

PRODUCT DESCRIPTION

SPECTEC's Intrinsically Safe RF sensors are designed for installation in hazardous locations. 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. Versions with ATEX certification are available under part numbers IS70A & IS71A. Custom sensors can also be created to meet specific needs.

INSTALLATION

CAUTION: This sensor MUST be installed with an FM approved barrier and following the details specified in the Installation Instruction Document #85046.

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
Temperature	T5 Ta= -40° to 85°C
Class & Range:	T6 Ta= -40° to 65°C
Storage Temp.:	-65° to 85°C
Construction:	300 Series Stainless Steel Solid Epoxy Encapsulation

CERTIFICATIONS for IS70 & IS71

USA: Intrinsically Safe
 Class I, II, III, Division 1
 GROUP ABCDEFG
 Class I, Zone 0, AEx ia IIC

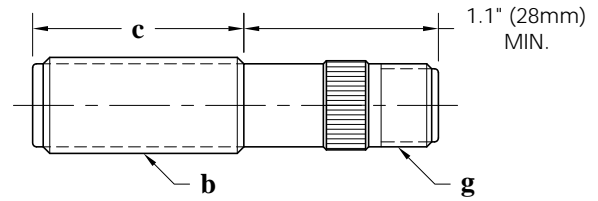
Canada: Intrinsically Safe
 Class I, Division 1
 GROUP ABCD
 Class I, Zone 0, Ex ia IIC

CERTIFICATIONS for IS70A & IS71A

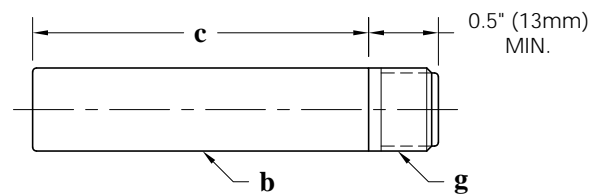
ATEX: II 1 G Ex ia IIC
 FM08ATEX0066X

CE: Compliance with
 EN55011, EN50022-2

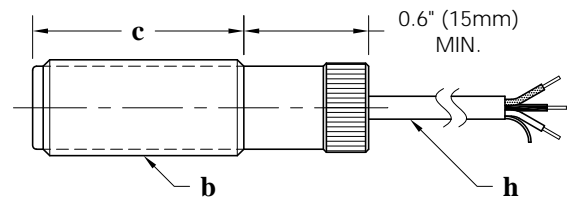
IS70 K shell type, knurled (shown below)
 A shell type, all-thread (knurl removed)
 H shell type, hex (knurl replaced by hex)



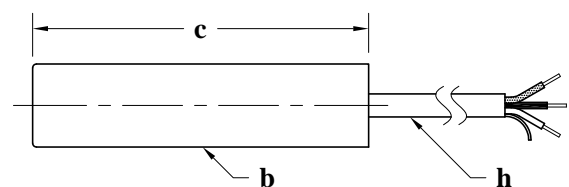
IS70 S shell type, smooth (custom units available)



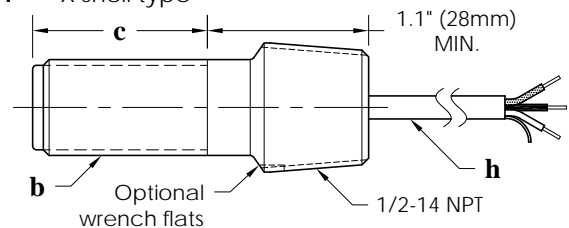
IS71 K shell type, knurled (shown below)
 A shell type, all-thread (knurl removed)
 H shell type, hex (knurl replaced by hex)



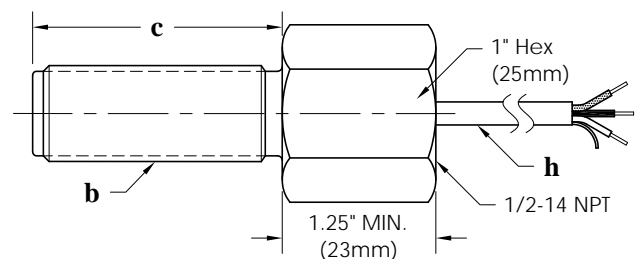
IS71 S shell type, smooth (custom units available)



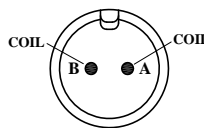
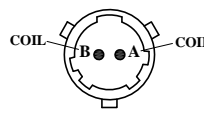
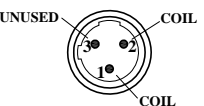
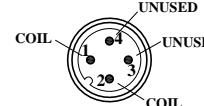
IS71 X shell type



IS71 Y shell type



FEATURE SELECTION for IS70-abceg and IS71-abceh

SPECTEC P/N	a Shell Type	b Thread / Diameter	c Thread Length	e Coil Resistance (Nominal)	Connection Type		
					g Connector (IS70 Only)	h Lead Wires (IS71 Only)	
IS70- (Connector Version) or IS71- (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 - 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) 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.	
		S 1 - ø1/2" (12.7mm) 2 - ø5/8" (15.9mm)	Same as above				
		X (Lead Wire 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	0 - 0.7" (18mm) 1 - 1.3" (33mm) 4 - 2.5" (64mm) 7 - 6.0" (152mm) 8 - 8.0" (203mm)			
		Y (Lead Wire 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)			

Variants:

IS70A-abcefg ATEX Certification

P/N Examples:

IS70-K3421 K shell type, 11/16-24 x 2.5" thread, 12 Ω coil, MO connector

IS71A-Y2312 ATEX certification, 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:

IS71-05 → IS71-X3022