

# XS3P Tubular Proximity Sensor



Sensing for aggressive environments in a non-corrosive, space-saving package

- Non-corrosive plastic cases for harsh environments: cutting oils, grease, solvents, etc.
- High visibility 360° indicators provide faster troubleshooting
- Two-wire versions simplify wiring
- Flush mountable in metal
- Worry-free replacement: using universal type extended temperature range, improved enclosure ratings (IP68)
- Trouble-free operation ensured by extensive protective circuitry
- Double insulated enclosure, i.e. no grounding required
- Universal version:
  - standard length body
  - extended AC/DC voltage range
  - includes plastic mounting nuts and lock washers
- Economy version:
  - short length body
  - includes plastic mounting nuts

**The XS3P series plastic tubular proximity sensors exhibit excellent overall resistance to:**

- **Chemical products**, such as salts, haliphactic and aromatic oils, petrols, acids and diluted bases. For acids, ketones and phenols, preliminary test should be made according to the nature and concentration of the liquid.
- **Agriculture and food industry products**, such as animal and vegetable based food products (vegetable oils, animal fat, fruit juice, dairy proteins). Excellent wash down resistance.



**SQUARE D**  
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# Specifications

## Electrical

	Short Length DC	Standard Length DC	Standard Length AC/DC
Voltage range	12 - 24 VDC	12 - 48 VDC	24 - 240 VAC, 24 - 210 VDC
Voltage limit (incl. ripple)	10 - 38 VDC	10 - 58 VDC	20 - 264 VAC/DC
Voltage drop (across switch) closed state	2.6 V	2 V	5.5 V
Max. Load Current	200 mA	200 mA	300 mA AC/200 mA DC

**Current consumption (no load):** 3 wire 10 mA

**Residual (leakage) current:** 2 wire 24 VAC/VDC 0.8 mA  
open state 120 VAC/VDC 1.5 mA

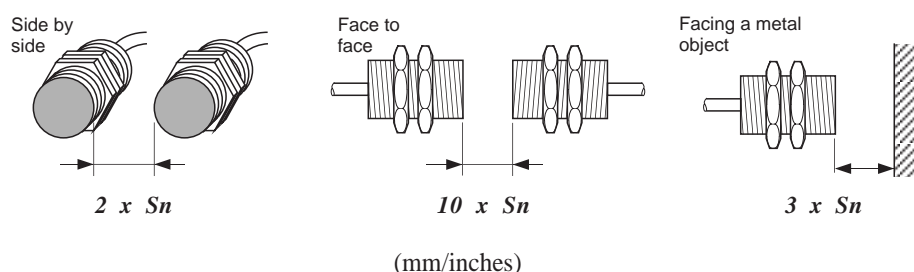
### Response Parameters

Diameter	On Delay (max.)		Off Delay (max.)		Power Up Delay (max.)		Operating Frequency	
	DC	AC/DC	DC	AC/DC	DC	AC/DC	DC	AC/DC
8 mm	0.5 ms	1 ms	1 ms	2 ms	5 ms	30 ms	600 Hz	25 Hz AC/400 Hz DC
12 mm	0.5 ms	1 ms	0.5 ms	2 ms	5 ms	40 ms	1100 Hz	25 Hz AC/400 Hz DC
18 mm	1 ms	2 ms	2 ms	4 ms	5 ms	40 ms	500 Hz	25 Hz AC/400 Hz DC
30 mm	2 ms	2 ms	6 ms	5 ms	10 ms	40 ms	200 Hz	25 Hz AC/400 Hz DC

**Protective Circuitry:** Short circuit yes, DC only devices  
Radio frequency immunity (RFI) yes  
Noise and transients yes

**Agency Approvals:** UL Listed, File E 13904 Guide NRKH  
CSA File LR44087-39 Class 3211-03

## Minimum Mounting Clearances

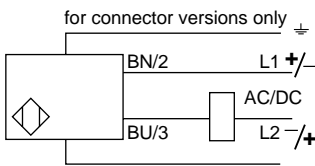
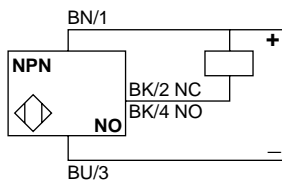
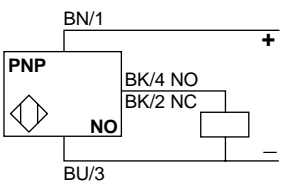


# Mechanical

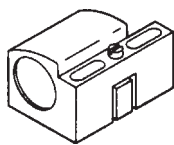
<b>Usable sensing range</b>			<b>Max. tightening torque</b>		
8 mm	0 - 1.2 mm		8 mm	1 Nm (1.3 ft/lbs)	
12 mm	0 - 1.6 mm		12 mm	2 Nm (2.7 ft/lbs)	
18 mm	0 - 4 mm		18 mm	5 Nm (6.7 ft/lbs)	
30 mm	0 - 8 mm		30 mm	20 Nm (26.6 ft/lbs)	
<b>Temperature range</b>			<b>Standard target size (steel)</b>		
-13°F to 176°F (-25°C to 80°C)			8 mm	8 mm x 8 mm	
			12 mm	12 mm x 12 mm	
			18 mm	18 mm x 18 mm	
			30 mm	30 mm x 30 mm	
<b>Enclosure rating</b>			<b>Differential (% of Sr.)</b> 1 - 15%		
NEMA 3, 4X, 6P, 12, 13			<b>Repeatability (% of Sr.)</b> 3%		
CENELEC IP68			<b>LED indicator type</b>		
<b>Enclosure material</b>			360° ring LED: shows output status		
PBT					
<b>Shock resistance</b>					
(IEC 68.2.27) 50G, duration 11 ms					
<b>Vibration resistance</b>					
(IEC 68.2.6) 25G, amplitude +/- 2 m,					
f=10-55 Hz					
<b>Cable</b>					
8 mm	2 or 3 wire	27 AWG	(0.11 mm <sup>2</sup> )	PVC	
12 mm	2 or 3 wire	22 AWG	(0.34 mm <sup>2</sup> )	PVC	
18/30 mm	2 wire	20 AWG	(0.5 mm <sup>2</sup> )	PVC	
18/30 mm	3 wire	22 AWG	(0.34 mm <sup>2</sup> )	PVC	

# Wiring Diagrams

3 wire NO or NC  
wire color/connector pin



# Mounting Bracket



Diameter	Catalog Number
8mm	XSZB108
12mm	XSZB112
18mm	XSZB118
30mm	XSZB130

See Digest for accessories.

# Dimensions

## Short Length with Cable

Part Number	Diameter	A		B	
		inches	mm	inches	mm
XS3P08PA340	8 mm	1.02	26	1.3	33
XS3P08NA340	8 mm	1.02	26	1.3	33
XS3P12PA340	12 mm	1.02	26	1.3	33
XS3P12NA340	12 mm	1.02	26	1.3	33
XS3P18PA340	18 mm	1.02	26	1.3	33
XS3P18NA340	18 mm	1.02	26	1.3	33
XS3P30PA340	30 mm	1.26	32	1.59	40.5
XS3P30NA340	30 mm	1.26	32	1.59	40.5

## Short Length with Connector

Part Number	Diameter	A		B	
		inches	mm	inches	mm
XS3P08PA340D	8 mm	1.02	26	1.65	42
XS3P08NA340D	8 mm	1.02	26	1.65	42
XS3P12PA340D	12 mm	1.02	26	1.77	45
XS3P12NA340D	12 mm	1.02	26	1.77	45
XS3P18PA340D	18 mm	1.02	26	1.77	45
XS3P18NA340D	18 mm	1.02	26	1.77	45
XS3P30PA340D	30 mm	1.26	32	1.97	50
XS3P30NA340D	30 mm	1.26	32	1.97	50

## Standard Length with Cable

Part Number	Diameter	A		B	
		inches	mm	inches	mm
XS3P08MA230	8 mm	1.57	40	1.97	50
XS3P08MB230	8 mm	1.57	40	1.97	50
XS3P08NA370	8 mm	1.57	40	1.97	50
XS3P08PA370	8 mm	1.57	40	1.97	50
XS3P12MA230	12 mm	1.65	42	1.97	50
XS3P12MB230	12 mm	1.65	42	1.97	50
XS3P12NA370	12 mm	1.65	42	1.97	50
XS3P12PA370	12 mm	1.65	42	1.97	50
XS3P18MA230	18 mm	2.02	51.5	2.36	60
XS3P18MB230	18 mm	2.02	51.5	2.36	60
XS3P18NA370	18 mm	2.02	51.5	2.36	60
XS3P18PA370	18 mm	2.02	51.5	2.36	60
XS3P30MA230	30 mm	2.02	51.5	2.36	60
XS3P30MB230	30 mm	2.02	51.5	2.36	60
XS3P30NA370	30 mm	2.02	51.5	2.36	60
XS3P30PA370	30 mm	2.02	51.5	2.36	60

## Standard Length with Connector

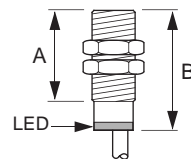
Part Number	Diameter	A		B	
		inches	mm	inches	mm
XS3P12MA230K	12 mm	1.65	42	2.4	61
XS3P12MB230K	12 mm	1.65	42	2.4	61
XS3P18MA230A	18 mm	2.02	51.5	2.95	75
XS3P18MB230A	18 mm	2.02	51.5	2.95	75
XS3P18MA230K	18 mm	2.02	51.5	2.76	70
XS3P18MB230K	18 mm	2.02	51.5	2.76	70
XS3P30MA230A	30 mm	2.13	54	2.95	75
XS3P30MB230A	30 mm	2.13	54	2.95	75
XS3P30MA230K	30 mm	2.02	51.5	2.76	70
XS3P30MB230K	30 mm	2.02	51.5	2.76	70

Bulletin No. 9006HO9302

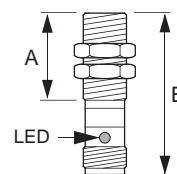
December, 1993

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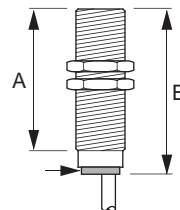
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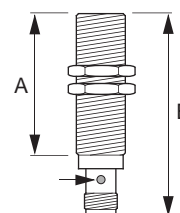
Short Length with Cable



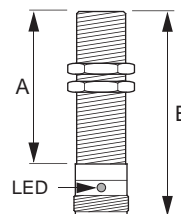
Short Length with Connector



Standard Length with Cable



Standard Length with Connector  
Type K



Standard Length with Connector  
Type A



**SQUARE D**

*We Respond.*

**GROUPE SCHNEIDER**