

Level Sensors - R16 Probe

R16 Level Probe Part Number Key



Sensor Family	LT = Linear Transducer
Measurement	Length of span
Length Units	E = Inches
Housing Style	R = Rod Style
Rod Diameter	Diameter in mm
Probe Style	S = Sanitary - 240 grit finish (max. span is 110 in.) F = Food Grade - 180 grit finish (max. span is 110 in.) P = PVDF 3 = 316 stainless steel (standard finish)

- Note:**
1. Available on probe styles 3 or P only.
 2. Available on probe styles P only.
 3. Available on probe styles S only.
 4. Not available on probe style P.

Special Approvals	3A = 3A approved sensor with float ³
Connector Type	D = Dual 3/4 inch NPT B1140 = 4-pin, <i>minifast</i> ⁴ S = Single 3/4 in. NPT (steel) Single 1/2 in. NPT ² (PVDF, with flange "C" only)
Intrinsically Safe	EX * must be connected to appropriate barrier
Output Type (Bottom to Top)	0 = 4 to 20 mA 1 = 20 to 4 mA
Output Configuration	LI = Current
Flange Adapter	Blank = No Adapter ¹ 20 = 2 inch Tri-clamp ⁴ 25 = 2.5 inch Clamp ⁴ 30 = 3 inch Tri-clamp ⁴ 40 = 4 inch Tri-clamp ⁴ C = 3 inch Dead Band ² , temperature limited (0 to 40 C)

R16 LEVEL

Specifications

Stainless Steel Probe	
Output	4 to 20 mA, 20 to 4 mA
Span	8 to 278 inches
Repeatability	0.014 in. + 0.5% of programmable span typical; max 0.014 in. + 0.4% of span
Resolution	0.025% of programmable span / 0.02 in., whichever is greater
Operating Temperature	-20°C to +70°C (-4°F to +158°F)
Null Zone	8 in.
Dead Zone	2 in.
Operational Voltage	13.5 to 30 VDC
Current Consumption	Loop Powered
Enclosure Rating	IP68
Accuracy	0.1% of programmable span or 0.050 in.
Reading Rate	40 ms
Rod Diameter	0.625 in. (15.9 mm)
Pressure	1015 psi
Electronics	Stainless Steel 316L
Rod	Stainless Steel 316L
Agency Approvals	FM
FM Approval	Class I, Div 1, Group C and D Class II, Div 1, Group E, F, and G Class I, Zone 0 or 1, Groups IIA or IIB

PVDF Probe	
Output	4 to 20 mA, 20 to 4 mA
Span	7 to 268 in.
Repeatability	0.014 in. + 0.5% of programmable span typical; max 0.014 in. + 0.4% of programmable span
Resolution	0.025% of programmable span or 0.02 in., whichever is greater
Operating Temperature	-20°C to +70°C (-4°F to +158°F)
Null Zone	12 in. (9 in. for flange adapter "C")
Dead Zone	6 to 8 in. (span 7 in. to 126 in.: 6 in.; span 127 in. to 268 in.: 8 in.) 3 in. For flange adapter "C"
Operational Voltage	13.5-30 VDC
Current Consumption	Loop Powered
Enclosure Rating	IP68
Accuracy	0.1% of programmable span
Reading Rate	40 ms
Rod Diameter	0.625 in. (15.9 mm)
Pressure	145 psi
Electronics	PVDF
Rod	PVDF
Agency Approvals	FM
FM Approval	Class I, Div 1, Group C and D Class II, Div 1, Group E, F, and G Class I, Zone 0 or 1, Groups IIA or IIB

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Level Sensors - R16 Probe

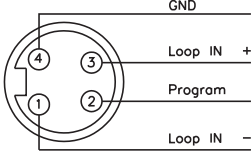




Housing Style	Part Number	Output Current
Stainless Steel Level Probe, minifast[®] Connection 	LT***E-R16-3LI0-EX-B1140	4-20 mA Loop Powered
	LT***E-R16-3LI1-EX-B1140	20-4 mA Loop Powered
Stainless Steel Level Probe, Dual 3/4 NPT Connection 	LT***E-R16-3LI0-EX-D	4-20 mA Loop Powered
	LT***E-R16-3LI1-EX-D	20-4 mA Loop Powered
Stainless Steel Level Probe, Single 3/4 NPT Connection 	LT***E-R16-3LI0-EX-S	4-20 mA Loop Powered
	LT***E-R16-3LI1-EX-S	20-4 mA Loop Powered
Stainless Steel Level Probe, minifast Connection, Tri-clamp Adapter 	LT***E-R16-3**LI0-EX-B1140	4-20 mA Loop Powered
	LT***E-R16-S**LI0-EX-B1140	
	LT***E-R16-F**LI0-EX-B1140	
Stainless Steel Level Probe, Single 3/4 NPT Connection, Tri-clamp Adapter 	LT***E-R16-3**LI1-EX-B1140	20-4 mA Loop Powered
	LT***E-R16-S**LI1-EX-B1140	
	LT***E-R16-F**LI1-EX-B1140	
Stainless Steel Level Probe, Single 3/4 NPT Connection, Tri-clamp Adapter 	LT***E-R16-3**LI0-EX-S	4-20 mA Loop Powered
	LT***E-R16-3**LI1-EX-S	20-4 mA Loop Powered

* Float ordered separately, see page E54.

** For flange dimensions, see page E53.

Level Sensors - R16 Probe

Voltage	Probe Style (Finish)	Operating Temp. (°C)	Pressure Rating (psi)	Connection Type	Agency Approval	Mating Cord, Cable Length/ Jacket	Wiring Diagram #	Wiring Diagrams
13.5-30 VDC	316 Stainless Steel	-20 to 70	1015	4-pin <i>minifast</i>	FM	RKM 46-*M	1	<p>Diagram 1</p>  <p>Diagram 2</p> 
	316 Stainless Steel	-20 to 70	1015	4-pin <i>minifast</i>	FM	RKM 46-*M	1	
13.5-30 VDC	316 Stainless Steel	-20 to 70	1015	Dual 3/4 NPT	FM	2 ft./PVC	2	
	316 Stainless Steel	-20 to 70	1015	Dual 3/4 NPT	FM	2 ft./PVC	2	
13.5-30 VDC	316 Stainless Steel	-20 to 70	1015	Single 3/4 NPT	FM	2 ft./PVC	2	
	316 Stainless Steel	-20 to 70	1015	Single 3/4 NPT	FM	2 ft./PVC	2	
13.5-30 VDC	316 Stainless Steel	-20 to 70	1015	4-pin <i>minifast</i>	FM	RKV 46-*M	1	
	Sanitary (316 SS w/240 grit)	-20 to 70	1015	4-pin <i>minifast</i>	FM	RKV 46-*M	1	
	Food Grade (316 SS w/180 grit)	-20 to 70	1015	4-pin <i>minifast</i>	FM	RKV 46-*M	1	
	316 Stainless Steel	-20 to 70	1015	4-pin <i>minifast</i>	FM	RKV 46-*M	1	
	Sanitary (316 SS w/240 grit)	-20 to 70	1015	4-pin <i>minifast</i>	FM	RKV 46-*M	1	
	Food Grade (316 SS w/180 grit)	-20 to 70	1015	4-pin <i>minifast</i>	FM	RKV 46-*M	1	
13.5-30 VDC	316 Stainless Steel	-20 to 70	1015	Single 3/4 NPT	FM	2 ft./PVC	2	
	316 Stainless Steel	-20 to 70	1015	Single 3/4 NPT	FM	2 ft./PVC	2	

R16 LEVEL

* Length in meters.

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Level Sensors - R16 Probe



Housing Style	Part Number	Output
<p>Stainless Steel Level Probe, <i>minifast</i>® Connection, Tri-clamp Adapter, with Float</p> <p> $\phi 1.000$ [25.4] $7/8-16\text{UNS}$ 3.430 [87.1] **Flange, 2" (2.5", 3" or 4") POLISHED AREA INSERTION LENGTH "3A" Float* (included) $\phi 1.845$ [46.9] 1.750 [44.5] 2.800 [71.1] 2.0 DEAD BAND 8.0 NULL ZONE OVERALL LENGTH SPAN FM APPROVED A 3 </p>	<p>LT***E-R16-S**LI0-EX-B1140/3A</p>	<p>4-20 mA Loop Powered</p>
	<p>LT***E-R16-S**LI1-EX-B1140/3A</p>	<p>20-4 mA Loop Powered</p>
<p>PVDF Level Probe, Dual 3/4 NPT Connection</p> <p> 10.000 [25.4] 1.620 [41.1] $3/4-14\text{NPT}$ 3.430 [87.1] Float Stop Float* (not included) $\phi 0.625$ [15.9] 12.0 NULL ZONE OVERALL LENGTH SPAN 3" to 8" DEAD BAND FM APPROVED </p>	<p>LT***E-R16-PLI0-EX-D</p>	<p>4-20 mA Loop Powered</p>
	<p>LT***E-R16-PLI1-EX-D</p>	<p>20-4 mA Loop Powered</p>
<p>PVDF Level Probe, Single 1/2 NPT Connection, Temperature Limited</p> <p> 1.000 [25.4] $1/2-14\text{NPT}$ 3.430 [87.1] Float* (not included) $\phi 0.625$ [15.9] 9.0 NULL ZONE OVERALL LENGTH SPAN 3" DEAD BAND FM APPROVED </p>	<p>LT***E-R16-PCLI0-EX-S</p>	<p>4-20 mA Loop Powered</p>
	<p>LT***E-R16-PCLI1-EX-S</p>	<p>20-4 mA Loop Powered</p>

* Float ordered separately, see page E54.

** For flange dimensions, see page E53.

Level Sensors - R16 Probe

Voltage	Probe Style (Finish)	Operating Temp. (°C)	Pressure Rating (psi)	Connection Type	Agency Approval	Mating Cord, Cable Length/ Jacket	Wiring Diagram #	Wiring Diagrams
13.5-30 VDC	Sanitary (316 SS w/240 grit)	-20 to 70	1015	4-pin <i>minifast</i>	3A, FM	RKV 46-*M	1	<p>Diagram 1</p> <p>Diagram 2</p>
	Sanitary (316 SS w/240 grit)	-20 to 70	1015	4-pin <i>minifast</i>	3A, FM	RKV 46-*M	1	
13.5-30 VDC	PVDF	-20 to 70	145	Dual 3/4 NPT	FM	2 ft./PVC	2	<p>Diagram 2</p>
	PVDF	-20 to 70	145	Dual 3/4 NPT	FM	2 ft./PVC	2	
13.5-30 VDC	PVDF	0 to 40	145	Single 1/2 NPT	FM	2 ft./PVC	2	<p>Diagram 2</p>
	PVDF	0 to 40	145	Single 1/2 NPT	FM	2 ft./PVC	2	

* Length in meters.

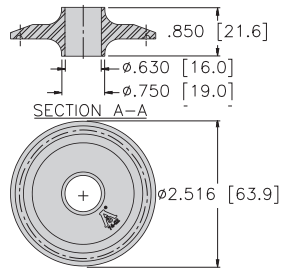
R16 LEVEL

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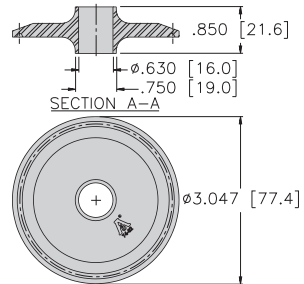
Level Sensors - R16 Probe

All dimensions shown as: Inches [mm]

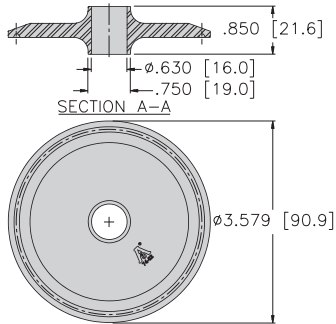
Flange Options



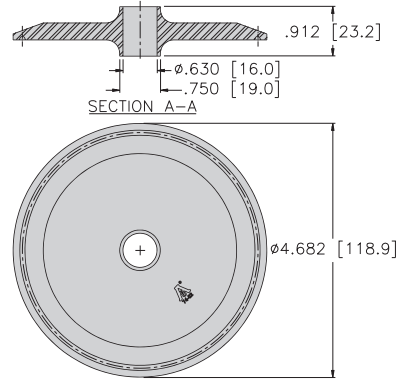
Flange, 2 inch Tri-clamp



Flange, 2.5 inch Tri-clamp



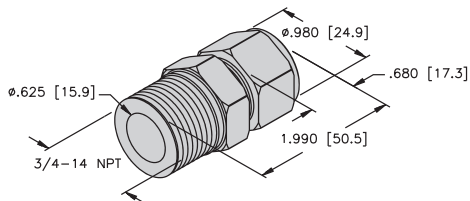
Flange, 3 inch Tri-clamp



Flange, 4 inch Tri-clamp

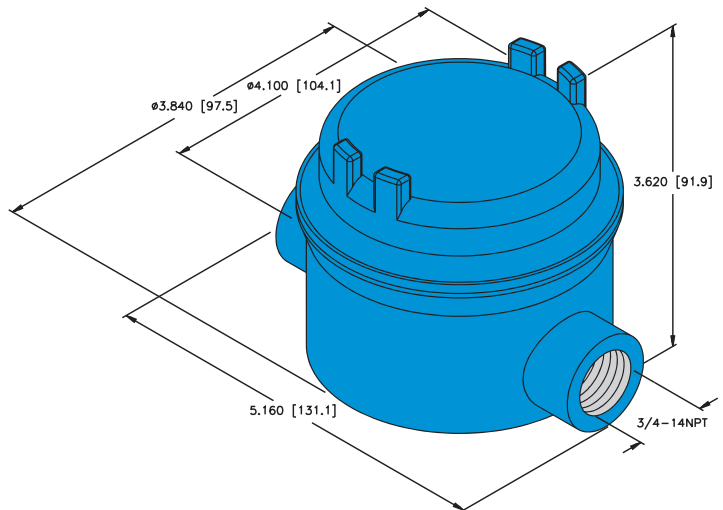
Level Probe Accessories

Tube Coupling



TC-R16-SS
(LT0305)

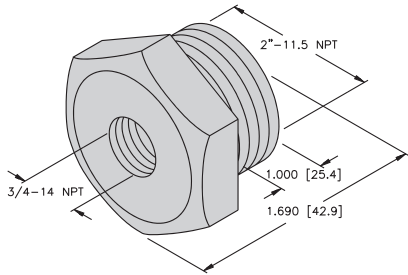
Junction Box



TB-R16S
(LT0294)

Level Probe Accessories

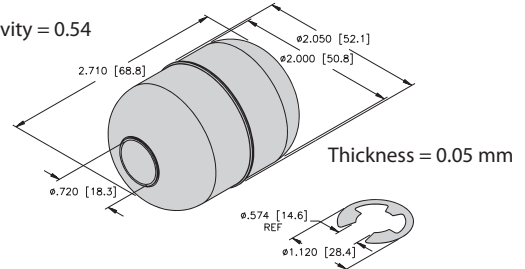
Bushing (316 Stainless Steel)



BU-R16-2x3/4 NPT-SS (LT0306)

Float Kit (316 Stainless Steel)
General Applications

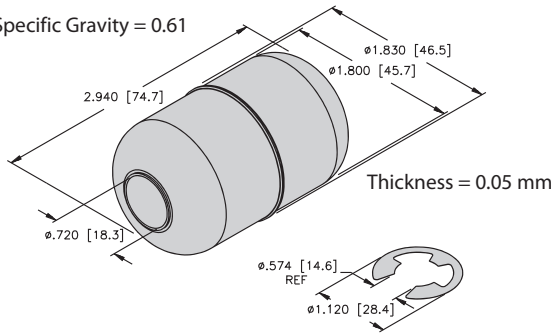
Specific Gravity = 0.54



FK-R16-205-SSES (LT0299)

Float Kit (316 Stainless Steel)
General Applications

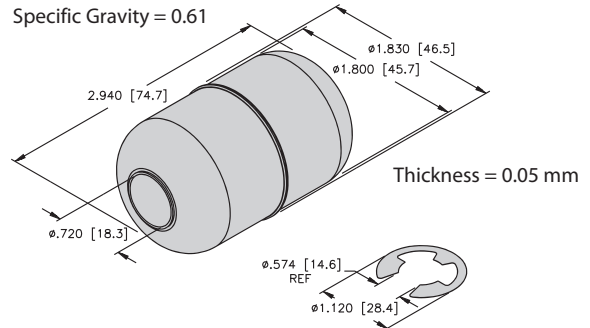
Specific Gravity = 0.61



FK-R16-183-SSES (LT0296)

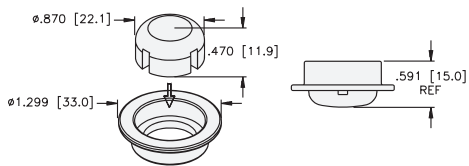
Float Kit (316 Polished Stainless Steel)
Food Grade and Sanitary Applications

Specific Gravity = 0.61



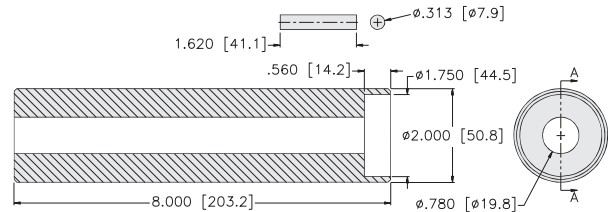
FK-R16-183-SSE (LT0302)

Probe Foot (ECTFE)



PF-R16 (LT0292)

Weight Kit (316 Stainless Steel)



WK-R16 (LT0295)

Required on PVDF probes up to 288 inches long.

R16 LEVEL

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Level Sensors - R16 Probe

R16 Level Probe Worksheet

Liquid to be measured _____

Fluid Properties (check all that apply)

Turbulent

Foam

Solids

Product Build-Up Yes No

Temperature Range _____°F to _____°F

Pressure Range _____ to _____

Viscosity Range _____ to _____

Specific Gravity _____

4 mA Starting Point Top Bottom

Approvals Required

UL CSA FM 3A Food Grade

Tank Location Indoors Outdoors

Tank Material _____

Additional Comments _____

**Allow overhead clearance for installation and removal of sensor.*

Customer

Phone Number

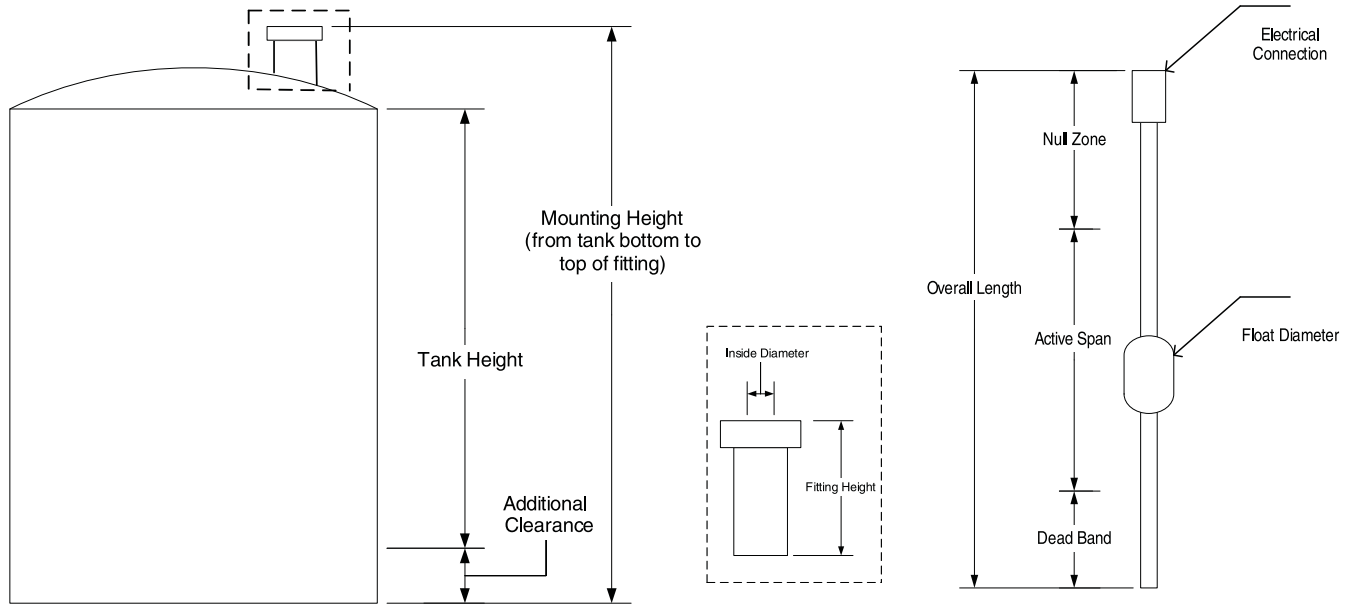
Date

Project

Quantity

Level Sensors - R16 Probe

R16 Level Probe Worksheet



R16 LEVEL