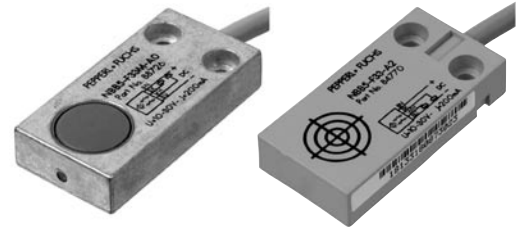


F33 and F33M Flat Rectangular Inductive Sensors

- 5 to 8 mm sensing range
- Flat rectangular housing
- Plastic or metal housing versions



Technical Specifications

SUPPLY VOLTAGE	4.75-30 VDC
LOAD CURRENT (I_L)	200 mA max.
LEAKAGE CURRENT (OFF-STATE)	≤ 0.5 mA
OUTPUT	
Suffix E0	NPN normally open
Suffix E2	PNP normally open
Suffix A0	NPN normally open & normally closed
Suffix A2	PNP normally open & normally closed
VOLTAGE DROP AT I_L (MAX.)	≤ 3 V
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 865-872 for accessories

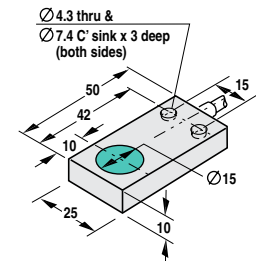
2-Meter Cable Models

Model Number	Range (mm)	Mounting	Electrical Output	Switching Frequency	Housing Material	Cable Jacket/Size	Dwg. No.
NBB5-F33M-E0	5	Flush	NPN N.O.	500 Hz	Die-cast zinc	PVC/#22 AWG	1
NBB5-F33M-E2	5	Flush	PNP N.O.	500 Hz	Die-cast zinc	PVC/#22 AWG	1
NBB5-F33M-A0	5	Flush	NPN N.O. & N.C.	500 Hz	Die-cast zinc	PVC/#22 AWG	1
NBB5-F33M-A2	5	Flush	PNP N.O. & N.C.	500 Hz	Die-cast zinc	PVC/#22 AWG	1
NBB5-F33-E0	5	Flush	NPN N.O.	500 Hz	PBT	PVC/#22 AWG	2
NBB5-F33-E2	5	Flush	PNP N.O.	500 Hz	PBT	PVC/#22 AWG	2
NBB5-F33-A0	5	Flush	NPN N.O. & N.C.	500 Hz	PBT	PVC/#22 AWG	2
NBB5-F33-A2	5	Flush	PNP N.O. & N.C.	500 Hz	PBT	PVC/#22 AWG	2
NBB8-F33-E0	8	Flush	NPN N.O.	500 Hz	PBT	PVC/#22 AWG	2
NBB8-F33-E2	8	Flush	PNP N.O.	500 Hz	PBT	PVC/#22 AWG	2

- ⚡ Stocked item
- Typical delivery 4 weeks or less
- Consult factory for all other models

Drawing No. 1

NBB5-F33M-E0 [NPN N.O.]
 NBB5-F33M-E2 [PNP N.O.]
 NBB5-F33M-A0 [NPN N.O. & N.C.]
 NBB5-F33M-A2 [PNP N.O. & N.C.]



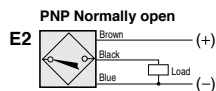
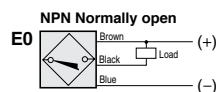
5 mm Sensing Range

Wiring Diagrams

3-Wire DC



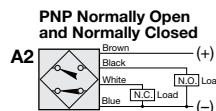
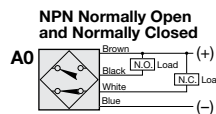
Cable Connection



4-Wire DC

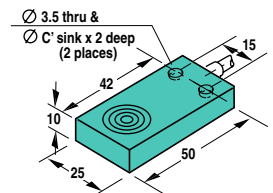


Cable Connection



Drawing No. 2

NBB...-F33-E0 [NPN N.O.]
 NBB...-F33-E2 [PNP N.O.]
 NBB5-F33-A0 [NPN N.O. & N.C.]
 NBB5-F33-A2 [PNP N.O. & N.C.]



5 and 8 mm Sensing Range

Inductive Surface Mount

3-Wire and 4-Wire DC