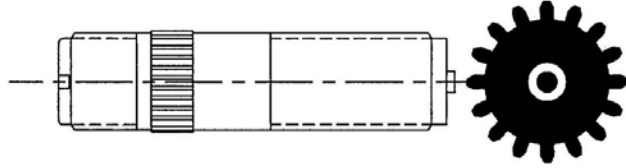


SPECTEC *for INNOVATIVE SENSOR SOLUTIONS*
Standard & Custom Sensors, Signal Conditioners
and Interface Electronics



SPEED SENSORS

Magnetic Speed Sensors (Active & Passive)
Hall Effect Speed Sensors, GBR (Zero Speed)
RF Pickups (Near Zero Speed)
Intrinsically Safe Speed Sensors

and other

PICKUPS

for:

SPEED ■ POSITION
PROXIMITY ■ ACCELERATION
TACHOMETRY ■ SYNCHRONIZATION
FLOW METERS ■ DIRECTION

Standard Temperature Range -150 to 330°F
High Temperature Speed Sensors to 1000°F
Cryogenic Sensors to -450°F

SIGNAL CONDITIONERS

Magnetic & RF Sensor Preamps
Frequency to Voltage Converters
4-20mA Converters
Speed/Flow Switches
Directional Indicators
DC Power Supplies & Enclosures

SPECTEC

THUNDERBIRD INTERNATIONAL CORPORATION
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406-333-4967 • FAX: 406-333-4259

www.spectecsensors.com

An ISO 9001:2000 Certified Company

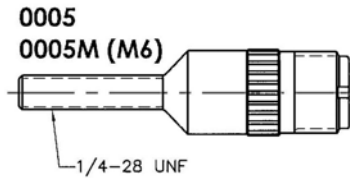


Output Voltage (Vpp): Contact Spectec for magnetic pickup's coil resistance/inductance/output voltage specs.
Air Gap: **M VR Sensor:** .25" max depending on target mass and velocity.
MI Inductive Sensor: 1" max. depending on magnetic field strength and velocity.
Temp. Ranges: **2T:** -100° to 250° F (-73° to 120° C)
3T: -150° to 330° F (-101° to 165° C)
5HT: -450° to 450° F (-270° to 232° C)
8HT: -450° to 850° F (-270° to 454° C)
NOTE: Can be used with [PA-20 signal conditioners](#) for digital output.

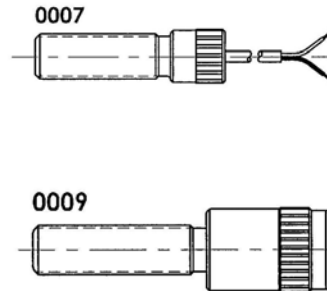
3/16 **Thread Size:** 10-32
Length (L): 0.5" to 2.5" (13 to 64 mm)
Coil Type 1: R: 100 Ohm; L: 5mH; 8Vpp
Temp Ranges: 2T or 5HT



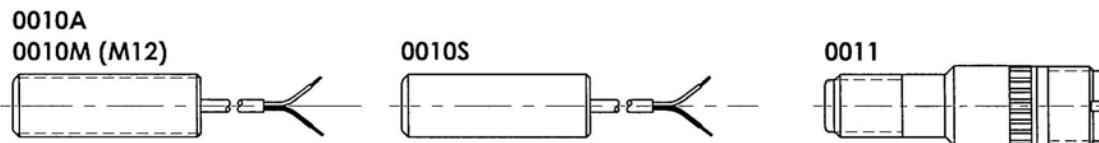
1/4 **Thread Size:** 1/4-40, 1/4-28, M6x1
M6 **Length (L):** 0.6" to 3" (15 to 75 mm)
Coil Type 1: 125 Ohm; 10 mH; 5 Vpp
Coil Type 2: 250 Ohm; 10 mH; 10 Vpp
Temp Ranges: 2T or 5HT



3/8 **Thread Size:** 3/8-24, M10x1.25
M10 **Length (L):** 0.6" to 5" (15 to 130 mm)
Coil Type 1: 100 Ohm; 16 mH; 25 Vpp
Coil Type 2: 250 Ohm; 10 mH; 10 Vpp
Coil Type 3: 650 Ohm; 160 mH; 85 Vpp
Coil Type 4: 1100 Ohm; 450 mH; 110 Vpp
Temp Ranges: 2T, 3T or 5HT



1/2 **Thread Size:** 1/2-20, M12x1
M12 **Length (L):** 0.8" to 5" (20 to 130 mm)
Coil Type 1: R: 140 Ohm; L: 20mH; 30Vpp
Coil Type 3: R: 650 Ohm; L: 160mH; 85Vpp
Temp Ranges: 2T or 5HT

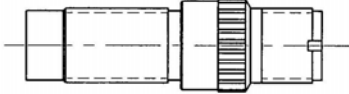


Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

**5/8
M16**
Thread Size: 5/8-18 UNF, M16x1.5
Length (L): 0.8" to 10" (20 to 250 mm)
Temp Ranges: 2T, 3T or 5HT

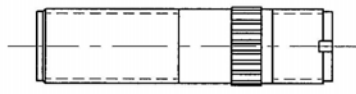
Coil Type 1: 100 Ohm; 30 mH; 45 Vpp
Coil Type 2: 230 Ohm; 90 mH; 75 Vpp
Coil Type 4: 100 Ohm; 700 mH; 210 Vpp (Standard)
Coil Type 5: 1500 Ohm; 800 mH; 240 Vpp
Coil Type 6: 3000 Ohm; 1500 mH; 290 Vpp
Coil Type 7: 5000 Ohm; 2500 mH; 330 Vpp (High Output)

0014

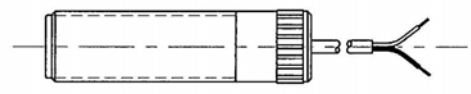


0015

0015M (M16)

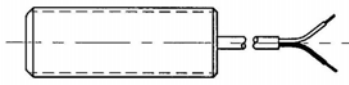


0017



0019

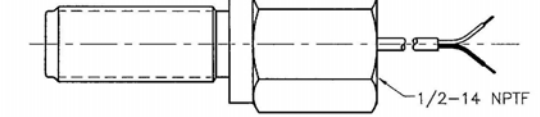
0019M (M16)



0032



0037

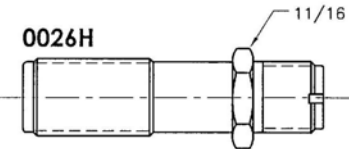


11/16
Thread Size: 11/16-24
Length (L): 0.8" to 3.5" (20 to 90 mm)
Coil Types: 4 through 7
Temp Ranges: 2T, 3T or 5HT

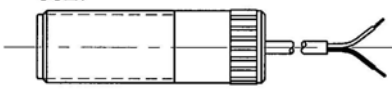
0026



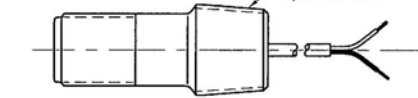
0026H



0027



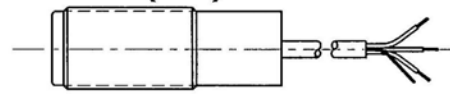
0033



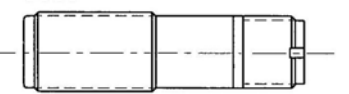
**3/4
M18**
Thread Size: 3/4-16, 3/4-20, M18x1.5
Length (L): 0.8" to 10" (20 to 250 mm)
Coil Types: 1 through 7
Temp Ranges: 2T, 3T or 5HT

0029

0029M (M18)



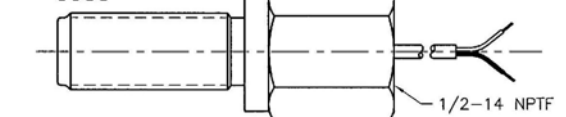
0030



0035



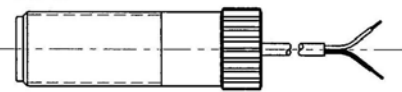
0038



**5/8
11/16
3/4
M18**
Thread Size: 5/8-18, 11/16-24, 3/4-16, 3/4-20, M18x1.5
Length (L): 3" to 10" (76 to 250 mm)
Coil Type 1: 120 Ohm
Temp Range: **8HT:** -450° to 850° F (-270° to 454° C)

High Temperature Magnetic Sensor

0025



Dual Output Magnetic Speed Sensors

Available in the same housing configurations as single output models. **0021:** Connector Version **0022:** Lead Wire Version

Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

Supply Voltage (Vs): 3.5 - 30 Vdc @ 15 mA, **MICROPOWER Model:** 2 to 6 Vdc @ 0.06mA
Pulse Out (Vo): 0 - Vs, 0 - 5V (TTL), 0 - 10 V, Open Collector (NPN or PNP)
Frequency Range: 0 to 40 kHz (Std), 100 kHz (Special order), **MICROPOWER Model:** ≤ 1 Hz to 30 kHz
Air Gap: 0.03" Typ., 0.50" Max. depending on target mass and velocity.
Temp. Ranges: **2TE:** -40° to 220° F (-40° to 120° C)
3TE: -40° to 290° F (-40° to 145° C)

DIGISPEC Magnetic pickups produce a digital frequency output directly proportional to speed. The internal amplifier provides for constant pulse shaping, signal amplitude, logic-level output, robust signal-to-noise ratio, usable at lower RPMs and greater air gap between the sensor and the actuator.

MICROPOWER versions are available for ultra low current draw, ideal for battery applications.

A sanitary version to NEMA 6, IP65 & IP67 is also offered.

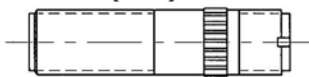
All models are also available with an internal temperature probe (RTD100 Ohm, NTC10 k Ohm).

5/8 M16 **Thread Size:** 5/8-18 UNF, M16x1.5
Length (L): 2.5" to 10" (64 to 250 mm)

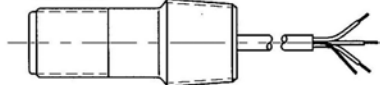
0091
0091M (M16)



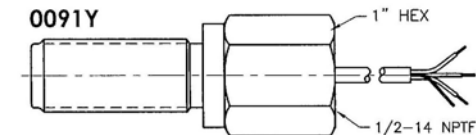
0090
0090M (M16)



0091X 1/2-14 NPT



0091Y

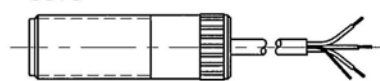


11/16 **Thread Size:** 11/16-24
Length (L): 2.5" to 3.5" (64 to 90 mm)

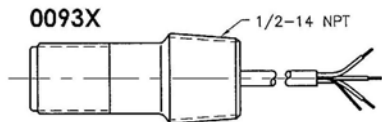
0092



0093



0093X



3/4 M18 **Thread Size:** 3/4-16, 3/4-20, M18x1.5
Length (L): 2.5" to 10" (64 to 250 mm)

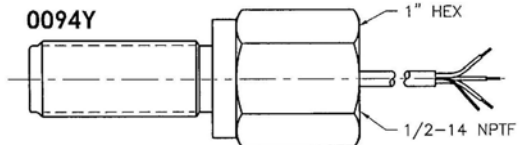
0094
0094M (M18)



0094L
0094ML (M18)



0094Y

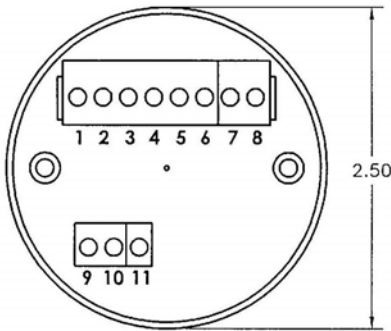


Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

Supply Voltage (Vs): 5 - 30 Vdc Std **Micropower:** 2 - 6 Vdc (for ultra low current draw, ideal for battery applications)
Input Current: 15 mA Std. 0.06 mA
Pulse Out (Vo): 1 - 10 Vpp Std.
Input Sensitivity: 30 mV, 12 mV, 5 mV 12 - 40 mV
Temp. Ranges: **Standard:** -40° to 160° F (-40° to 80° C), **In Line & Ultra Compact:** -40° to 240° F (-40° to 120° C)
Frequency Range: To 10 kHz, up to 40 kHz varies with signal level, target size, air gap & sensor. **Micro** 1 Hz-30 kHz

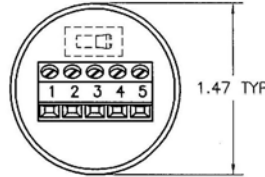
4021 Pulse Amplifier

Multi Output, Noise Canceling
Standard and/or Opto-isolated
Fits GUAL-16 type Explosion-proof enclosure



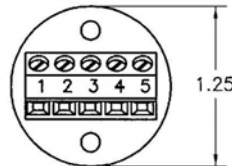
4022 Pulse Amplifier

With Optional Output Select
Fits Elby Explosion-proof enclosure



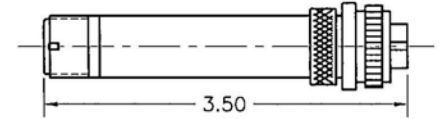
4023 Pulse Amplifier

Fits Y1 Explosion-proof enclosure

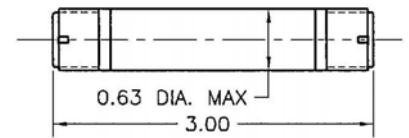


4024 in-Line Pulse Amplifier

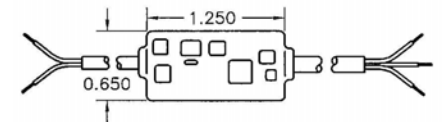
With MS Connector



4024M

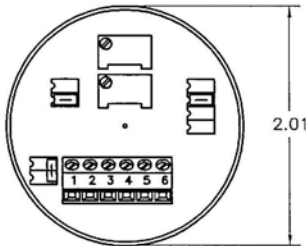


4024H Ultra Compact



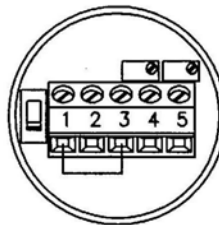
4026 FTC - FTV Converter

FTC Converter: 4-20mA, 10-50mA
FTV Converter: 0-5 Vpp, 0-10 Vpp
Fits Y3 Explosion-proof enclosure



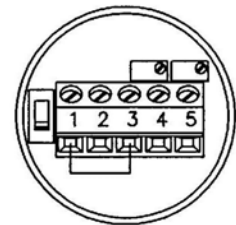
4027 Freq to Current Converter

4-20 mA Converter fits
Elby Explosion-proof enclosure



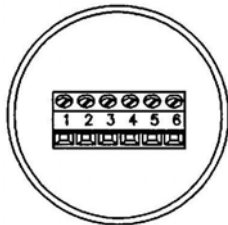
4028 Freq to Voltage Converter

0-5 V or 0-10 V FTV Converter fits
Elby Explosion-proof enclosure



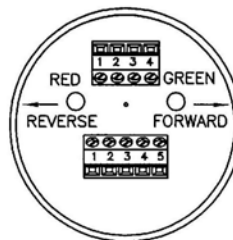
4029 Digital Opto-Isolated Current Loop

Fits Elby Explosion-proof enclosures



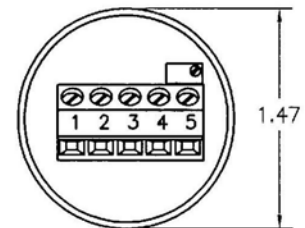
4033 Directional Mag Preamp

Provides directional data from two
magnetic speed pickups
Fits Y3 Explosion-proof enclosure



4051 Speed Flow Switch, SS1

For Magnetic Speed sensors,
Open collector output
Fits Elby Explosion-proof enclosure



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

Inductance/Resistance Options: RF4: 4.00 Ohm, 0.36 mH
RF10: 12.00 Ohm, 1.00 mH

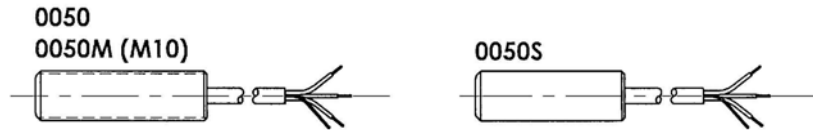
Air Gap: **Open Face:** ≤ .160", **Closed Face:** ≤ .130"

Frequency Range: ≤ 5 Hz to 6000 Hz

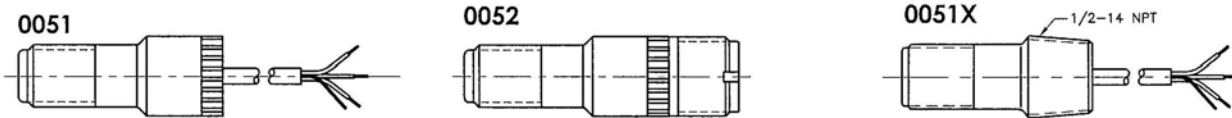
Temperature Ranges: 3T: -150° to 330° F (-101° to 165° C)
4HT: -350° to 400° F (-157° to 204° C)
5HT: -450° to 450° F (-270° to 232° C)

NOTE: Must be used with PA-10

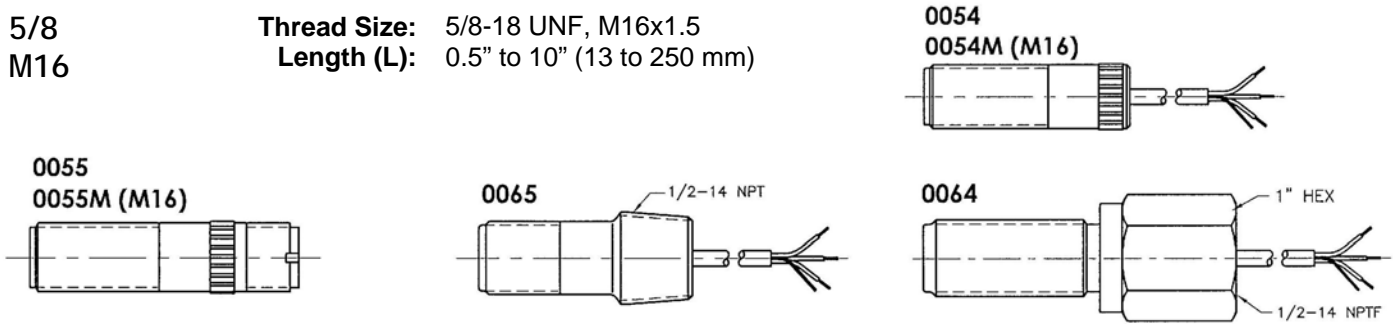
3/8 M10 **Thread Size:** 3/8-24, M10x1.25
Length (L): 0.5" to 5" (13 to 130 mm)



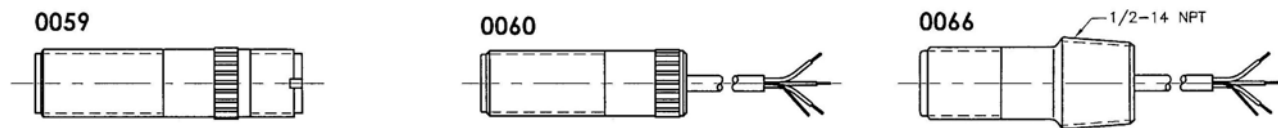
1/2 **Thread Size:** 1/2-20
Length (L): 0.5" to 5" (13 to 130 mm)



5/8 M16 **Thread Size:** 5/8-18 UNF, M16x1.5
Length (L): 0.5" to 10" (13 to 250 mm)



11/16 **Thread Size:** 11/16-24
Length (L): 0.5" to 3.5" (13 to 90 mm)



3/4 M18 **Thread Size:** 3/4-16, 3/4-20, M18x1.5
Length (L): 0.5" to 10" (13 to 250 mm)



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

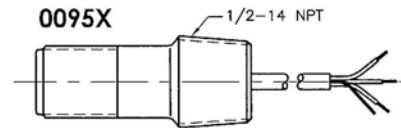
Supply Voltage (Vs): 7 - 30 Vdc @ 15 mA
Pulse Out (Vo): 0 - Vs, 0 - 5V (TTL), 0 - 10 V, Open Collector (NPN or PNP)
Frequency Range: 0.5 Hz to 5 kHz
Air Gap: 0.16" (4mm) Max., depending on target mass and velocity.
Temp. Ranges: **2TE:** -40° to 220° F (-40° to 120° C)
3TE: -40° to 290° F (-40° to 145° C)

SPECTEC's RF pickups are active sensors driven by an external RF ("carrier") signal conditioner. Together they complete an oscillating circuit. The output of this circuit is amplitude modulated when a ferrous object passes by the pickup coil. This change in modulation of the carrier frequency is converted into a square wave pulse by the signal conditioner for computing and/or further processing. DIGISPEC RF pickups have good **EMI protection** and **reverse polarity protection**.

DIGISPEC RF flow meter sensors are available in open face design for greater sensitivity or closed face design for greater environmental sealing.

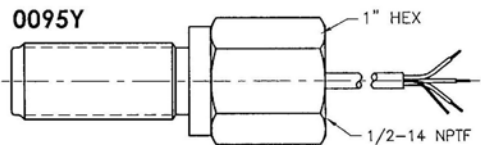
Custom digital RF pickup sensors or OEM replacement speed sensors available. An internal temperature probe (NTC10, RTD100 or others) is available which is positioned near the face of the sensor.

5/8 M16 **Thread Size:** 5/8-18 UNF, M16x1.5
Length (L): 2.5" to 10" (64 to 250 mm)

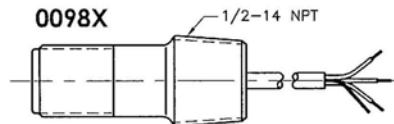
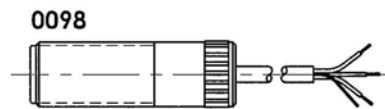


0096
0096M (M16)

0095
0095M (M16)



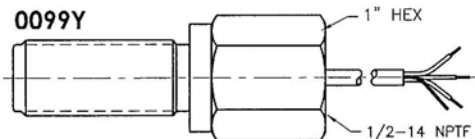
11/16 **Thread Size:** 11/16-24
Length (L): 2.1" to 3.5" (54 to 90 mm)



3/4 M18 **Thread Size:** 3/4-16, 3/4-20, M18x1.5
Length (L): 2.1" to 10" (54 to 250 mm)

0099
0099M (M12)

0099L
0099LM



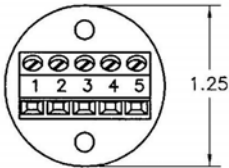
Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

PA-10

- Supply Voltage (Vs):** 5 - 30 Vdc Std
- Input Current:** ≤ 10 mA
- Pulse Out (Vo):** 0 - 10 Vpp Std. or 0 - 5 Vpp (Micropower)
- Frequency Range:** Near 0 to 5 kHz depending on target mass and air gap.
- Temp. Ranges:** **2TE:** -40° to 220° F (-40° to 120° C),
3TE: -40° to 290° F (-40° to 145° C)

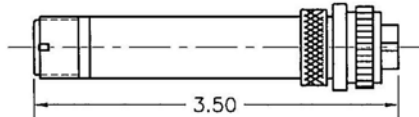
4013 Pulse Amplifier

Fits Y1 Explosion-proof enclosure

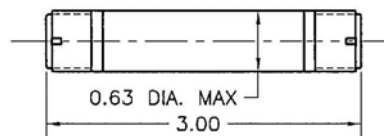


4014 in-Line Pulse Amplifier

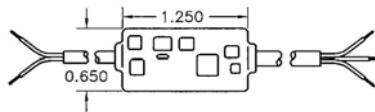
With MS Connector



4014M

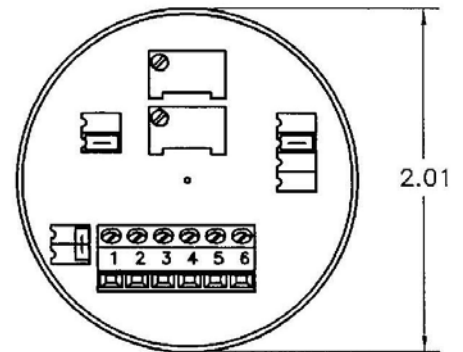


4014H



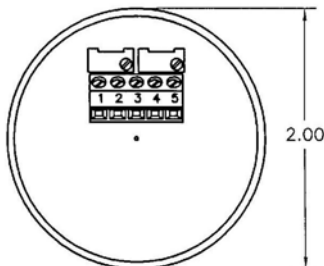
4016 FTC - FTV Converter

FTC Converter: 4-20mA, 10-50mA
FTV Converter: 0-5 Vpp, 0-10 Vpp
Fits Y3 Explosion-proof enclosure



4032 Two Wire Temperature Transmitter

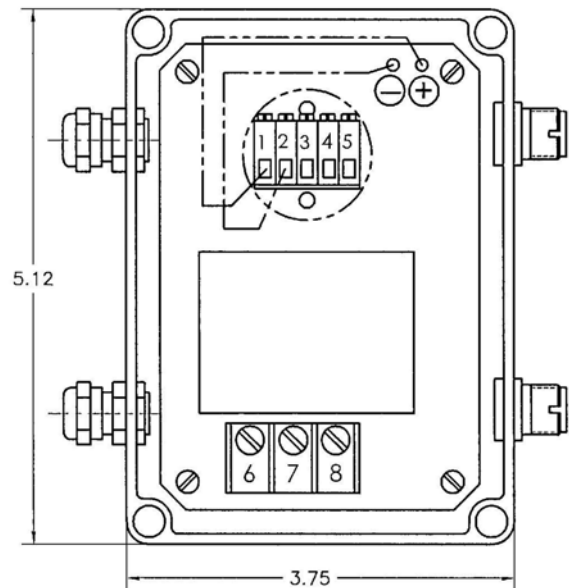
For use with RTDs or thermocouples
Fits Y3 Explosion-proof enclosure



4100 Universal Power Supply

For Magnetic speed sensor & RF pickup signal conditioners
In NEMA 4 enclosure

- Supply voltage (Vs):** 120 Vac 10%, 25 mA
- Voltage Out (Vo):** 5Vdc, 12Vdc or 24Vdc
- Connections:** AC primary, DC output



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

Supply Voltage (Vs): 4.5 - 30 Vdc @ 13 mA
Pulse Out (Vo): 0 - Vs, 0 - 5V (TTL), Open Collector (NPN or PNP)
Frequency Range: 0 to 25 kHz (Std), ≤ 100 kHz (Special order)
Air Gap: 0.50" (12mm) Max.
Temp. Ranges: **2TE:** -40° to 220° F (-40° to 120° C)
3TE: -40° to 290° F (-40° to 145° C)

1/4 **Thread Size:** 1/4-28, 1/4-40, M6x1
M6 **Length (L):** 0.8" to 3" (20 to 75 mm)

0155A
0155M (M6)

0155K

0155

0155S



3/8 **Thread Size:** 3/8-24, M10x1.25
M10 **Length (L):** 0.8" to 5" (20 to 130 mm)

0156A

0156K

0156

0156S



1/2 **Thread Size:** 1/2-20
Length (L): 0.8" to 5" (20 to 130 mm)

0158S

0158A
0158M (M12)

0158
0158MC (M12)



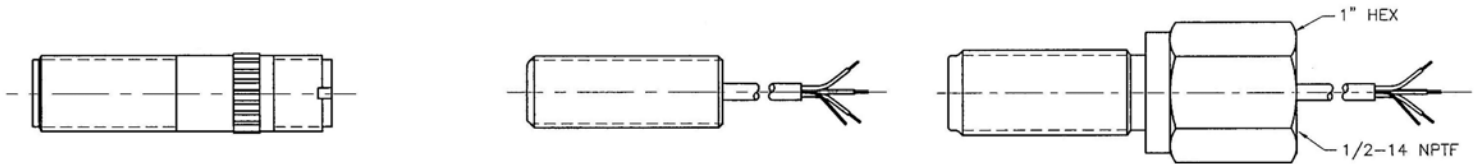
5/8 **Thread Size:** 5/8-18 UNF, M16x1.5
M16 **Length (L):** 0.8" to 10" (20 to 250 mm)

Available in Dual Output

0161
0161 (M16)

0160C
0160MC (M16)

0160Y

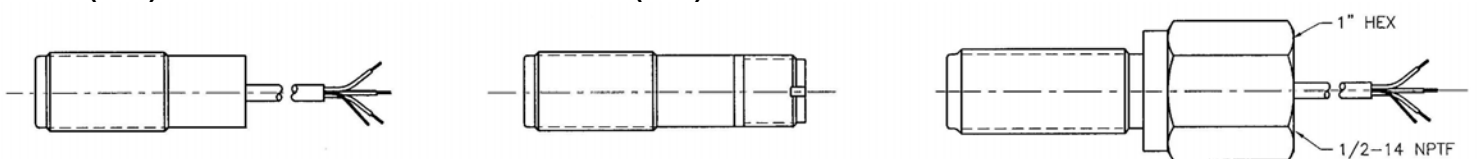


3/4 **Thread Size:** 3/4-16, 3/4-20, M18x1.5
M18 **Length (L):** 2.1" to 10" (54 to 250 mm)

0172
0172 (M18)

0162C
0162MC (M18)

0172Y



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

Supply Voltage (Vs): 4.5 - 30 Vdc @ 13 mA
Pulse Out (Vo): 0 - Vs, 0 - 5V (TTL), Open Collector (NPN or PNP)
Frequency Range: 0 to 25 kHz (Std), ≤ 100 kHz (Special order)
Air Gap: 0.16" (4mm) Max.
Temp. Ranges: **2TE:** -40° to 220° F (-40° to 120° C)
3TE: -40° to 290° F (-40° to 145° C)

1/4 **Thread Size:** 1/4-28, 1/4-40, M6x1
M6 **Length (L):** 0.8" to 3" (20 to 75 mm)

0165A
0165M (M6)

0165K

0165

0165S



3/8 **Thread Size:** 3/8-24, M10x1.25
M10 **Length (L):** 0.8" to 5" (20 to 130 mm)

0167A
0167M (M6)

0167

0166

0167S

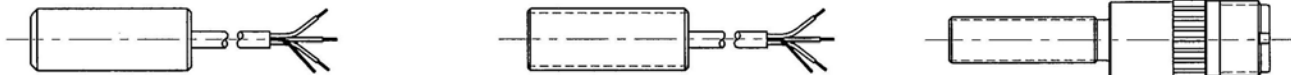


1/2 **Thread Size:** 1/2-20
M12 **Length (L):** 0.8" to 5" (20 to 130 mm)

0168S

0168A
0168M (M12)

0168A
0168MC (M12)



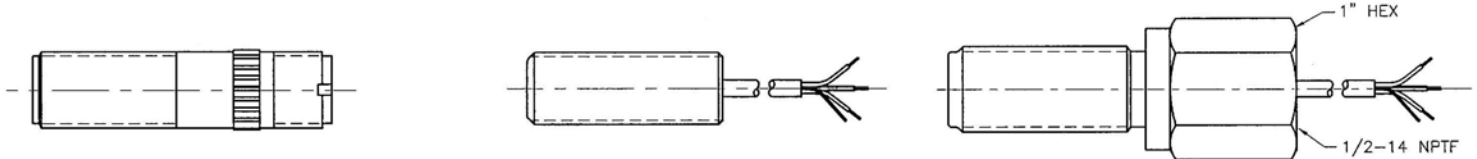
5/8 **Thread Size:** 5/8-18 UNF, M16x1.5
M16 **Length (L):** 0.8" to 10" (20 to 250 mm)

Available with Dual Output

0169
0169 (M16)

0170A
0170MC (M16)

0180Y



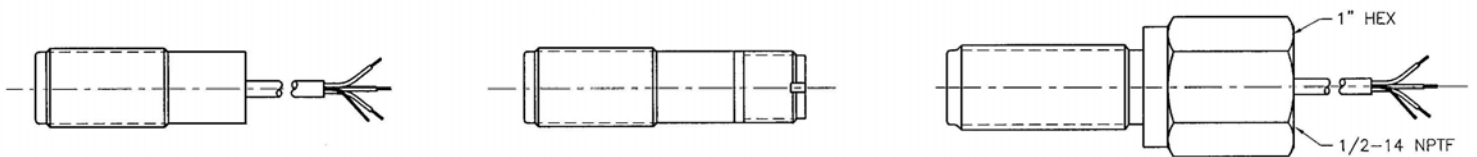
3/4 **Thread Size:** 3/4-16, 3/4-20, M18x1.5
M18 **Length (L):** 2.1" to 10" (54 to 250 mm)

**Available with Dual Output and an
Additional Directional Output**

0172

0171

0172Y



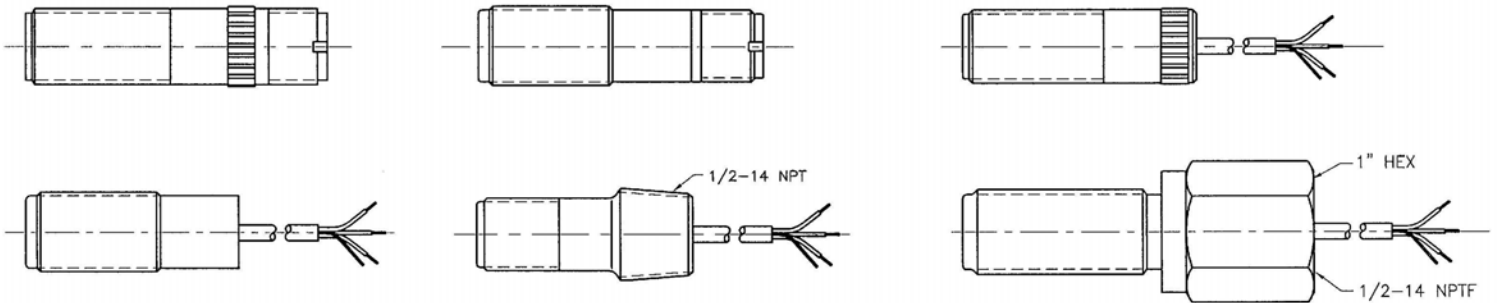
Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

Supply Voltage (Vs): 3.5 - 30 Vdc @ 13 mA
Pulse Out (Vo): 0 - Vs, 0 - 5V (TTL), Open Collector (NPN or PNP)
Frequency Range: 0 to 25 kHz (Std), depending on target size and distance
Air Gap: 5DP (M5): ≤ 0.16" (4mm) Max.
24DP (M1): ≤ 0.08" (2mm) Max.
Temp. Ranges: 2TE: -40° to 220° F (-40° to 120° C)
3TE: -49° to 300° F (-45° to 150° C)

DIGISPEC Hall Effect Dual Output Sensors provide two digital output signals detecting speed (down to true zero speed) and direction of rotation of gear teeth and ferrous targets. Sensors are also available with LED indicators.

5/8 Thread Size: 5/8-18 UNF, 3/4-16, 3/4-20, M18x1.5
3/4 Length (L): 0.8" to 5" (20 to 130 mm)
M18

0174 Series - Connector
0175 Series - Lead Wires



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

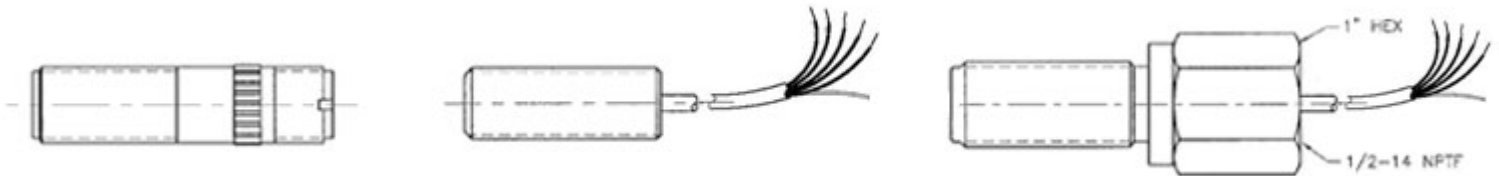
Supply Voltage (Vs): 8.5 - 30 Vdc @ 13 mA
Pulse Out (Vo): 0 - 5V (TTL), Open Collector (NPN or PNP)
Frequency Range: 0 to 25 kHz (Std), depending on target size and distance
Air Gap: 0.16" (4mm) Max. depending on target mass
Temp. Ranges: **2TE:** -40° to 220° F (-40° to 120° C)
3TE: -45° to 300° F (-40° to 150° C)

DIGISPEC Hall Effect Quadrature Sensors provide two digital output signals, 90° out of phase to each other, detecting speed (down to true zero speed) and direction of rotation of gear teeth and ferrous targets.

5/8 Thread Size: 5/8-18 UNF, 11/16-24, 3/4-20, M18x1.5
11/16 Length (L): 2.1" to 5" (54 to 130 mm)
3/4
M18

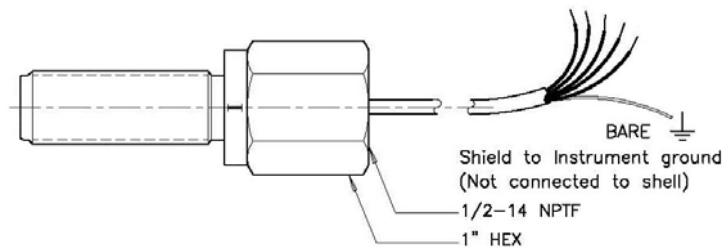
0190 Series - Connector

0191 Series - Lead Wires



3/4 Thread Size: 3/4-16, 3/4-20
Length (L): 3.15" (79.5 mm)

0193Y



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

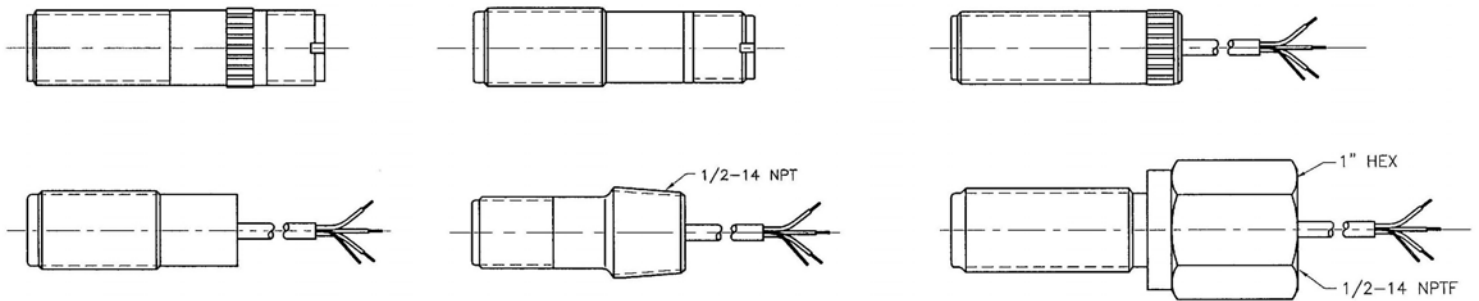
DIGISPEC linear position sensors are designed to detect continuous variations in the magnetic field and convert field strength to a proportional voltage. The output voltage produced for zero field is nominally 2.5v, with a standard transfer function of +/- 10 mV/Gauss. Magnetic sensitivity is along one axis only. Several units can be combined to measure (X, Y, Z) magnetic field vectors.

Custom ranges, output configurations, sensitivity and packaging are available on request. Intrinsically Safe linear position sensors are also available.

5/8 Thread Size: 5/8-18 UNF, 3/4-16, 3/4-20, M16x1.5, M18x1.5
3/4 Length (L): 2.5" to 10" (64 to 250 mm)
M16 Voltage Supply (Vs): 8 - 30 Vdc @ ≤ 5 mA
M18 Pulse Out (Vo): 0.06 - 4.5 V typical

0220 Series - Connector

0221 Series - Lead Wires



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

COMPLIANCE: CE: EN550011, EN50022-2



Class I, Zone 0, AEx [ia] IIC
CLASS I, II, III, Div 1
Group ABCDEFG

INSTALLATION:

Installations must meet the requirements of intrinsically safe systems for hazardous (classified) locations and must follow details specified in FM Global control drawing 85047.

5/8
M16

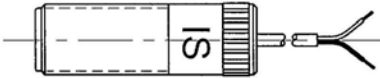
Thread Size: 5/8-18 UNF, M16x1.5
Length (L): 2" to 10" (45 to 250 mm)

IS40

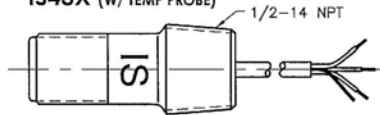
IS42 (W/ TEMP PROBE)



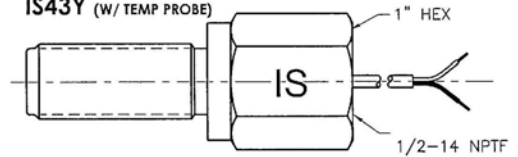
IS41
IS43 (W/ TEMP PROBE)



IS41X
IS43X (W/ TEMP PROBE)



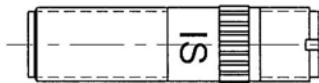
IS41Y
IS43Y (W/ TEMP PROBE)



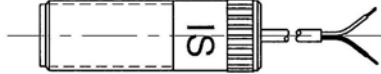
11/16

Thread Size: 11/16-24
Length (L): 1.8" to 3.5" (45 to 90 mm)

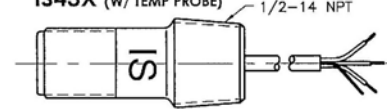
IS40
IS42 (W/ TEMP PROBE)



IS41
IS43 (W/ TEMP PROBE)



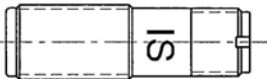
IS41X
IS43X (W/ TEMP PROBE)



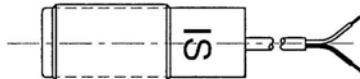
3/4
M18

Thread Size: 3/4-16, 3/4-20, M18x1.5
Length (L): 1.8" to 10" (45 to 250 mm)

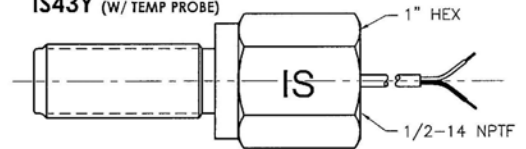
IS40



IS41
IS43 (W/ TEMP PROBE)



IS41Y
IS43Y (W/ TEMP PROBE)



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

COMPLIANCE: CE: EN550011, EN50022-2

◀ FM ▶ IS

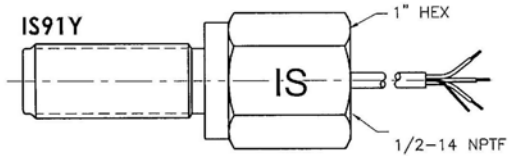
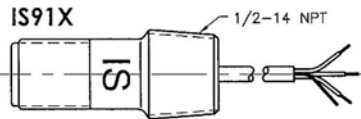
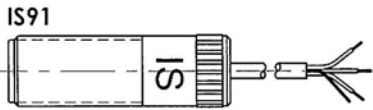
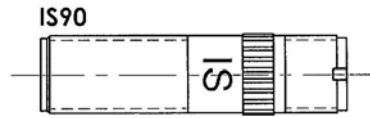
Class I, Zone 0, AEx [ia] IIC
CLASS I, II, III, Div 1
Group ABCDEFG

INSTALLATION:

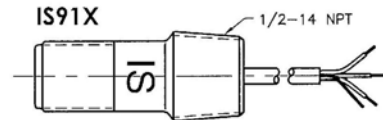
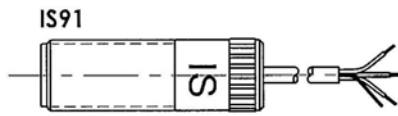
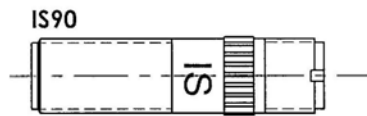
Installations must meet the requirements of intrinsically safe systems for hazardous (classified) locations and must follow details specified in FM Global control drawing 85047.

Supply Voltage (Vs): 8 - 30 Vdc
Pulse Out (Vo): 0 - Vs, 0 - 5V (TTL), 0 - 10 V, Open Collector (NPN or PNP)
Frequency Range: ~5 Hz to 10 kHz depending on target size, distance and pickup sensitivity
Temperature Range: **T5:** -40° to 149° F (-40° to 65° C)
T6: -40° to 185° F (-40° to 85° C)

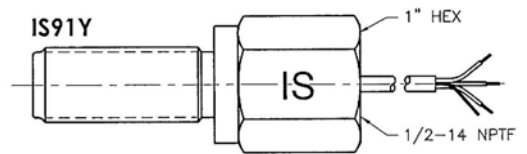
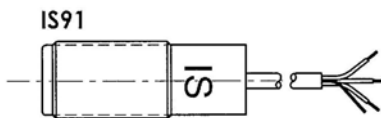
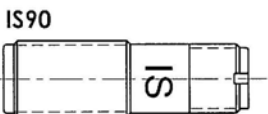
5/8 M16 **Thread Size:** 5/8-18 UNF, M16x1.5
Length (L): 2.5" to 10" (64 to 250 mm)



11/16 **Thread Size:** 11/16-24
Length (L): 2.5" to 3.5" (64 to 90 mm)



3/4 M18 **Thread Size:** 3/4-16, 3/4-20, M18x1.5
Length (L): 1.8" to 10" (45 to 250 mm)



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.



COMPLIANCE: CE: EN550011, EN50022-2



**Class I, Zone 0, AEx [ia] IIC
CLASS I, II, III, Div 1
Group ABCDEFG**

INSTALLATION:

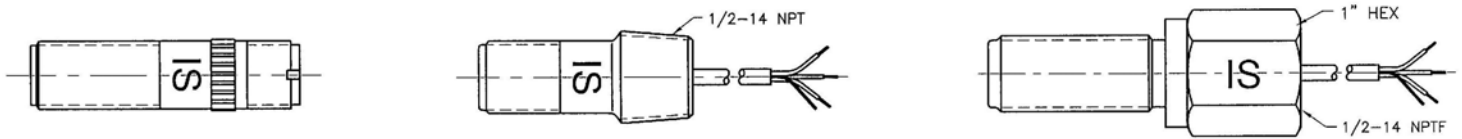
Installations must meet the requirements of intrinsically safe systems for hazardous (classified) locations and must follow details specified in FM Global control drawing 85047.

NOTE: RF pickups must be used with Intrinsically Safe PA-10

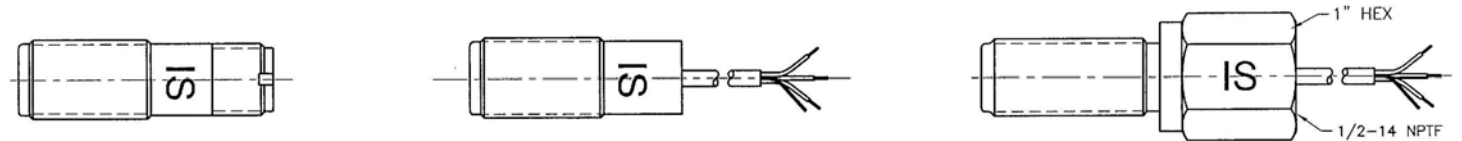
Inductance/Resistance Options: RF4: 4.00 Ohm, 0.36 mH
RF10: 12.00 Ohm, 1.00 mH
Air Gap: Open Face: ≤ .160", Closed Face: ≤ .130
Frequency Range: ≤ 5 Hz to 6000 Hz
Temperature Ranges: T5: -40° to 149° F (-40° to 65° C)
T6: -40° to 185° F (-40° to 85° C)

- IS70:** Connector
- IS71:** Lead Wire
- IS72:** Connector with temperature probe
- IS73:** Lead Wire with temperature probe

5/8
M16
11/16
Thread Size: 5/8-18 UNF, M16x1.5, 11/16-20
Length (L): 1.8" to 10" (45 to 250 mm)



3/4
M18
Thread Size: 3/4-16, 3/4-20, M18x1.5
Length (L): 1.8" to 10" (45 to 250 mm)



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

COMPLIANCE: CE: EN550011, EN50022-2



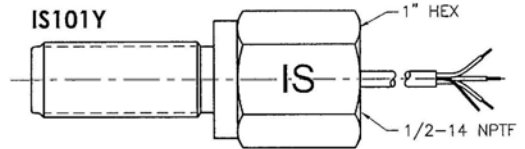
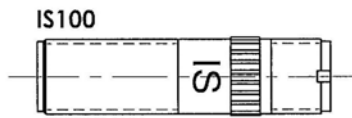
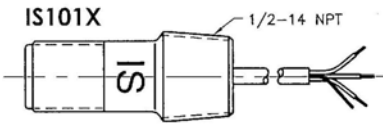
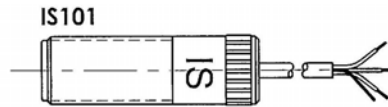
Class I, Zone 0, AEx [ia] IIC
CLASS I, II, III, Div 1
Group ABCDEFG

INSTALLATION:

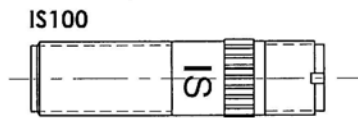
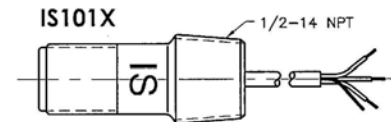
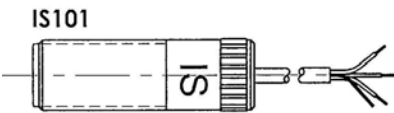
Installations must meet the requirements of intrinsically safe systems for hazardous (classified) locations and must follow details specified in FM Global control drawing 85047.

Supply Voltage (Vs): 8 - 30 Vdc, Reverse polarity protected; 4.5 - 8 Vdc optional
Pulse Out (Vo): 0 - Vs Open Collector - NPN, 0 - 5V (TTL), 0 - 10 V
Frequency Range: ≤ 0.5 Hz to ≥ 5 kHz depending on target size, distance and pickup sensitivity
Temperature Range: **T5:** -40° to 149° F (-40° to 65° C)
T6: -40° to 185° F (-40° to 85° C)

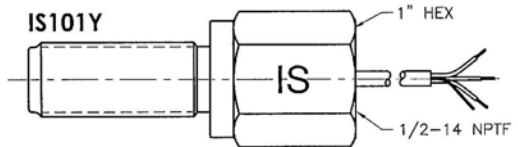
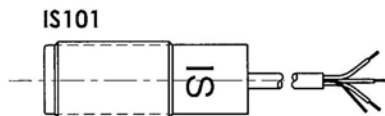
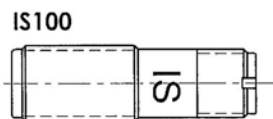
5/8 M16 **Thread Size:** 5/8-18 UNF, M16x1.5
Length (L): 3" to 10" (76 to 250 mm)



11/16 **Thread Size:** 11/16-24
Length (L): 2.8" to 3.5" (71 to 90 mm)



3/4 M18 **Thread Size:** 3/4-16, 3/4-20, M18x1.5
Length (L): 2.8" to 10" (71 to 250 mm)



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

COMPLIANCE: CE: EN550011, EN50022-2



Class I, Zone 0, AEx [ia] IIC
CLASS I, II, III, Div 1
Group ABCDEFG

INSTALLATION:

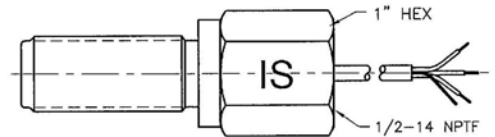
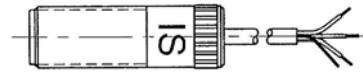
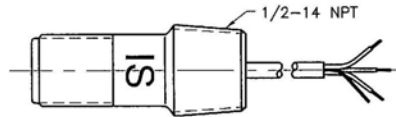
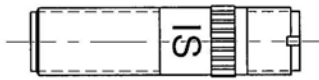
Installations must meet the requirements of intrinsically safe systems for hazardous (classified) locations and must follow details specified in FM Global control drawing 85047.

Supply Voltage (Vs): 5 - 30 Vdc
Pulse Out (Vo): 0 - Vs, 0 - 5V (TTL), 0 - 10 V, Open Collector (NPN or PNP)
Frequency Range: 0 to 25 kHz depending on target size, distance and pickup sensitivity
Target: **Standard:** Bi-polar (N & S pole) activation; **Optional:** Uni-polar (N or S pole) also available
Temperature Range: **T5:** -40° to 149° F (-40° to 65° C)
T6: -40° to 185° F (-40° to 85° C))

- IS159:** Single Output, Lead Wire, LED indicator
- IS160:** Single Output, Lead Wire
- IS161:** Single Output, Connector
- IS180:** Dual Output, Connector
- IS181:** Dual Output, Lead Wire

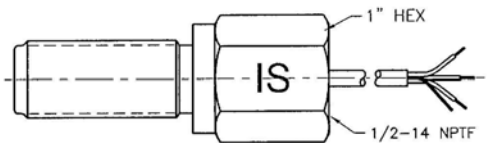
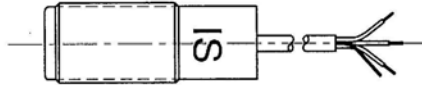
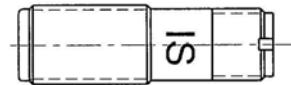
5/8
M16
11/16

Thread Size: 5/8-18 UNF, M16x1.5, 11/16-20
Length (L): 1.8" to 10" (45 to 250 mm)



3/4
M18

Thread Size: 3/4-16, 3/4-20, M18x1.5
Length (L): 1.8" to 10" (45 to 250 mm)



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

COMPLIANCE: CE: EN550011, EN50022-2



Class I, Zone 0, AEx [ia] IIC
CLASS I, II, III, Div 1
Group ABCDEFG

INSTALLATION:

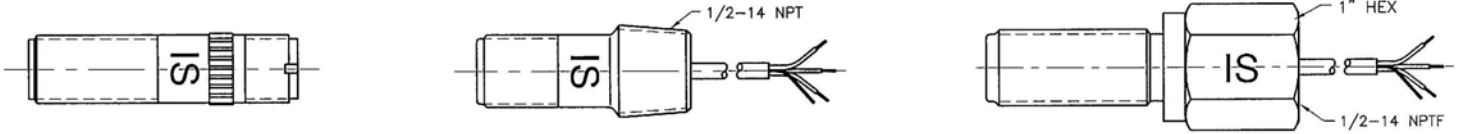
Installations must meet the requirements of intrinsically safe systems for hazardous (classified) locations and must follow details specified in FM Global control drawing 85047.

Supply Voltage (Vs): **Standard:** 5 - 30 Vdc; **LED Option:** 12 -30 Vdc
Pulse Out (Vo): 0 - Vs, 0 - 5V (TTL), 0 - 10 V, Open Collector (NPN or PNP)
Frequency Range: 0 to 25 kHz depending on target size, distance and pickup sensitivity
Air Gap: 5DP (M5): ≤ 0.16" (4mm) Max.
24DP (M1): ≤ 0.08" (2mm) Max.
Temperature Range: **T5:** -40° to 149° F (-40° to 65° C)
T6: -40° to 185° F (-40° to 85° C)

- IS170:** Single Output, Connector
- IS171:** Single Output, Lead Wire
- IS174:** Dual Output, Connector
- IS175:** Dual Output, Lead Wire
- IS190:** Quadrature Output, Connector
- IS191:** Quadrature Output, Lead Wire

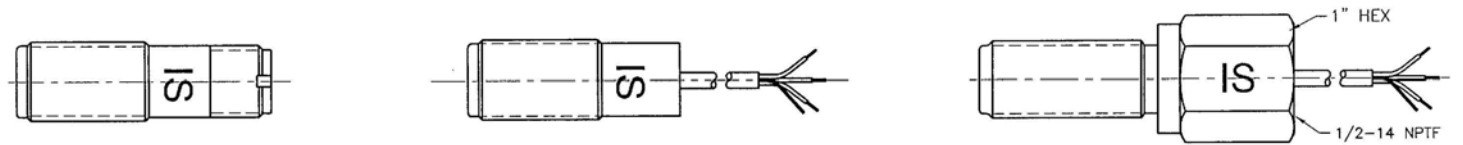
5/8
M16
11/16

Thread Size: 5/8-18 UNF, M16x1.5, 11/16-20
Length (L): 1.8" to 10" (45 to 250 mm)



3/4
M18

Thread Size: 3/4-16, 3/4-20, M18x1.5
Length (L): 1.8" to 10" (45 to 250 mm)



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.



COMPLIANCE: CE: EN550011, EN50022-2



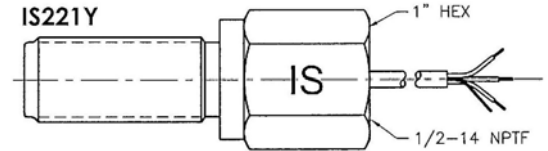
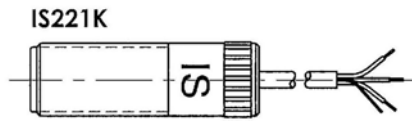
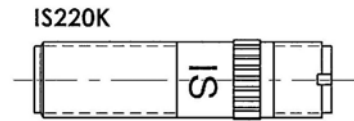
Class I, Zone 0, AEx [ia] IIC
CLASS I, II, III, Div 1
Group ABCDEFG

INSTALLATION:

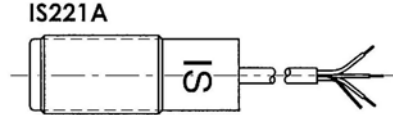
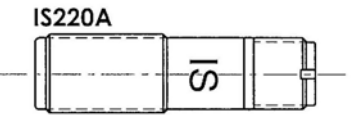
Installations must meet the requirements of intrinsically safe systems for hazardous (classified) locations and must follow details specified in FM Global control drawing 85047.

Supply Voltage (Vs): 8 - 30 Vdc
Pulse Out (Vo): 0.06 - 4.5 V typical
Air Gap: To > 1" @ 3000 Gauss typical
Temperature Range: **T5:** -40° to 220° F (-40° to 120° C)
T6: -45° to 300° F (-40° to 150° C)

5/8 **Thread Size:** 5/8-18 UNF, M16x1.5
M16 **Length (L):** 2" to 10" (78 to 250 mm)



3/4 **Thread Size:** 3/4-20, M18x1.5
M18 **Length (L):** 2" to 10" (78 to 250 mm)



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.

COMPLIANCE: CE: EN550011, EN50022-2



Class I, Zone 0, AEx [ia] IIC
CLASS I, II, III, Div 1
Group ABCDEFG

INSTALLATION:

Installations must meet the requirements of intrinsically safe systems for hazardous (classified) locations and must follow details specified in FM Global control drawing 85047.

Pulse Out (Vo): 0 - 5 V, 0 - 10 V
Temperature Range: T5: -40° to 220° F (-40° to 120° C)
T6: -45° to 300° F (-40° to 150° C)

IS4022 Pulse Amplifier

For IS magnetic sensors with
Optional output selection

Supply Voltage (Vs): 7.5 - 30 Vdc

Freq Range: ~5 Hz to 10kHz;
~5Hz to 40 kHz at
increased signal level

IS4027 Freq to Current Converter

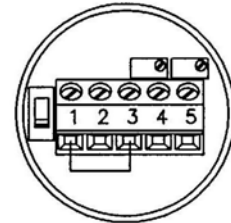
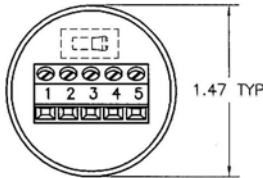
4-20 mA Converter fits
Elby Explosion-proof enclosure

Supply Voltage (Vs): 9 - 30 Vdc

IS4028 Freq to Voltage Converter

0-5 V or 0-10 V FTV Converter fits
Elby Explosion-proof enclosure

Supply Voltage (Vs): 12 - 30 Vdc



Detailed specification sheets are available for each sensor listed; please contact Spectec for more information.