

PRODUCT DESCRIPTION

SPECTEC's Non-Incendive / Increased Safety digital output 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. 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 #85047N.

SPECIFICATIONS

- Supply Voltage:** 8 to 30 Vdc @ ≤15 mA
- Output Voltage:** See page 2
(25 mA maximum current sinking)
- Frequency Range:** ~0.5 Hz to 5000 Hz
- Rise/Fall Time:** .04 / .18 μs Nominal
- Air Gap:** ≤ .20" (5mm)
Depending on target mass
- Connection:** Connector or lead wires. See page 2
- Construction:** 300 Series Stainless Steel
Solid Epoxy Encapsulation

CERTIFICATIONS for N100 & N101

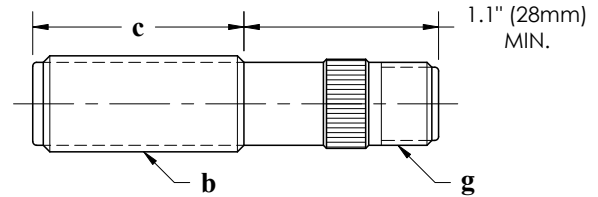
USA: N100: Class I, Division 2
 GROUP ABCD T6...T5 APPROVED
 N101: Class I, II, III, Division 2
 GROUP ABCDEFG T6...T5
 Class I, Zone 2, AEx nC IIC T6...T5

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

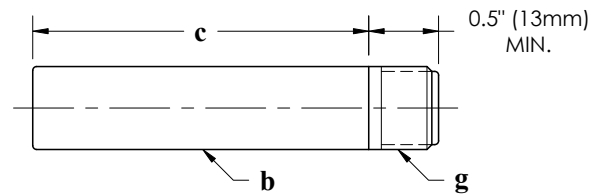
ATEX & UKEX: II 3 G Ex ec IIC T6...T3 Gc
 FM08ATEX0067X
 FM22UKEX0109X
CE: Compliance with EN55011, EN50082-2
 APPROVED

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

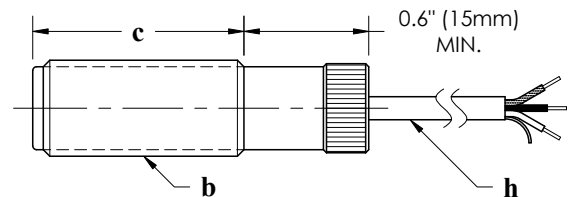
- N100** K shell type, knurled (shown below)
 A shell type, all-thread (knurl removed)
 H shell type, hex (knurl replaced by hex)



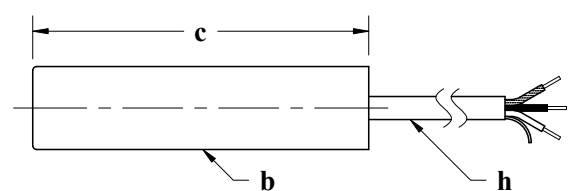
- N100** S shell type, smooth (custom units available)



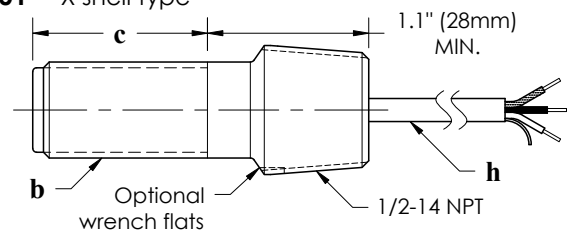
- N101** K shell type, knurled (shown below)
 A shell type, all-thread (knurl removed)
 H shell type, hex (knurl replaced by hex)



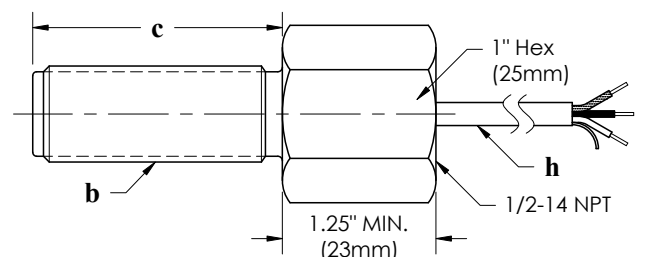
- N101** S shell type, smooth (custom units available)



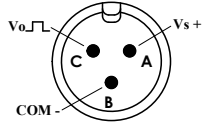
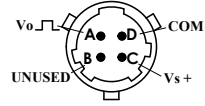
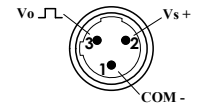
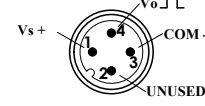
- N101** X shell type



- N101** Y shell type



FEATURE SELECTION for N100-abcgj and N101-abchj

SPECTEC P/N	a Shell Type	b Thread / Diameter	c Thread Length	Connection Type		j Output Signal	
				g Connector (N100 Only)	h Lead Wires (N101 Only)		
N100- (Connector Version) or N101- (Lead Wire Version)	K A H	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 - MO3 Mate: Amphenol MS3106A10SL-3S 	1 - 12" (.3m) 2 - 36" (1m) 3 - 120" (3m) 4 - 198" (5m) 5 - 396" (10m)	1 - 0-5V, NPN (TTL) 2 - 0-10V, NPN 3 - 0-Vs, NPN 4 - 0-Vs, NPN OC	
		S	2 - ø5/8" (15.9mm)	Same as above	2 - B4 Mate: Amphenol MS3116F8-4S 		Lengths of 36" (1m) and longer use shielded cable 18 to 24 AWG (depending on shell size) PVC or TFE insulation
		X (N101 only)	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)	3 - MC3 Mate: Turck KB 3T 		Red - Supply Black - Common White - Output Shield - Floating (Not connected to shell, please ground to instrumentation)
		Y (N101 only)	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)	4 - MD4 Mate: Turck RK 4.4T 		NOTE: Other lead wire lengths are available.

P/N Examples:

N100-K3412 K shell type, 11/16-24 x 2.5" thread, MO3 connector, 0-10V output

N101-Y2321 Y shell type, 5/8-18 x 2.0" thread, 36" leads, 0-5V output

Please Note: Some combinations of options are not possible, please contact sales with any questions.
 Some output options are only available with thread lengths of 1.5" or longer (2.0" or longer for 'S' shell type)

Old P/N to New P/N correlations:

N100-01 → N100-K2214	N100-05 → N100-K2232	N100-42 → N100-K3211	N101-16 → N101-Y2323
N100-02 → N100-K2211	N100-07 → N100-K2221	N100-43 → N100-K3212	N101-18 → N101-K3151
N100-03 → N100-K2212	N100-41 → N100-K3214	N100-45 → N100-K3221	

SPECIALTY MODELS:

N100-17	X	5/8-18 UNF	1.3" (33mm)	MO3 Connector	0-10V, NPN
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