

2-Wire AC/DC 12, 18, and 30 mm Diameter Pile Driver™ Inductive Sensors

- 2 to 8 mm sensing ranges
- Stainless steel housing and sensing face
- LED power and target indication



See pages
827-874 for
cordsets



See pages
885-892 for
accessories



Technical Specifications

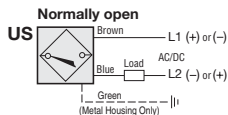
SUPPLY VOLTAGE	20-250 VAC/300 VDC
LOAD CURRENT (I _L)	8-200 mA max.
LEAKAGE CURRENT (OFF-STATE)	≤ 1.3 mA
OUTPUT	Normally open
VOLTAGE DROP AT I _L (MAX.)	≤ 7 VDC
HYSTERESIS	3-15% (5% typical)
SHORT CIRCUIT AND OVERLOAD PROTECTION	Yes
REVERSE POLARITY PROTECTED	Yes
LED INDICATION	See dimension drawings
HOUSING MATERIAL	303 stainless steel (face and barrel)
STANDARDS	EN 60947-5-2
ENVIRONMENTAL PROTECTION	IP67
AMBIENT TEMPERATURE	-14°F to +158°F (-25°C to +70°C)
APPROVALS	

Wiring Diagrams

2-Wire AC/DC



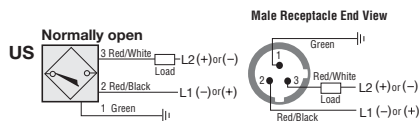
Cable Connection



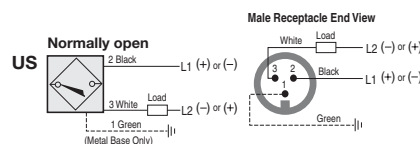
Quick Disconnect

Note: Wiring diagrams show quick disconnect pin numbers.

V12 Type



V93 Type



Reduction Factors

Target Size 12mm x 12mm x 1mm

12mm dia. Model	Mild Steel	Stainless Steel 303/304	316	Al	Cu	Brass	Ti	Ni
Series FE (Ferrous)	1	0.25	0.1	0	0	0	0.5	0.35
Series NFE (Nonferrous)	0	0	0	1	1.1	0.9	0	0

Reduction Factors

Target Size 18mm x 18mm x 1mm

18mm dia. Model	Mild Steel	Stainless Steel 303/304	316	Al	Cu	Brass	Ti	Ni
Series FE (Ferrous)	1	0.5	0.2	0	0	0	0.5	0.35
Series NFE (Nonferrous)	0	0	0	1	1.1	0.9	0	0

Reduction Factors

Target Size 30mm x 30mm x 1mm

30mm dia. Model	Mild Steel	Stainless Steel 303/304	316	Al	Cu	Brass	Ti	Ni
Series FE (Ferrous)	1	0.7	0.2	0	0	0	0.5	0.35
Series NFE (Nonferrous)	0	0	0	1	1.1	0.9	0	0

Specified Sensing Range x Reduction Factor = Actual Sensing Range
For 400 series stainless, consult factory.

When detecting aluminum foil, Series FE Pile Driver must be used.

2-Meter Cable Models

Dia. (mm)	Model Number	Range (mm)	Mounting	Std. Target Material	Electrical Output	Switching Frequency	Cable Jacket/Size	Dwg. No.
12	NMB2-12GM80-US-FE	2	Flush	Steel	Normally open	30 Hz	PUR/#22 AWG	1
	NMB2-12GM80-US-NFE	2	Flush	Aluminum	Normally open	15 Hz	PUR/#22 AWG	1
18	NMB5-18GM80-US-FE	5	Flush	Steel	Normally open	15 Hz	PUR/#20 AWG	2
	NMB5-18GM80-US-NFE	5	Flush	Aluminum	Normally open	30 Hz	PUR/#20 AWG	2
30	NMB8-30GM80-US-FE	8	Flush	Steel	Normally open	10 Hz	PUR/#20 AWG	3
	NMB8-30GM80-US-NFE	8	Flush	Aluminum	Normally open	10 Hz	PUR/#20 AWG	3



Micro AC (1/2"-20) Quick Disconnect Models

Dia. (mm)	Model Number	Range (mm)	Mounting	Std. Target Material	Electrical Output	Switching Frequency	Quick Disconnect	Dwg. No.
12	NMB2-12GM85-US-FE-V12	2	Flush	Steel	Normally open	30 Hz	1/2"-20 Micro AC	4
	NMB2-12GM85-US-NFE-V12	2	Flush	Aluminum	Normally open	15 Hz	1/2"-20 Micro AC	4
18	NMB5-18GM85-US-FE-V12	5	Flush	Steel	Normally open	15 Hz	1/2"-20 Micro AC	5
	NMB5-18GM85-US-NFE-V12	5	Flush	Aluminum	Normally open	30 Hz	1/2"-20 Micro AC	5
30	NMB8-30GM85-US-FE-V12	8	Flush	Steel	Normally open	10 Hz	1/2"-20 Micro AC	6
	NMB8-30GM85-US-NFE-V12	8	Flush	Aluminum	Normally open	10 Hz	1/2"-20 Micro AC	6



Mini AC/DC (7/8"-16) Quick Disconnect Models

Dia. (mm)	Model Number	Range (mm)	Mounting	Std. Target Material	Electrical Output	Switching Frequency	Quick Disconnect	Dwg. No.
18	NMB3-18GM85-US-FE-V93*	3	Flush	Steel	Normally open	15 Hz	7/8"-16 Mini AC	7
	NMB5-18GM85-US-FE-V93	5	Flush	Steel	Normally open	15 Hz	7/8"-16 Mini AC	7
	NMB5-18GM85-US-NFE-V93	5	Flush	Aluminum	Normally open	30 Hz	7/8"-16 Mini AC	7
30	NMB8-30GM85-US-FE-V93	8	Flush	Steel	Normally open	10 Hz	7/8"-16 Mini AC	8
	NMB8-30GM85-US-NFE-V93	8	Flush	Aluminum	Normally open	10 Hz	7/8"-16 Mini AC	8



*NMB3-18GM85-US-FE-V93 is designed for aluminum machining environments. Unaffected by aluminum shavings.

Inductive Pile Driver™

2-Wire AC/DC

Drawing No. 1

NMB2-12GM80-US-FE [N.O.]
NMB2-12GM80-US-NFE [N.O.]

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

80
72
61
56
2
17 across the flats
4 thickness
M12 x 1

2 mm Sensing Range

Drawing No. 2

NMB5-18GM80-US-FE [N.O.]
NMB5-18GM80-US-NFE [N.O.]

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

80
75
2.5
24 across the flats
4 thickness
M18 x 1

5 mm Sensing Range

Drawing No. 3

NMB8-30GM80-US-FE [N.O.]
NMB8-30GM80-US-NFE [N.O.]

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

80
70
2.5
36 across the flats
5 thickness
M30 x 1.5

8 mm Sensing Range

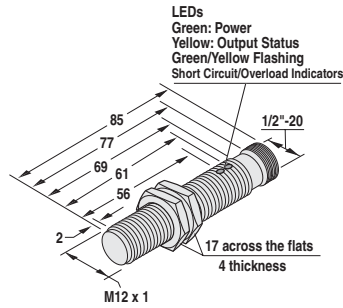
CONTINUED

12, 18, and 30 mm Diameter

Inductive Pile Driver™

Drawing No. 4

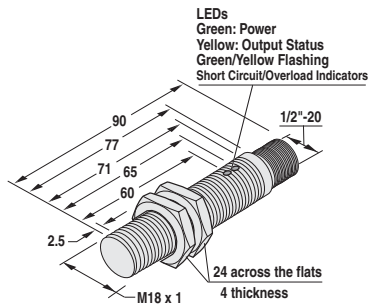
NMB2-12GM85-US-FE-V12 [N.O.]
NMB2-12GM85-US-NFE-V12 [N.O.]



2 mm Sensing Range

Drawing No. 5

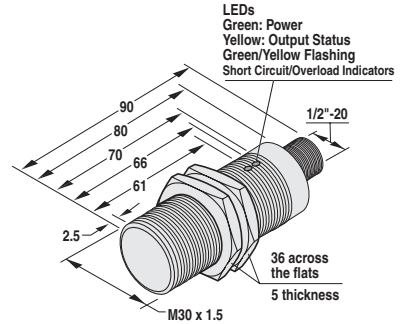
NMB5-18GM85-US-FE-V12 [N.O.]
NMB5-18GM85-US-NFE-V12 [N.O.]



5 mm Sensing Range

Drawing No. 6

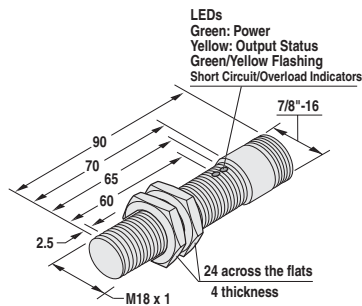
NMB8-30GM85-US-FE-V12 [N.O.]
NMB8-30GM85-US-NFE-V12 [N.O.]



8 mm Sensing Range

Drawing No. 7

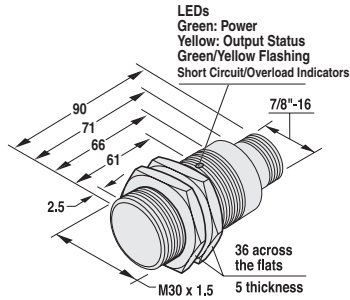
NMB3-18GM85-US-FE-V93 [N.O.]
NMB5-18GM85-US-FE-V93 [N.O.]
NMB5-18GM85-US-NFE-V93 [N.O.]



3 and 5 mm Sensing Range

Drawing No. 8

NMB8-30GM85-US-FE-V93 [N.O.]
NMB8-30GM85-US-NFE-V93 [N.O.]



8 mm Sensing Range

2-Wire
AC/DC

Recommended Accessories



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" (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.



BF12
BF18
BF30



BF 12-F
BF 18-F
BF 30-F



BF5-30



AB12
AB18
AB30

Mounting Brackets

Dia.	Model	Description
12	BF12	12 mm clamp bracket
	BF 12-F	12 mm snap lever bracket
	BF5-30	5-30 mm universal bracket
	AB12	12 mm right angle bracket

Dia.	Model	Description
18	BF18	18 mm clamp bracket
	BF 18-F	18 mm snap lever bracket
	BF5-30	5-30 mm universal bracket
	AB18	18 mm right angle bracket

Dia.	Model	Description
30	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.