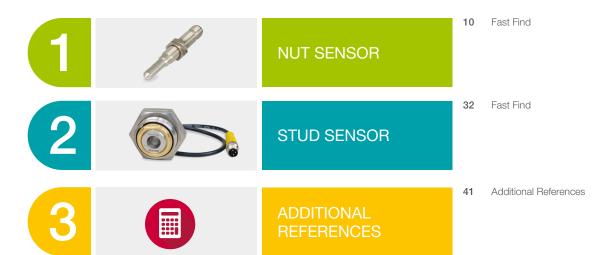


Nut and Stud Sensors Durable, Sensitive and Cost-saving



Contents





Engineering GREAT solutions

IMI Precision Engineering is a world leader in motion and fluid control technologies. Wherever precision, speed and engineering reliability are essential, we deliver exceptional solutions which improve the productivity and efficiency of our customers' equipment.

We deliver **GREAT** solutions for our customers tackling the world's most demanding engineering challenges.

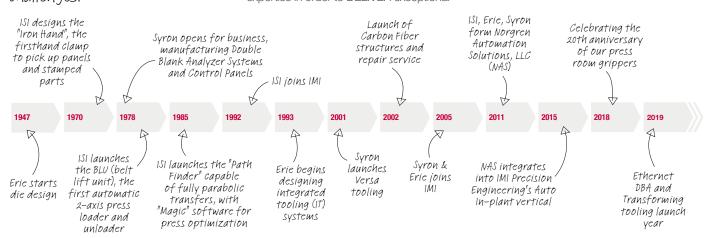
Part of IMI plc, (listed on the London Stock Exchange since 1966), IMI Precision Engineering has \$1,214m in sales generated from a sales and service network in 75 countries, as well as manufacturing capabilities in the USA, Germany, China, UK, Switzerland, Czech Republic, Mexico and Brazil. We support this with our global centers of technical excellence and facilities for CFD design and R&D testing. We employ a dedicated team of field engineers, sector specialists and key account managers – all committed to providing excellent service to our customers.

As a business, we aim to UNDERSTAND our customers' challenges. We then CONNECT our products, people and expertise in order to DELIVER exceptional

service and solutions. Together these actions IMPROVE the performance of our customers' machinery.

We call this Engineering Great. We deliver it to customers through a world-class portfolio of high performance products, and strong partnerships for problem-solving utilizing our global network of support.

The Norgren Automation Solutions (NAS) Team creates capacity by designing and manufacturing automation and tooling that optimize production throughput in the press room and other material handling applications.









How we deliver value to our customers

Partnerships & problem solving

We have a global team of key account managers and over 400 highly experienced engineers – many with in-depth expertise of key industry sectors.

We recruit and develop the industry's top talent, offering the best training and exposure to world-class products and technologies with some of the world's leading businesses. The deep and combined experience this gives us means we have the skills, confidence and knowhow to get closer to our customers, enabling us to understand their exact challenges and resolve them **precisely**.

Because of this our problem-solving is more effective, our solutions more targeted, our partnerships more productive.

High performance products

Our world-class products improve performance and productivity.

We have global manufacturing capability and technical centres of excellence, each dedicated to developing and rigorously testing new high performance products to meet **precise** industry and application needs. Helping improve performance and reduce downtime and energy consumption on production lines across the world, our world-class portfolio includes IMI Norgren, IMI Buschjost, IMI FAS, IMI Herion and IMI Maxseal. Having proven their value over years, they stand amongst the most trusted names in fluid and motion control. We are continuously adding to this portfolio through a programme of innovation and new product development.

Because of this, we're able help our customers solve the world's greatest engineering challenges – reliably, safely and efficiently.

Reliability

We deliver and support our high quality products through our global service network.

We have world-class manufacturing and sales and service operations in 75 countries, supported by investment in robust project management systems and lean localised production. Together, with our integrated supply chain, and the speed of our Express service we have the systems, processes and support to deliver quality products and aftersales service **precisely**, reliably, in full and on time, anywhere.



We get closer to our customers to understand their exact challenges





Our global reach

With established manufacturing facilities globally, we have the capability to cope with the most demanding of international projects. With a sales and service network in 50 countries, we have the reach and capability to ensure continuity of supply and local support where it is needed.

Canada



Sales & Service

- ♀ IMI Precision Engineering sales, manufacturing and technical centers
- Value Added Resellers/ Distributors





South America

Sao Paulo, BR \







GLOBAL LOCATIONS AND PARTNERS

IMI Precision Engineering – Auto In-plant Locations

www.imi-precision.com/autoinplant

USA

Norgren Automation Solutions, LLC (NAS)

2871 Bond Street

Rochester Hills, MI 48309 USA

Tel: 1-800-272-4511 Fax: 1-734-429-2981

Email: NASInsideSales@imi-precision.com Web: www.imi-precision.com/autoinplant

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Tel: 1-800-272-4511 Fax: 1-734-429-2981

Email: NASInsideSales@imi-precision.com Web: www.imi-precision.com/autoinplant

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Tel: +52 442 229 50 00

Email: nas.mexico@imi-precision.com

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Email: vendas@imi-precision.com

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埃迈诺冠商贸(上海)有限公司.

Tel: +86 21 24161800 sales@imi-precision.com.cn

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IMI Norgren Herion Pvt. Ltd.

A-62, Sector 63, Noida- 201301 Uttar Pradesh India

Tel: +91 (0) 120 4089500 Fax: +91 (0) 120 4089599 Email: india@imi-precision.com

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IMI Norgren S.A.

Colom, 391, 2º - Edificio Tecno 08223 Terrassa

00223 16118558

Tel: +34 937489800

Email: spain@imi-precision.com

Thailand

Norgren Co., Ltd

120/34 M. 12 Rachadhewa, Bangplee Samutprakarn 10540 Thailand

Tel: +66 (0) 2 2750 3598 Fax: +60 (0) 2 750 3855

Email: THSales@imi-precision.com



9

Value Added Resellers (VARs) and Distributors

USA

Kamco, Inc.

326 Park St. Troy, MI 48083

Tel: 248-585-7400 Fax: 248-585-7751

Email: sales@kamcocontrols.com Web: www.kamcosales.com

Mosier Fluid Power

2475 Technical Drive Miamisburg, OH 45342

Tel: 800-232-0676

Email: sales@mosierohio.com

Motion Industries

1605 Alton Road Birmingham, AL 35210

Tel: 800-526-9328

Web: www.motionindustries.com

Nicholas Press Sales, Inc.

3077 Nationwide Parkway Brunswick, OH 44212

Tel: 440-652-6604 Fax: 440-389-8666

Email: sales@nicholaspress.com Web: www.nicholaspress.com

Production Resources

118 Seaboard Lane #106 Franklin, TN 37067

Tel: 800-863-3164

Sunsource

2301 Windsor Ct Addison, IL 60101 Tel: 888-786-7723

Wyco

1310 Garlington Road, Suite L Greenville, SC 29615

Tel: 1-864-458-8000 Fax: 1-864-458-8256 Email: info@wyconet.com

Canada

Dyak Systems Inc.

6810 Kitimat Road, Unit 8&9 Mississauga, Ontario L5N 5M2 Canada

Tel: 905-567-4157 Fax: 905-567-4158

Email: salesdesk@dyaksystems.com

Mexico

ART Robotics

Pioneros del Cooperativismo Nº 136 México Nuevo Atizapán de Zaragoza Estado de México C.P 52966

Tel.: (52) (55) 5077 5603 (52) (55) 5077 5604 (52) (55) 5077 5605 Fax: (52) (55) 5825 9739 E-mail: mexico@artrobotics.com Web: www.artrobotics.com

United Kingdom

Coremo Automation Ltd

Unit 9A – Three Springs Trading Estate Vincent Road Worcester WR5 1BW U.K.

Tel: +44 (0) 1905 360707 Fax: +44 (0) 1905 360708

Email address: sales@coremo.co.uk

Japan

Taihei Boeki Co., Ltd.

Nikken-Sumisei bldg, 4-15-32 Sakai, Naka-ku, Nagoya, 460-0008 Japan

Tel: +81-(0)52-261-5517 Fax: +81-(0)52-261-2017 Email: nagoya@taiheiboeki.co.jp

Spain

Sankyo Desarrollos Tecnicos S.L.

Calle Manisitu, 5 Bj Pabellón A, 01240, Álava, Spain

Tel: +34 945 420 840 Fax: +34 945 420 841 Email: info@sankyo-sdt.com Web: www.sankyo-sdt.com



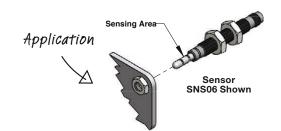
SNS AND SNP SERIES NUT THREAD DETECTOR

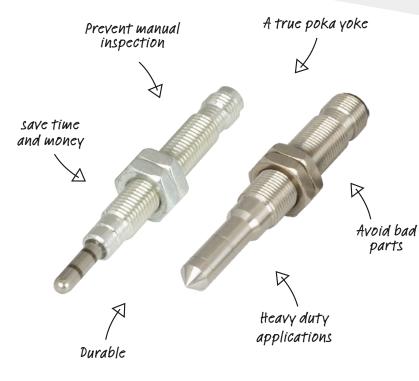
Nut Thread Detector

- > Uses non-magnetic inductive proximity detection technology to verify the presence of nuts or threads
- > Prevent defective parts from going through
- > Prevent manual inspection
- > Can be used to verify thread quality
- > Capable of thread detection in tapped holes

Toughened Nut Thread Detector

- Used for heavy duty and heavy side loading applications
- > Can handle more collisions
- > Can be used as a gauging pin









Fast Find Guide

Nut Thread Detector



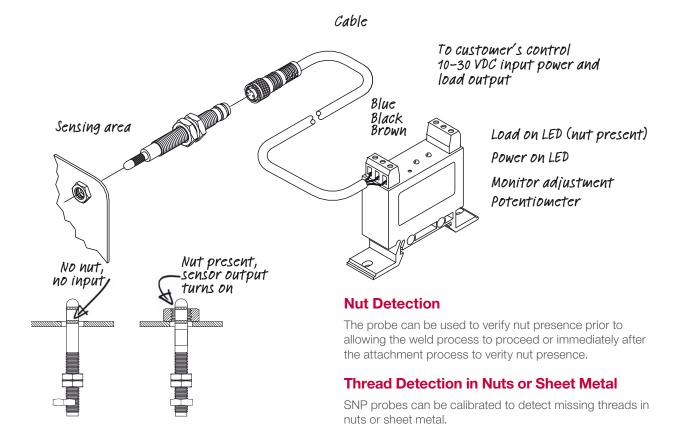


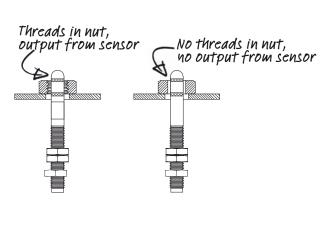


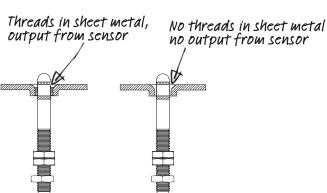


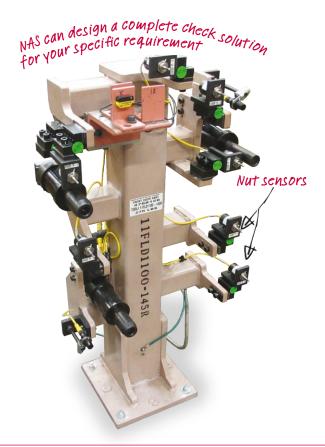
NUT AND THREAD DETECTION APPLICATION













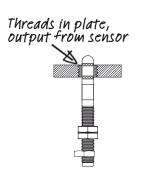


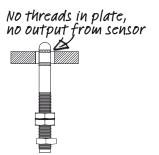
THREAD AND THREAD QUALITY APPLICATIONS



Thread Detection in Steel Plate of Casting

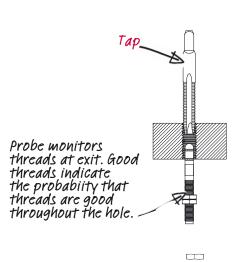
NAS can help you determine the best combination of Sensors to detect missing threads. We will test your product samples to make the best possible recommendation based on the results of our factory tests.

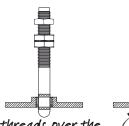




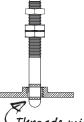
Good Thread / Bad Thread / Partial Thread Detection

SNP Nut Sensors can detect not only missing threads, but also threads that are not to specification. Variations in tapping operation can result in holes losing the thread on one side at the exit end of the hole. SNP Sensors can be calibrated to detect such incomplete, imperfect, and out of specification threads.

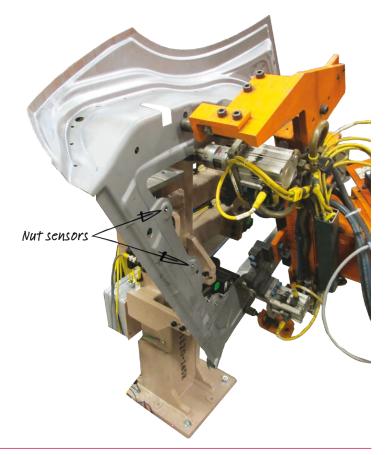




Good threads over the complete length of the hole. Monitor tuned to provide an output.



Threads missing on one side at exit end. Monitor tuned to provide no output indicating a bad part.







NUT SENSOR SELECTION GUIDE





- · Nut and thread sensing
- Hidden nut detection
- . Thread sensing in tapped holes
- · Thread quality sensing



Sensors



Accessories







Monitors

PNP SMR37005 SMR37006 SMR37010 SMR37012

NPN SMR36005 SMR36006 SMR36008 SMR36010 SMR36012



Applications

- · Nut and thread sensing
- Used as gauging pin
- Quality checking (nut size)
- · Heavy duty/harsh environments
- Heavy side loading applications
- IP67 Rated

Sensors

M4 nuts SNS04

M5 nuts SNS05

M6 nuts SNS06

M8 nuts SNS08

M10 nuts SNS10

M12 nuts SNS12

Accessories

SAB30403



SCE13001 for SNS04/SNS05 SNS06/SNS08



Right angle SCF12160 for SNS10/SNS12



Straight SCE13000 for SNS04/SNS05 SNS06/SNS08



Straight SCF12060 for SNS10/SNS12





PNP SMH37004 SMH37005 SMH37006 SMH37010 SMH37012

NPN SMH36004 SMH36005 SMH36006 SMH36010 SMH36011



Spring mount SAB30403 for SNS04/ SNS05/ SNS06/ SNS08 only





NUT SENSOR

SNP50608

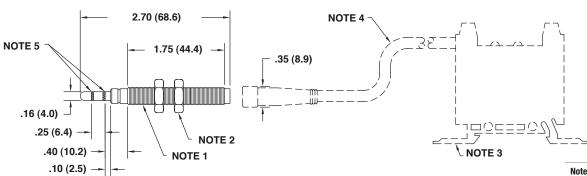
- Detects M5, M6 or M8 nut or thread presence
- · Abrasion and impact resistant
- For light duty applications with sensor tip radial loads up to 30 lbs.
- · Exceptional for thread detection and thread quality detection
- Immune to weld fields and resistant to weld slag

Technical Data

Minimum nut thickness: 4.0 mm (0.16") for M5 nut 5.0 mm (0.20") for M6 nut 6.5 mm (0.26") for M8 nut Sensor connector: 3-pin (male) 8 mm (pico) connector Operating temperature range: 32°F to 212°F (0°C to 100°C) Target material: Ferrous/Non-Ferrous* Seal: IP67



Dimensions



Note 1	M8 X 1.0	
Note 2	2X M8 JAM NUTS	
Note 3	SOLD SEPARATELY	
Note 4	SOLD SEPARATELY	
Note 5	SENSING AREA	

M5 Nut Detector System

Sensor	Monitor	Cable	Weight
SNP50608	SMR36005 (NPN)	SCE13000 2m (6ft)	0.029 lbs / 13 gm
	SMR37005 (PNP)	SCE13001 2m (6ft) (Angled)	

M6 Nut Detector System

Sensor	Monitor	Cable	Weight
SNP50608	SMR36006 (NPN)	SCE13000 2m (6ft)	0.029 lbs / 13 gm
	SMR37006 (PNP)	SCE13001 2m (6ft) (Angled)	

M8 Nut Detector System

Sensor	Monitor	Cable	Weight
SNP50608	SMR36008 (NPN)	SCE13000 2m (6ft)	0.029 lbs / 13 gm
	SMR37008 (PNP)	SCE13001 2m (6ft) (Angled)	

*For non-Ferrous applications please contact our Nut/Thread Sensor experts at 1-800-272-4511





NUT SENSOR

SNP01012



- Detects M10 or M12 nut or thread presence
- · Abrasion and impact resistant
- For light duty applications with sensor tip radial loads up to 35 lbs.
- · Exceptional for thread detection and thread quality detection
- Immune to weld fields and resistant to weld slag

Technical Data

Minimum nut thickness: 8.0 mm (0.31") for M10 nut 10.0 mm (0.39") for M12 nut

Sensor connector: 3-pin (male) 8 mm (pico) connector Operating temperature range:

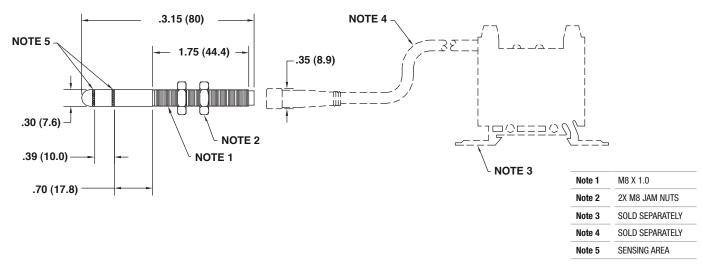
32°F to 212°F (0°C to 100°C)

Target material: Ferrous/Non-Ferrous* Seal:

IP67



Dimensions



M10 Nut Detector System

Sensor	Monitor	Cable	Weight
SNP01012	SMR36010 (NPN)	SCE13000 2m (6ft)	0.037 lbs / 17 gm
	SMR37010 (PNP)	SCE13001 2m (6ft) (Angled)	

M12 Nut Detector System

Sensor	Monitor	Cable	Weight
SNP01012	SMR36012 (NPN)	SCE13000 2m (6ft)	0.037 lbs / 17 gm
	SMR37012 (PNP)	SCE13001 2m (6ft) (Angled)	

*For non-Ferrous applications please contact our Nut/Thread Sensor experts at 1-800-272-4511





MONITOR FOR NUT SENSOR

SMR3XXXX

- · LED for on/off status of sensor
- Interface directly to programmable controllers



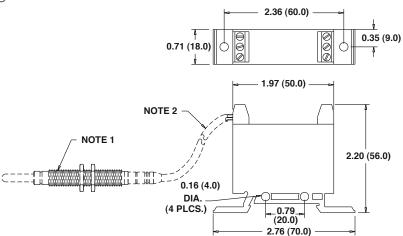
Technical Data

Sensor connector: 2 X 3-pin terminal strips Supply Voltage Range: 10VDC to 30VDC Maximum Load Current: 150mA Operating temperature range: 32°F to 140°F (0°C to +60°C) Response time: 25ms turn-on, 25ms turn-off Indicator lights: GREEN: DC power connect AMBER: Target detected Seal

IP65

Short circuit protection: Yes Overload protection: Yes Weight: 0.091 lbs / 41 gms

Dimensions



Note 1	SOLD SEPARATELY
Note 2	SOLD SEPARATELY

System	Sensor	Monitor	Switch type	Cable
M5 Nut Detector	SNP50608	SMR36005 (NPN) SMR37005 (PNP)	Current sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)
M6 Nut Detector	SNP50608	SMR36006 (NPN) SMR37006 (PNP)	Current sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)
M8 Nut Detector	SNP50608	SMR36008 (NPN) SMR37008 (PNP)	Current sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)
M10 Nut Detector	SNP01012	SMR36010 (NPN) SMR37010 (PNP)	Current sinking Current sourcing	SCE13001 2m (6ft.) SCE13001 2m (6ft) (Angled)
M12 Nut Detector	SNP01012	SMR36012 (NPN) SMR37012 (PNP)	Current sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)





- Detects M4 nut or thread presence
- For heavy duty applications with sensor tip radial loads up to 32 lbs.
- For use in weld applications
- Immune to weld fields
- · Resistant to weld slag

Technical Data

Minimum nut thickness: 4.0 mm (0.16")

Sensor connector:

3-pin (male) 8mm (pico) connector

Operating temperature range:

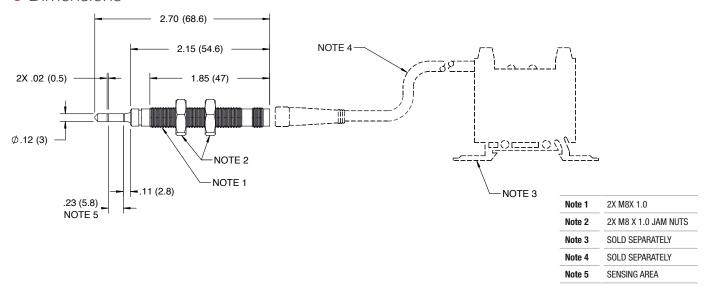
32°F to 212°F (0°C to 100°C)



Target material: Ferrous/Non-Ferrous* Seal:

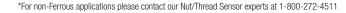
IP67

Dimensions



M4 Nut Detector System

Sensor	Monitor	Cable	Weight
SNS04	SMH36004 (NPN)	SCE13000 2m (6ft)	0.019 lbs / 9 gm
	SMH37004 (PNP)	SCE13001 2m (6ft) (Angled)	









SNS05

- For heavy duty applications with sensor tip radial loads up to 38 lbs.
- For use in weld applications

• Detects M5 nut or thread presences

- · Immune to weld fields
- · Resistant to weld slag

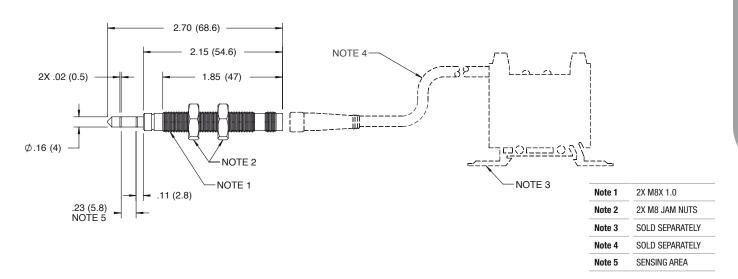
Technical Data

Minimum nut thickness: 4.0 mm (0.16")

Sensor connector: 3-pin (male) 8mm (pico) connector Operating temperature range: 32°F to 212°F (0°C to 100°C)

Target material: Ferrous/Non-Ferrous* Seal: IP67

Dimensions



M5 Nut Detector System

	SMH37005 (PNP)	SCE13001 2m (6ft) (Angled)	
SNS05	SMH36005 (NPN)	SCE13000 2m (6ft)	0.019 lbs / 9 gm
Sensor	Monitor	Cable	Weight

*For non-Ferrous applications please contact our Nut/Thread Sensor experts at 1-800-272-4511







- Detects M6 nut or thread presence
- For Heavy Duty Applications with sensor tip radial loads up to 50 lbs.
- · For use in weld applications
- Immune to weld fields
- · Resistant to weld slag
- · Can be used as a locating pin

Technical Data

Minimum nut thickness:

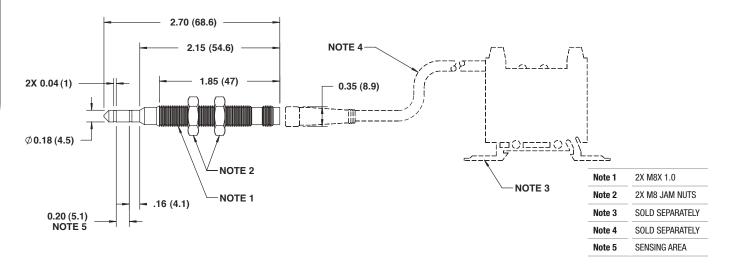
Sensor connector: 3-pin (male) 8 mm (pico) connector Operating temperature range: 32°F to 212°F (0°C to 100°C)

Target material: Ferrous/Non-Ferrous* Seal:

IP67

5.0 mm (0.20")

Dimensions



M6 Nut Detector System

Engineering

SNS06 SMH36006 (NPN)	SCE13000 2m (6ft)	0.037 lbs / 17 gm
Sensor Monitor	Cable	Weight







SNS06-01



- Detect M6 nut or thread presence, with additional locating pin feature
- For Heavy Duty Applications with sensor tip radial loads up to 50 lbs.
- · For use in weld applications
- · Immune to weld fields
- · Resistant to weld slag
- · Sensor sized for more accurate positioning of nut



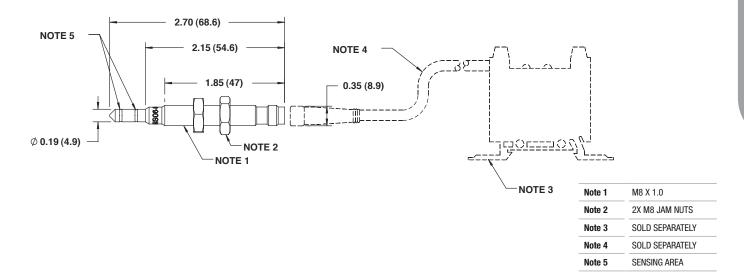
Technical Data

Minimum nut thickness: 5.0mm (0.20")

Sensor connector: 3-pin (male) 8mm (pico) connector Operating temperature range: 32°F to 212°F (0°C to 100°C)

Target material: Ferrous/Non-Ferrous* Seal: IP67

Dimensions



M6 Nut Detector System

SNS06-01 SMH36006 (NPN)	SCE13000 2m (6ft)	0.037 lbs / 17 gm	
Sensor Monitor	Cable	Weight	

*For non-Ferrous applications please contact our Nut/Thread Sensor experts at 1-800-272-4511





SNS08



- Detects M8 nut or thread presence
- For heavy duty applications with sensor tip radial loads up to 38 lbs.
- · For use in weld applications
- Immune to weld fields
- · Resistant to weld slag



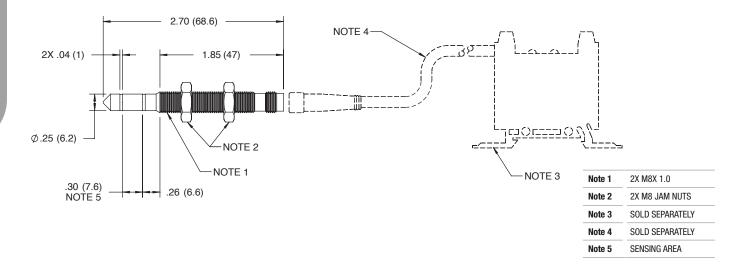
Technical Data

Minimum nut thickness: 6.5mm (0.26")

Sensor connector: 3-pin (male) 8 mm (pico) connector Operating temperature range: 32°F to 212°F (0°C to 100°C)

Target material: Ferrous/Non-Ferrous* Seal: IP67

Dimensions



M8 Nut Detector System

Sensor	Monitor	Cable	Weight
SNS08	SMH36008 (NPN)	SCE13000 2m (6ft)	0.033 lbs / 15 gm
	SMH37008 (PNP)	SCE13001 2m (6ft) (Angled)	



Engineering



SNS08-01

- Detect M8 nut or thread presence, with additional locating pin feature
- For heavy duty applications with sensor tip radial loads up to 38 lbs.
- · For use in weld applications
- Immune to weld fields
- · Resistant to weld slag
- · Sensor sized for more accurate positioning of nut



Technical Data

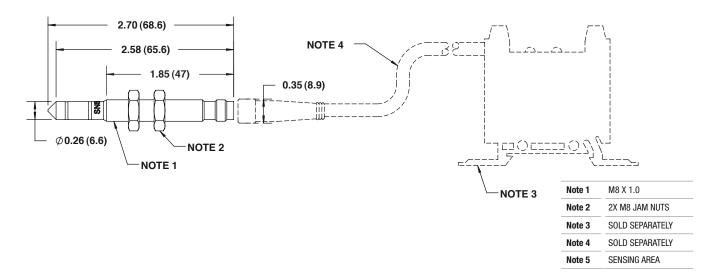
Minimum nut thickness: 6.5mm (0.26")

Sensor connector: 3-pin (male) 8 mm (pico) connector

Operating temperature range: 32°F to 212°F (0°C to 100°C)

Target material: Ferrous/Non-Ferrous* Seal: IP67

Dimensions



M8 Nut Detector System

IMI NORGREN

Sensor	Monitor	Cable	Weight
SNS08-01	SMH36008 (NPN)	SCE13000 2m (6ft)	0.82 lbs / 37 gm
	SMH37008 (PNP)	SCE13001 2m (6ft) (Angled)	

*For non-Ferrous applications please contact our Nut/Thread Sensor experts at 1-800-272-4511

Precision





- Detects M10 nut or thread presence
- For heavy duty applications with sensor tip radial loads up to 40 lbs.
- · For use in weld applications
- Immune to weld fields
- · Resistant to weld slag



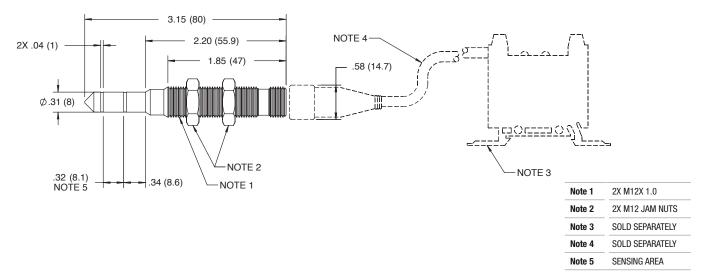
Technical Data

Minimum nut thickness 8.0 mm (0.31")

Sensor connector: 4-pin (male) 12mm (micro) connector Operating temperature range: 32°F to 212°F (0°C to 100°C)

Target material: Ferrous/Non-Ferrous* Seal: IP67

Dimensions



M10 Nut Detector System

Sensor	Monitor	Cable	Weight
SNS10	SMH36010 (NPN)	SCF12060 2m (6ft)	0.082 lbs / 37 gm
	SMH37010 (PNP)	SCF12160 2m (6ft) (Angled)	



Engineering





SNS10-01



- Detect M10 nut or thread presence, with additional locating pin feature
- For heavy duty applications with sensor tip radial loads up to 40 lbs.
- · For use in weld applications
- Immune to weld fields
- · Resistant to weld slag
- · Sensor sized for more accurate positioning of nut



Technical Data

Minimum nut thickness: 8.0 mm (0.31")

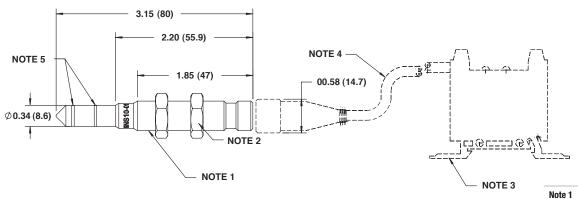
Sensor connector:

4-pin (male) 12mm (micro) connector

Operating temperature range: 32°F to 212°F (0°C to 100°C)

Target material: Ferrous/Non-Ferrous* Seal: IP67

Dimensions



Note 1	M12 X 1.0	
Note 2	2X M12 JAM NUTS	
Note 3	SOLD SEPARATELY	
Note 4	SOLD SEPARATELY	
Note 5	SENSING AREA	

M10 Nut Detector System

Sensor	Monitor	Cable	Weight
SNS10-01	SMH36010 (NPN)	SCF12060 2m (6ft)	0.082 lbs / 37 gm
	SMH37010 (PNP)	SCF12160 2m (6ft) (Angled)	

*For non-Ferrous applications please contact our Nut/Thread Sensor experts at 1-800-272-4511





SNS12

- Detects M12 nut or thread presence
- For heavy duty applications with sensor tip radial loads up to 60 lbs.
- · For use in weld applications
- Immune to weld fields
- · Resistant to weld slag



Technical Data

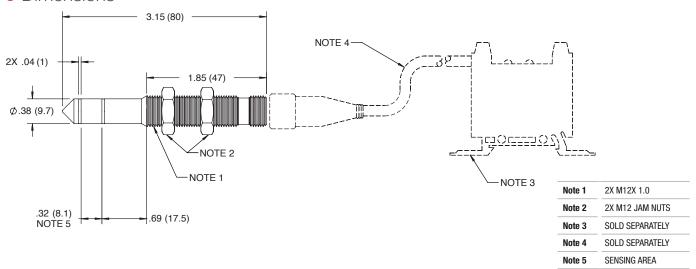
Minimum nut thickness: 10.0 mm (0.39")

Sensor connector:
4-pin (male) 12mm (micro) connector

Operating temperature range: 32°F to 212°F (0°C to 100°C)

Target material: Ferrous/Non-Ferrous* Seal: IP67

Dimensions



M12 Nut Detector System

Sensor	Monitor	Cable	Weight
SNS12	SMH36012 (NPN)	SCF12060 2m (6ft)	0.082 lbs / 37 gm
	SMH37012 (PNP)	SCF12160 2m (6ft) (Angled)	





MONITOR FOR TOUGHENED NUT SENSOR

SMH3XXXX

- · LED for on/off status
- Interface directly to programmable controllers

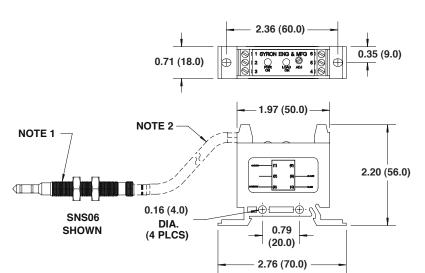
Technical Data

Power/sensor connector: 2 X 3-pin terminal connector Supply voltage range: 10 VDC to 30 VDC Maximum load current: 150mA Seal Operating temperature range: 32°F to 140°F (0°C to +60°C) Response time: 25ms turn-on, 25ms turn-off Indicator lights: GREEN: DC power connect AMBER: Target detected

Short circuit protection: Yes Overload protection: Yes Weight: 0.091 lbs / 41 gms



Dimensions



SEPARATELY
SEPARATELY

System	Sensor	Monitor	Switch type	Cable
M4 Toughened Nut Detector	SNS04	SMH36004 (NPN) SMH37004 (PNP)	Current sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)
M5 Toughened Nut Detector	SNS05	SMH36005 (NPN) SMH37005 (PNP)	Current sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)
M6 Toughened Nut Detector	SNS06 SNS06-01	SMH36006 (NPN) SMH37006 (PNP)	Current sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)
M8 Toughened Nut Detector	SNS08 SNS08-01	SMH36008 (NPN) SMH37008 (PNP)	Current sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)
M10 Toughened Nut Detector	SNS10 SNS10-01	SMH36010 (NPN) SMH37010 (PNP)	Current sinking Current sourcing	SCE12060 2m (6ft.) SCE12160 2m (6ft) (Angled)
M12 Toughened Nut Detector	SNS12	SMH36012 (NPN) SMH37012 (PNP)	Current sinking Current sourcing	SCE12060 2m (6ft.) SCE12160 2m (6ft) (Angled)





SENSOR CABLES WITH 3 PIN PICO CONNECTORS



SCE13000, SCE13001, SCE13005

Part Number

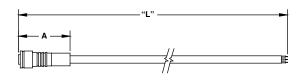
SCE13000, SCE13005

Straight cable, 3-pin PICO for SNP50608, SNP01012, SNS04, SNS05, SNS06, SNS06-01, SNS08, SNS08-01

Technical Data

Weight: 74 grams







Front View Female Connector





DIM	MM	Inches
Α	30.9	1.21

Part number	"L"
SCE13000	2000.0mm (78.74")
SCE13005	5000.0mm (196.85")

Note 1	
3-PIN (Female), PICO	

Part Number

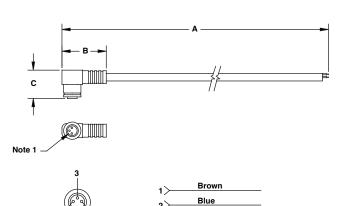
SCE13001

Right angle cable, 3-pin PICO for SNP50608, SNP01012, SNS04, SNS05, SNS06, SNS06-01, SNS08, SNS08-01

Technical Data

Weight:

68 grams





DIM	MM	Inches
Α	2000.0	78.74
В	26.0	1.03
С	15.9	0.63

Note 1	
3-PIN (Female), PICO	

Dimensions in inches (mm) are for reference only





Black

SENSOR CABLES





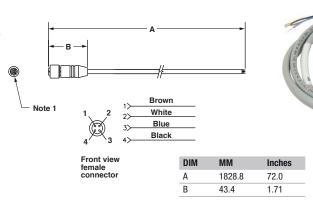
SCF12060

Straight cable, 4-pin MICRO for SNS10, SNS10-01, SNS12

Technical Data

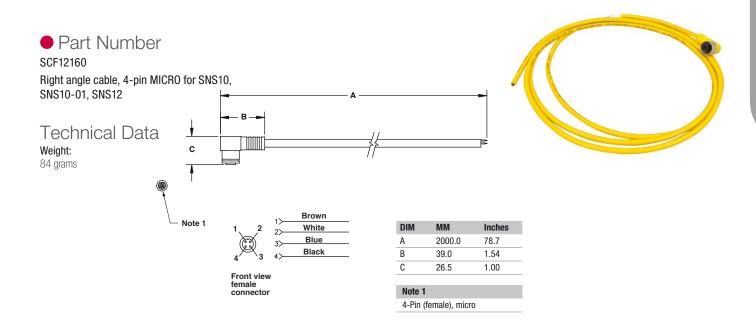
Weight:





Note 1

4-Pin (female), micro







NUT SENSOR SPRING MOUNT

SAB30403



- Mounts to any nut sensor except for SNS10 and SNS12
- · Allows sensor probe to retract when nut is out of place
- Allows sensor tip to offset up to 5° off centerline of spring mount to locate misaligned holes



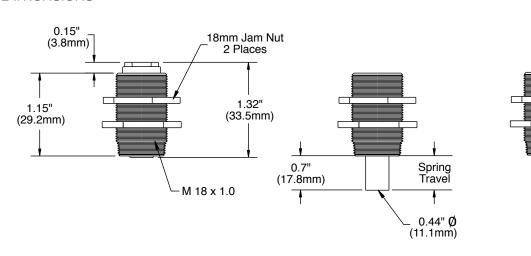
5°offset

5°offset

Technical Data

Weight: 53 grams

Dimensions



Application







NOTES		





NSS SERIES STUD THREAD DETECTOR

- > Durable- stainless steel stands up to welding environments and resists weld slag
- > Sensitive- wide sensing area that checks threads on a longer portion of a stud
- > Cost-saving- prevents scrap, reduces downtime
- > Proven- extension of existing and proven IMI Norgren Nut Sensor Line



Cost-saving





Wide sensing

Fast Find Guide

Stud Thread Detector



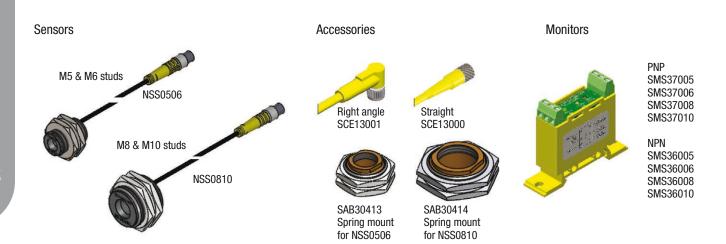


STUD THREAD DETECTOR SELECTION GUIDE





- · Stud and thread sensing
- Quality checking (stud size)
- Heavy duty/harsh environments
- Heavy side loading applications







M5/M6 STUD SENSOR

NSS0506

- Detects M5 or M6 stud or thread presence
- · For heavy duty applications
- · For use in weld applications
- Immune to weld fields
- · Resistant to weld slag



Technical Data

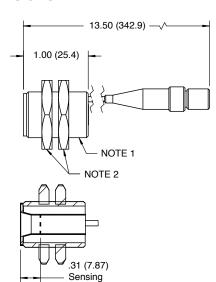
Sensor connector: 3-pin (male) 8mm (pico) connector

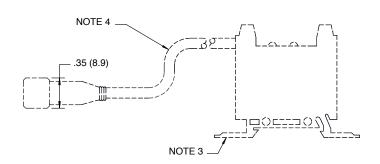
Operating temperature range: 32°F to 212°F (0°C to 100°C)

Target material: Ferrous/Non-Ferrous*

Diameter: 0.29" (7.4mm) **Seal:** IP67

Dimensions





Note 1	M18 x 1.0
Note 2	2 X M18 JAM NUTS
Note 3	MONITOR SOLD SEPARATELY
Note 4	CABLE SOLD SEPARATELY

Order Information

M5 and M6 Stud Thread Detection System

Sensor	Monitor for M5	Monitor for M6	Spring Mount	Cable	Weight (Sensor)
	SO OF THE PROPERTY OF THE PROP	So man			
NSS0506	SMS36005 (NPN)	SMS36006 (NPN)	SAB30413	SCE13000 6ft (2m)	0.096 lbs (44 gm)
	80	EO		<u>u</u>	
	SMS37005 (PNP)	SMS37006 (PNP)		SCE13001 6ft (2m) 90° ang	ıle

*For non-Ferrous applications please contact our Nut/Thread Sensor experts at 1-800-272-4511





M8/M10 STUD SENSOR

NSS0810



- Detects M8 or M10 stud or thread presence
- · For heavy duty applications
- · For use in weld applications
- Immune to weld fields
- · Resistant to weld slag



Technical Data

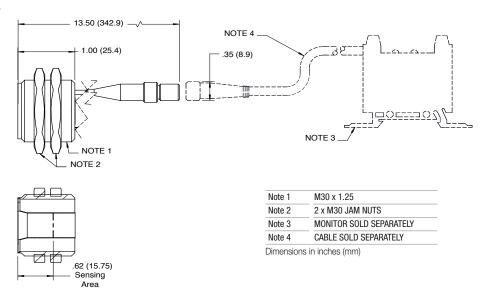
Sensor connector: 3-pin (male) 8 mm (pico) connector

Operating temperature range: 32°F to 212°F (0°C to 100°C)

Target material: Ferrous/Non-Ferrous*

Diameter: 0.48" (12.2mm) **Seal:** IP67

Dimensions



Order Information

M8 and M10 Stud Thread Detection System

Sensor	Monitor for M8	Monitor for M10	Spring Mount	Cable	Weight (Sensor)
	SO	So-ward and the state of the st			_
NSS0810	SMS36008 (NPN)	SMS36010 (NPN)	SAB30414	SCE13000 6ft (2m)	.188 lbs (86 gm)
	So was	Someon State of the State of th		E .	
	SMS37008 (PNP)	SMS37010 (PNP)		SCE13001 6ft (2m) 90° and	gle

*For non-Ferrous applications please contact our Nut/Thread Sensor experts at 1-800-272-4511





SENSOR CABLES WITH 3 PIN PICO CONNECTORS

SCE13000, SCE13001, SCE13005

Part NumberSCE13000

Technical Data

Weight: 74 grams

SCE13005







Front View Female Connector





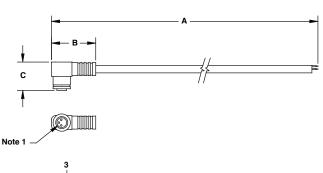
DIM	MM	Inches
Α	30.9	1.21

Part number	"L"
SCE13000	2000.0 mm (78.74")
SCE13005	5000.0 mm (196.85")

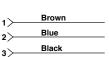
lote 1	
PIN (Female), PICO	

Part NumberSCE13001

Technical Data Weight: 68 grams









DIM	MM	Inches
Α	2000.0	78.74
В	26.0	1.03
С	15.9	0.63

Note 1 3–PIN (Female), PICO





MONITOR FOR STUD SENSOR

SMS3XXXX

- LED for on/off status
- Interface directly to programmable controller

Technical Data

Power/sensor connector: 2 X 3-pin terminal connector Supply voltage range: 10VDC to 30 VDC Maximum load current: 150mA Seal

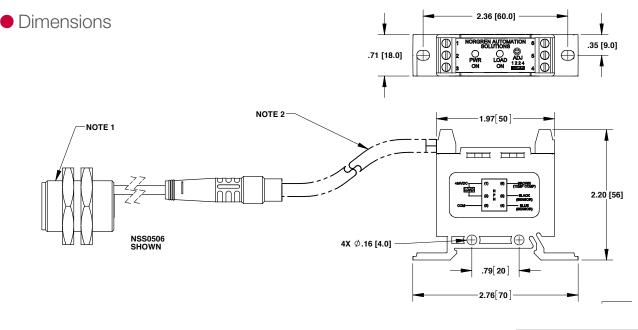
IP65

Operating temperature range: 32°F to 140°F (0°C to +60°C) Response time: 25ms turn-on, 25ms turn-off Indicator lights: GREEN: DC power connect AMBER: Target detected

Short circuit protection: Yes Overload protection: Yes Weight:

0.091 lbs / 41 gms





Note 1	SOLD SEPARATELY	
Note 2	SOLD SEPARATELY	

Order Information

System	Sensor	Monitor	Switch type	Cable
M5 Stud Detector	NSS0506	SMS36005 (NPN) SMS37005 (PNP)	Current Sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)
M6 Stud Detector	NSS0506	SMS36006 (NPN) SMS37006 (PNP)	Current Sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)
M8 Stud Detector	NSS0810	SMS36008 (NPN) SMS37008 (PNP)	Current Sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)
M10 Stud Detector	NSS0810	SMS36010 (NPN) SMS37010 (PNP)	Current Sinking Current sourcing	SCE13000 2m (6ft.) SCE13001 2m (6ft) (Angled)





SPRING MOUNT

SAB30413

- Mounts to the NSS0506 Stud Sensor
- Allows sensor to retract when stud is out of place
- Allows sensor offset up to 5° off centerline of spring mount to locate misaligned studs

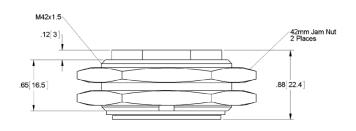


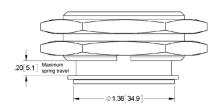
Technical Data

Maximum Axial Travel: 0.20" (5.1 mm) Maximum Radial Misalignment: 0.04" (1.1 mm) Maximum Angular Misalignment: Materials:
Housing - Stainless Steel
Slide - Brass
Spring, and snap ring - Steel
Mounting: M42 x 1.5 Thread
Initial Spring Force: 0.6 lbf. (2.7N)

Final Spring Force: 1.8 lbf. (8.0N)

Dimensions







Spring Mount (SAB30414) with Stud Sensor (NSS0810)

Order Information

Spring Mount	Sensor w/cable		
SAB30414	NSS0810		





SPRING MOUNT

SAB30414



- Mounts to the NSS0810 Stud Sensor
- Allows sensor to retract when stud is out of place
- Allows sensor offset up to 10° off centerline of spring mount to locate misaligned studs

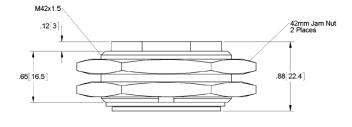


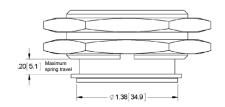
Technical Data

Maximum Axial Travel: 0.20" (5.1 mm) Maximum Radial Misalignment: 0.04" (1.1 mm) Maximum Angular Misalignment: Materials:

Housing - Stainless Steel Slide - Brass Spring, and snap ring - Steel Mounting: M42 x 1.5 Thread Initial Spring Force: 0.6 lbf. (2.7N) Final Spring Force: 1.8 lbf. (8.0N)

Dimensions







Spring Mount (SAB30414) with Stud Sensor (NSS0810)

Order Information

Spring Mount	Sensor w/cable
SAB30414	NSS0810







Visit our website to:

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Nut/Stud Sensors URL: Click here

or visit https://autoinplant.imi-precision.com/en/marvelous-machines/thread-nut-stud-detection







ENGLISH TO METRIC NUT CONVERSION



 Use the table below to convert English nuts to metric and determine the compatible nut sensor

Metric to ASME Nut/Thread Cross Reference

Nut Sensor	Target Material	Seal	Tip Diameter	Metric Nut Sizes	SAE Nut Sizes
SNS04	Ferrous/Non-Ferrous*	IP67	0.12"	M4	8-32, 10-24, 10-32
SNP50608 or SNS05	Ferrous/Non-Ferrous*	IP67	0.16"	M5	12-24, 1/4-20
SNP50608 or SNS06	Ferrous/Non-Ferrous*	IP67	0.18"	M6	1/4-20, 1/4-28, 5/16-18
SNP50608 or SNS08	Ferrous/Non-Ferrous*	IP67	0.25"	M8	5/16-24, 3/8-16
SNP01012 or SNS10	Ferrous/Non-Ferrous*	IP67	0.31"	M10	3/8-24, 7/16-14, 7/16-20
SNP01012 or SNS12	Ferrous/Non-Ferrous*	IP67	0.38"	M12	1/2-13, 1/2-20

^{*}For non-Ferrous applications please contact our Nut/Thread Sensor experts at 1-800-272-4511





Warning

These products are intended for use in industrial systems only. Do not use these products where pressures and temperatures can exceed those listed under Specifications.

Before using these products with fluids other than those specified, for nonindustrial applications, life-support systems, or other applications not within published specifications, consult Norgren.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure modes.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided. System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products, or posted on the Norgren website under "Downloads." System designers should also provide for all OSHA requirements including Title 29 CFR 1910.147 Lockout/Tagout.

It should be recognized that warnings are valid for any product, regardless of manufacturer, and are not restricted to products manufactured by Norgren. Norgren's reputation for product quality and performance is well established. We feel we have the additional obligation to provide information or warnings to customers to assist them in applying our products in a reasonable and safe manner.

Proposition 65: These products may contain chemicals known to the state of California to cause cancer, or birth defects, or other reproductive harm.

Warranty

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Norgren reserves the right to discontinue manufacture of any product or change product materials, design, or specifications.



1

NUT SENSOR



2

STUD SENSOR



3

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15585SP us/01/19

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