

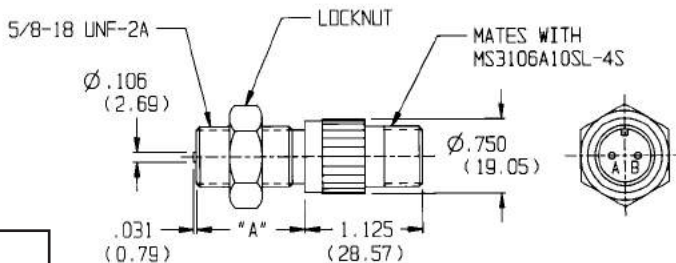
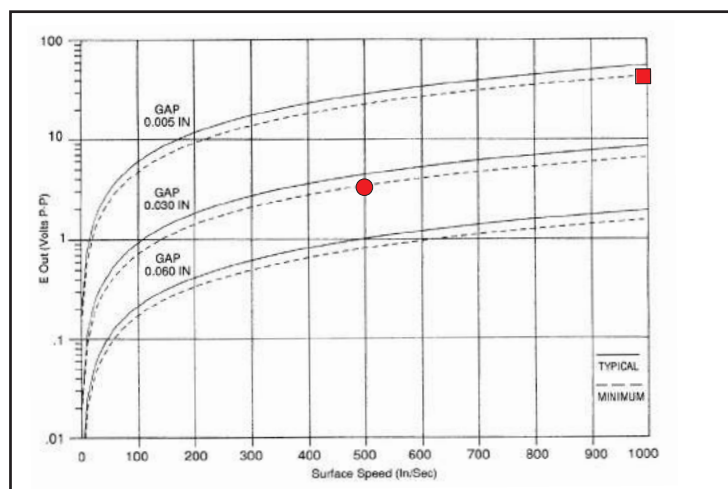
General Purpose

Ordering Part # Thread Length (A)

70085-1010-001	1.125 (28.57)
70085-1010-003	2.625 (66.67)
70085-1010-018	3.625 (92.07)
70085-1010-118	5.000 (127.00)

(Select cable from group "A", see index)

Performance Curves



Specifications:

- Output Voltage (Standard): 40 V (P-P)
- Output Voltage (Guarantee Point): 3.4 V (P-P)
- DC Resistance: 130 ohms max.
- Typical Inductance: 33 mH ref.
- Output Polarity: Pin 'B' positive
- Operating Temperature: -55 to +107°C
- Net Weight: 5 oz. max.

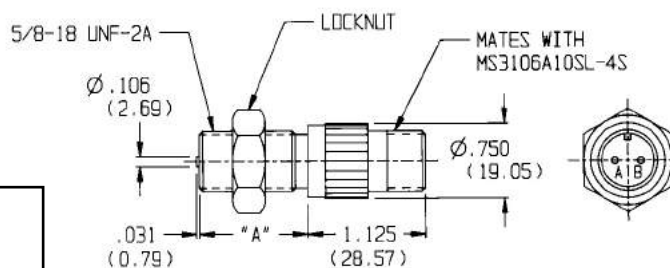
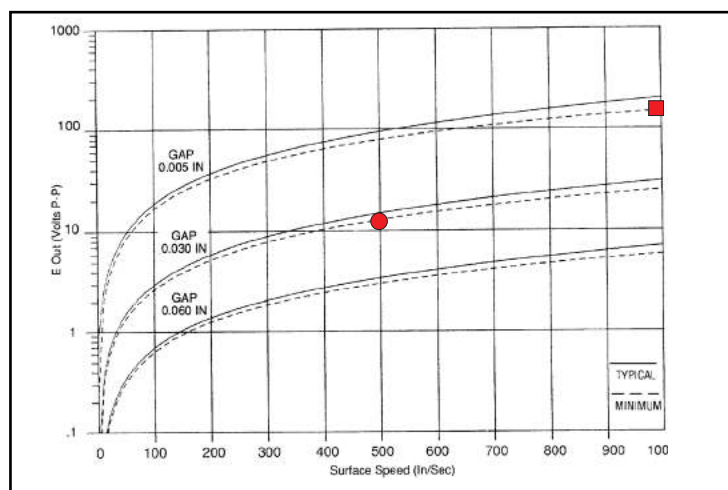
High Sensitivity

Ordering Part # Thread Length (A)

70085-1010-002	1.125 (28.57)
70085-1010-175	2.625 (66.67)
70085-1010-026	3.625 (92.07)
70085-1010-408	5.000 (127.00)

(Select cable from group "A", see index)

Performance Curves



Specifications:

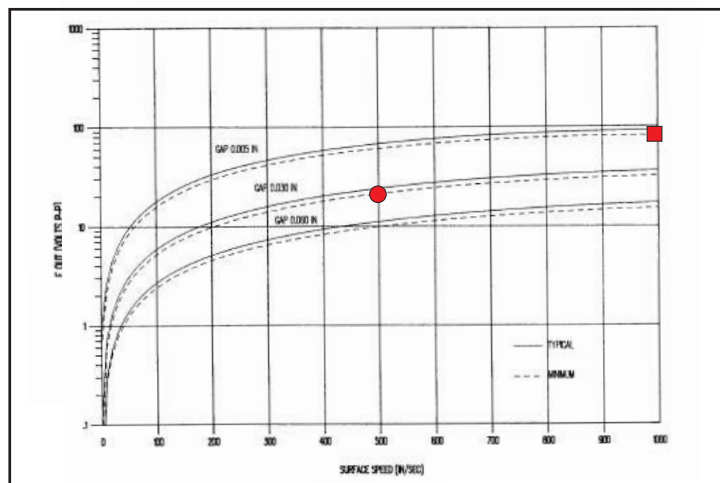
- Output Voltage (Standard): 150 V (P-P)
- Output Voltage (Guarantee Point): 12.9 V (P-P)
- DC Resistance: 1500 ohms max.
- Typical Inductance: 360 mH ref.
- Output Polarity: Pin 'B' positive
- Operating Temperature: -55 to +107°C
- Net Weight: 5 oz. max.

Dimensions in inches and (mm).

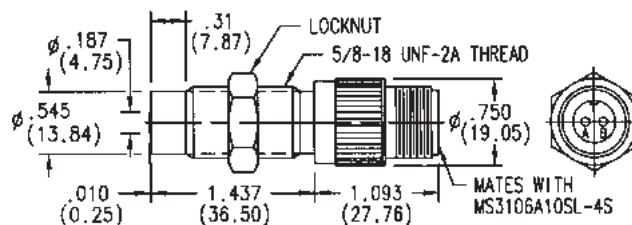
Power Output

Ordering Part # **Thread Length (A)**
 70085-1010-028 1.437 (36.50)
 (Select cable from group "A", see index)

Performance Curves



Based on 8 D.P. Gear



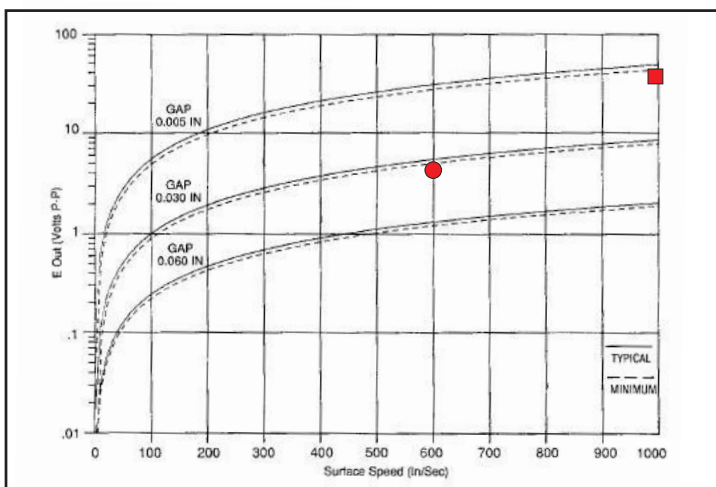
Specifications:

- Output Voltage (Standard): 75 V (P-P)
- Output Voltage (Guarantee Point): 21.5 V (P-P)
- DC Resistance: 210 ohms max.
- Typical Inductance: 50 to 95 mH ref.
- Output Polarity: Pin "B" positive
- Operating Temperature: -73 to +107° C
- Net Weight: 2.2 oz. max.

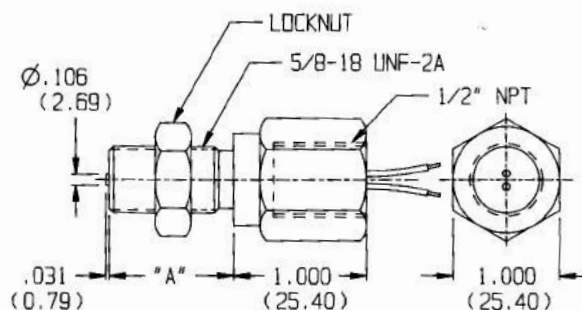
Conduit Fitting – General Purpose

Ordering Part # **Thread Length (A)**
 70085-1010-004 1.125 (28.57)
 70085-1010-469 2.750 (69.85)

Performance Curves



Based on 20 D.P. Gear



Specifications:

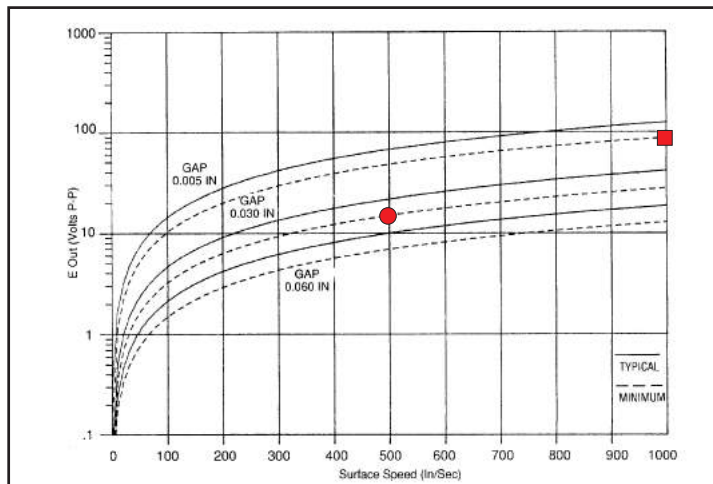
- Output Voltage (Standard): 43 V (P-P)
- Output Voltage (Guarantee Point): 4.3 V (P-P)
- DC Resistance: 130 ohms max.
- Typical Inductance: 32-46 mH ref.
- Output Polarity: Red lead positive
- Operating Temperature: -73 to +107° C
- Lead length: 10 ft (3.05 m)
- Net Weight: 16 oz. max.

Dimensions in inches and (mm).

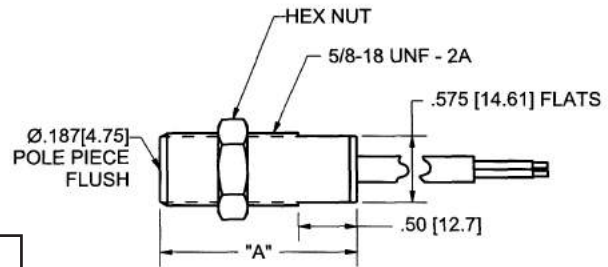
Full Thread – Power Output

Ordering Part #	Thread Length (A)
70085-1010-131	1.80 (45.72)
70085-1010-214	3.06 (77.72)

Performance Curves



Based on 8 D.P. Gear



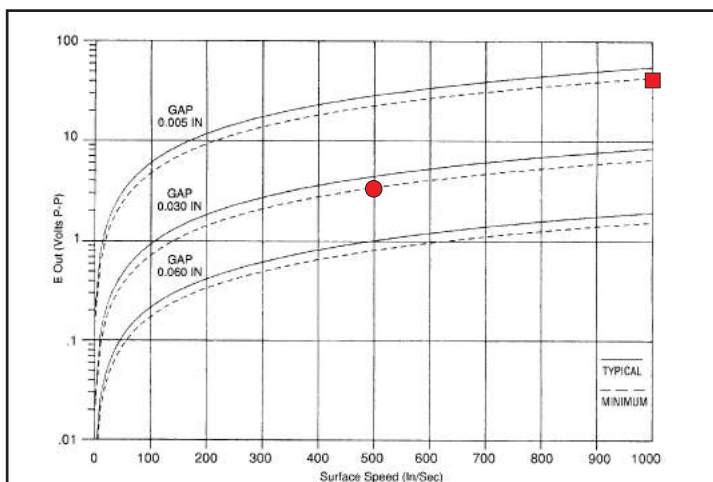
Specifications:

- Output Voltage (Standard): 120 V (P-P)
- Output Voltage (Guarantee Point): 15.1 V (P-P)
- DC Resistance: 250 ohms max.
- Typical Inductance: 40-60 mH ref.
- Output Polarity: White lead positive
- Operating Temperature: -55 to +107° C
- Cable Length: 10 ft (3.05 m)
- Net Weight: 5 oz. max.

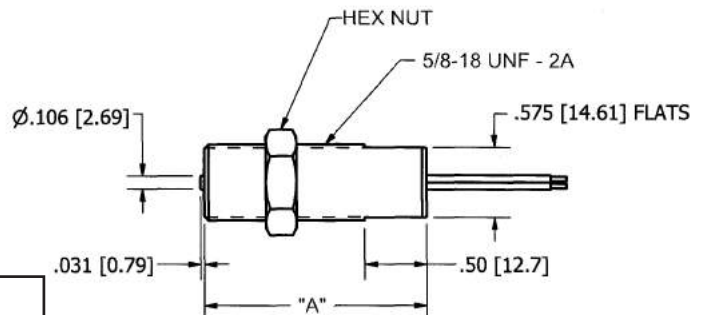
Full Thread – General Purpose

Ordering Part #	Thread Length (A)
70085-1010-078	1.80 (45.72)
70085-1010-137	3.06 (77.72)

Performance Curves



Based on 20 D.P. Gear



Specifications:

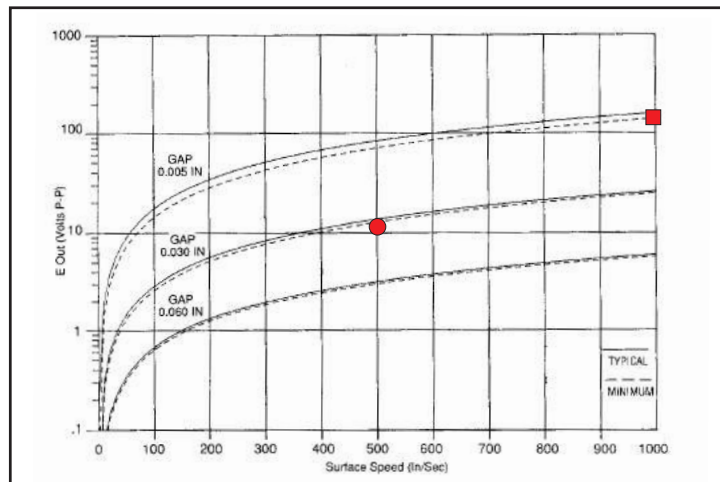
- Output Voltage (Standard): 40 V (P-P)
- Output Voltage (Guarantee Point): 3.4 V (P-P)
- DC Resistance: 130 ohms max.
- Typical Inductance: 33 mH ref.
- Output Polarity: white lead positive
- Operating Temperature: -55 to +107° C
- Lead Length: -078, 12 in (30.5 cm)
- 137, 24 in (60.9 cm)
- Net Weight: 3 oz. max.

Dimensions in inches and (mm).

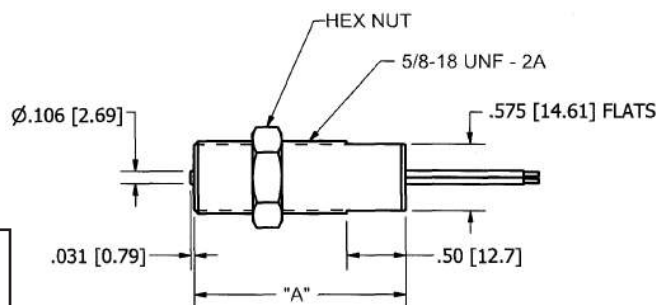
Full Thread – High Sensitivity

Ordering Part #	Thread Length (A)
70085-8080-003	1.80 (45.72)
70085-1010-220	3.06 (77.72)

Performance Curves



Based on 20 D.P. Gear



Specifications:

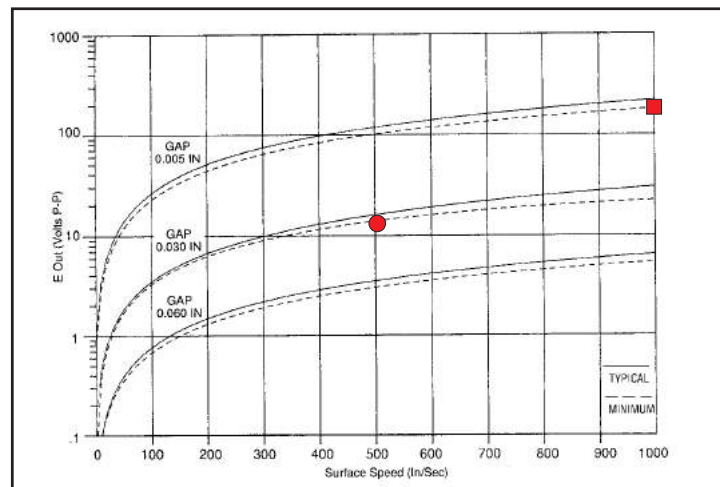
- Output Voltage (Standard): 150 V (P-P)
- Output Voltage (Guarantee Point): 12.8 V (P-P)
- DC Resistance: 1430 ohms max.
- Typical Inductance: 500 mH ref.
- Output Polarity: White lead positive
- Operating Temperature: -55 to + 107°C
- Lead Length: -003, 12 in (30.5 cm)
- 220, 36 in (91.4 cm)
- Net Weight: 3 oz. max.

Molded – High Sensitivity

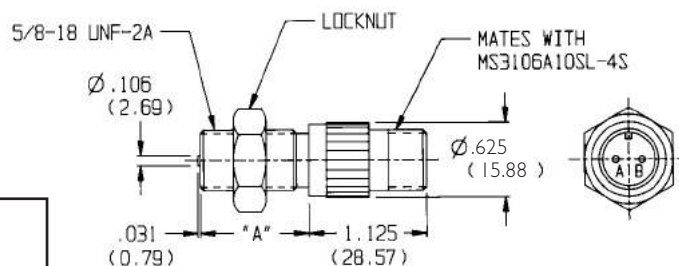
Ordering Part #	Thread Length (A)
70084-1713-111	1.125 (28.57)

(Select cable from group "A", see index)

Performance Curves



Based on 20 D.P. Gear



Specifications:

- Output Voltage (Standard): 190 V (P-P)
- Output Voltage (Guarantee Point): 13.9 V (P-P)
- DC Resistance: 1200 ohms max.
- Typical Inductance: 400 mH ref.
- Output Polarity: Pin 'B' positive
- Operating Temperature: -40 to +150° C
- Net Weight: 2 oz. max.

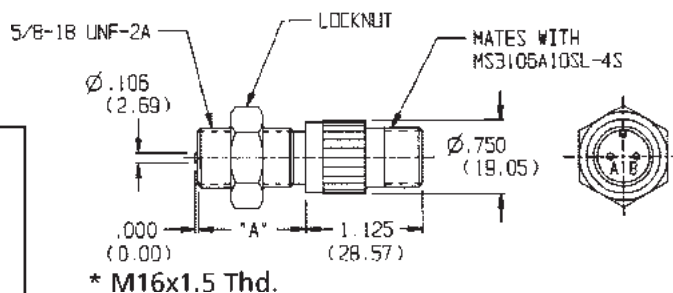
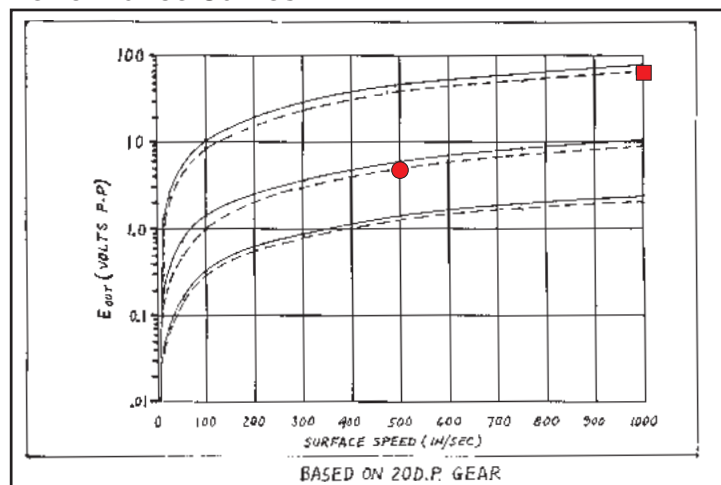
Dimensions in inches and (mm).

Molded

Ordering Part #	Thread Length (A)	
70085-1010-421	2.475	(62.87)
70085-1010-425	3.000	(76.20) * M16 x 1.5 Thd.
70085-1010-424	4.493	(114.12)

(Select cable from group "A", see index)

Performance Curves **



Specifications:

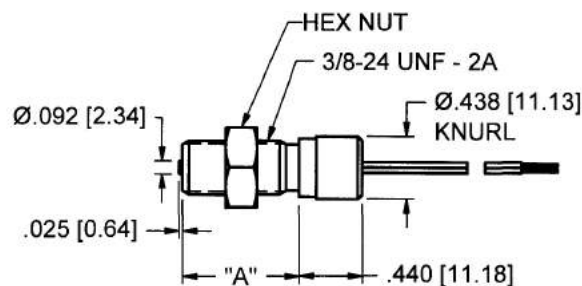
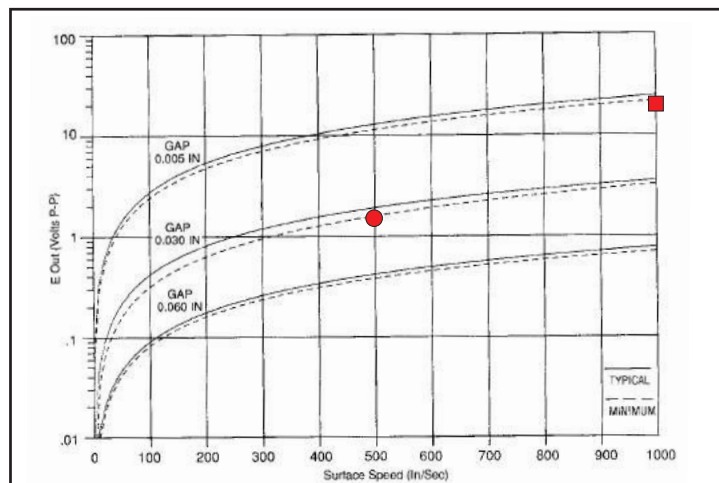
- Output Voltage (Standard): 63 V (P-P)
- Output Voltage (Guarantee Point): 4.9V (P-P)
- DC Resistance: 250 ohms max.
- Typical Inductance: 63 mH ref.
- Output Polarity: Pin 'B' positive
- Operating Temperature: -55 to +107° C
- Net Weight: 5 oz. max.

Dimensions in inches and (mm).

General Purpose

Ordering Part #	Thread Length (A)
70085-1010-007	.812 (20.62)
70085-1010-056	3.625 (92.08)

Performance Curves



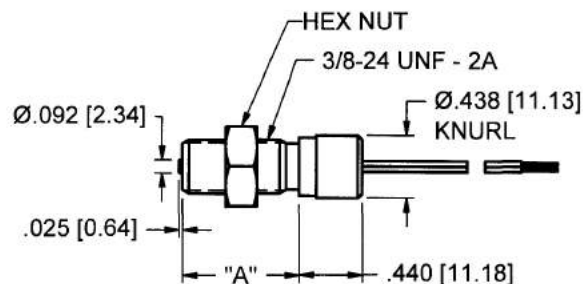
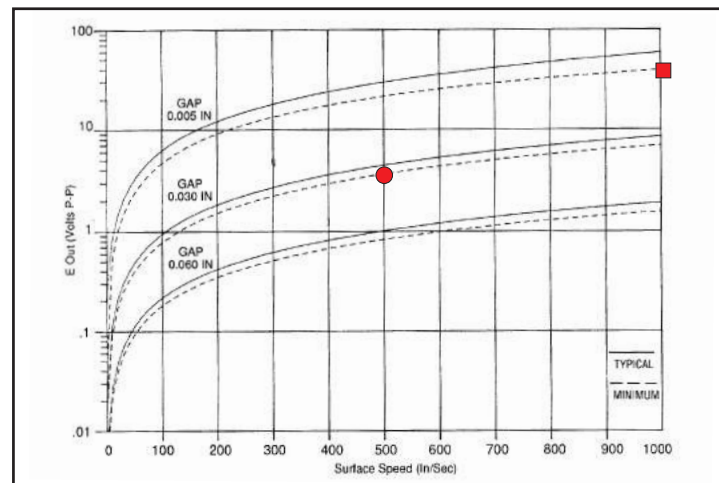
Specifications:

- Output Voltage (Standard): 21 V (P-P)
- Output Voltage (Guarantee Point): 1.6 V (P-P)
- DC Resistance: 125 ohms max.
- Typical Inductance: 22 mH ref.
- Output Polarity: White lead positive
- Operating Temperature: -55 to +107°C
- Lead Length: 6 in (15.2 cm)
- Net Weight: 2 oz. max.

High Sensitivity

Ordering Part #	Thread Length (A)
70085-1010-086	.812 (20.62)
70085-1010-355	.812 (20.62)

Performance Curves



Specifications:

- Output Voltage (Standard): 55 V (P-P)
- Output Voltage (Guarantee Point): 4.2V (P-P)
- DC Resistance: 960 ohms max.
- Typical Inductance: 125 mH ref.
- Output Polarity: White lead positive
- Operating Temperature: -55 to +107°C
- Lead Length: -086, 18 in (45.7 cm)
- Cable Length: -355, 40 in (101.6 cm)
- Net Weight: 2 oz. max.

Dimensions in inches and (mm).

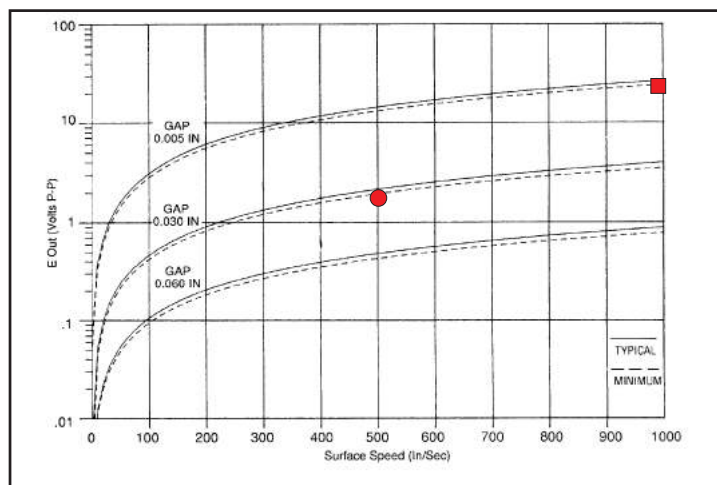
Passive Speed Sensors

3/8 – 24 FAMILY

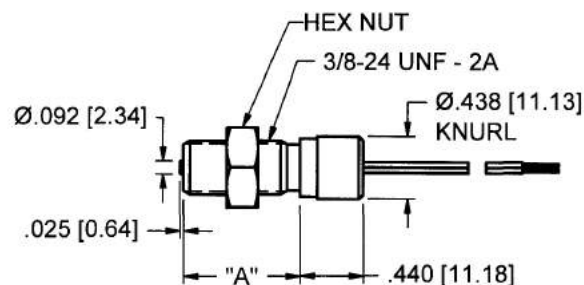
General Purpose – High Temperature

Ordering Part #	Thread Length (A)
70085-1010-041	.812 (20.62)
70085-1010-428	1.500 (38.10)
70085-1010-458	3.625 (92.08)

Performance Curves



Based on 20 D.P. Gear



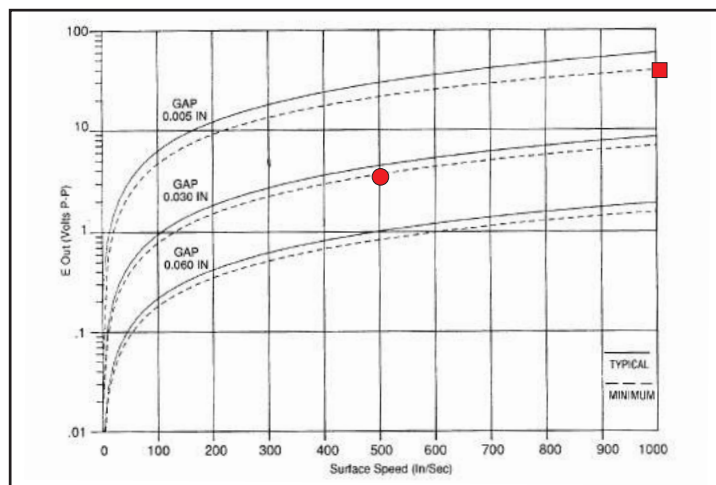
Specifications:

- Output Voltage (Standard): 24 V (P-P)
- Output Voltage (Guarantee Point): 2.0 V (P-P)
- DC Resistance: 125 ohms max.
- Typical Inductance: 21 mH ref.
- Output Polarity: White lead positive
- Operating Temperature: -73 to +232°C
- Lead Length: 40 in (1 m)
- Net Weight: 2 oz. max.

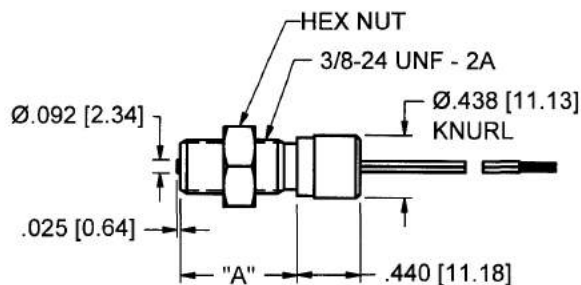
High Sensitivity - High Temperature

Ordering Part #	Thread Length (A)
70085-1010-174	.812 (20.62)

Performance Curves



Based on 20 D.P. Gear



Specifications:

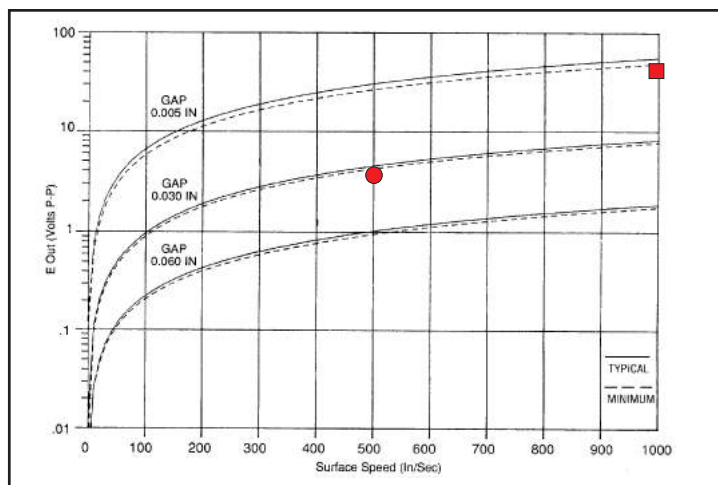
- Output Voltage (Standard): 55 V (P-P)
- Output Voltage (Guarantee Point): 3.6V (P-P)
- DC Resistance: 705 ohms max.
- Typical Inductance: 150 mH ref.
- Output Polarity: White lead positive
- Operating Temperature: -65 to +220°C
- Cable Length: 60 in (1.5 m)
- Net Weight: 2 oz. max.

Dimensions in inches and (mm).

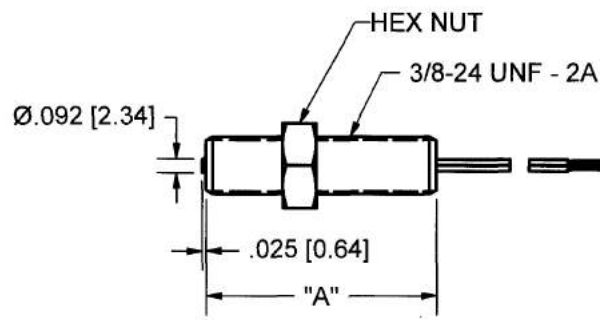
Full Thread – High Sensitivity

Ordering Part #	Thread Length (A)	
70085-1010-120	1.250	(31.75)
70085-8080-001	1.500	(38.10)

Performance Curves



Based on 20 D.P. Gear



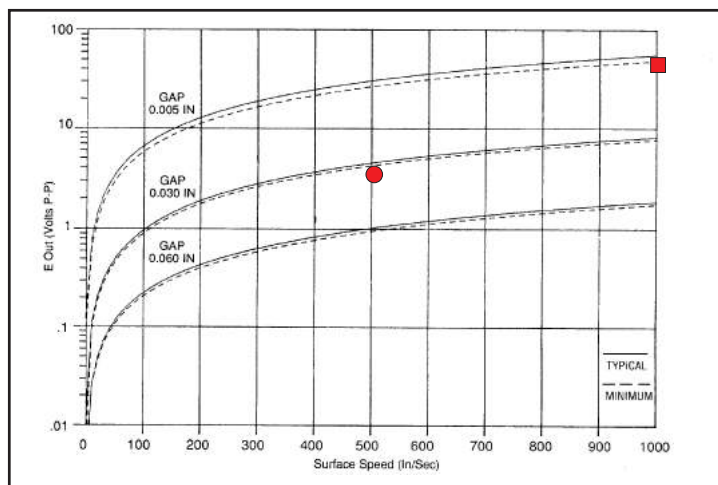
Specifications:

- Output Voltage (Standard): 55 V (P-P)
- Output Voltage (Guarantee Point): 4.2 V (P-P)
- DC Resistance: 960 ohms max.
- Typical Inductance: 125 mH ref.
- Output Polarity: White lead positive
- Operating Temperature: -55 to + 107°C
- Lead Length: 6 in (15.2cm)
- Net Weight: 1 oz. max.

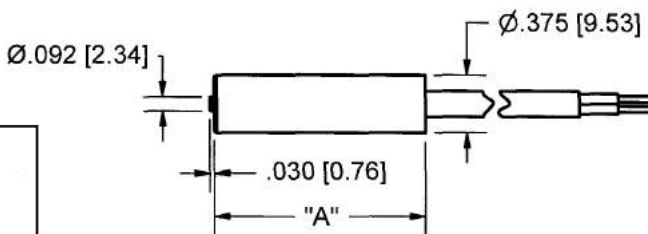
Smooth Body – High Sensitivity

Ordering Part #	Length (A)	
70085-1010-314	1.375	(34.93)
70085-8080-004	2.500	(63.50)

Performance Curves



Based on 20 D.P. Gear

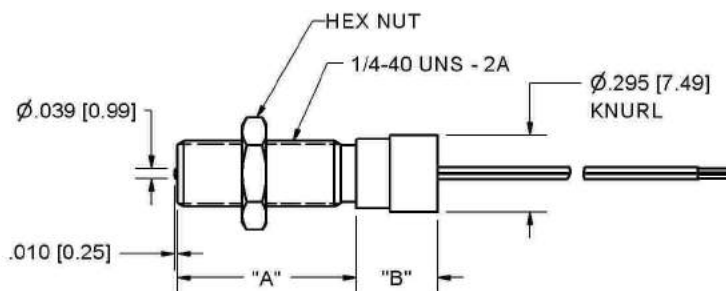


Specifications:

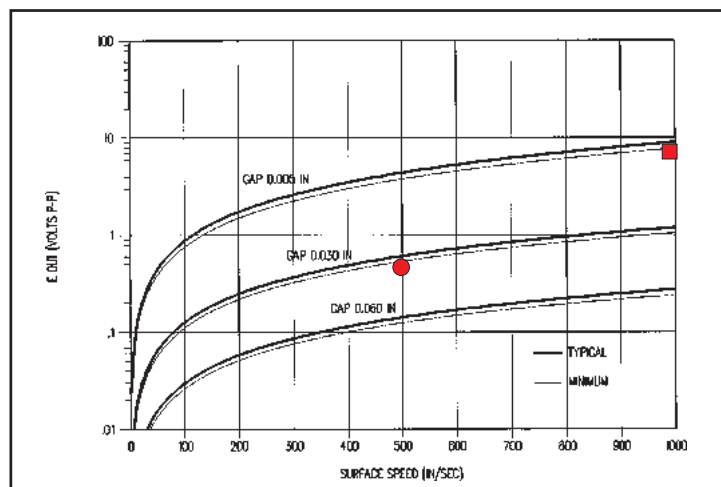
- Output Voltage (Standard): 55 V (P-P)
- Output Voltage (Guarantee Point): 4.2 V (P-P)
- DC Resistance: 960 ohms max.
- Typical Inductance: 125 mH ref.
- Output Polarity: White lead positive
- Operating Temperature: -30 to +85°C
- Lead Length: -004, 6 in (15.2cm)
- Cable Length: -314, 10ft (3.05m)
- Net Weight: 3 oz. max.

General Purpose - High Temperature

Ordering Part #	Thread	Length (A)	(B)
70085-1010-024	.687	(17.45)	.313 (7.95)
70085-1010-472 *	.687	(17.45)	.500 (12.70)
70085-1010-227	1.687	(42.85)	.313 (7.95)



Performance Curves



Based on 20 D.P. Gear

Specifications:

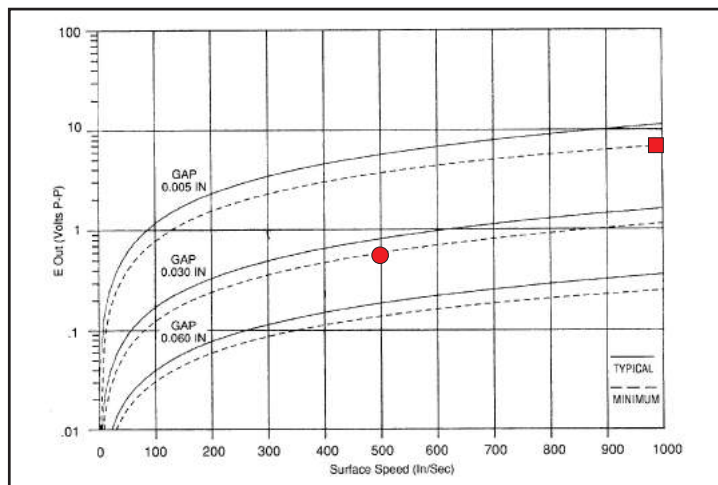
- Output Voltage (Standard): 4.7 V (P-P)
- Output Voltage (Guarantee Point): 0.4 V (P-P)
- DC Resistance: 125 ohms max.
- Typical Inductance: 5-12 mH ref.
- Output Polarity: White lead positive
- Operating Temperature: -73 to 232°C
- Lead Length: 8 in (20.3 cm)
- Cable Length: -472, 60 in (1.5 m) *
- Net Weight: 2 oz. max.

* Egress is a 2-conductor, AWG #26, shielded, Teflon cable, with 3" long shrink tubing over housing and cable for extra protection. Extra locknut provided.

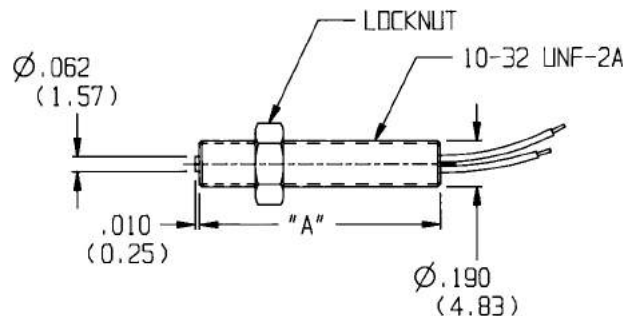
High Sensitivity

Ordering Part #	Thread Length (A)
70085-1010-037	.500 (12.70)
70085-1010-299	1.250 (31.75)

Performance Curves



Based on 20 D.P. Gear



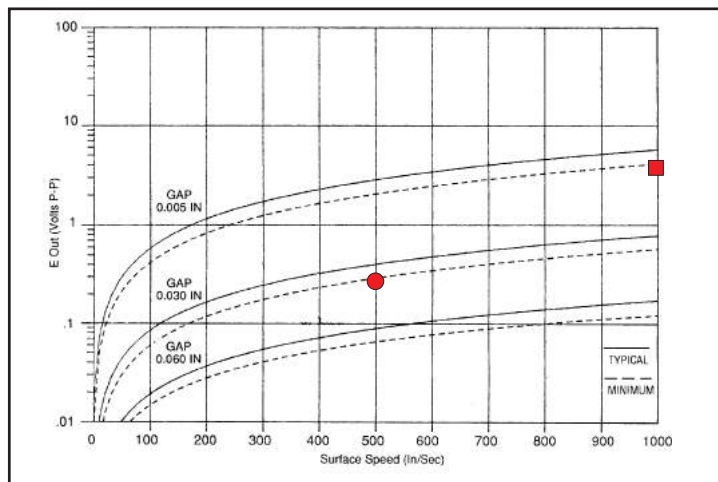
Specifications:

- Output Voltage (Standard): 13 V (P-P)
- Output Voltage (Guarantee Point): .6 V (P-P)
- DC Resistance: 190 ohms max.
- Typical Inductance: 10 mH, ref.
- Output Polarity: White lead positive
- Operating Temperature: -55 to +107°C
- Lead Length: 18 in (45.7 cm)
- Net Weight: 1 oz. max.

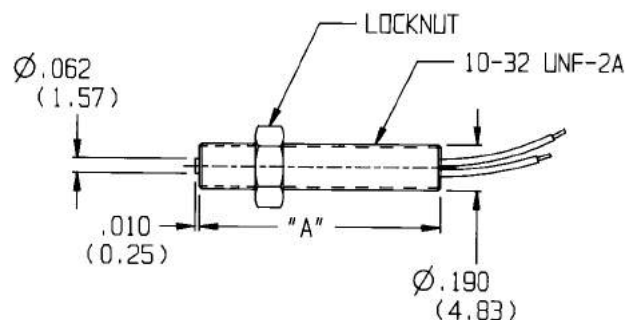
General Purpose – High Temperature

Ordering Part #	Thread Length (A)
70085-1010-182	.500 (12.70)
70085-1010-289	1.250 (31.75)

Performance Curves



Based on 20 D.P. Gear



Specifications:

- Output Voltage (Standard): 6 V (P-P)
- Output Voltage (Guarantee Point): .3 V (P-P)
- DC Resistance: 50 ohms max.
- Typical Inductance: 2 mH, ref.
- Output Polarity: White lead positive
- Operating Temperature: -73 to +150°C
- Lead Length: 18 in (45.7 cm)
- Net Weight: 1 oz. max.

Dimensions in inches and (mm).

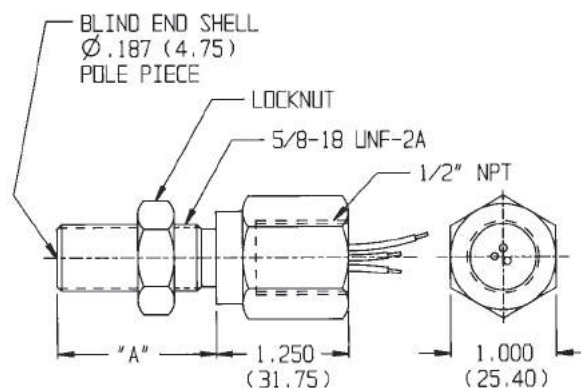
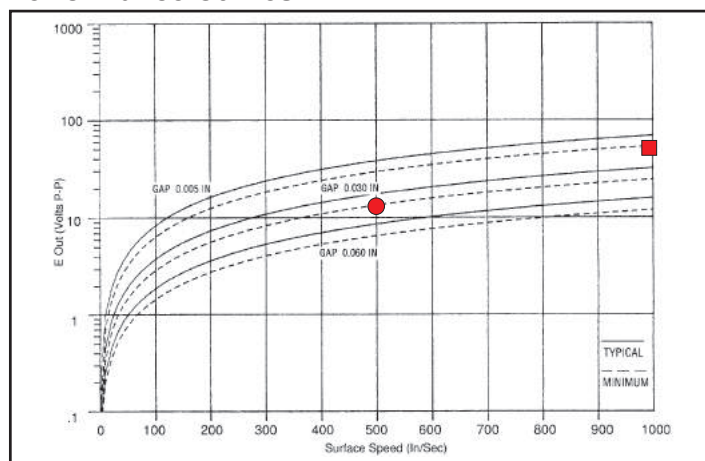
UL/ATEX/CSA Sensors

The products on pgs 18-20 are capable of up to a SIL 3 rating.*

Ordering Part #	Thread Length (A)	
70085-1010-081	1.500	(38.10)
70085-1010-411	1.875	(47.63)
70085-1010-329	2.750	(69.85)
70085-1010-330	4.000	(101.60)
70085-1010-412	6.000	(152.40)

Rating: UL and CSA listed for hazardous locations.
Class I, Div 1, Groups A, B, C & D; Class II, Div 1,
Groups E, F, G. Temp Code T3C.
ATEX Group II, Category 3G, Zone 2

Performance Curves



Specifications:

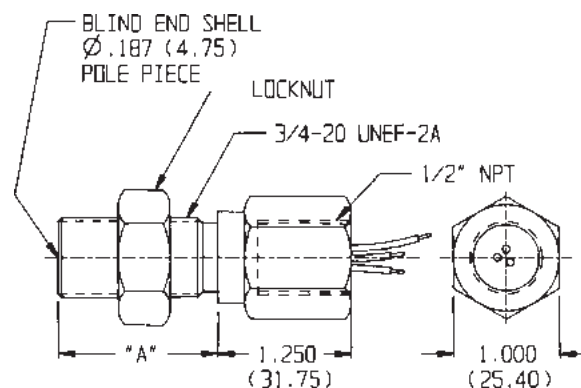
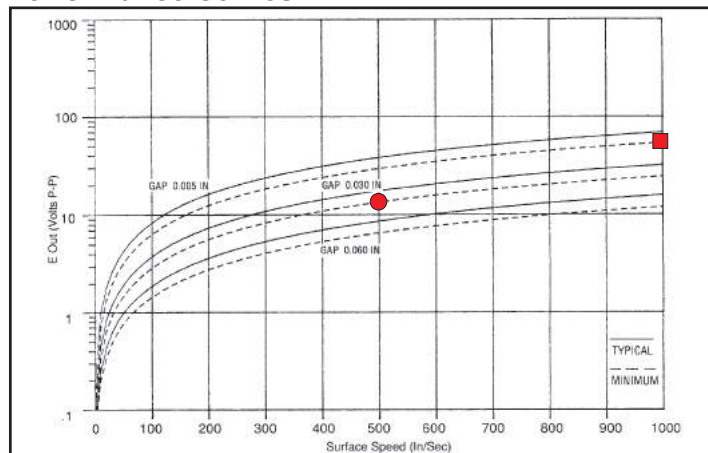
- Output Voltage (Standard): 54 V (P-P)
- Output Voltage (Guarantee Point): 13.4 V (P-P)
- DC Resistance: 240 ohms max.
- Typical Inductance: 30 mH ref.
- Output Polarity: White lead positive
- Operating Temperature: -65 to 95°C
- Lead Length: 10 ft (3.05 m)
- Housing Ground: Green/Yellow Tracer
- Net Weight: 14 oz. max.

UL/ATEX/CSA Sensors

Ordering Part #	Thread Length (A)	
70085-1010-413	1.500	(38.10)
70085-1010-005	1.875	(47.63)
70085-1010-327	2.750	(69.85)
70085-1010-328	4.000	(101.60)
70085-1010-414	6.000	(152.40)

Rating: UL and CSA listed for hazardous locations.
Class I, Div 1, Groups A, B, C & D; Class II, Div 1,
Groups E, F, G. Temp Code T3C.
ATEX Group II, Category 3G, Zone 2

Performance Curves



Specifications:

- Output Voltage (Standard): 54 V (P-P)
- Output Voltage (Guarantee Point): 13.4 V (P-P)
- DC Resistance: 240 ohms max.
- Typical Inductance: 30 mH ref.
- Output Polarity: White lead positive
- Operating Temperature: -65 to +95°C
- Lead Length: 10 ft (3.05 m)
- Housing Ground: Green/Yellow Tracer
- Net Weight: 14 oz. max.

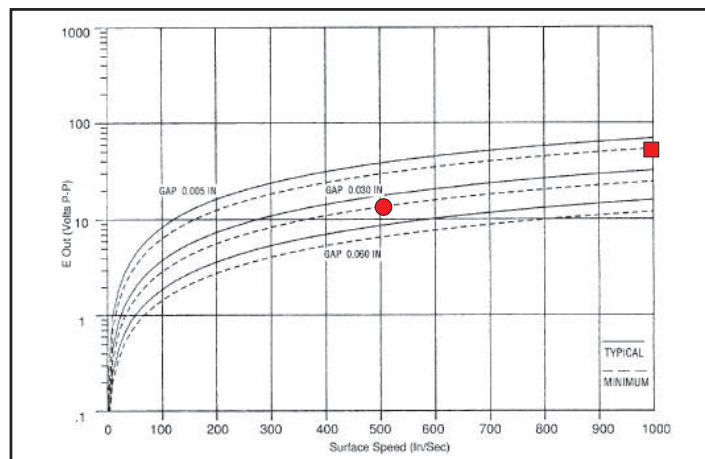
Dimensions in inches and (mm).

FM / ATEX Sensors

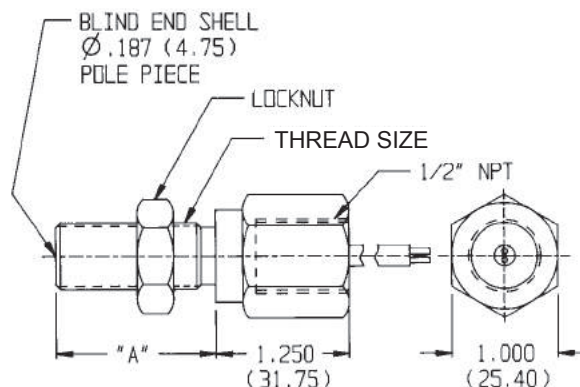
Ordering Part #	Thread Length (A)	Thread Size (B)
70085-1010-404	1.500 (38.10)	5/8-18 UNF-2A
70085-1010-544	1.875 (47.63)	5/8-18 UNF-2A
70085-1010-406	2.750 (69.85)	5/8-18 UNF-2A
70085-1010-417	4.000 (101.60)	5/8-18 UNF-2A
70085-1010-420	6.000 (152.40)	5/8-18 UNF-2A
70085-1010-541	1.875 (47.63)	3/4-20 UNEF-2A
70085-1010-542	2.750 (69.85)	3/4-20 UNEF-2A
70085-1010-540	4.000 (101.60)	3/4-20 UNEF-2A
70085-1010-543	6.000 (152.40)	3/4-20 UNEF-2A

Rating: FM listed Intrinsically Safe, Class I, Division 1, Groups A, B, C, D; ATEX Group II, Category 3G, Zone 2 .

Performance Curves



Based on 8 D.P. Gear



Specifications:

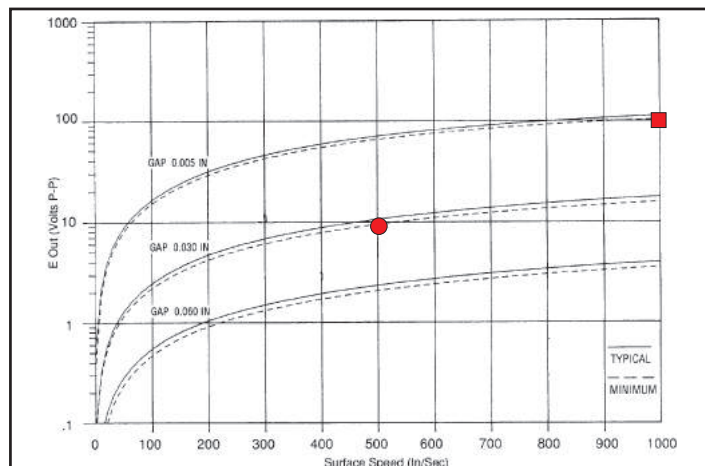
- Output Voltage (Standard): 60V (P-P)
- Output Voltage (Guarantee Point): 13.4V (P-P)
- DC Resistance: 210 ohms max.
- Typical Inductance: 75 mH max.
- Output Polarity: White lead positive
- Operating Temperature: -20 to +220°C
- Cable Length: 15 ft. (4.57m)
- Net Weight: 16 oz. max.

FM / ATEX Sensors

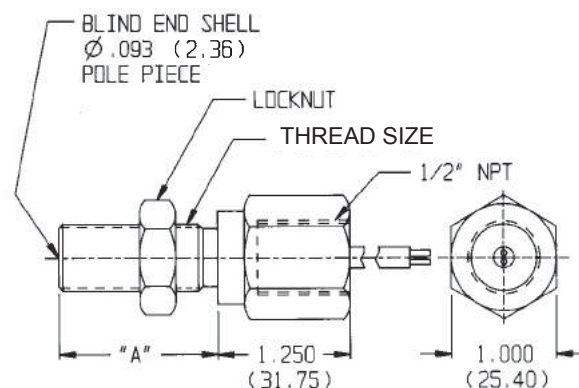
Ordering Part #	Thread Length (A)	Thread Size (B)
70085-1010-403	1.500 (38.10)	5/8-18 UNF-2A
70085-1010-415	4.000 (101.60)	5/8-18 UNF-2A
70085-1010-416	6.000 (152.40)	5/8-18 UNF-2A
70085-1010-405	2.750 (69.85)	3/4-20 UNEF-2A

Rating: FM listed Intrinsically Safe, Class I, Division 1, Groups A, B, C, D; ATEX Group II, Category 3G, Zone 2 .

Performance Curves



Based on 20 D.P. Gear



Specifications:

- Output Voltage (Standard): 90 V (P-P)
- Output Voltage (Guarantee Point): 9.4 V (P-P)
- DC Resistance: 660 ohms max.
- Typical Inductance: 210 mH max.
- Output Polarity: White lead positive
- Operating Temperature: -55 to +220° C
- *Mounting Thread: -0405, 3/4 - 20 UNEF-2A
- Cable Length: 15 ft (4.57 m)
- Net Weight: 16 oz. max.

IEC EX Sensors

Ordering Part #	Thread Length (A)	Thread Size (B)	Cable Length (C)	Conduit Thread
70085-3030-111	1.500 (38.10)	5/8-18 UNF-2A	3 m	1/2 NPT
70085-3030-112	2.750 (68.85)	5/8-18 UNF-2A	3 m	1/2 NPT
70085-3030-113	4.000 (101.6)	5/8-18 UNF-2A	3 m	1/2 NPT
70085-3030-114	6.000 (152.4)	5/8-18 UNF-2A	3 m	1/2 NPT
70085-3030-211	1.500 (38.10)	5/8-18 UNF-2A	10 m	1/2 NPT
70085-3030-212	2.750 (68.85)	5/8-18 UNF-2A	10 m	1/2 NPT
70085-3030-213	4.000 (101.6)	5/8-18 UNF-2A	10 m	1/2 NPT
70085-3030-214	6.000 (152.4)	5/8-18 UNF-2A	10 m	1/2 NPT
70085-3030-222	2.750 (68.85)	3/4-20 UNEF-2A	10 m	1/2 NPT
70085-3030-235	1.575 (40.00)	M16 x 1.5 6g	10 m	G 1/2
70085-3030-237	3.937 (100.0)	M16 x 1.5 6g	10 m	G 1/2

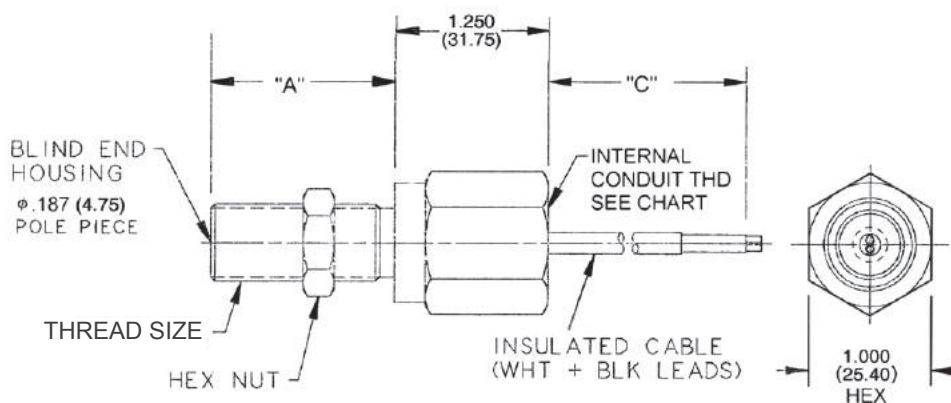
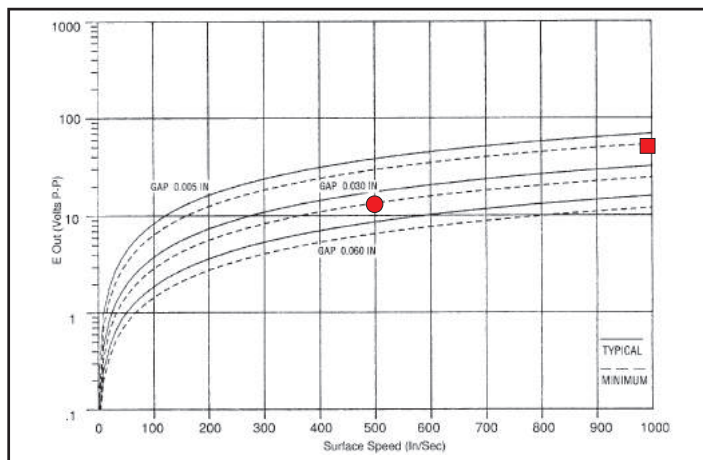


Figure 1: Dimension Drawing

Rating: ATEX and IEC Ex Equip Group II, Category 2G, Gas Group IIC, Zone 1
 Sensor must be used with MTL 7764ac intrinsic barrier
 User must install sensor in such a manner as to limit the output voltage to less than 12V Pk-Pk and a total energy of less than 26 microjoules

Performance Curves



Based on 8 D.P. Gear

Available in a range of inch and metric thread lengths and sizes and cable lengths of 3 or 10 meters. Consult factory for additional details.

*The defined SIL capability is based on the end users safety system architecture and defined diagnostics as outlined in IEC 61508 and IEC 61511 for sensors. Single channel device is insufficient to determine zero speed as part of the safety function. Consult the factory for additional details. (Pages 18-20)

KEY FEATURES:

Capable of up to a SIL 3 Rating

- **PFH 6.10 E-09 1/h**
- **PFD_{AVG} (T1=20 Years) 5.35 E-04**
- **DC 90%**
- **SFF 91%**

Specifications:

- **Output Voltage (Standard): 54 V (P-P)**
- **Output Voltage (Guarantee Point): 13.4 V (P-P)**
- DC Resistance: 240 ohms max.**
- Typical Inductance: 30 mH ref.**
- Output Polarity: White lead positive**
- Operating Temperature: -65 to 95°C**
- Net Weight: 14 oz. max.**