The Loop Powered VF30 utilizes a piezoelectric driven tuning fork that exhibits a large change in resonant frequency when immersed in any liquid. A “smart” microprocessor-based electronic unit keeps the sensor in a resonant state as it changes from dry to wet or wet to dry. The resonant frequency is continuously monitored for changes created by a wet or dry sensor and an alarm is provided via an 8 or 16 mA dc signal. An important feature of the Vector is that its resonant frequency is not significantly affected by coating on the fork until the space between the forks is bridged. Vector’s ability to identify true liquid level in viscous, coating or aerated liquid is unparalleled. The self-test option checks for fault conditions such as sensor failure and excessive product build up on the sensor. Applications include redundant high/low liquid level without concern for parameters such as specific gravity, dielectric constant or mounting position of the sensor.

### FEATURES:
- Direct Replacement For Ultrasonic Gap Or RF Capacitance Switches
- Superior Resistance To Coating Or Build-Up On Sensor
- Any Mounting 3/4“ NPT Or Larger
- No Calibration Required
- Loop Powered

### SPECIFICATIONS:
- **Switch Type:** Frequency-shift Tuning Fork
- **Operating Power:** 13.5-36 VDC Loop Powered
- **Loop Output:** 8 +/- 1mADC or 16 +/- 1mADC (selectable)
  - Fault = 20 +/- 1 mADC or 4 +/- 1 mADC
- **Response Time:** 0.1 seconds
- **Hysteresis (Deadband):** Approx. +/- 1/8 in.
- **Repeatability:** +/- 0.1 in.
- **Time Delay:** 0.1-10 seconds (adjustable)
- **Operating Temperature:** Electronic: -40°F (-40°C) to 165°F (74°C) Ambient
  - Sensor: -40°F (-40°C) to 300°F (149°C)
- **Operating Pressure:** 0 PSIA to 600 PSIG (41 Bar)
  - (Contact Factory for higher pressures)
- **Features:** Continuous Self-Test. Alarm status LED indicates wet, dry or fault. Adjustable time delay (.01 to 10 second)
- **Approvals:** Factory Mutual & Canadian Standards Association Hazardous Area Rating: XP/II/1/ABCD/T6 Ta=74°C,DIP/II,III/1/EFG/T6 Ta=74°C IS/II,III,CDEFG/T4 Tamb=77°C;
  - NI/II,III,2/ABCD/FG/T4 Tamb=77°C ELE1011/9/01/99
  - NEMA 4X
- **Conduit Connection:** Single Compartment: 3/4“ FNPT (19 mm)
  - Dual Compartment: 1/2“ FNPT (13 mm)
- **Specific Gravity:** 0.45 Minimum
- **CRN Registered:** OF4752.2

### OPTIONS:
- Integral System-Diagnostics / Self-Test
- Adjustable Time Delay (0.1 – 10 seconds)
- Alarm Status LED
- Field Selectable Fail-Safe
- Dual Compartment Housing
- Ceramic Glass To Metal Feedthrough Provides Secondary Pressure Boundary
- Special alloy sensors:
  - Hastelloy C-276
  - Monel
ORDERING INFORMATION:

VF30 / a / b / c / d / e / f / g / PL
/a = Operating Power
  0 = Loop Powered (12.5 to 35 VDC)
/b = Process Connection
  P7 = 3/4" MNPT (Standard) , P1 = 1" MNPT,
  B1 = 1" BSPT
  WP = Welded Flange (Specify type & size, SLG-0001-1)
  FL = Loose Flange (Specify type & size, SLG-0001-1)
/c = Sensor Material
  S6 = 316L SS (Standard)
  HC = Hastelloy C-276
  MO = Monel
/d = Probe Finish
  Blank = Standard Finish
  1F = 180 grit finish (suitable for 3A service)
  2F = 240 grit finish
  EP = 240 grit and Electropolished
/e = Special Options (omit if not required)
  HT = High Temperature (>250°F) Extension
  MM = M20 Conduit Connection
  HS = 5 Pin Hermetic Feed-through
/f = Housing Single Compartment Aluminum Standard
  Optional, for loop-power version only:
  A = Alum. dual compartment housing
  S = Stainless Steel dual compartment housing
  R = Remote housing (50 ft./ 15.25 m maximum)
/g = Approval
  FM = Factory Mutual Research Corp. (FM)
  CSX = CSA Explosion Proof
  CSI = CSA Intrinsic Safe (only with loop powered option)
/PL = Probe Length: 3-7/8" Standard; Specify extended lengths in 1"
  increments up to 100" (2540 mm).