



- EZ-Cal® II
- External CAL and alarm lights
- Calibration indication output relay
- External test in place
- Dual conduit housing

### VRF-2000 Integral Series



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### VRF-2000 Cable Series

#### Features and Benefits

##### Opti-Sense™

Uses variable radio frequency ( VRF™ ) technology to determine the optimal operating frequency for greatest sensitivity and stability

Wide Variety of Probe Options  
Unequaled application versatility

##### Test In Place

Test by using a magnetic fob without removing the cover

##### Pro-Guard™

Probe design ignores material build-up on probe

##### EZ-Cal® II

No initial manual calibration required

Explosion Proof & Stainless  
Steel Enclosures Available  
Provides more options for a wide range of applications

Calibration Status and Alarm Lights  
Green LED indicates calibration status; red LED indicates alarm status

Surpassing the sensitivity of RF technology, VRF™ provides superior level detection. The VRF series uses Variable Radio Frequency to detect the presence or absence of material in a vessel by compensating for the load of the probe, as well as the load induced by vessel environment, and automatically determining the optimal operating frequency for the greatest sensitivity and stability. At initial start-up the sensor detects the characteristics of air (no load) and calibrates to it. If installed in material, when the load is reduced (material leaves probe), the VRF senses this change and automatically recalibrates to its new condition without the need of an operator or technician.

Bindicator® manufactures an array of VRF probes, each tailored for specific applications. When combined with our large selection of probes, we have a VRF sensor for virtually every application. Please consult one of our representatives or call the factory for application assistance.

#### How to Order VRF-2000 Integral Series

##### VRF2-

Assembly Configuration	
A	= ¾" S.S. & 1¼" Aluminum & Flush Probes
B	= Pipe Ext. Probe, S.S. Coupling & Connection
C	= Pipe Ext. Probe, Plated Coupling & Aluminum Connection
S	= Sanitary Connection 1" or 1½" Tri-clamp Size (See Note 1)
H	= ¾" Hastelloy C (For Teflon® Probes Only)
Electronics Version	
1	= Standard
Enclosure Type	
G	= General Purpose NEMA 4X
S	= Stainless Steel Type 304 NEMA 4X
Probe Type	
0	= Standard Ryton®
1	= Standard Kynar® Coated (Max. Length 60" or 1524mm)
2	= Food Grade Polysulfone
4	= Stub Polysulfone
5	= Heavy Duty Ryton®
6	= Heavy Duty Kynar® Coated
7	= Dome Flush (Use "A" Configuration Only) (Specify Thickness - See Note 2)
8	= Flush (Use "A" Configuration Only)
A	= Armored Food Grade (Use "A" Configuration Only)
J	= Jumbo (Use "A Configuration Only) (Enclosure Type G or D Only)
T	= Teflon® Jacketed Standard
U	= Teflon® Jacketed Heavy Duty
Voltage	
A	= AC 85-265 VAC
D	= DC 9-36 VDC
VRF-2000 Series	

Note 1: For 3A Sanitary Certification add "3A" at end of the model code. Configuration "S" must be used and either "Type 2" Food Grade probe or "Type 4" Stub probe.

Note 2: Thickness of probe must be specified: 3/8", 1/2", 5/8" or 3/4" wall thickness.

# VRF-2000

## How to Order VRF-2000 Cable Series

VRF2C

Cable Probe Material

S = Stainless Steel

N = Nylon

T = Teflon®

Cable Probe Length

\_\_\_ = Specify Insertion Length of Cable Probe Assembly in Inches (See Note 1)

Assembly Configuration

A = 3/4" S.S. & 1 1/4" Aluminum & Flush Probes

S = Sanitary Connection 1" or 1 1/2" Tri-clamp size

Electronics Version

1 = Standard

Enclosure Type

G = General Purpose NEMA 4X

Probe Type

0 = Standard Ryton®

2 = Food Grade Polysulfone

4 = Stub Polysulfone

5 = Heavy Duty Ryton®

Voltage

A = AC 85-265 VAC

D = DC 9-36 VDC

VRF-2000 Cable Probe Series

Note 1: Maximum length 45 feet (13.71m) or 540 inches (13716mm).

The VRF™ Cable Series should be used when tank mid or low-level monitoring is desired and the unit must be mounted from the top of the tank. The Cable Series provides the same features and reliability of the standard probe series, however, with a bendable cable, the unit can be conveniently mounted in enclosed environments.

## Electrical Specifications for Integral and Cable Series

Universal Input Power: 85 VAC - 265 VAC  
DC input power: 9 VDC - 36 VDC

Power: 5 Watts

Output Relay: DPDT 6 amps @ 240 VAC, 6 amps @ 30 VDC, Minimum load 12V/100mA

Temperature Range: -40° F to 158° F (-40° C to 70° C)

Sensitivity: Rotary-switch selectable for 0.5pF, 1pF, 2pF, 3pF, 5pF, 8pF, 10pF, or 15pF

Time Delay: Rotary-switch selectable for 200 milliseconds, 1, 2, 5, 10, 20, 30, or 60

Time Delay Mode: Time delay for activating/deactivating the alarm or both

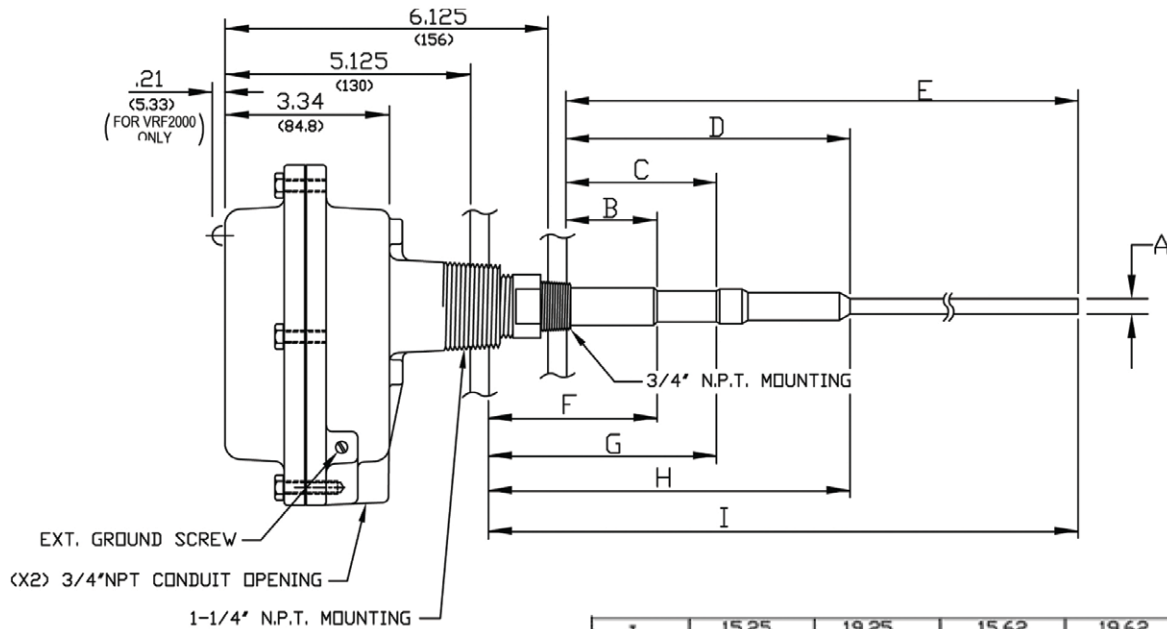
Fail Safe: High-Low level failsafe dip-switch

Calibration: Push-button, intelligent recalibration, external magnetic fob

Approvals: FM and CSA listed for non-hazardous enclosure types NEMA 4X

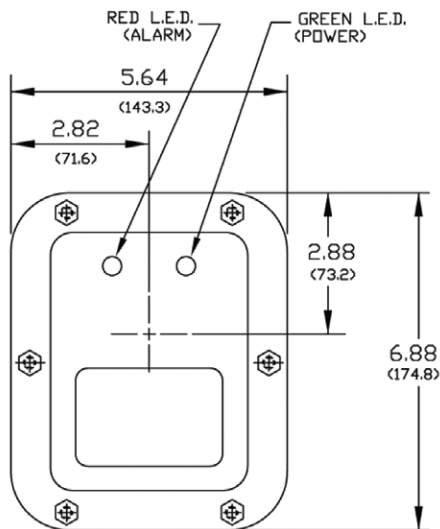
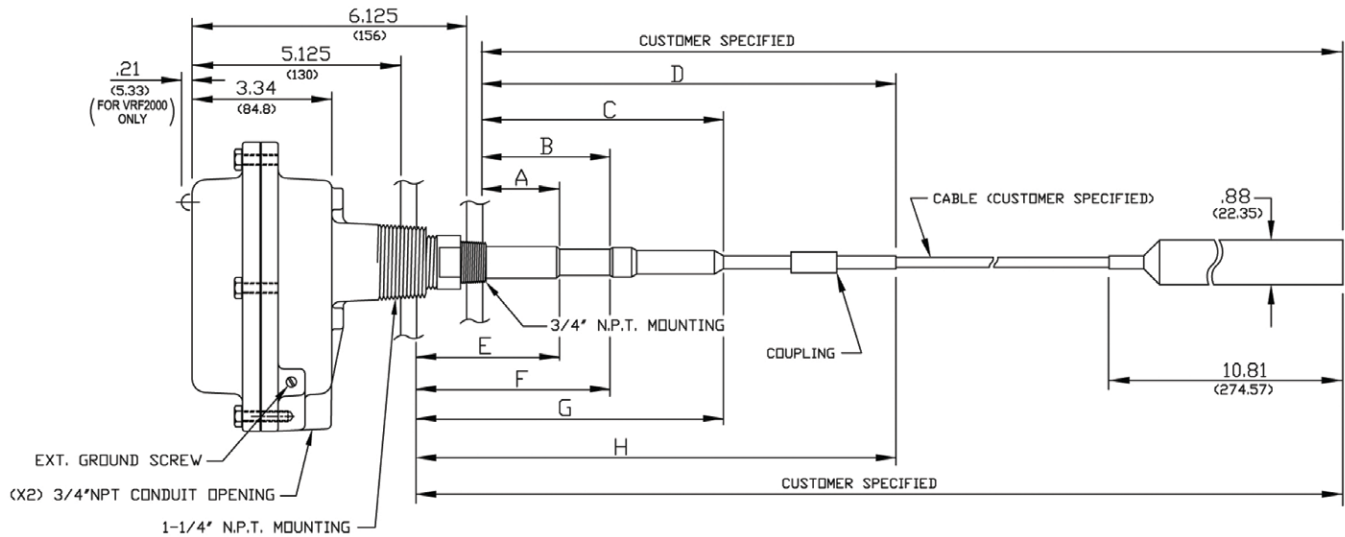
## Dimensions

### VRF-2000 Integral Series



I	15.25 (387.3)	19.25 (489)	15.62 (396.7)	19.62 (498.35)	15.25 (387.35)
H	7.00 (178)	11.75 (298.5)	7.00 (178)	11.75 (298.5)	3.63 (92.2)
G	4.50 (115)	10.00 (254)	4.50 (115)	10.00 (254)	3.25 (82.55)
F	3.38 (86)	8.5 (216)	3.38 (86)	8.5 (216)	2.75 (69.85)
E	14.25 (362)	18.25 (463.5)	14.62 (371.4)	18.62 (472.95)	14.25 (362)
D	6.00 (152.5)	10.75 (273)	6.00 (152.5)	10.75 (273)	2.63 (66.8)
C	3.50 (89)	9.00 (228.5)	3.50 (89)	9.00 (228.5)	2.25 (57.2)
B	2.38 (60.5)	7.50 (190.5)	2.38 (60.5)	7.50 (190.5)	1.75 (44.5)
A	.31 DIA. (8)	.38 DIA. (9.5)	.31 DIA. (8)	.38 DIA. (9.5)	.31 DIA. (8)
APPROX DIM'S	STD. & FOODGRADE	H.D.	STD. KYNAR COATED	H.D. KYNAR COATED	STUB

## Dimensions VRF-2000 Cable Series



H	11.50 (292.1)	16.25 (412.8)	8.12 (206.2)
G	7.00 (178)	11.75 (298.5)	3.63 (92.2)
F	4.50 (115)	10.00 (254)	3.25 (82.6)
E	3.38 (86)	8.50 (216)	2.75 (69.9)
D	10.50 (266.7)	15.25 (387.4)	7.12 (180.8)
C	6.00 (152.5)	10.75 (273)	2.63 (66.8)
B	3.50 (89)	9.00 (228.5)	2.25 (57.2)
A	2.38 (60.5)	7.50 (190.5)	1.75 (44.5)
APPROX DIM'S	STD. & FOODGRADE	H.D.	STUB



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**venture**  
 MEASUREMENT

VRF180300 Rev. E

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