>™</sup> technology to eliminate routine problems encountered with other vortex meters
- Unique shedder design provides best-in-class accuracy

## Key Drivers

- Low Cost of Ownership
  - No Moving Parts = minimal maintenance
  - Direct Sense Technology = No Shift in K-factor
- Simplified Oil & Gas configuration for produced liquids (PVM) to facilitate start-up
- Built-in temperature measurement eliminates the need of a separate thermowell, lowering installation costs and minimizing process penetrations, reducing the risk of fugitive emissions and leak points

## Main Highlights

- Modbus or HART communication protocols
- New Modbus DTM
- 84C available with or without integrated process temperature measurement
- 84C platform available with flanged, wafer or threaded end-connections
- Mappable flow and temperature measurement on 4-20mA or Pulse outputs from one device (HART version)
- Time in Service Clock, track run time and assist with maintenance

## Unique Differentiators

- *DirectSense*<sup>™</sup> technology:
  - No shift in K-factor
  - High reliability
    - Lifetime Warranty on Sensor
  - Provides best-in-class performance
  - Increased measurement sensitivity for wider rangeability
  - Greater immunity to pipe vibration
- Best in class accuracy
  - Volumetric flow rate accuracy of  $\pm 0.5\%$  of reading in liquids,  $\pm 1.0\%$  in gas & steam
  - Process temperature accuracy of  $\pm 1^\circ\text{F}$  ( $0.56^\circ\text{C}$ )

## Commercial Approach

- Simplify field installation and link to RTU (remote terminal unit)
- Enhance measurement points in RTU by freeing up cabinet space

## Target Applications

- Produced Liquids on Separators (Oil & Water)
- Salt Water Disposal
- Natural Gas Measurement (API approved? for allocation)
- Steam Measurement
- Rail Car and Truck Loading/Unloading
- Process control applications of both liquid and gas flow streams

## Value proposition

- DTM Ease Configuration Wizard: Only 7 simple steps streamline setup/commissioning
- High turn down
  - 40:1 typical for Liquids
  - 20:1 typical for Gas/Steam
- No Calibration Drift
  - K-factor not impacted by changes in fluid properties
  - Calibrated on Water
  - Calibration holds true for both liquids and gasses
- Small Footprint
  - Ease of Use
  - Ease of Installation
- High Value
  - Suitable for some mass flow applications replacing Coriolis meters, at 1/3 the cost
- Broad range of line sizes  $\frac{3}{4}$ -in through 12-in

## Electrical Certifications

- With Explosion-Proof/ Flame-proof certifications for FM, CSA, ATEX, IECEx

## Voltage Supply

- The 84C Modbus operates with a 9 – 30 VDC supply.
- The 84C HART operates with a 15.5 – 42 VDC supply.
- Low Power version 10 – 42 VDC supply.

## Tools and Sales Material

Link for SE employees, End User Campus (M&I Page) : <https://spiceportal.schneider-electric.com/web/industry-end-users-and-sis-campus/home>

Link for Reps and Partners, PRM: <https://partner.schneider-electric.com/partners/Menu/login>