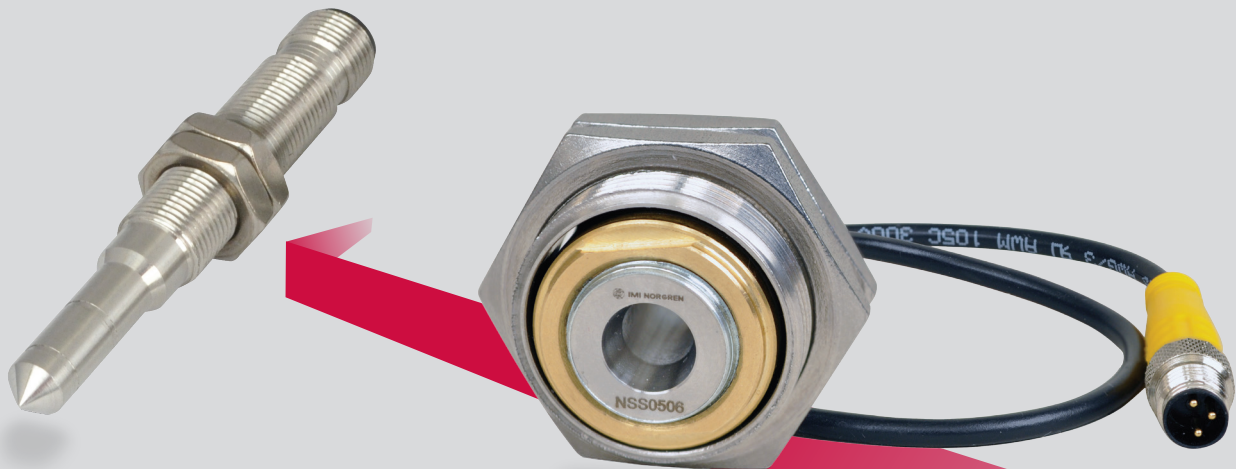




1.800.272.4511
Insidesales@imi-precision.com
norgren.com/automationsolutions



Nut and Stud Sensors



**Durable, Sensitive
and Cost-saving**

Engineering
GREAT Solutions

IMI
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Nut and Stud Sensors

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ADDITIONAL REFERENCES

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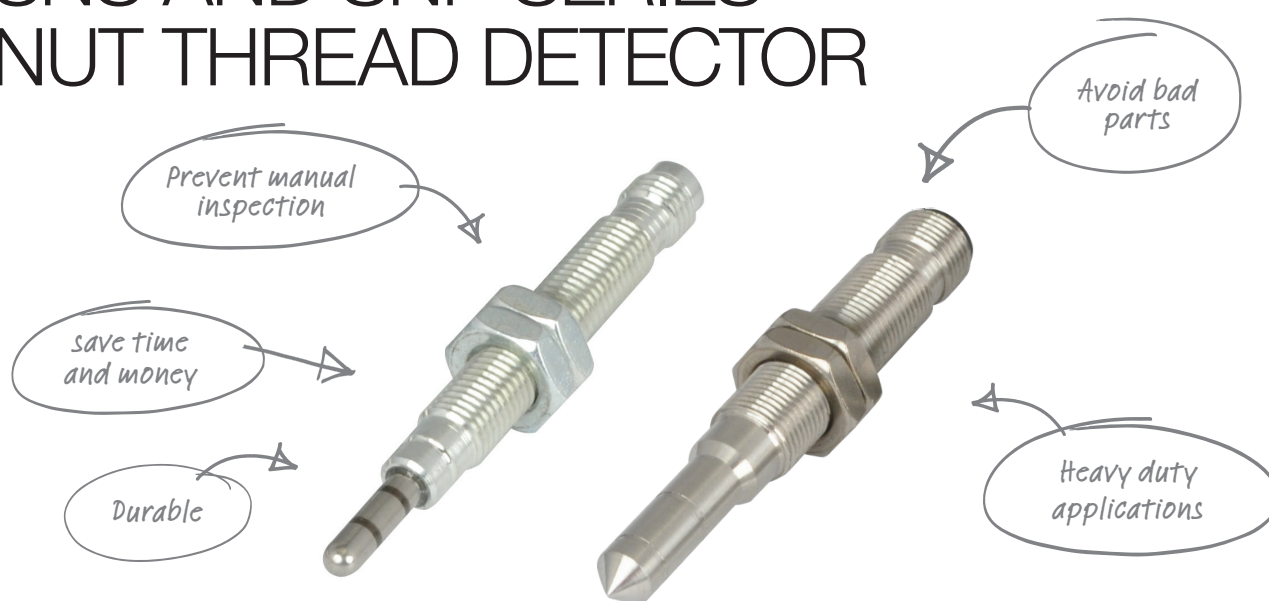
NUT AND STUD THREAD DETECTOR LINE



The IMI Norgren Nut Thread and Stud Thread Detector line senses missing or unthreaded nuts or studs, saving scrap and lost time for sheet metal fabricators. The strong, sensitive sensors are a significant advancement over previous technologies, which could only detect the presence of nut or stud and threads but within a limited range. No other sensor on the market has an all stainless-steel construction that provides the durability the stamping and assembly industry demands. Application of this technology could save customers thousands of dollars in lost time sorting parts.

Note: The use of the IMI Norgren Nut Thread Detector is limited in certain stainless steel and aluminum grades or alloys. We encourage an evaluation be made for stainless steel and aluminum parts prior to purchase. Please contact insidesales@imi-precision.com for more information.

SNS AND SNP SERIES NUT THREAD DETECTOR



NUT THREAD DETECTOR

- > Uses inductive proximity detection technology to verify the presence of nuts or threads
- > Avoid defective parts from going through
- > Prevent manual inspection
- > Can be calibrated to detect Nut/Thread quality with a simple hand adjustment and LED indicator
- > 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 SENSOR

Nut Sensor Selection Guide

NS-06

SNP: Nut Thread Detector

NS-07

SMR: Nut Sensor Monitor

NS-09

SNS: Toughened Nut Thread Detector

NS-10

SMH: Toughened Nut Sensor Monitor

NS-19

SCE and SCF: Cables

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SAB: Spring Mounts

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Additional References

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English to Metric Nut Conversion Guide

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Nut Sensor Selection Guide



To PLC



Applications

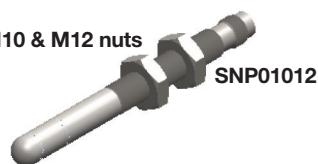
- > Nut and thread sensing
- > Hidden nut detection
- > Thread sensing in tapped holes
- > Thread quality sensing

Sensors

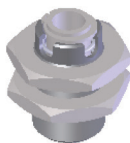
M5, M6 & M8 nuts



M10 & M12 nuts

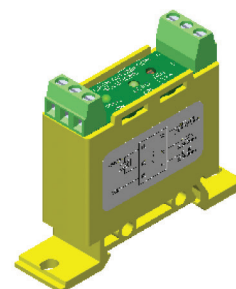


Accessories



Spring mount
SAB30403

Monitors



PNP
SMR37005
SMR37006
SMR37008
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

Sensors

M4 nuts
SNS04



M5 nuts
SNS05



M6 nuts
SNS06



M8 nuts
SNS08



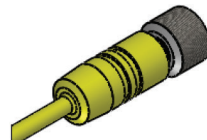
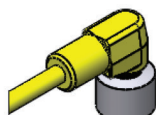
M10 nuts
SNS10



M12 nuts
SNS12

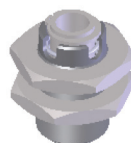


Accessories



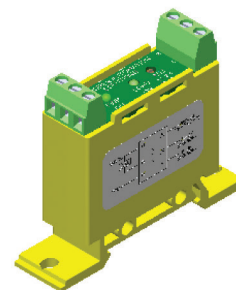
Right angle
SCF12160 for
SNS10/SNS12

Straight
SCF12060 for
SNS10/SNS12



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

Monitors



PNP
SMH37004
SMH37005
SMH37006
SMH37008
SMH37010
SMH37012

NPN
SMH36004
SMH36005
SMH36006
SMH36008
SMH36010
SMH36012

- > 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

Maximum blank thickness:
is 1.6 mm (0.06")

Sensor connector:

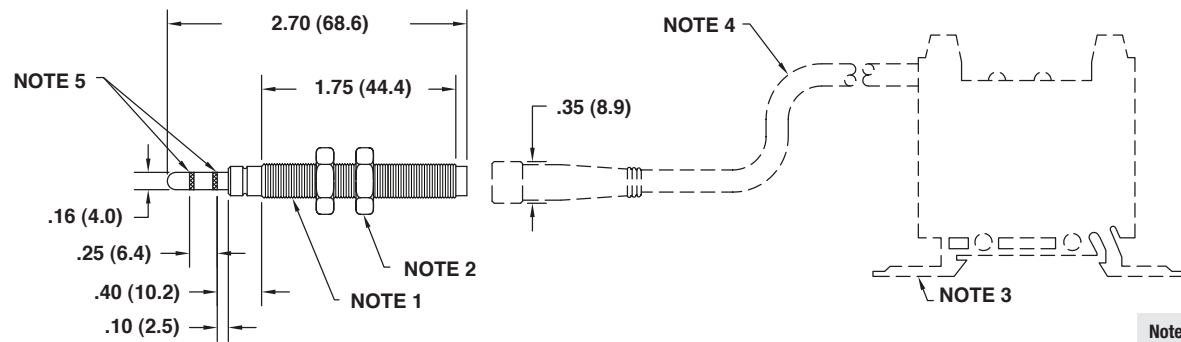
3-pin (male) 8 mm (pico) connector

Operating temperature range:

32°F to 212°F (0°C to 100°C)

Target material:

Ferrous/Non-Ferrous



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)	

Dimensions in inches (mm) are for reference only

- > 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

Maximum blank thickness:

2.5 mm (0.10")

Sensor connector:

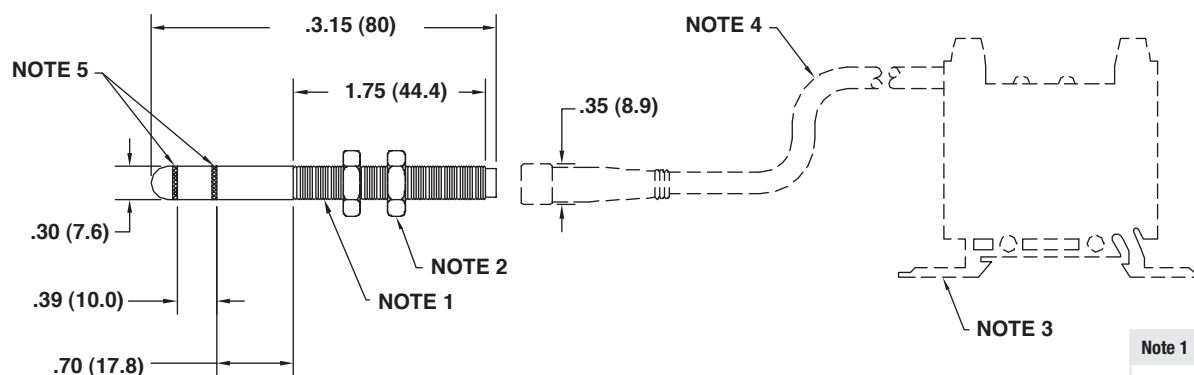
3-pin (male) 8 mm (pico) connector

Operating temperature range:

32°F to 212°F (0°C to 100°C)

Target material:

Ferrous/Non-Ferrous



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

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)	

Dimensions in inches (mm) are for reference only

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

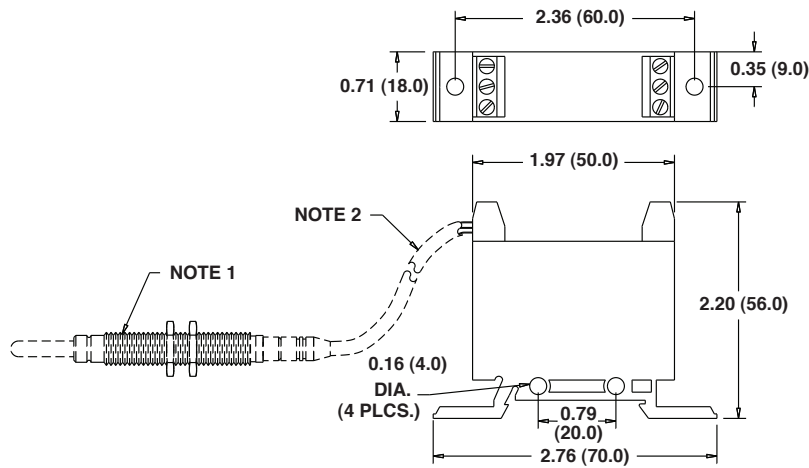


Technical data

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

Target material:
Ferrous/Non-Ferrous
Short circuit protection:
Yes
Overload protection:
Yes
Weight:
0.091 lbs / 41 gms



- Note 1** SOLD SEPERATELY
- Note 2** SOLD SEPERATELY

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)

Dimensions in inches (mm) are for reference only

- > 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

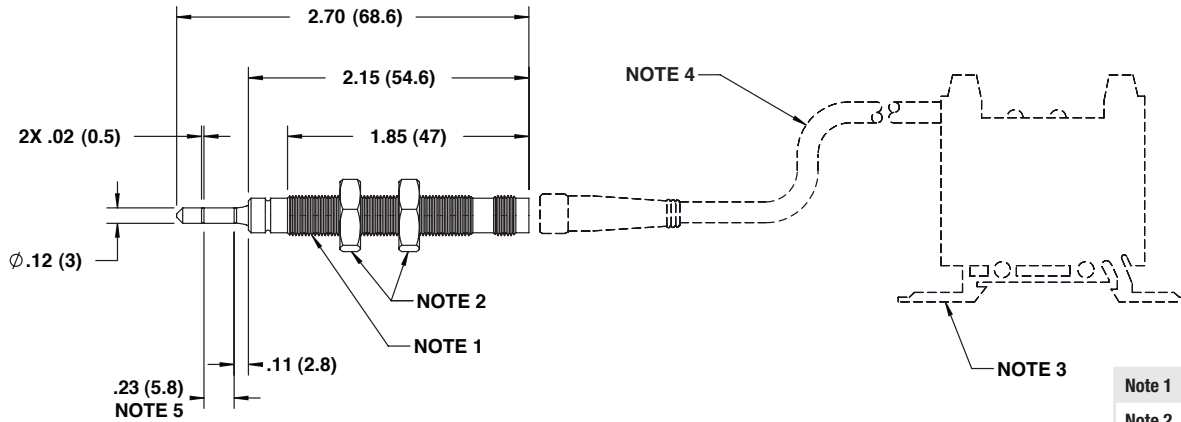
Minimum nut thickness:
4.0 mm (0.16")

Maximum blank thickness:
1.6mm (0.06")

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



Note 1	2X M8X 1.0
Note 2	2X M8 X 1.0 JAM NUTS
Note 3	SOLD SEPERATELY
Note 4	SOLD SEPERATELY
Note 5	SENSING AREA

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)	

Dimensions in inches (mm) are for reference only

- > Detects M5 nut or thread presences
- > 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:

4.0 mm (0.16")

Maximum blank thickness:

1.6mm (0.06")

Sensor connector:

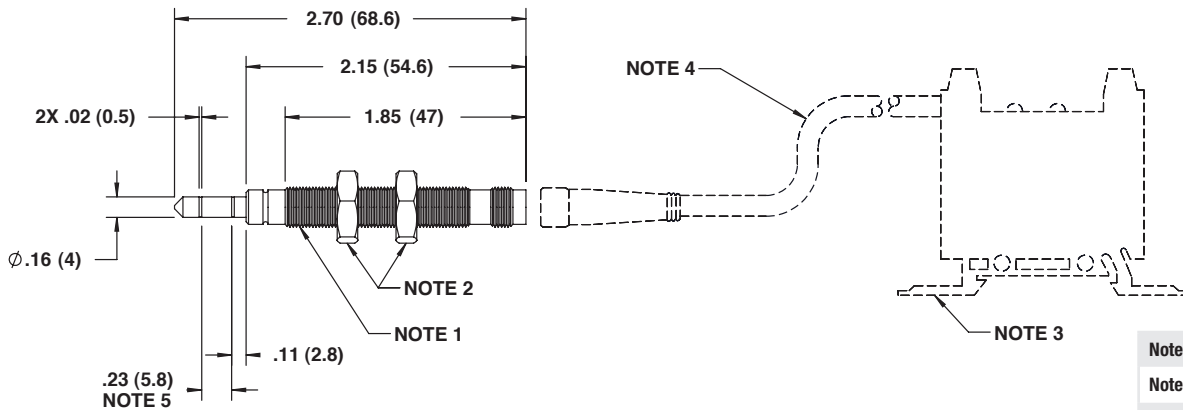
3-pin (male) 8mm (pico) connector

Operating temperature range:

32°F to 212°F (0°C to 100°C)

Target material:

Ferrous/Non-Ferrous



Note 1	2X M8X 1.0
Note 2	2X M8 JAM NUTS
Note 3	SOLD SEPERATELY
Note 4	SOLD SEPERATELY
Note 5	SENSING AREA

M5 Nut Detector System

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

Dimensions in inches (mm) are for reference only

- > 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

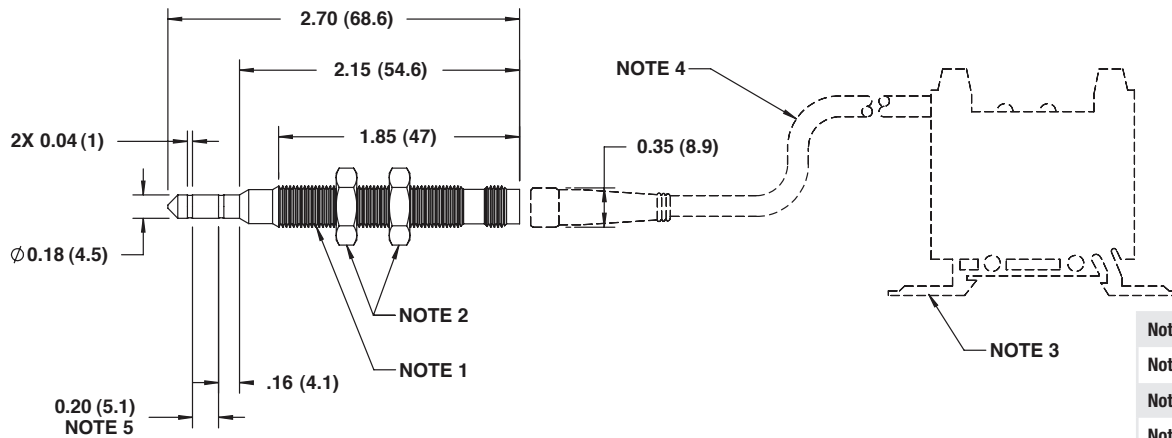
Minimum nut thickness:
5.0 mm (0.20")

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

Maximum blank thickness:
1.6 mm (0.06")



Note 1	2X M8X 1.0
Note 2	2X M8 JAM NUTS
Note 3	SOLD SEPERATELY
Note 4	SOLD SEPERATELY
Note 5	SENSING AREA

M6 Nut Detector System

Sensor	Monitor	Cable	Weight
SNS06	SMH36006 (NPN)	SCE13000 2m (6ft)	0.037 lbs / 17 gm
	SMH37006 (PNP)	SCE13001 2m (6ft) (Angled)	

Dimensions in inches (mm) are for reference only

- > 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

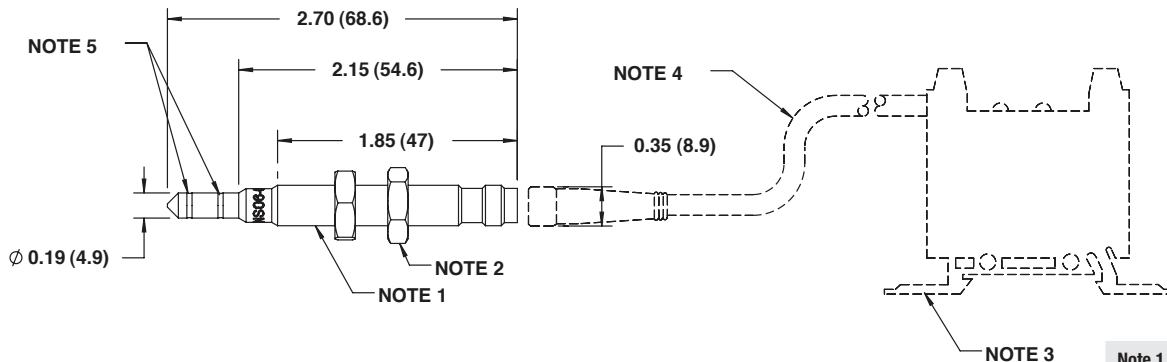
Minimum nut thickness:
5.0mm (0.20")

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

Maximum blank thickness:
1.6mm (0.06")



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

M6 Nut Detector System

Sensor	Monitor	Cable	Weight
SNS06-01	SMH36006 (NPN)	SCE13000 2m (6ft)	0.037 lbs / 17 gm
	SMH37006 (PNP)	SCE13001 2m (6ft) (Angled)	

Dimensions in inches (mm) are for reference only

- > 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

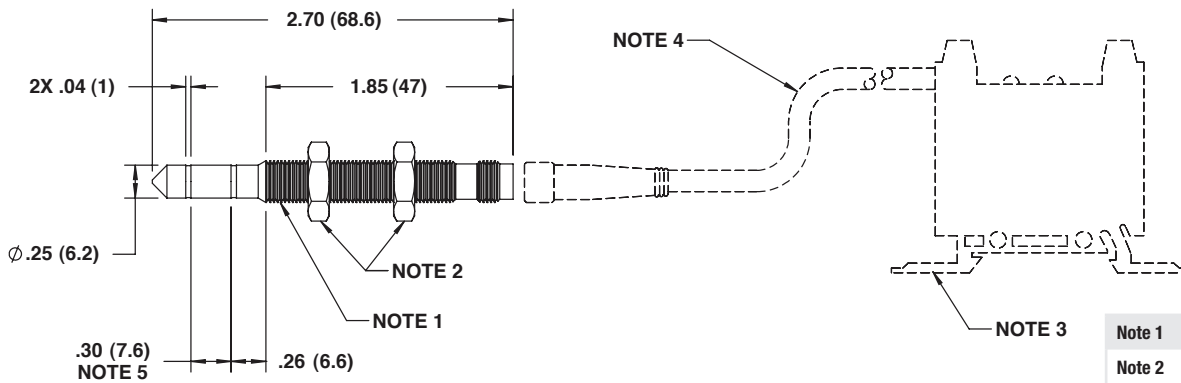
Minimum nut thickness:
6.5mm (0.26")

Maximum blank thickness:
1.6mm (0.06")

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



Note 1	2X M8X 1.0
Note 2	2X M8 JAM NUTS
Note 3	SOLD SEPERATELY
Note 4	SOLD SEPERATELY
Note 5	SENSING AREA

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)	

Dimensions in inches (mm) are for reference only

- > 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

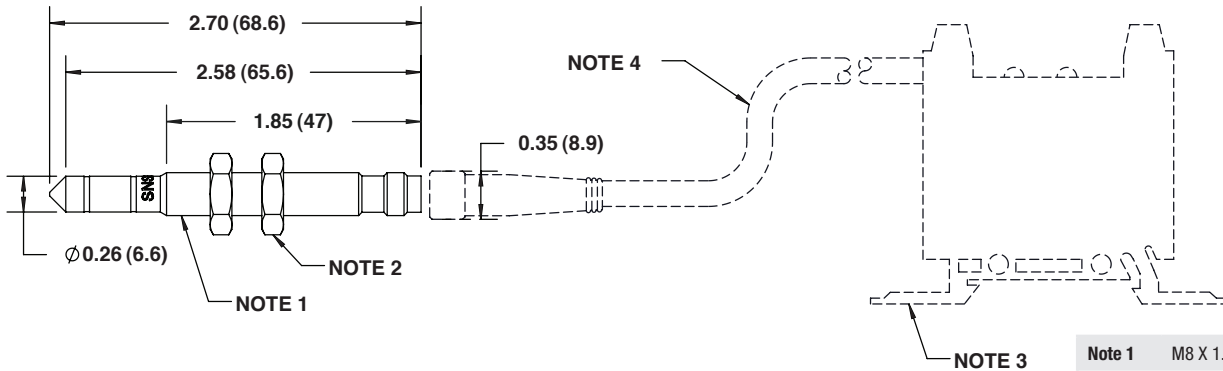
Minimum nut thickness:
6.5mm (0.26")

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

Maximum blank thickness:
1.6mm (0.06") Sensor connector:
3-pin (male) 8mm (pico) connector



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

M8 Nut Detector System

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

Dimensions in inches (mm) are for reference only

- > 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")

Maximum blank thickness

2.5mm (0.10")

Sensor connector:

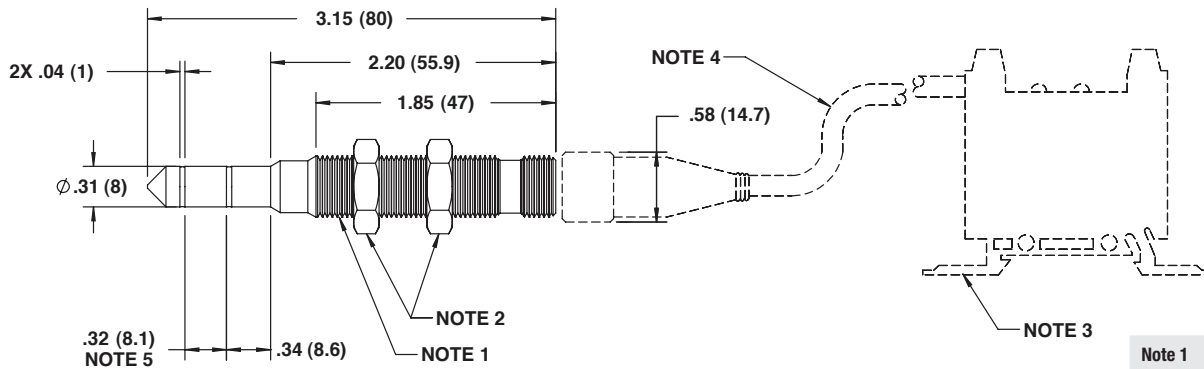
4-pin (male) 12mm (micro) connector

Operating temperature range:

32°F to 212°F (0°C to 100°C)

Target material:

Ferrous/Non-Ferrous



Note 1	2X M12X 1.0
Note 2	2X M12 JAM NUTS
Note 3	SOLD SEPERATELY
Note 4	SOLD SEPERATELY
Note 5	SENSING AREA

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)	

Dimensions in inches (mm) are for reference only

- > 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")

Maximum blank thickness:

2.5mm (0.10")

Sensor connector:

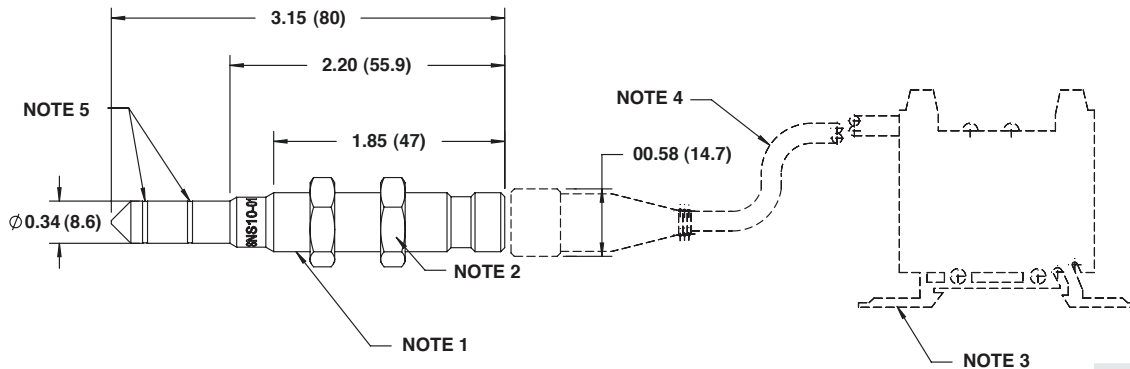
4-pin (male) 12mm (micro) connector

Operating temperature range:

32°F to 212°F (0°C to 100°C)

Target material:

Ferrous/Non-Ferrous



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)	

Dimensions in inches (mm) are for reference only

- > 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

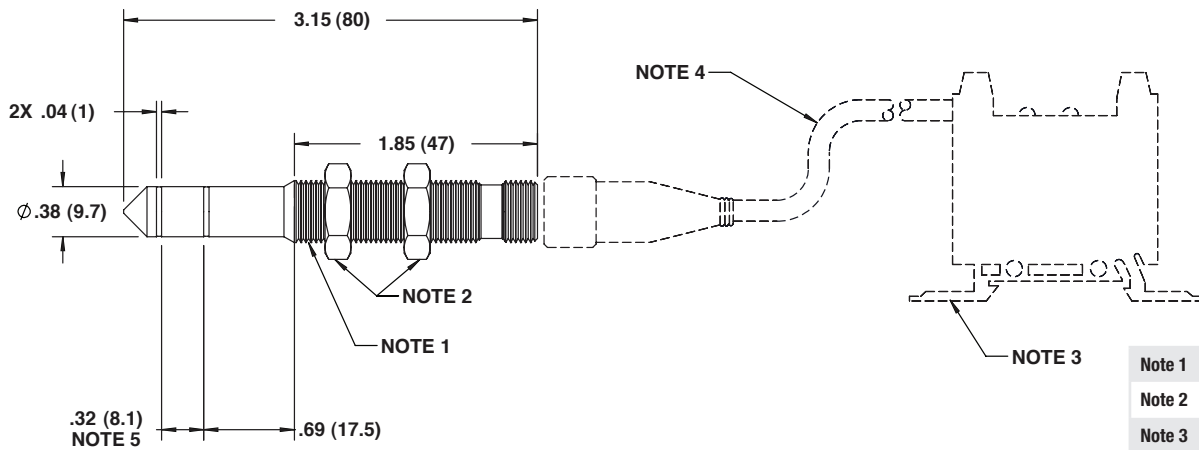
Minimum nut thickness:
10.0 mm (0.39")

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

Maximum blank thickness:
2.5mm (0.10")



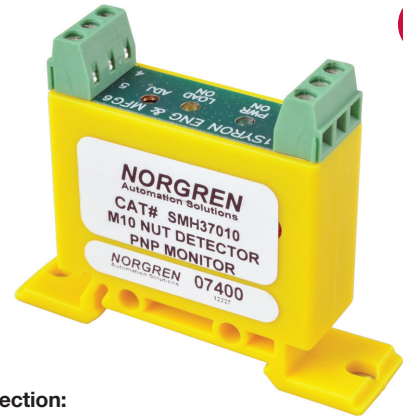
Note 1	2X M12X 1.0
Note 2	2X M12 JAM NUTS
Note 3	SOLD SEPERATELY
Note 4	SOLD SEPERATELY
Note 5	SENSING AREA

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)	

Dimensions in inches (mm) are for reference only

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



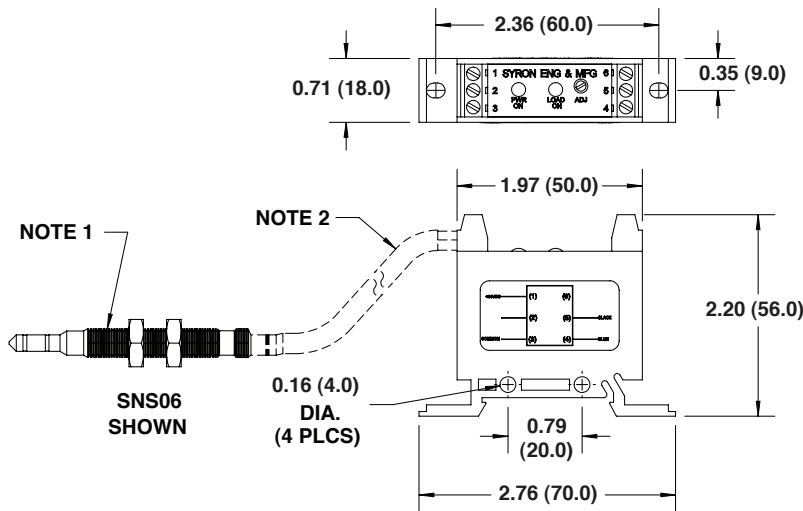
NUT SENSOR

Technical data

Power/sensor connector:
2 X 3-pin terminal connector
Supply voltage range:
10 VDC to 30 VDC
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

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



Note 1	SOLD SEPERATELY
Note 2	SOLD SEPERATELY

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

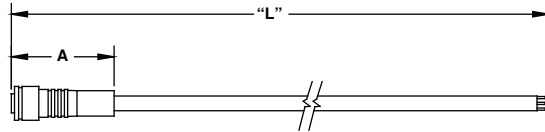
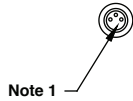
Dimensions in inches (mm) are for reference only

Part number
SCE13000, SCE13005

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

Technical data

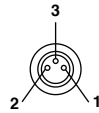
Weight:
74 grams



DIM	MM	Inches
A	30.9	1.21

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

Note 1
3-PIN (Female), PICO



Front View
Female
Connector

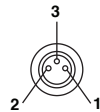
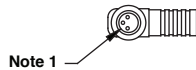
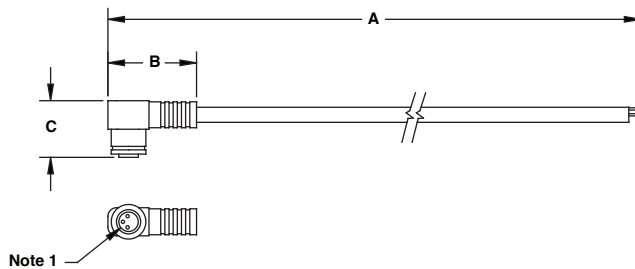
- 1 > Brown
- 2 > Blue
- 3 > Black

Part number
SCE13001

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

Technical data

Weight:
68 grams



- 1 > Brown
- 2 > Blue
- 3 > Black



DIM	MM	Inches
A	2000.0	78.74
B	26.0	1.03
C	15.9	0.63

Note 1
3-PIN (Female), PICO

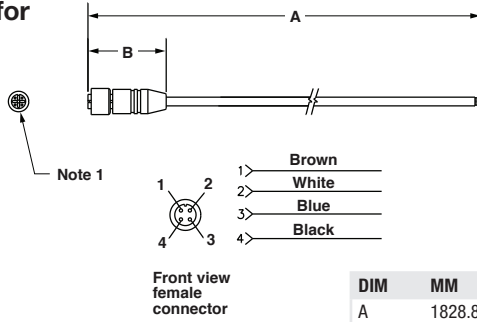
Dimensions in inches (mm) are for reference only

Part number
 SCF12060

Straight cable, 4-pin MICRO for
 SNS10, SNS12

Technical data

Weight:
 84 grams



DIM	MM	Inches
A	1828.8	72.0
B	43.4	1.71

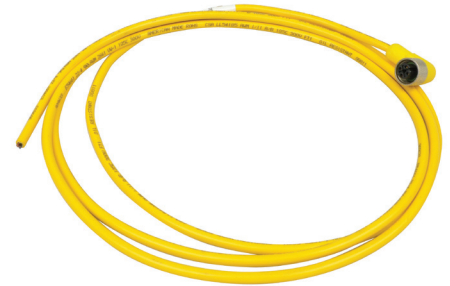
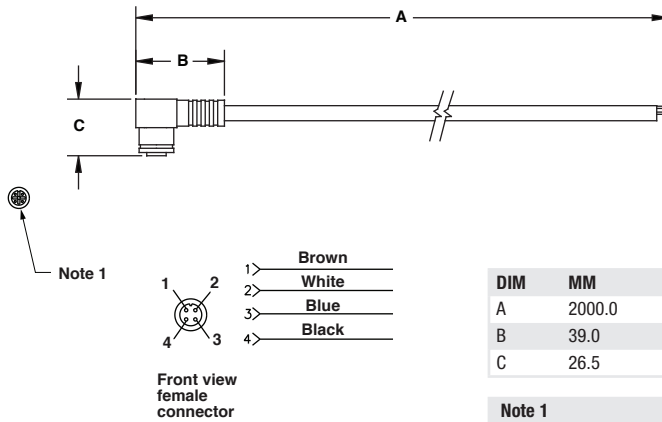
Note 1
 4-Pin (female), micro

Part number
 SCF12160

Right angle cable, 4-pin MICRO for
 SNS10, SNS12

Technical data

Weight:
 84 grams



DIM	MM	Inches
A	2000.0	78.7
B	39.0	1.54
C	26.5	1.00

Note 1
 4-Pin (female), micro

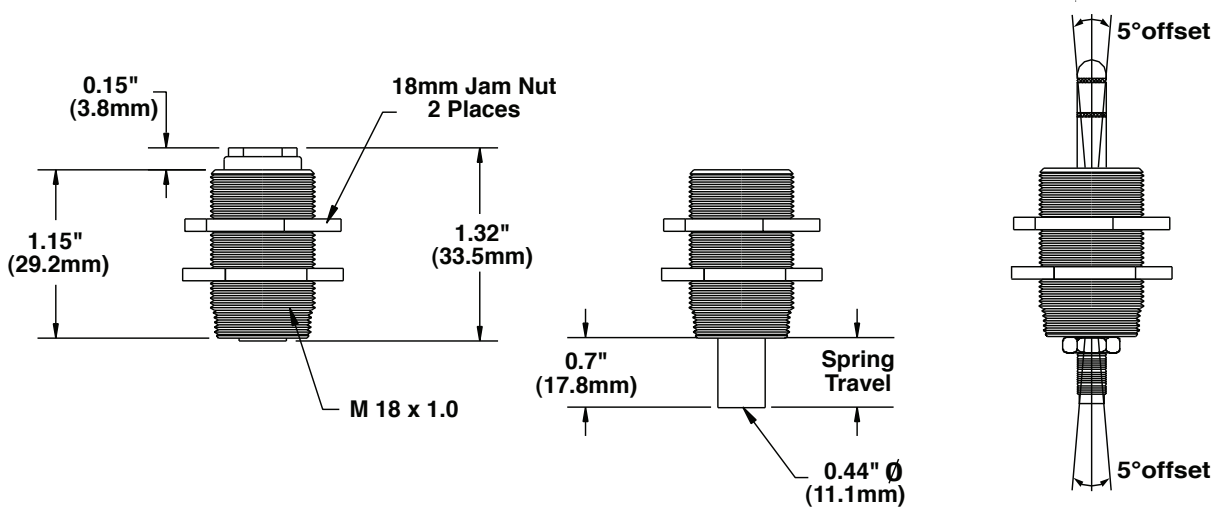
Dimensions in inches (mm) are for reference only

- > 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



Technical data

Weight:
53 grams

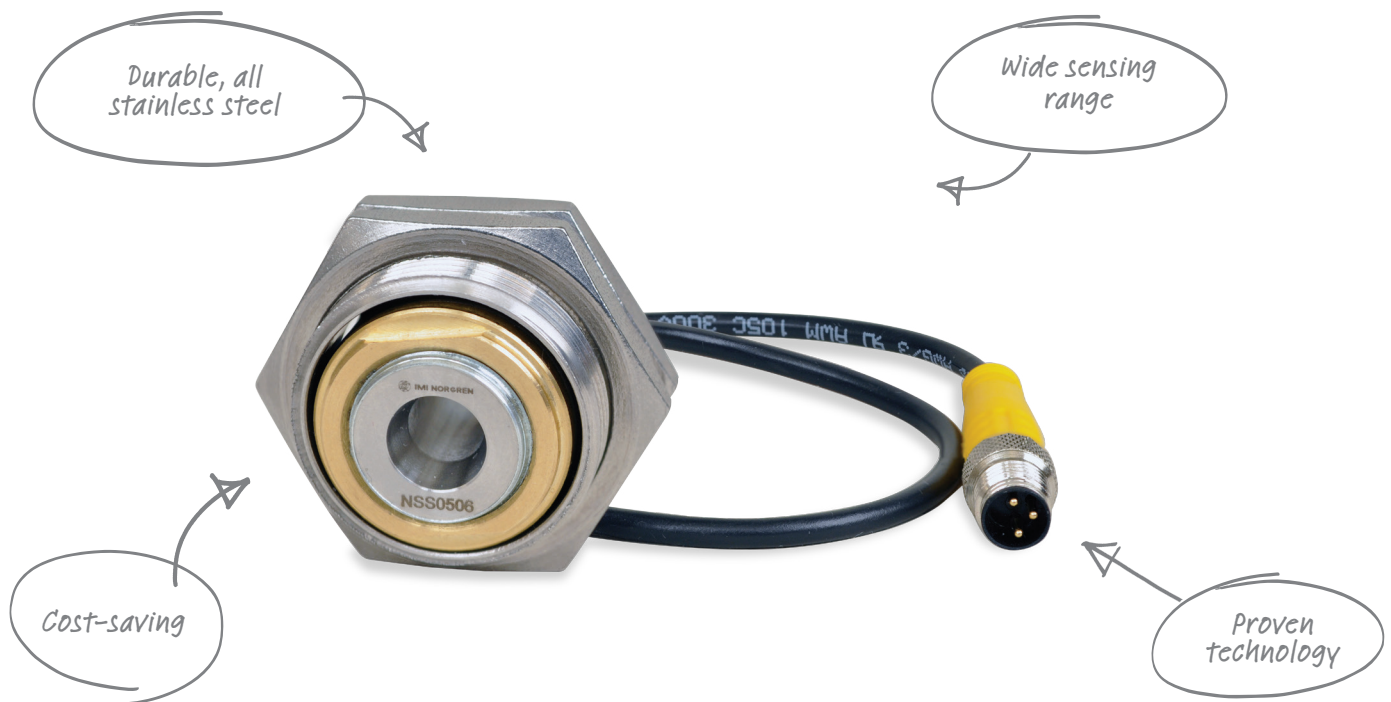


Application



Dimensions in inches (mm) are for reference only

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

Fast Find Guide



STUD THREAD DETECTOR

Stud Thread Detector Selection Guide



SS-25

NSS: Stud Thread Detector



SS-26

SCE: Cables



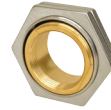
SS-28

SMS: Monitors



SS-29

SAB: Spring Mounts



SS-30

Additional References



R-32

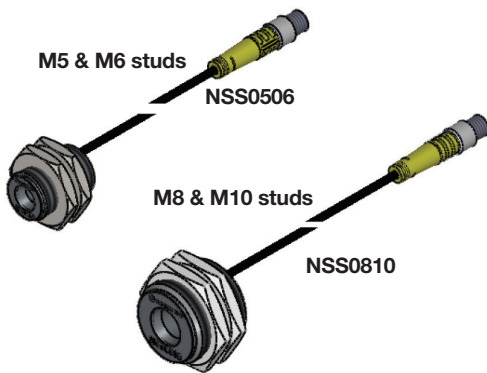
Stud Thread Detector Selection Guide



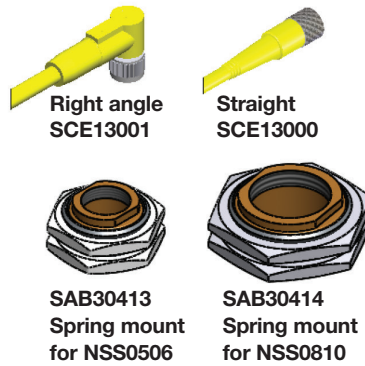
Applications

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

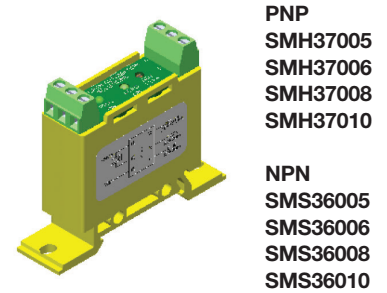
Sensors



Accessories



Monitors



- PNP
SMH37005
SMH37006
SMH37008
SMH37010
- NPN
SMS36005
SMS36006
SMS36008
SMS36010

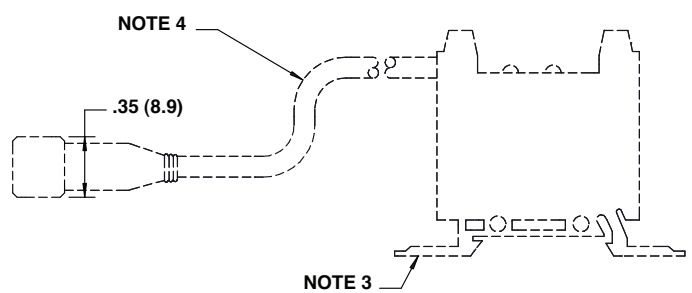
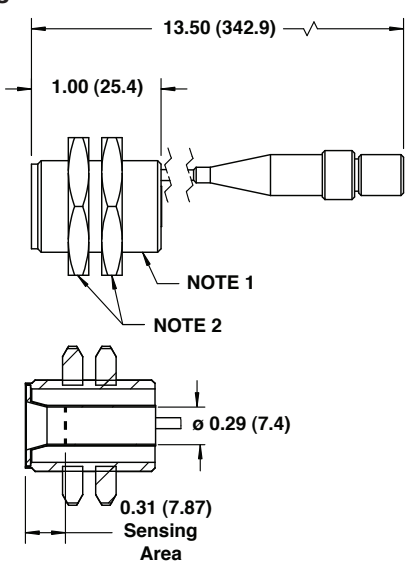
- > Detects M5 or M6 stud or thread presence
- > For heavy duty applications
- > For use in weld applications
- > Immune to weld fields
- > Resistant to weld slag



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

Dimensions



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

Order information
M5 and M6 Stud Thread Detection System

Sensor	Monitor for M5	Monitor for M6	Spring Mount	Cable	Weight (Sensor)
					0.096 lbs (44 gm)
NSS0506	SMS36005 (NPN)	SMS36006 (NPN)	SAB30413	SCE13000 6ft (2m)	
					
	SMS37005 (PNP)	SMS37006 (PNP)		SCE13001 6ft (2m) 90° angle	

Dimensions in inches (mm) are for reference only

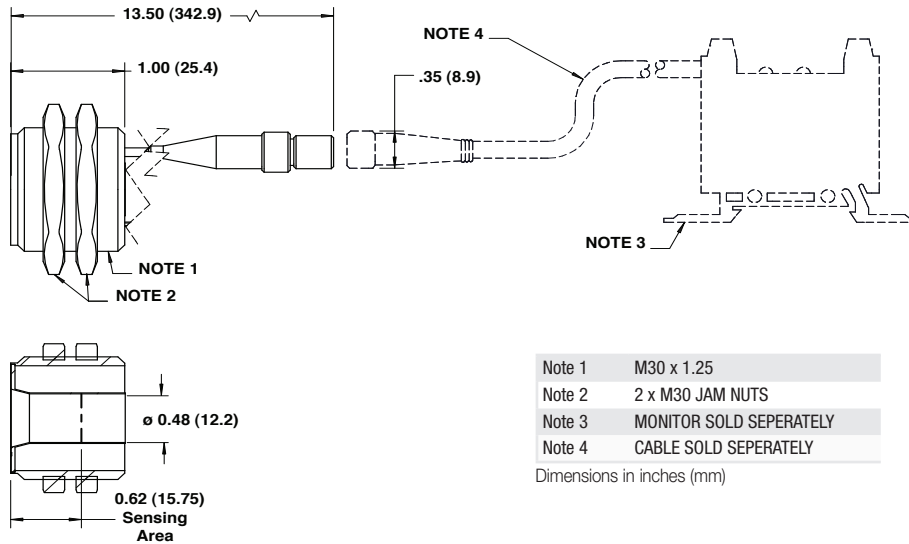
- > Detects M8 or M10 stud or thread presence
- > For heavy duty applications
- > For use in weld applications
- > Immune to weld fields
- > Resistant to weld slag






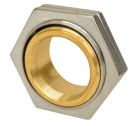




Technical data

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

Dimensions



Order information
M8 and M10 Stud Thread Detection System

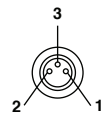
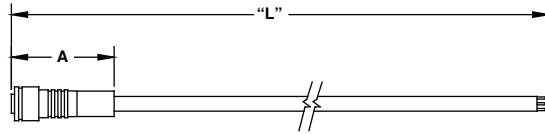
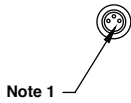
Sensor	Monitor for M8	Monitor for M10	Spring Mount	Cable	Weight (Sensor)
 NSS0810	 SMS36008 (NPN)	 SMS36010 (NPN)	 SAB30414	 SCE13000 6ft (2m)	.188 lbs (86 gm)
	 SMS37008 (PNP)	 SMS37010 (PNP)		 SCE13001 6ft (2m) 90° angle	

Dimensions in inches (mm) are for reference only

Part number
SCE13000
SCE13005

Technical data

Weight:
74 grams



Front View
Female
Connector

- 1 > Brown
- 2 > Blue
- 3 > Black



DIM	MM	Inches
A	30.9	1.21

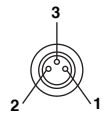
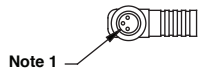
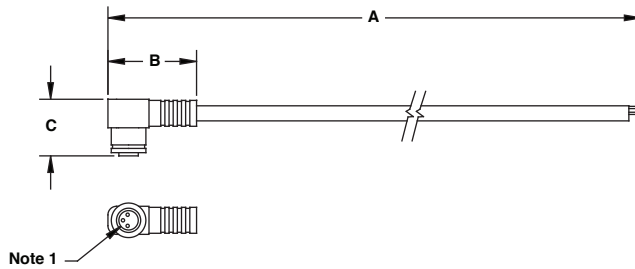
Part number	"L"
SCE13000	2000.0 mm (78.74")
SCE13005	5000.0 mm (196.85")

Note 1	3-PIN (Female), PICO
--------	----------------------

Part number
SCE13001

Technical data

Weight:
68 grams



- 1 > Brown
- 2 > Blue
- 3 > Black



DIM	MM	Inches
A	2000.0	78.74
B	26.0	1.03
C	15.9	0.63

Note 1	3-PIN (Female), PICO
--------	----------------------

Dimensions in inches (mm) are for reference only

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

Technical data

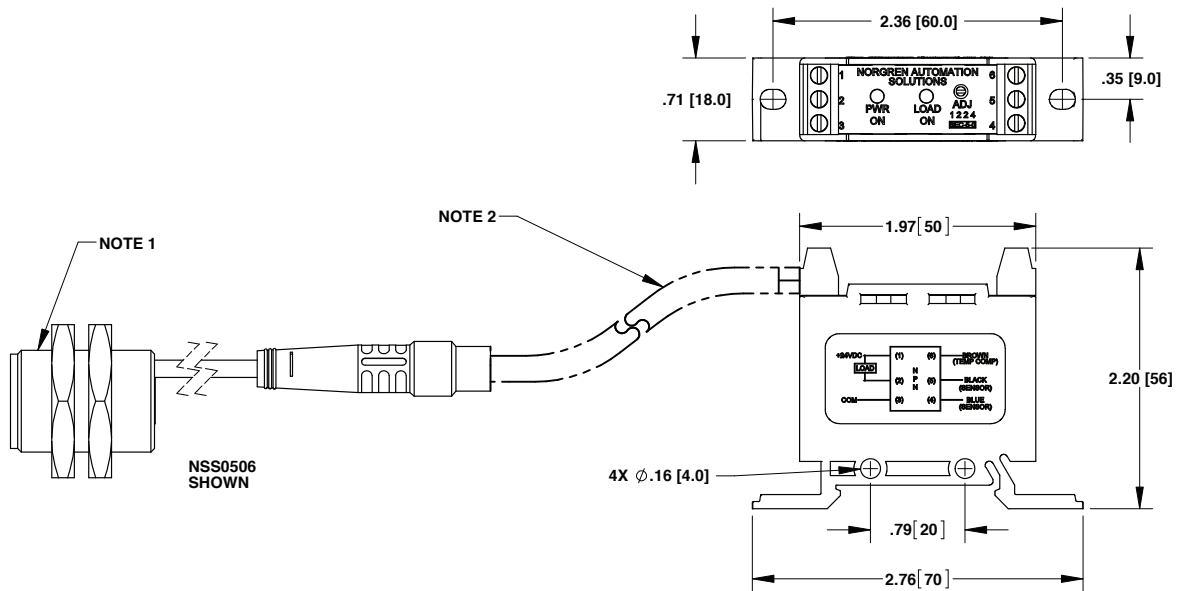
Power/sensor connector:
 2 X 3-pin terminal connector
Supply voltage range:
 10VDC to 30 VDC
Maximum load current:
 150mA

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

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



Dimensional information



Note 1 SOLD SEPARATELY
 Note 2 SOLD SEPARATELY

Order information

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

Dimensions in inches (mm) are for reference only

- > 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:

0.23" (5.8 mm)

Maximum Radial Misalignment:

0.03" (0.8 mm)

Maximum Angular Misalignment:

5°

Materials:

Housing - Stainless Steel

Slide - Brass

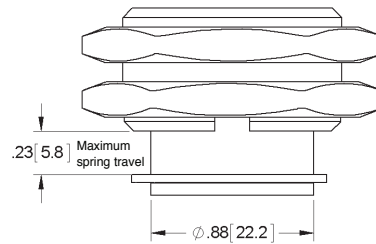
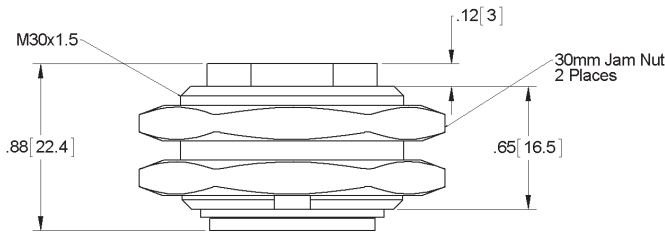
Spring, and snap ring - Steel

Mounting: M30 x 1.5 Thread

Initial Spring Force: 1.9 lbf. (8.5N)

Final Spring Force: 3.4 lbf. (15.1N)

Dimensional Information



Order Information

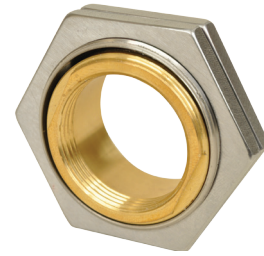
Spring Mount	Sensor w/cable
	
SAB30413	NSS0506



Spring Mount (SAB30413) with Stud Sensor (NSS0506)

Dimensions in inches (mm) are for reference only

- > 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:

10°

Materials:

Housing - Stainless Steel

Slide - Brass

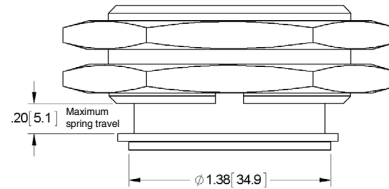
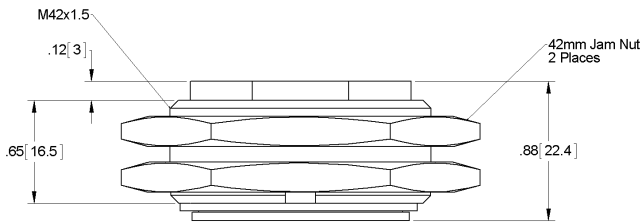
Spring, and snap ring - Steel

Mounting: M42 x 1.5 Thread

Initial Spring Force: 0.6 lbf. (2.7N)

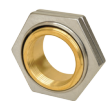
Final Spring Force: 1.8 lbf. (8.0N)

Dimensional information



Order information

Spring Mount



SAB30414

Sensor w/cable



NSS0810



**Spring Mount (SAB30414) with
Stud Sensor (NSS0810)**

Dimensions in inches (mm) are for reference only



Visit our website to:

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- > Shop the Webstore

Nut Sensors URL: www.norgren-nutsensors.com

Stud Sensors URL: www.norgren-studsensors.com

Engineering
GREAT
Solutions

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

Warning

The use of the IMI Norgren Nut Thread Detector is limited in certain stainless steel and aluminum grades or alloys. We encourage an evaluation be made for stainless steel and aluminum parts prior to purchase. Please contact insidesales@imi-precision.com for more information.

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

Items sold by Norgren are warranted to be free from defects in materials and workmanship for a period of two years* from the date of invoice, provided said items are used according to Norgren's recommended usages. NORGREN'S LIABILITY IS LIMITED TO THE REPAIR OF, REFUND OF PURCHASE PRICE PAID FOR, OR REPLACEMENT IN KIND OF, AT NORGREN'S SOLE OPTION, ANY ITEMS PROVED DEFECTIVE, PROVIDED THE ALLEGEDLY DEFECTIVE ITEMS ARE RETURNED TO NORGREN PREPAID. THE WARRANTIES EXPRESSED ABOVE ARE IN LIEU OF AND EXCLUSIVE OF ALL OTHER WARRANTIES. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, EXCEPT AS STATED HEREIN.

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Nut and Stud Sensors



1.800.272.4511

Insidesales@imi-precision.com

www.norgren.com/automationsolutions

NS

NUT SENSOR

FAST FIND GUIDE PAGE NS-04



SS

STUD SENSOR

FAST FIND GUIDE PAGE SS-23



R

ADDITIONAL REFERENCES

FAST FIND GUIDE PAGE R-32



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15585SP us/10/16

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IMI

Precision Engineering