

PRODUCT DESCRIPTION

SPECTEC's Non-Incendive / Increased Safety RF sensors are designed for installation in CL 1, Div 2 or Zone 2 hazardous locations and do not require a safety barrier. They are offered in a wide variety of configurations as outlined on page 2. These sensors are actuated by gear teeth and other ferrous targets but do not cause magnetic drag. These sensors must be used with a matched RF signal conditioner. Custom sensors can also be created to meet specific needs.


INSTALLATION

CAUTION: This sensor MUST be installed following the details specified in the Installation Instruction Document #85046N.


SPECIFICATIONS

- Coil Resistance:** See page 2
- Frequency Range:** ~0.5 Hz to 5000 Hz
- Air Gap:** up to .160" depending on target mass
- Connection:** Connector or lead wires, See page 2
- Construction:** 300 Series Stainless Steel
Solid Epoxy Encapsulation

CERTIFICATIONS for N70 & N71

USA: N70: Class I, Division 2
GROUP ABCD T6...T5 
 N71: Class I, II, III, Division 2 APPROVED
GROUP ABCDEFG T6...T5
 Class I, Zone 2, AEx nC IIC T6...T5

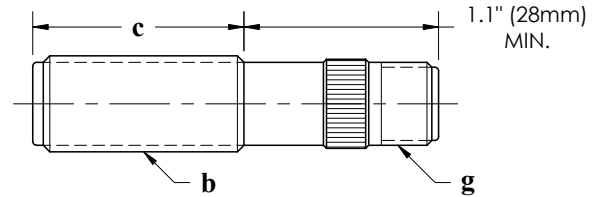
Canada: Class I, Division 2
GROUP ABCD T6...T5
 Class I, Zone 2, Ex nL IIC T6...T5
 T5 @ -40°C ≤ T_{amb} ≤ +85°C
 T6 @ -40°C ≤ T_{amb} ≤ +65°C

ATEX & UKEX: II 3 G Ex ec IIC T6...T3 Gc
 FM08ATEX0067X 
 FM22UKEX0109X

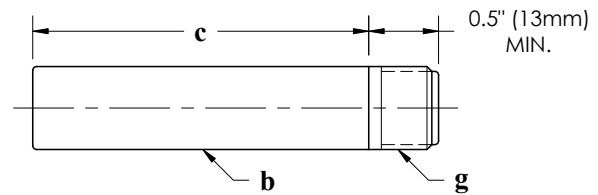
CE: Compliance with
 EN55011, EN50082-2

IECEx: Ex ec IIC T6...T3 Gc
 IECEx FMG 16.0003X
 T3 @ -40°C ≤ T_{amb} ≤ +135°C
 T4 @ -40°C ≤ T_{amb} ≤ +120°C
 T5 @ -40°C ≤ T_{amb} ≤ +85°C
 T6 @ -40°C ≤ T_{amb} ≤ +65°C

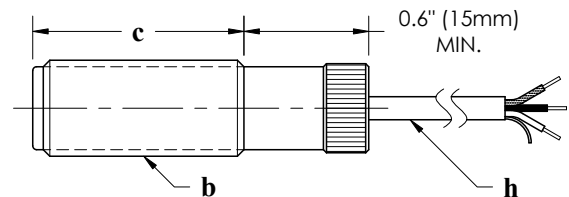
- N70** K shell type, knurled (shown below)
 A shell type, all-thread (knurl removed)
 H shell type, hex (knurl replaced by hex)



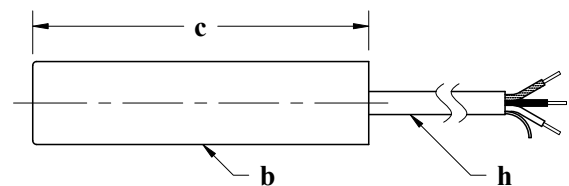
- N70** S shell type, smooth (custom units available)



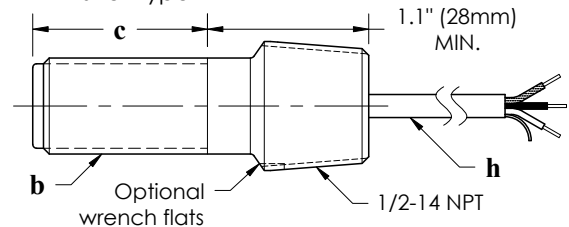
- N71** K shell type, knurled (shown below)
 A shell type, all-thread (knurl removed)
 H shell type, hex (knurl replaced by hex)



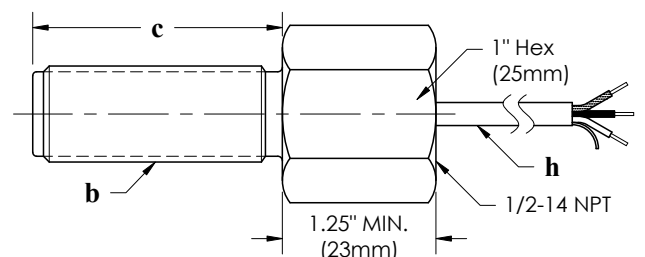
- N71** S shell type, smooth (custom units available)



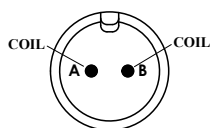
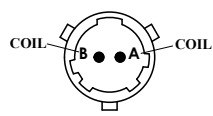
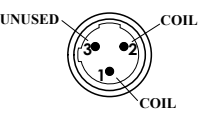
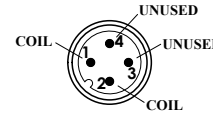
- N71** X shell type



- N71** Y shell type



FEATURE SELECTION for N70-abceg and N71-abceh

SPECTEC P/N	a Shell Type	b Thread / Diameter	c Thread Length	e Coil Resistance (Nominal)	Connection Type	
					g Connector (N70 Only)	h Lead Wires (N71 Only)
N70- (Connector Version) or N71- (Lead Wire Version)	K A H S X (N71 only) Y (N71 only)	1 - 1/2-20 UNF 2 - 5/8-18 UNF 3 - 11/16-24 UNEF 4 - 3/4-16 UNF 5 - 3/4-20 UNEF 6 - M12x1 7 - M16x1.5 8 - M18x1 9 - M18x1.5	0 - 0.75" (19mm) 1 - 1.0" to 1.3" (25-33mm) 2 - 1.5" to 1.8" (38-45mm) 3 - 2.0" (51mm) 4 - 2.5" (64mm) 5 - 3.0" to 3.5" (76-89mm) 6 - 4.0" (101mm) 7 - 6.0" (152mm) 8 - 8.0" (203mm) 9 - 10.0" (254mm)	1 - 4 Ω (.38 mH) 2 - 12 Ω (1.0 mH)	1 - MO Mate: Amphenol MS3106A10SL-4S  2 - B Mate: Amphenol MS3116F8-2S  3 - MC3 Mate: Turck KB 3T  4 - MD4 Mate: Turck RK 4.4T 	1 - 12" (.3m) 2 - 36" (1m) 3 - 120" (3m) 4 - 198" (5m) 5 - 396" (10m) Lengths of 36" (1m) and longer use shielded cable 18 to 24 AWG (depending on shell size) PVC or TFE insulation Shield is not connected to shell, please ground to instrumentation NOTE: Other lead wire lengths are available.
		1 - 1/2-20 UNF 2 - 5/8-18 UNF 3 - 11/16-24 UNEF 4 - 3/4-16 UNF 5 - 3/4-20 UNEF	0 - 0.7" (18mm) 1 - 1.3" (33mm) 4 - 2.5" (64mm) 7 - 6.0" (152mm) 8 - 8.0" (203mm)			
		2 - 5/8-18 UNF 5 - 3/4-20 UNEF 7 - M16x1.5 8 - M18x1 9 - M18x1.5	1 - 1.1" (28mm) 3 - 2.0" (51mm) 5 - 3.0" (76mm) 6 - 4.0" (101mm) 7 - 6.0" (152mm) 8 - 8.0" (203mm) 9 - 10.0" (254mm)			

P/N Examples:

N70-K3421 K shell type, 11/16-24 x 2.5" thread, 12 Ω coil, MO connector

N71-Y2312 Y shell type, 5/8-18 x 2.0" thread, 4 Ω coil, 36" leads

Please Note: Some combinations of options are not possible, please contact sales with any questions.

Old P/N to New P/N correlations:

N71-05 → N71-X3022