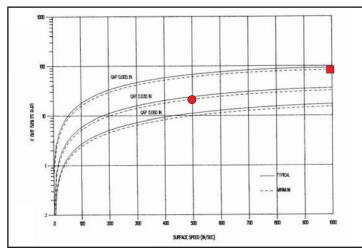
Power Output

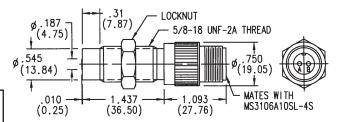
Ordering Part # Thread Length (A) 70085-1010-028 1.437 (36.50)

(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.

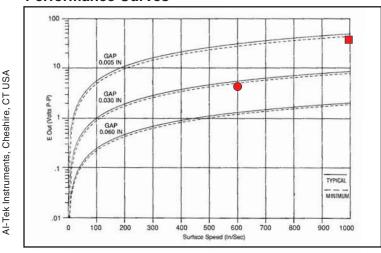
Conduit Fitting - General Purpose

 Ordering Part #
 Thread Length (A)

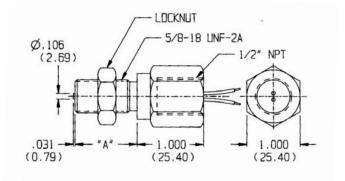
 70085-1010-004
 1.125 (28.57)

 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

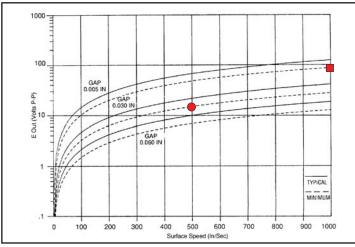
Lead length: 10 ft (3.05 m) Net Weight: 16 oz. max.

Full Thread - Power Output

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

Ø.187[4.75] POLE PIECE FLUSH HEX NUT 5/8-18 UNF - 2A .575 [14.61] FLATS

Performance Curves



Based on 8 D.P. Gear

Specifications:

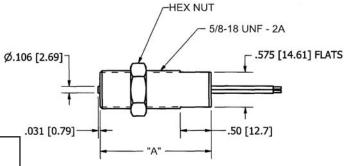
- Output Voltage (Standard): 120 V (P-P)
- Output Voltage (Guarantee Point):15.1 V (P-P)

DC Resistance: 250 ohms max. Typical Inductance: 40-60 mH ref. Output Polarity: White lead positive Operating Temperature: -55 to +107° C

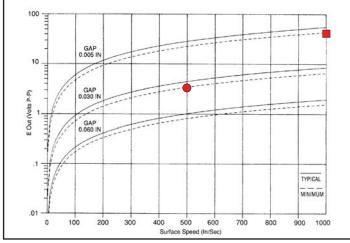
Cable Length: 10 ft (3.05 m) Net Weight: 5 oz. max.

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.

Molded

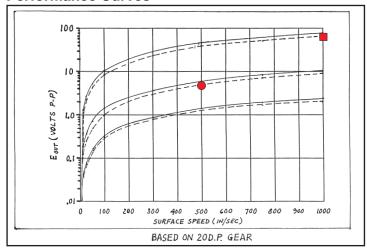
Ordering Part #	Thread Len	gth (A)
70085-1010-421	2.475	(62.87)

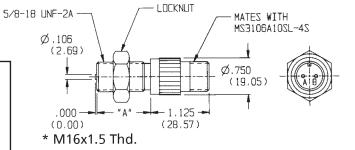
70085-1010-425 3.000 (76.20)* M16 x 1.5 Thd.

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

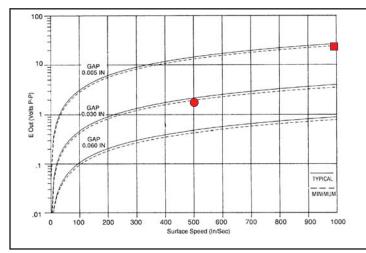
Operating Temperature: -55 to +107° C

Net Weight: 5 oz. max.

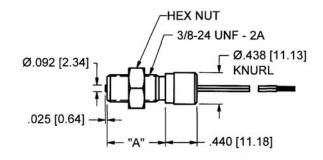
General Purpose – High Temperature

Ordering Part #	Thread Le	ength (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

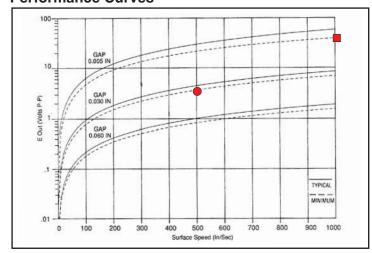
Lead Length: 40 in (1 m) Net Weight: 2 oz. max.

High Sensitivity - High Temperature

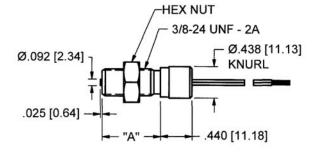
Ordering Part # 70085-1010-174

Thread Length (A) .812 (20.62)

Performance Curves



Based on 20 D.P. Gear



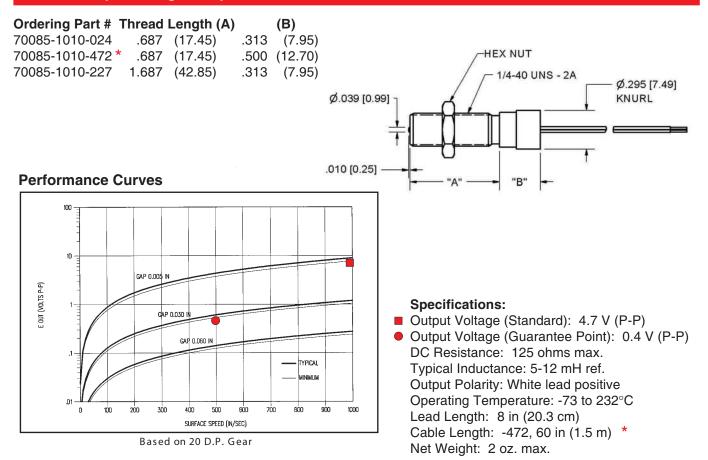
Specifications:

- 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.

General Purpose - High Temperature



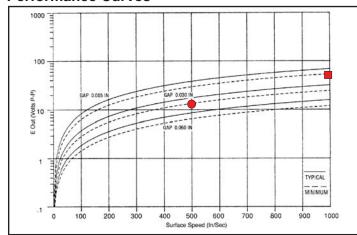
^{*} Egress is a 2-conductor, AWG #26, shielded, Teflon cable, with 3" long shrink tubing over housing and cable for extra protection. Extra locknut provided.

UL/ATEX/CSA Sensors

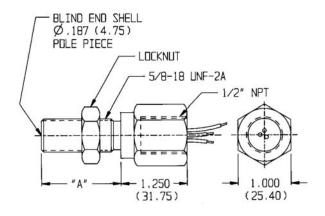
Ordering Part #	Thread L	ength (A)
70085-1010-081	1.500	(38.10)
70085-1010-411	1.875	(47.63)
70085-1010-329	2.750	(69.85)
70085-1010-330	4.000	(101.60)
70085-1010-412	6.000	(152.40)

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



Based on 8 D.P. Gear



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 100°C

Lead Length: 10 ft (3.05 m)

Housing Ground: Green/Yellow Tracer

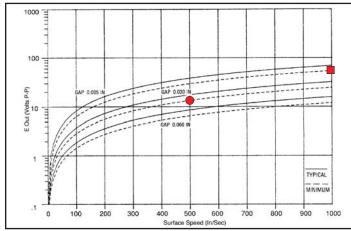
Net Weight: 14 oz. max.

UL/ATEX/CSA Sensors

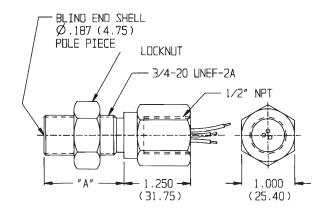
Ordering Part #	Thread L	ength (A)
70085-1010-413	1.500	(38.10)
70085-1010-005	1.875	(47.63)
70085-1010-327	2.750	(69.85)
70085-1010-328	4.000	(101.60)
70085-1010-414	6.000	(152.40)

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



Based on 8 D.P. Gear



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 +100°C

Lead Length: 10 ft (3.05 m)

Housing Ground: Green/Yellow Tracer

Net Weight: 14 oz. max.

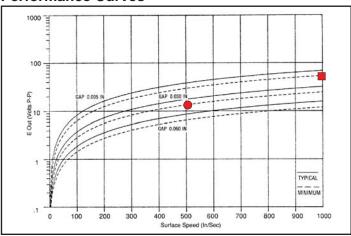
FM / ATEX Sensors

Ordering Part #	Thread I	_ength (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.

BLIND END SHELL Ø.187 (4.75) POLE PIECE LOCKNUT THREAD SIZE 1/2" NPT 1.000 1.250 (31.75)(25.40)

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: -55 to +220°C

Cable Length: 15 ft. (4.57m) Net Weight: 16 oz. max.

> BLIND END SHELL Ø.093 (2.36) POLE PIECE

> > LOCKNUT

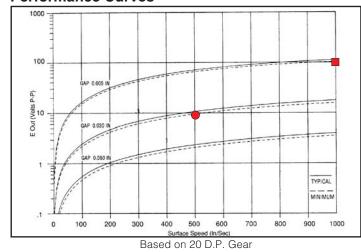
THREAD SIZE

FM / ATEX Sensors

Ordering Part #	Thread I	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



1.250 -(31.75)**Specifications:** Output Voltage (Standard): 90 V (P-P) DC Resistance: 750 ohms max.

Output Voltage (Guarantee Point): 9.4 V (P-P)

Typical Inductance: 210 mH max. Output Polarity: White lead positive Operating Temperature: -55 to +232° C *Mounting Thread: -0405, 3/4 - 20 UNEF-2A

Cable Length: 15 ft (4.57 m) Net Weight: 16 oz. max.

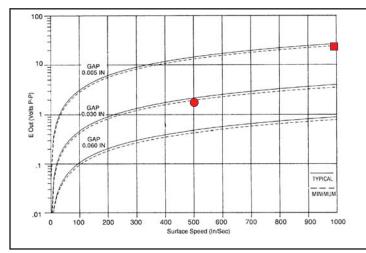
1.000

(25.40)

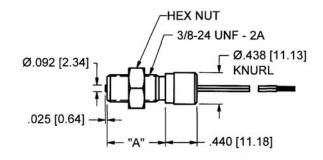
General Purpose – High Temperature

Ordering Part #	Thread Le	ength (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

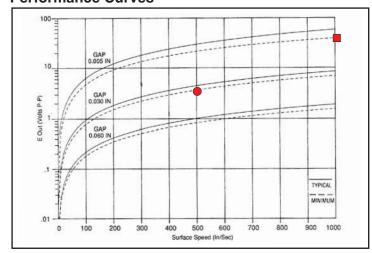
Lead Length: 40 in (1 m) Net Weight: 2 oz. max.

High Sensitivity - High Temperature

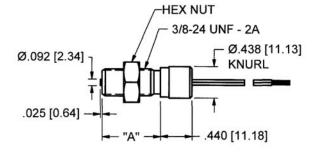
Ordering Part # 70085-1010-174

Thread Length (A) .812 (20.62)

Performance Curves



Based on 20 D.P. Gear



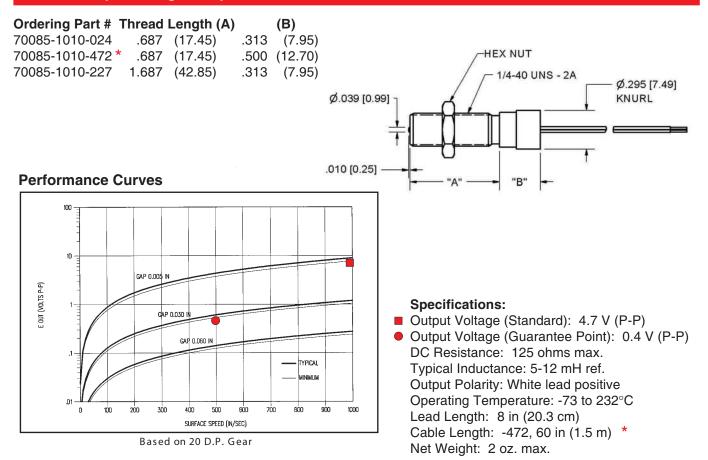
Specifications:

- 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.

General Purpose - High Temperature

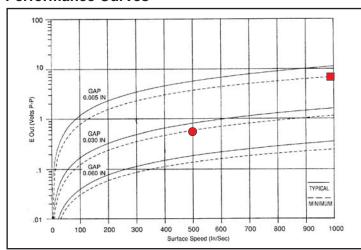


^{*} Egress is a 2-conductor, AWG #26, shielded, Teflon cable, with 3" long shrink tubing over housing and cable for extra protection. Extra locknut provided.

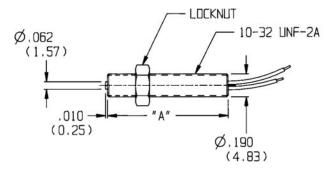
High Sensitivity

Ordering Part #	Thread Le	ength (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

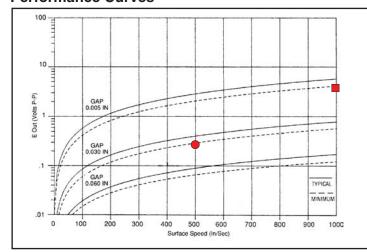
 Ordering Part #
 Thread Length (A)

 70085-1010-182
 .500 (12.70)

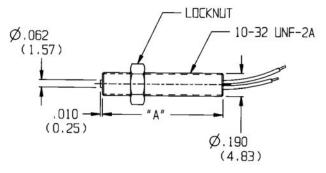
 70085-1010-289
 1.250 (31.75)

Performance Curves

AI-Tek Instruments, Cheshire, CT USA



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

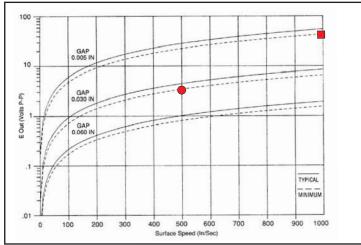
Output Polarity: White lead positive Operating Temperature: -73 to +150°C

Lead Length: 18 in (45.7 cm) Net Weight: 1 oz. max.

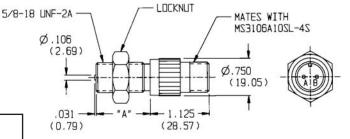
General Purpose

Ordering Part #	Thread L	ength (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



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.

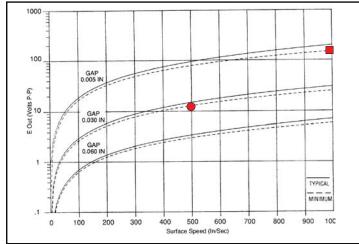
Typical Inductance: 33 mH ref.
Output Polarity: Pin 'B' positive
Operating Temperature: -55 to +107°C

Net Weight: 5 oz. max.

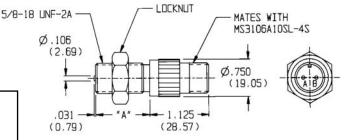
High Sensitivity

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



Based on 20 D.P. Gear



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

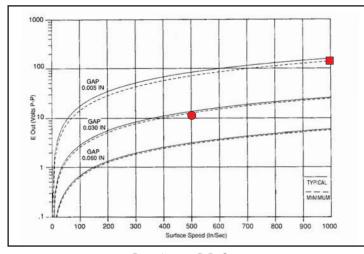
Net Weight: 5 oz. max.

Full Thread - High Sensitivity

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

Ø.106 [2.69] .031 [0.79] .031 [0.79] .031 [0.79]

Performance Curves



Based on 20 D.P. Gear

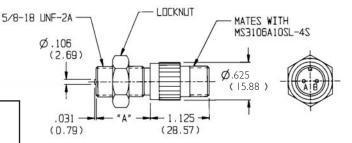
Specifications:

- 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)

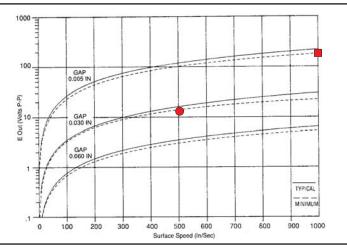
Net Weight: 3 oz. max.

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

Typical Inductance: 400 mH ref. Output Polarity: Pin 'B' positive

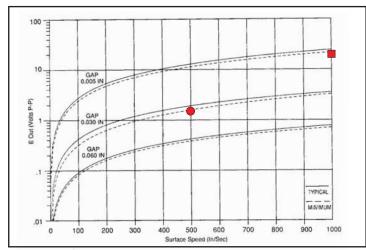
Operating Temperature: -40 to +150° C

Net Weight: 2 oz. max.

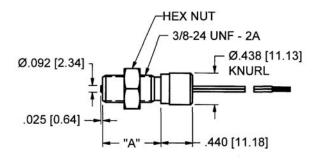
General Purpose

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

Performance Curves



Based on 20 D.P. Gear



Specifications:

Output Voltage (Standard): 21 V (P-P)

Output Voltage (Guarantee Point): 1.6 V (P-P)

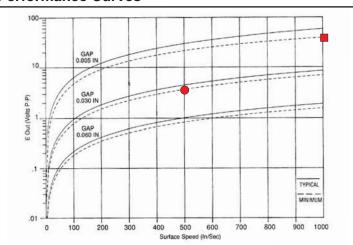
DC Resistance: 125 ohms max. Typical Inductance: 22 mH ref. Output Polarity: White lead positive Operating Temperature: -55 to +107°C

Lead Length: 6 in (15.2 cm) Net Weight: 2 oz. max.

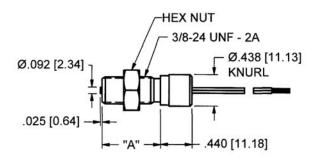
High Sensitivity

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

Performance Curves



Based on 20 D.P. Gear



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.

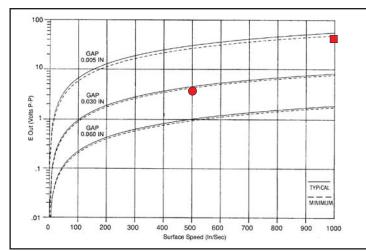
Dimensions in inches and (mm).

AI-Tek Instruments, Cheshire, CT USA

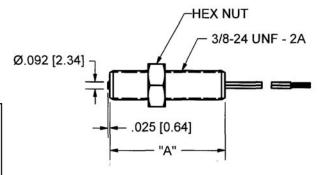
Full Thread – High Sensitivity

Ordering Part #	Thread Le	ength (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

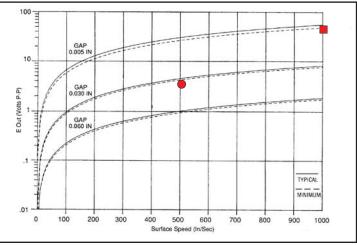
Lead Length: 6 in (15.2cm) Net Weight: 1 oz. max.

Smooth Body – High Sensitivity

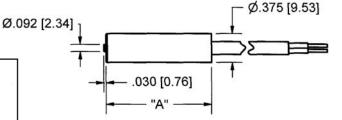
Ordering Part #	Length (A)		
70085-1010-314	1.375	(34.93)	
70085-8080-004	2.500	(63.50)	

Performance Curves

AI-Tek Instruments, Cheshire, CT USA



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.

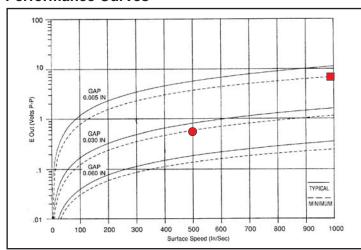
Typical Inductance: 125 mH ref.
Output Polarity: White lead positive
Operating Temperature: -30 to +85°C
Lead Length: -004, 6 in (15.2cm)
Cable Length: -314, 10ft (3.05m)

Net Weight: 3 oz. max.

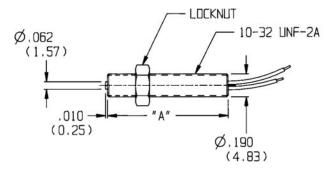
High Sensitivity

Ordering Part #	Thread Le	ength (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

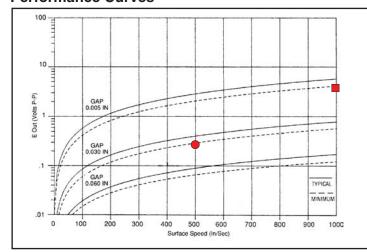
 Ordering Part #
 Thread Length (A)

 70085-1010-182
 .500 (12.70)

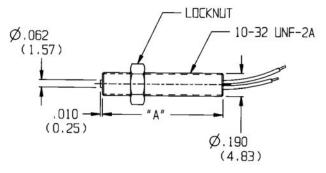
 70085-1010-289
 1.250 (31.75)

Performance Curves

AI-Tek Instruments, Cheshire, CT USA



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

Output Polarity: White lead positive Operating Temperature: -73 to +150°C

Lead Length: 18 in (45.7 cm) Net Weight: 1 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

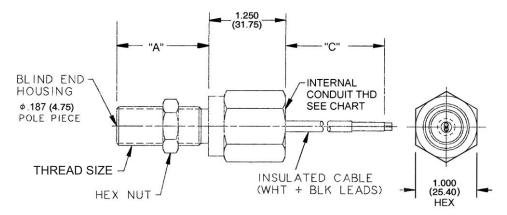
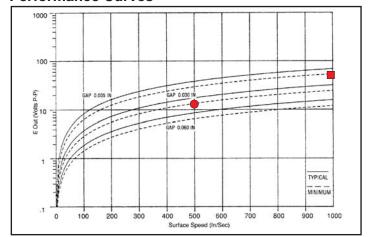


Figure 1: Dimension Drawing

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.

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 100°C

Net Weight: 14 oz. max.

Al-Tek Instruments, LLC

Side Look Sensor

Application: Used for Speed Take Off

The Side Look Sensor (SLS) has been developed by Al-Tek Instruments for Allison automatic transmissions for trucks ranging from light duty vans to overthe-road tractors. It is available for Allison AT, MT and HT transmissions. The new SLS improves on earlier designs developed for Allison to replace a mechanical speed system.

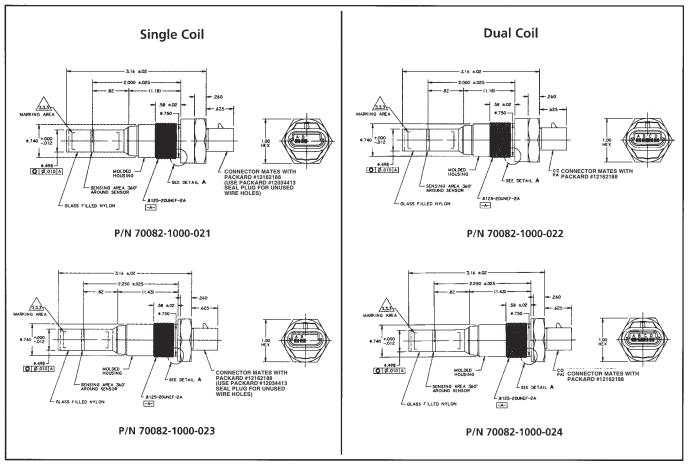
The SLS is a variable reluctance device that provides electronic transmission speed inputs to engine control systems and/or electronic dashboards. It mounts directly on the transmission and employs a unique magnet configuration that induces a magnetic field on the side of the sensor in the path of the rotating transmission gear. This system with its fewer mounting parts improves reliability, reduces weight and conserves space over the earlier designs.



The new SLS uses a molded, glass filled nylon body to protect the sensor in harsh, truck-operating environments. It replaces the old fly-lead design with an integral standard Packard connector, which eliminates the added extra connector cost of the old design. It is available in single and dual output versions.

The SLS is manufactured in the United States. AI-Tek Instruments Distributors stock the SLS for off-the-shelf maintenance, repair and overhaul (MRO) requirements.

Outline and Mounting Dimensions



Specifications

Characteristics

Physical

Weight: 55 gm typical.

Body: Black, molded thermoplastic.

Electrical

All measurements at 25°C.

Output:

Single Coil: .67 Volts peak-to-peak, A to B

Dual Coil: .35 Volts peak-to-peak, A to B and C to D,

Sensing a 16 tooth wheel, 2.208" diameter

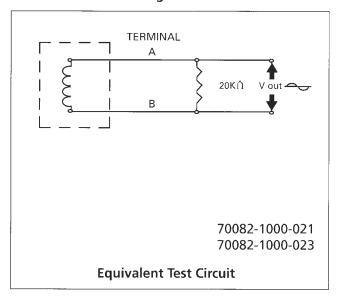
at 100 rpm and .040 inch air gap.

DC Resistance

Single Coil: 3.17K ±10% ohms.

Dual Coil: $1206 \pm 20\%$ ohms each coil.

Single Coil



Inductance

Single Coil: 2.25 H typical. Dual Coil: 620 mH typical.

Dielectric: 1000 VAC between terminals (shorted

together) and body for 10 seconds . .5 mA maximum leakage current.

Environmental

Temperature

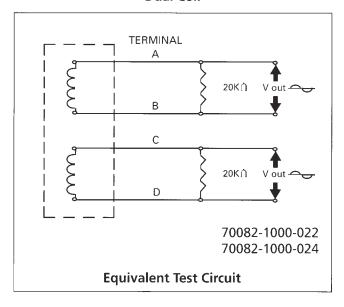
Operating Temperature: -40°C to 150°C. Storage Temperature: -40°C to 150°C.

Connector

Single Coil: Mates with Packard #12162188. (Use Packard #12034413 seal plug for unused wire holes.)

Dual Coil: Mates with Packard #12162188.

Dual Coil



Applications		
P/N 70082-1000-021	AT, MT	
P/N 70082-1000-022	AT, MT	
P/N 70082-1000-023	HT	
P/N 70082-1000-024	HT	