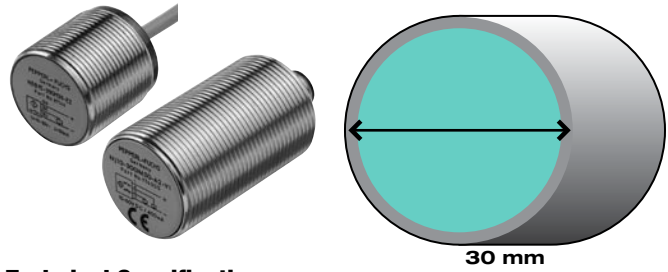


3- and 4-Wire DC 30 mm Diameter Inductive Sensors

- 10 to 40 mm sensing ranges
- 30 mm threaded barrels
- LED target indication
- Cable and Micro (M12) quick disconnect models



Technical Specifications

SUPPLY VOLTAGE	10-30 VDC
LOAD CURRENT (I_L)	<i>GM30/GM35 Models</i> 100 mA max. <i>All Other Models</i> 200 mA max.
LEAKAGE CURRENT (OFF-STATE)	<i>NBB/NBN Models</i> ≤ 0.5 mA <i>NEB/NEN Models</i> ≤ 0.1 mA
OUTPUT	<i>Suffix E, E0</i> NPN normally open <i>Suffix E2</i> PNP normally open <i>Suffix E3</i> PNP normally closed <i>Suffix A0</i> NPN normally open & normally closed <i>Suffix A2</i> PNP normally open & normally closed
VOLTAGE DROP AT I_L (MAX.)	<i>NBB/NBN Models</i> ≤ 3 VDC <i>NEB/NEN Models</i> ≤ 2 VDC
HYSTERESIS	3-15% (5% typical)
SHORT CIRCUIT AND OVERLOAD PROTECTION	Yes
REVERSE POLARITY PROTECTED	Yes
LED INDICATION	See dimension drawings
SENSING FACE MATERIAL	PBT
STANDARDS	EN 60947-5-2
ENVIRONMENTAL PROTECTION	IP67
AMBIENT TEMPERATURE	-13 °F to +158 °F (-25 °C to +70 °C)
APPROVALS	



See pages 803-854 for cordsets



See pages 865-872 for accessories

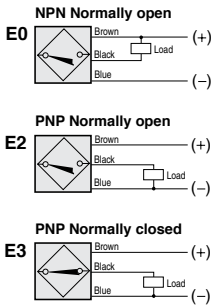
3-Wire and 4-Wire DC

Wiring Diagrams

3-Wire DC



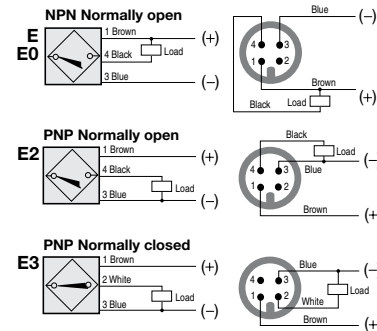
Cable Connection



Quick Disconnect

Note: Wiring diagrams show quick disconnect pin numbers.

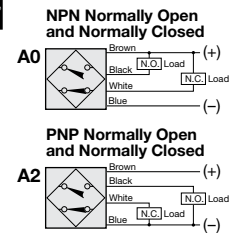
V1 Type



4-Wire DC



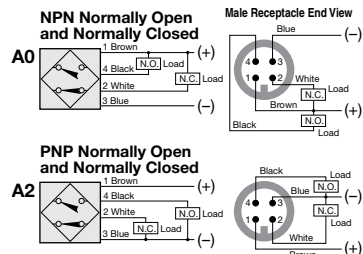
Cable Connection



Quick Disconnect

Note: Wiring diagrams show quick disconnect pin numbers.

V1 Type



30 mm Diameter

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-E0	10	Flush	NPN N.O.	200 Hz	Ni-Brass	PVC/22 AWG	1
	NBB10-30GM50-E2	10	Flush	PNP N.O.	200 Hz	Ni-Brass	PVC/22 AWG	1
	NBB10-30GM60-A0	10	Flush	NPN N.O. & N.C.	200 Hz	Ni-Brass	PVC/22 AWG	2
	NBB10-30GM60-A2	10	Flush	PNP N.O. & N.C.	200 Hz	Ni-Brass	PVC/22 AWG	2
	NBB15-30GM30-E2	15	Flush	PNP N.O.	200 Hz	Ni-Brass	PVC/22 AWG	3
	NBB15-30GM30-E3	15	Flush	PNP N.C.	200 Hz	Ni-Brass	PVC/22 AWG	3
	NBB15-30GM50-E0	15	Flush	NPN N.O.	200 Hz	Ni-Brass	PVC/22 AWG	4
	NBB15-30GM50-E2	15	Flush	PNP N.O.	200 Hz	Ni-Brass	PVC/22 AWG	4
	NBB15-30GM60-A0	15	Flush	NPN N.O. & N.C.	200 Hz	Ni-Brass	PVC/26 AWG	5
	NBB15-30GM60-A2	15	Flush	PNP N.O. & N.C.	200 Hz	Ni-Brass	PVC/26 AWG	5
	NBN15-30GM50-E0	15	Nonflush	NPN N.O.	200 Hz	Ni-Brass	PVC/22 AWG	6
	NBN15-30GM50-E2	15	Nonflush	PNP N.O.	200 Hz	Ni-Brass	PVC/22 AWG	6
	NBN15-30GM60-A0	15	Nonflush	NPN N.O. & N.C.	200 Hz	Ni-Brass	PVC/22 AWG	7
	NBN15-30GM60-A2	15	Nonflush	PNP N.O. & N.C.	200 Hz	Ni-Brass	PVC/22 AWG	7
	NBN22-30GM35-E2	22	Flush	PNP N.O.	200 Hz	Ni-Brass	PVC/22 AWG	8
	NBN25-30GM50-E0	25	Nonflush	NPN N.O.	200 Hz	Ni-Brass	PVC/22 AWG	9
NBN25-30GM50-E2	25	Nonflush	PNP N.O.	200 Hz	Ni-Brass	PVC/22 AWG	9	



Inductive Cylindrical

Micro (M12) Quick Disconnect Models

Dia. (mm)	Model Number	Range (mm)	Mounting	Electrical Output	Switching Frequency	Barrel Material*	Quick Disconnect	Dwg. No.
30	NBB10-30GM50-E0-V1	10	Flush	NPN N.O.	200 Hz	Ni-Brass	M12 Micro	10
	NBB10-30GM50-E2-V1	10	Flush	PNP N.O.	200 Hz	Ni-Brass	M12 Micro	10
	NBB10-30GM60-A0-V1	10	Flush	NPN N.O. & N.C.	200 Hz	Ni-Brass	M12 Micro	11
	NBB10-30GM60-A2-V1	10	Flush	PNP N.O. & N.C.	200 Hz	Ni-Brass	M12 Micro	11
	NBB15-30GM30-E2-V1	15	Flush	PNP N.O.	200 Hz	Ni-Brass	M12 Micro	12
	NBB15-30GM30-E3-V1	15	Flush	PNP N.C.	200 Hz	Ni-Brass	M12 Micro	12
	NBB15-30GM50-E0-V1	15	Flush	NPN N.O.	200 Hz	Ni-Brass	M12 Micro	13
	NBB15-30GM50-E2-V1	15	Flush	PNP N.O.	200 Hz	Ni-Brass	M12 Micro	13
	NBB15-30GM60-A0-V1	15	Flush	NPN N.O. & N.C.	200 Hz	Ni-Brass	M12 Micro	14
	NBB15-30GM60-A2-V1	15	Flush	PNP N.O. & N.C.	200 Hz	Ni-Brass	M12 Micro	14
	NBN15-30GM50-E0-V1	15	Nonflush	NPN N.O.	200 Hz	Ni-Brass	M12 Micro	15
	NBN15-30GM50-E2-V1	15	Nonflush	PNP N.O.	200 Hz	Ni-Brass	M12 Micro	15
	NBN15-30GM60-A0-V1	15	Nonflush	NPN N.O. & N.C.	200 Hz	Ni-Brass	M12 Micro	16
	NBN15-30GM60-A2-V1	15	Nonflush	PNP N.O. & N.C.	200 Hz	Ni-Brass	M12 Micro	16
	NBN22-30GM35-E2-V1	22	Flush	PNP N.O.	200 Hz	Ni-Brass	M12 Micro	17
	NBN25-30GM50-E0-V1	25	Nonflush	NPN N.O.	200 Hz	Ni-Brass	M12 Micro	18
	NBN25-30GM50-E2-V1	25	Nonflush	PNP N.O.	100 Hz	Ni-Brass	M12 Micro	18
	NEN40-30GM60-E2-V1	40	Nonflush	PNP N.O.	100 Hz	Ni-Brass	M12 Micro	19



3-Wire and 4-Wire DC

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

CONTINUED

30 mm Diameter

Look for these logos in the drawings to identify our X-Series extended range and Half Pint short-barrel sensors



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



Half Pint
Short-barrel cylindrical sensors for space-critical applications

Inductive Cylindrical

3-Wire and 4-Wire DC

Drawing No. 1
NBB10-30GM50-E0 [NPN N.O.]
NBB10-30GM50-E2 [PNP N.O.]

10 mm Sensing Range

Drawing No. 2
NBB10-30GM60-A0 [NPN N.O. & N.C.]
NBB10-30GM60-A2 [PNP N.O. & N.C.]

10 mm Sensing Range

Drawing No. 3
NBB15-30GM30-E2 [PNP N.O.]
NBB15-30GM30-E3 [PNP N.C.]

15 mm Sensing Range

Drawing No. 4
NBB15-30GM50-E0 [NPN N.O.]
NBB15-30GM50-E2 [PNP N.O.]

15 mm Sensing Range

Drawing No. 5
NBB15-30GM60-A0 [NPN N.O. & N.C.]
NBB15-30GM60-A2 [PNP N.O. & N.C.]

15 mm Sensing Range

Drawing No. 6
NBN15-30GM50-E0 [NPN N.O.]
NBN15-30GM50-E2 [PNP N.O.]

15 mm Sensing Range

Drawing No. 7
NBN15-30GM60-A0 [NPN N.O. & N.C.]
NBN15-30GM60-A2 [PNP N.O. & N.C.]

15 mm Sensing Range

Drawing No. 8
NBN22-30GM35-E2 [PNP N.O.]

15 mm Sensing Range

Drawing No. 9
NBN25-30GM50-E0 [NPN N.O.]
NBN25-30GM50-E2 [PNP N.O.]

25 mm Sensing Range

Drawing No. 10
NBB10-30GM50-E0-V1 [NPN N.O.]
NBB10-30GM50-E2-V1 [PNP N.O.]

10 mm Sensing Range

Drawing No. 11
NBB10-30GM60-A0-V1 [NPN N.O. & N.C.]
NBB10-30GM60-A2-V1 [PNP N.O. & N.C.]

10 mm Sensing Range

Drawing No. 12
NBB15-30GM30-E2-V1 [PNP N.O.]
NBB15-30GM30-E3-V1 [PNP N.C.]

15 mm Sensing Range

30 mm Diameter



See pages 803-854 for cordsets



See pages 865-872 for accessories

Inductive Cylindrical

3-Wire and 4-Wire DC

Drawing No. 13
NBB15-30GM50-E0-V1 [NPN N.O.]
NBB15-30GM50-E2-V1 [PNP N.O.]

15 mm Sensing Range

Drawing No. 14
NBB15-30GM60-A0-V1 [NPN N.O. & N.C.]
NBB15-30GM60-A2-V1 [PNP N.O. & N.C.]

15 mm Sensing Range

Drawing No. 15
NBN15-30GM50-E0-V1 [NPN N.O.]
NBN15-30GM50-E2-V1 [PNP N.O.]

15 mm Sensing Range

Drawing No. 16
NBN15-30GM60-A0-V1 [NPN N.O. & N.C.]
NBN15-30GM60-A2-V1 [PNP N.O. & N.C.]

15 mm Sensing Range

Drawing No. 17
NBN22-30GM35-E2-V1 [PNP N.O.]

40 mm Sensing Range

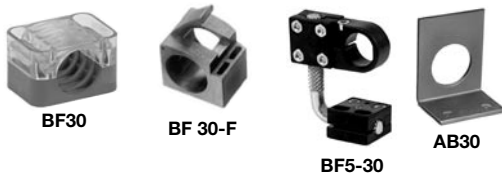
Drawing No. 18
NBN25-30GM50-E0-V1 [NPN N.O.]
NBN25-30GM50-E2-V1 [PNP N.O.]

25 mm Sensing Range

Drawing No. 19
NEN40-30GM60-E2-V1 [PNP N.O.]

40 mm Sensing Range

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 865-872 for complete accessory listing.

Micro Cordsets

Straight "Micro" (M12)	
Model	Description
V1-G-YE2M-PVC	2 m length, PVC jacket
V1-G-YE5M-PVC	5 m length, PVC jacket
V1-G-YE2M-PUR	2 m length, PUR jacket
V1-G-YE5M-PUR	5 m length, PUR jacket

Right Angle "Micro" (M12)	
Model	Description
V1-W-YE2M-PVC	2 m length, PVC jacket
V1-W-YE5M-PVC	5 m length, PVC jacket
V1-W-YE2M-PUR	2 m length, PUR jacket
V1-W-YE5M-PUR	5 m length, PUR jacket



See pages 803-854 for complete cordset listing.