

PRODUCT DESCRIPTION

SPECTEC's Intrinsically Safe digital output 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. Versions with ATEX certification are available under part numbers IS100A & IS101A. 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 #85047.

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
Temperature Class & Range:	T5 Ta= -40° to 85°C T6 Ta= -40° to 65°C
Storage Temp.:	-55° to 85°C
Construction:	300 Series Stainless Steel Solid Epoxy Encapsulation

CERTIFICATIONS for IS100 & IS101

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

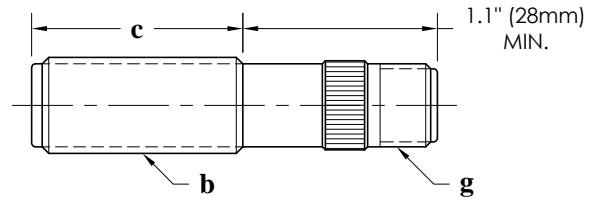
Canada: Intrinsically Safe
 Class I, Division 1
 GROUP ABCD
 Class I, Zone 0, Ex ia IIC

CERTIFICATIONS for IS100A & IS101A

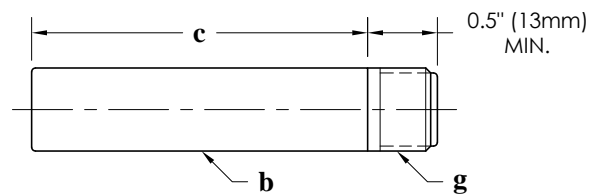
ATEX: II 1 G Ex ia IIC
 FM08ATEX0066X

CE: Compliance with
 EN55011, EN50022-2

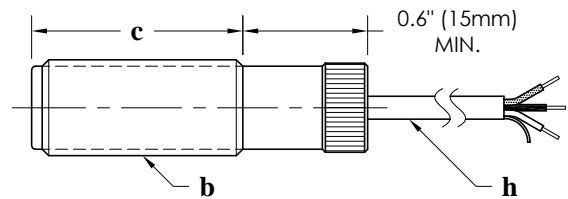
IS100 K shell type, knurled (shown below)
 A shell type, all-thread (knurl removed)
 H shell type, hex (knurl replaced by hex)



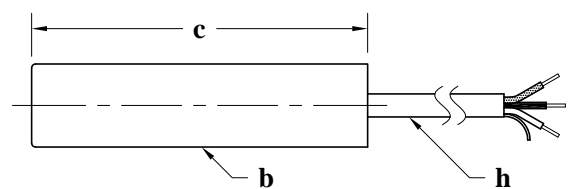
IS100 S shell type, smooth (custom units available)



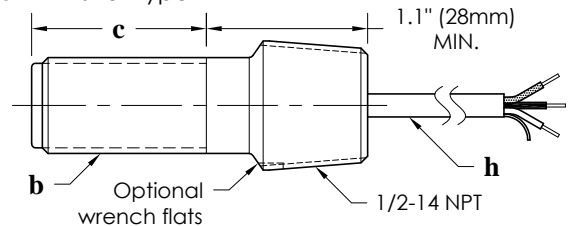
IS101 K shell type, knurled (shown below)
 A shell type, all-thread (knurl removed)
 H shell type, hex (knurl replaced by hex)



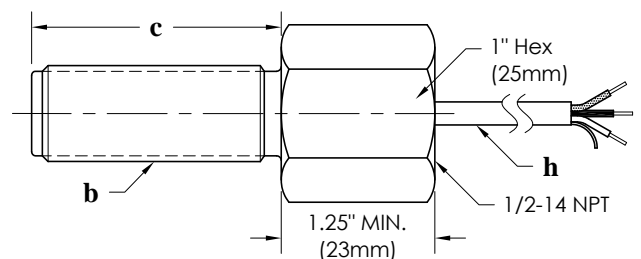
IS101 S shell type, smooth (custom units available)



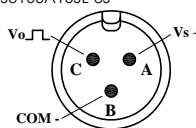
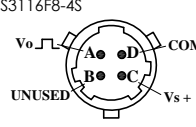
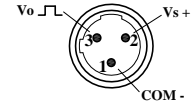
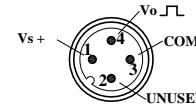
IS101 X shell type



IS101 Y shell type



FEATURE SELECTION for IS100-abcgj and IS101-abchj

SPECTEC P/N	a Shell Type	b Thread / Diameter	c Thread Length	Connection Type		j Output Signal
				g Connector (IS100 Only)	h Lead Wires (IS101 Only)	
IS100- (Connector Version) or IS101- (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  2 - B4 Mate: Amphenol MS3116F8-4S  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 Red - Supply Black - Common White - Output Shield - Floating (Not connected to shell, please ground to instrumentation) NOTE: Other lead wire lengths are available.	1 - 0-5V, NPN(TTL) 2 - 0-10V, NPN 3 - 0-Vs, NPN 4 - 0-Vs, NPN OC
	S	2 - $\varnothing 5/8"$ (15.9mm)	Same as above			
	X (Lead Wire 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)			
	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:

IS100A-abcgj ATEX Certification - can be used in conjunction with variants above

P/N Examples:

IS100-K3412 K shell type, 11/16-24 x 2.5" thread, MO3 connector, 0-10V output

IS101A-Y2321 ATEX certification, 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:

IS100-01 → IS100-K2214	IS100-05 → IS100-K2232	IS100-42 → IS100-K3211	IS101-16 → IS101-Y2323
IS100-02 → IS100-K2211	IS100-07 → IS100-K2221	IS100-43 → IS100-K3212	
IS100-03 → IS100-K2212	IS100-41 → IS100-K3234	IS100-45 → IS100-K3221	

SPECIALTY MODELS: (also available with ATEX certification under the part number IS100A-xx or IS101A-xx)

IS100-17	X	5/8-18 UNF	1.3" (33mm)	MO3 Connector	0-10V, NPN
-----------------	----------	------------	-------------	---------------	------------