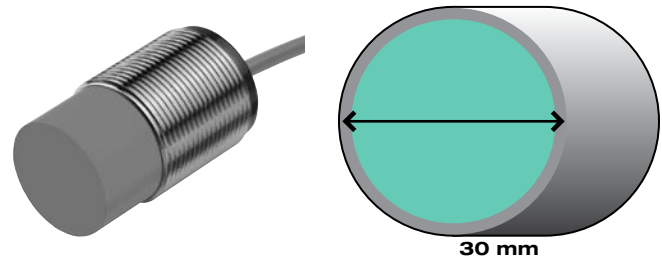


2-Wire AC & AC/DC 30 mm Diameter Inductive Sensors

- 10 to 25 mm sensing ranges
- 30 mm threaded barrels
- LED power and output indication
- Cable and quick disconnect models



Technical Specifications

SUPPLY VOLTAGE	Suffix WS, WO	20-250 VAC
	Suffix US	20-250 VAC/300 VDC
SUPPLY FREQUENCY		45-65 Hz
LOAD CURRENT (I _L)	Suffix WS, WO	5-200 mA max.
	Suffix US	8-200 mA max.
LEAKAGE CURRENT (OFF-STATE)	Suffix WS, WO	≤ 1.7 mA
	Suffix US	≤ 1.3 mA
OUTPUT	Suffix WS, US	Normally open
	Suffix WO, UO	Normally closed
VOLTAGE DROP AT I _L (MAX.)	Suffix WS, WO	≤ 8 V
	Suffix US	≤ 7 V
INRUSH CURRENT		< 1.7 A/20 ms
HYSTERESIS		3-15% (5% typical)
SHORT CIRCUIT AND OVERLOAD PROTECTION	Suffix WS, WO	No
	Suffix US	Yes
REVERSE POLARITY PROTECTED		Yes
LED INDICATION		See dimension drawings
HOUSING MATERIAL		Ni-Brass
SENSING FACE MATERIAL		PBT
STANDARDS		EN 60947-5-2
ENVIRONMENTAL PROTECTION		IP67
AMBIENT TEMPERATURE		-14°F to +158°F (-25°C to +70°C)
APPROVALS		



See pages
827-874 for
cordsets



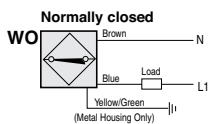
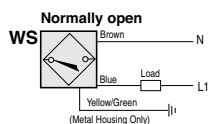
See pages
885-892 for
accessories

Wiring Diagrams

2-Wire AC



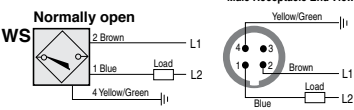
Cable Connection



Quick Disconnect

Note: Wiring diagrams show quick disconnect pin numbers.

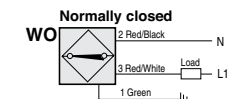
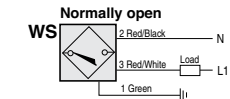
V11 Type



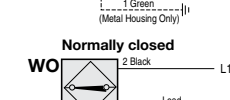
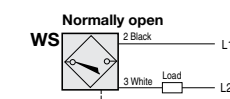
Quick Disconnect

Note: Wiring diagrams show quick disconnect pin numbers.

V12 Type



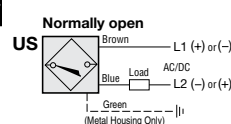
V93 Type



2-Wire AC/DC



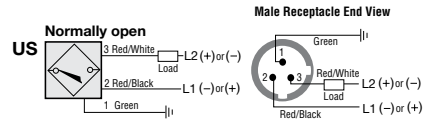
Cable Connection



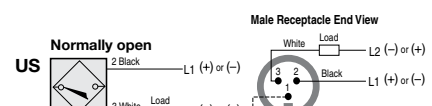
Quick Disconnect

Note: Wiring diagrams show quick disconnect pin numbers.

V12 Type



V93 Type



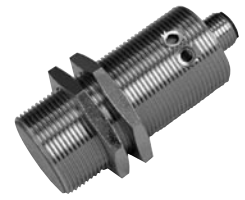
Inductive Cylindrical

2-Wire AC & AC/DC

2-Meter Cable Models								
Dia. (mm)	Model Number	Range (mm)	Mounting	Electrical Output	Switching Frequency	Barrel Material†	Cable Jacket/Size	Dwg. No.
30	NBB10-30GM50-WS	10	Flush	Normally open	25 Hz	Ni-Brass	PVC/#22 AWG	1
	NBB10-30GM50-WO	10	Flush	Normally closed	25 Hz	Ni-Brass	PVC/#22 AWG	1
	NBB15-30GM50-WS	15	Semiflush	Normally open	20 Hz	Ni-Brass	PVC/#22 AWG	2
	NBB15-30GM50-WO	15	Semiflush	Normally closed	20 Hz	Ni-Brass	PVC/#22 AWG	2
	NCB15-30GM70-US	15	Flush	Normally open	30 Hz	Ni-Brass	PVC/#22 AWG	3
	NCN25-30GM70-US	25	Nonflush	Normally open	30 Hz	Ni-Brass	PVC/#22 AWG	4



Micro AC (M12) Quick Disconnect Models								
Dia. (mm)	Model Number	Range (mm)	Mounting	Electrical Output	Switching Frequency	Barrel Material†	Quick Disconnect	Dwg. No.
30	NBB10-30GM50-WS-V11	10	Flush	Normally open	20 Hz	Ni-Brass	M12 Micro AC	5
	NBB15-30GM50-WS-V11	15	Semiflush	Normally open	20 Hz	Ni-Brass	M12 Micro AC	6



Micro AC (1/2"-20) Quick Disconnect Models								
Dia. (mm)	Model Number	Range (mm)	Mounting	Electrical Output	Switching Frequency	Barrel Material†	Quick Disconnect	Dwg. No.
30	NBB10-30GM50-WS-V12	10	Flush	Normally Open	20 Hz	Ni-Brass	1/2"-20 Micro AC	7
	NBB10-30GM50-WO-V12	10	Flush	Normally Closed	20 Hz	Ni-Brass	1/2"-20 Micro AC	7
	NBB15-30GM50-WS-V12	15	Semiflush	Normally Open	25 Hz	Ni-Brass	1/2"-20 Micro AC	8
	NCB15-30GM80-US-V12	15	Semiflush	Normally Open	30 Hz	Ni-Brass	1/2"-20 Micro AC	9
	NCN25-30GM80-US-V12	25	Nonflush	Normally Open	30 Hz	Ni-Brass	1/2"-20 Micro AC	10



Mini AC/DC (7/8"-16) Quick Disconnect Models								
Dia. (mm)	Model Number	Range (mm)	Mounting	Electrical Output	Switching Frequency	Barrel Material†	Quick Disconnect	Dwg. No.
30	NBB10-30GM50-WS-V93	10	Flush	Normally open	25 Hz	Ni-Brass	7/8"-16 Mini AC	11
	NBB10-30GM50-WO-V93	10	Flush	Normally closed	25 Hz	Ni-Brass	7/8"-16 Mini AC	11
	NBB15-30GM50-WS-V93	15	Semiflush	Normally open	20 Hz	Ni-Brass	7/8"-16 Mini AC	12
	NCB15-30GM80-US-V93	15	Flush	Normally open	30 Hz	Ni-Brass	7/8"-16 Mini AC	13
	NCN25-30GM80-US-V93	25	Nonflush	Normally open	30 Hz	Ni-Brass	7/8"-16 Mini AC	14

†SS = stainless steel, Ni-Brass = nickel-plated brass

Note: See relay output models on pages 179-183 for other AC sensor options.

Look for this logo in the drawings to identify our X-Series extended range sensors



X-Series™
Sensing range 25-240% beyond "traditional" inductive sensors

Drawing No. 1

NBB10-30GM50-WS [N.O.]
NBB10-30GM50-WO [N.C.]

LEDs
Yellow: Output Status
Green: Power

10 mm Sensing Range

Drawing No. 2

NBB15-30GM50-WS [N.O.]
NBB15-30GM50-WO [N.C.]

X SERIES

LEDs
Yellow: Output Status
Green: Power

15 mm Sensing Range

Drawing No. 3

NCB15-30GM70-US [N.O.]

LEDs
Green: Power
Yellow: Output Status
Green/Yellow Flashing
Short Circuit/Overload Indicators

15 mm Sensing Range

Drawing No. 4

NCN25-30GM70-US [N.O.]

X SERIES

LEDs
Green: Power
Yellow: Output Status
Green/Yellow Flashing
Short Circuit/Overload Indicators

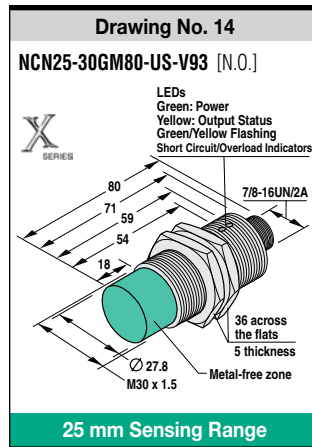
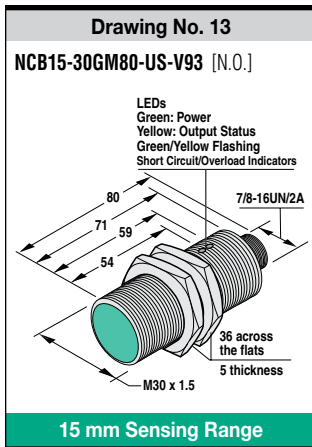
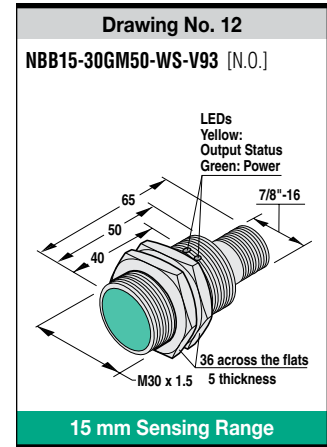
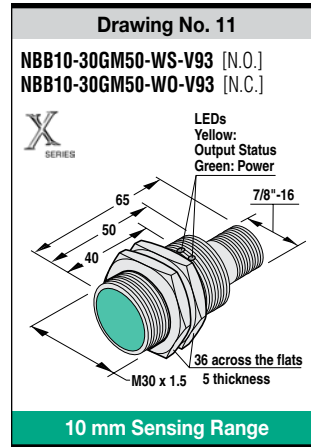
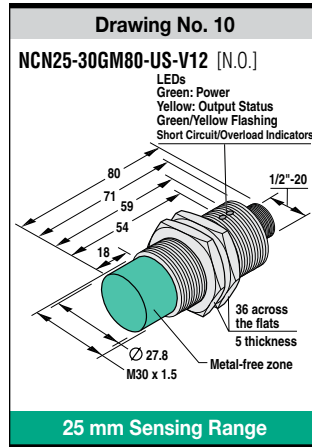
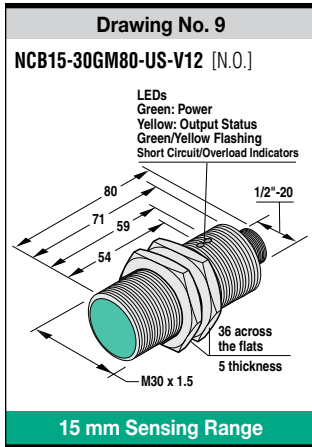
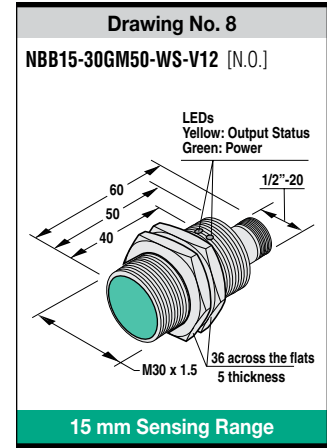
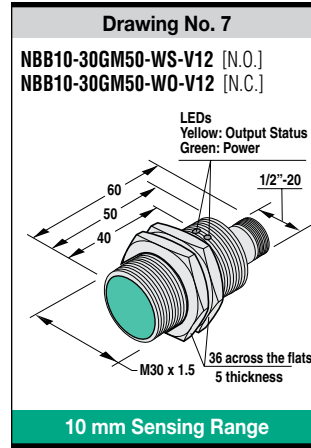
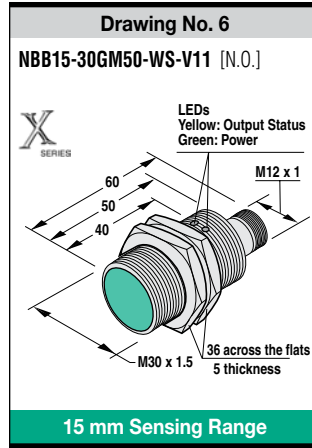
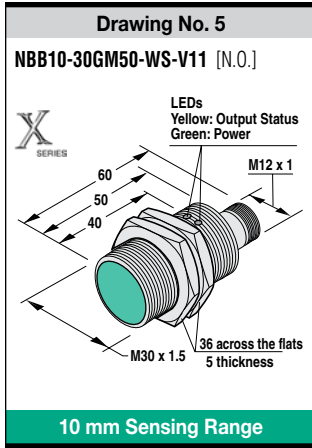
25 mm Sensing Range

CONTINUED

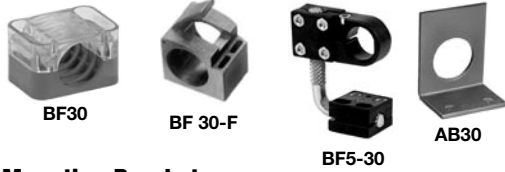
30 mm Diameter

Inductive Cylindrical

2-Wire
AC &
AC/DC



Recommended Accessories



Mounting Brackets

Model	Description
BF30	30 mm clamp bracket
BF 30-F	30 mm snap lever bracket
BF5-30	5-30 mm universal bracket
AB30	30 mm right angle bracket

See pages 885-892 for complete accessory listing.



Mini Cordsets

Straight "Mini AC/DC" (7/8"-16)	
Model	Description
V93-G-YE2M-STOOW	2 m length, STOOW jacket
V93-G-YE4M-STOOW	4 m length, STOOW jacket

Right Angle "Mini AC/DC" (7/8"-16)	
Model	Description
V93-W-YE2M-STOOW	2 m length, STOOW jacket
V93-W-YE4M-STOOW	4 m length, STOOW jacket



Micro AC Cordsets

Straight "Micro" (M12)	
Model	Description
V11B-G-YE2M-PVC	2 m length, PVC jacket
V11B-G-YE4M-PVC	4 m length, PVC jacket

Right Angle "Micro" (M12)	
Model	Description
V11B-W-YE2M-PVC	2 m length, PVC jacket
V11B-W-YE4M-PVC	4 m length, PVC jacket

Straight "Micro" (1/2"-20)	
Model	Description
V12-G-YE2M-PVC	2 m length, PVC jacket
V12-G-YE5M-PVC	5 m length, PVC jacket

Right Angle "Micro" (1/2"-20)	
Model	Description
V12-W-YE2M-PVC	2 m length, PVC jacket
V12-W-YE5M-PVC	5 m length, PVC jacket

See pages 827-874 for complete cordset listing.