

H3333 Capacitance Detector

Center Guide Capacitance Detector for Strip Processing Lines



- No field calibration required
- Virtually no maintenance
- Self diagnostics with fault annunciation
- No AC power required
- Output unaffected by passline changes or wavy edges
- Senses ferrous and non-ferrous metals
- Modular assembly allows easy installation without cutting strip

The H3333 Capacitance Detector is a center guide detector featuring superior immunity to strip passline change, tilt, and wavy edges. Its capacitance-sensing design provides the advantage of simple, virtually maintenance-free operation. Shielded construction allows placement in areas with high operator activity or machinery movement. Detector output is unaffected by occasional moisture dripping from the strip.

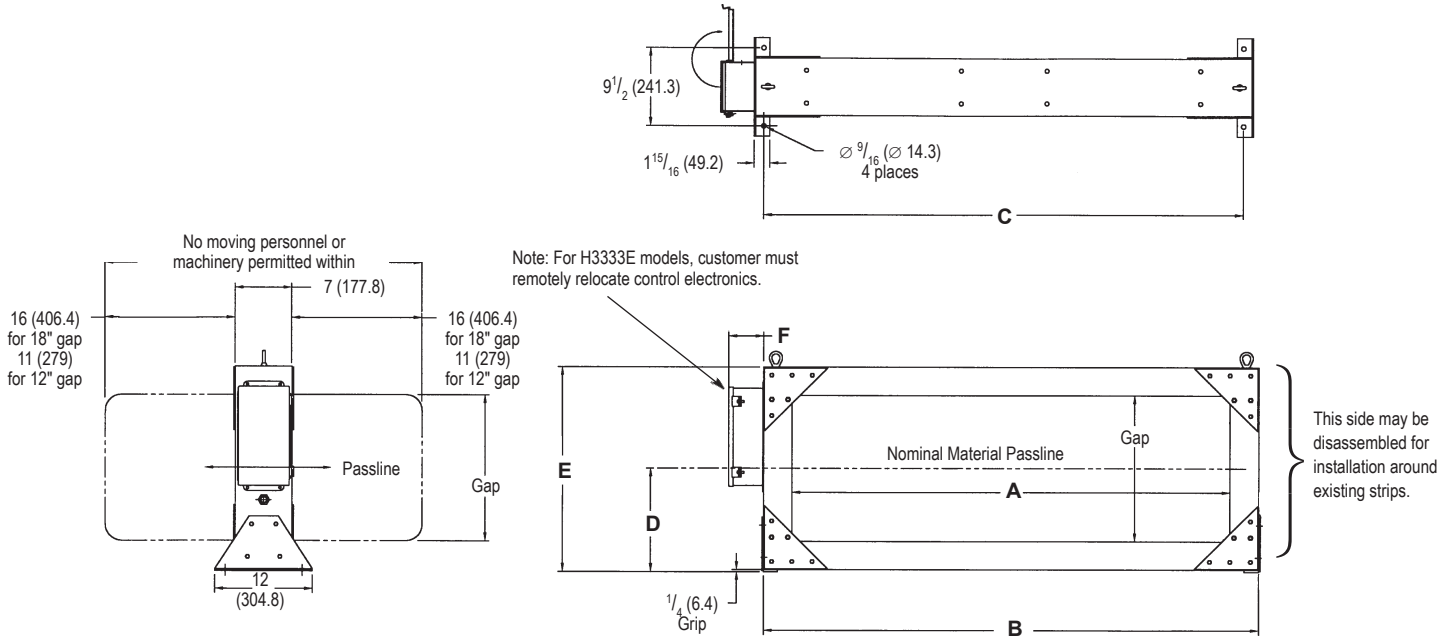
Featuring advanced digital signal processing, the H3333 requires no operator adjustments. There is no field calibration required. The strip does not have to be cut or removed to accommodate the detector. The only setup required is a simple pushbutton input to establish the zero point for the detector. Due to its extremely linear output, the H3333 tolerates large strip-width variations with negligible effect on the guide point. Additionally, the internal processor constantly monitors signal quality and provides a relay output to indicate any possible problem with detector operation.

The H3333 is available in two basic temperature ratings. The H3333A, with integral electronics, is suitable for use in ambient temperatures up to 130 F (55 C). The H3333E, with remote electronics, is suitable for use in ambient temperatures up to 392 F (200 C).

The H3333 can be used with any conductive strip. Process line applications include galvanizing, paint, tin, and pickle lines. The H3333 can be used to retrofit many applications currently using optical detectors, providing freedom from the maintenance associated with optical systems. The H3333 provides a bipolar ± 10 V dc output for compatibility with all Fives North American controllers. The modular design of the detector makes it easy to partially disassemble for installation without cutting the strip in the process line.

DIMENSIONS

inches (mm)



| Gap Model No. | in. (mm) | Strip width ±3" (150 mm) offset | | dimensions in inches (mm) | | | | | weight | Approx. lb (kg) |
|------------------|----------|------------------------------------|------------|---------------------------|--------|--------|--------------------------------|--------------------------------|---------------------------------|--------------------|
| | | min. width | max. width | A | B | C | D | E | | |
| H3333A-18-54 | 18 | 12 | 30 | 54 | 61 | 59 | 12 ³ / ₄ | 25 ¹ / ₄ | 4 ⁹ / ₃₂ | 100 |
| H3333E-18-54 | (457) | (305) | (762) | (1372) | (1549) | (1499) | (324) | (641) | (109) | (45.5) |
| H3333A-12-54 | 12 | 12 | 30 | 54 | 61 | 59 | 9 ³ / ₄ | 19 ¹ / ₄ | 4 ²³ / ₃₂ | 95 |
| H3333E-12-54 | (305) | (305) | (762) | (1372) | (1549) | (1499) | (247.7) | (489) | (120) | (43.1) |
| H3333A-18-78 | 18 | 12 | 54 | 78 | 85 | 83 | 12 ³ / ₄ | 25 ¹ / ₄ | 4 ⁹ / ₃₂ | 125 |
| H3333E-18-78 | (457) | (305) | (1372) | (1981) | (2159) | (2108) | (324) | (641) | (109) | (56.8) |
| H3333A-12-78 | 12 | 12 | 54 | 78 | 85 | 83 | 9 ³ / ₄ | 19 ¹ / ₄ | 4 ²³ / ₃₂ | 120 |
| H3333E-12-78 | (305) | (305) | (1372) | (1981) | (2159) | (2108) | (247.7) | (489) | (120) | (54.4) |
| H3333A-18-96 | 18 | 12 | 72 | 96 | 103 | 101 | 12 ³ / ₄ | 25 ¹ / ₄ | 4 ⁹ / ₃₂ | 140 |
| H3333E-18-96 | (457) | (305) | (1829) | (2438) | (2616) | (2565) | (324) | (641) | (109) | (63.5) |
| H3333A-12-96 | 12 | 12 | 72 | 96 | 103 | 101 | 9 ³ / ₄ | 19 ¹ / ₄ | 4 ²³ / ₃₂ | 135 |
| H3333E-12-96 | (305) | (305) | (1829) | (2438) | (2616) | (2565) | (247.7) | (489) | (120) | (61.2) |
| H3333A-18-120 | 18 | 12 | 96 | 120 | 127 | 125 | 12 ³ / ₄ | 25 ¹ / ₄ | 4 ⁹ / ₃₂ | 165 |
| H3333E-18-120 | (457) | (305) | (2438) | (3048) | (3226) | (3175) | (324) | (641) | (109) | (74.8) |
| H3333A-12-120 | 12 | 12 | 96 | 120 | 127 | 125 | 9 ³ / ₄ | 19 ¹ / ₄ | 4 ²³ / ₃₂ | 160 |
| H3333E-12-120 | (305) | (305) | (2438) | (3048) | (3226) | (3175) | (247.7) | (489) | (120) | (72.5) |

DIMENSIONS SHOWN ARE SUBJECT TO CHANGE. PLEASE OBTAIN CERTIFIED PRINTS FROM FIVES NORTH AMERICAN COMBUSTION, INC.
IF SPACE LIMITATIONS OR OTHER CONSIDERATIONS MAKE EXACT DIMENSION(S) CRITICAL.

SPECIFICATIONS

Housing: Anodized structural aluminum

Operating temperature:

H3333A: 32-130 F (0-55 C)

H3333E: 32-392 F (0-200 C) Electronic enclosure limited to 130 F (55 C).

Guidepoint shift due to passline variaiation: Less than 0.02" per inch of passline change.

Guidepoint shift due to strip width variation: Less than 0.01" per inch of width change.

Power supply: ±14.25 to ±15.75 V dc at 200 mA max.

Outputs: Edge 1: ±10 V dc
Edge 2: ±10 V dc
Edge 1 - Edge 2: ±10 V dc

Output impedance: 100 ohms

Frequency response: dc to 10 Hz

Output sensitivity: 0.35 V per inch nominal

Alarm relay output: 2 amp at 24 V ac/dc

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