VM™ GMD AIR GAP

CAPACITIVE MEASURING CHAINS FOR THE MINING INDUSTRY - GEARLESS MILLS

GENERAL SPECIFICATIONS

Sensors

Operation

• Measurement type	Non-contact proximity, capacitive technology

Connection

• Integral cable	Coaxial
• Connector	Male, SMA

Environmental

• Temperature range	0 to 125°C *[32 to 257°F]*
• Magnetic field immunity	Up to 2 Tesla (50 or 60 Hz)
• Dust and oil contamination	Films have no effect
• Humidity	Up to 95%, non-condensing

Physical Characteristics

• Sensor material	Non-conductive and semi-conductive material
• Integral cable material	FEP Jacket / Teflon® Insulation

Extension Cables

Connection

• Cable type	Triaxial
• Absolute minimum length	20 m *[65.6 ft]* (nominal) minus 1 m *[39.4 in]*
• Connector	
Sensor side	Female, gold-plated SMA and grounding terminal
Conditioner side	Male, gold-plated SMA and grounding terminal
• Minimum bending radius	10 cm *[4 in]*

Environmental

• Temperature range	0 to 125°C *[32 to 257°F]*

Physical Characteristics

• Cable material	FEP jacket / FEP insulation

LIN™-351-20H-GMD Conditioner

Power Requirements

• Voltage	24 Vdc ±15%
• Consumption	120 mA max.
• Protection	Auto-reset fuse
• Warm-up time	30 minutes

Connection

• Power/Output	5-pin M12 male
• Sensor input	Female, gold-plated SMA and grounding terminal

Teflon® is a registered trademark of The Chemours Company FC, LLC (formally E.I. du Pont de Nemours and Company)

Environmental

- Temperature range
  - Operating: 0 to 55°C *[32 to 131°F]*
  - Storage (measuring chain): -25 to 70°C *[-13 to 158°F]*

Physical Characteristics

- Body: Nickel-plated aluminum
- Mounting: 4 slots for #6 (M3.5) screws
- Max. torque on SMA: 1.1 Nm *[10 in-lb]*
- Status indicator: Bicolor LED

Measuring Chains Technical Specifications

VM GMD Air Gap Measuring Chain (2 to 20 mm)

Sensor	VM GMD
Nominal measuring range	2 to 20 mm *[79 to 787 mils]*
Sensor integral triaxial cable length	0.5 m *[19.7 in]*
Extension cable (type H) nominal length	20 m *[65.6ft]*
Conditioner model	LIN351-20H-2/20GMD
Output	4 to 20mA
Bandwidth	DC to 1.2 kHz (-3 dB)
Sensitivity	0,889 mA/mm *[22.6 µA/mil]*
Accuracy (full scale)	See figure 1
Repeatability (% of reading)	± 0.3 %
Temperature drift (at mid-range)	< 1500 ppm/°C
Load at output	500 Ω max.

VM GMD Air Gap Measuring Chain (5 to 35 mm)

Sensor	VM GMD
Nominal measuring range	5 to 35 mm *[197 to 1378 mils]*
Sensor integral triaxial cable length	0.5 m *[19.7 in]*
Extension cable (type H) nominal length	20 m *[65.6ft]*
Conditioner model	LIN351-20H-5/35GMD
Output	4 to 20mA
Bandwidth	DC to 1.2 kHz (-3 dB)
Sensitivity	0,533 mA/mm *[13.5 µA/mil]*
Accuracy (full scale)	See figure 2
Repeatability (% of reading)	± 0.3 %
Temperature drift (at mid-range)	< 1500 ppm/°C
Load at output	500 Ω max.

Figure 1

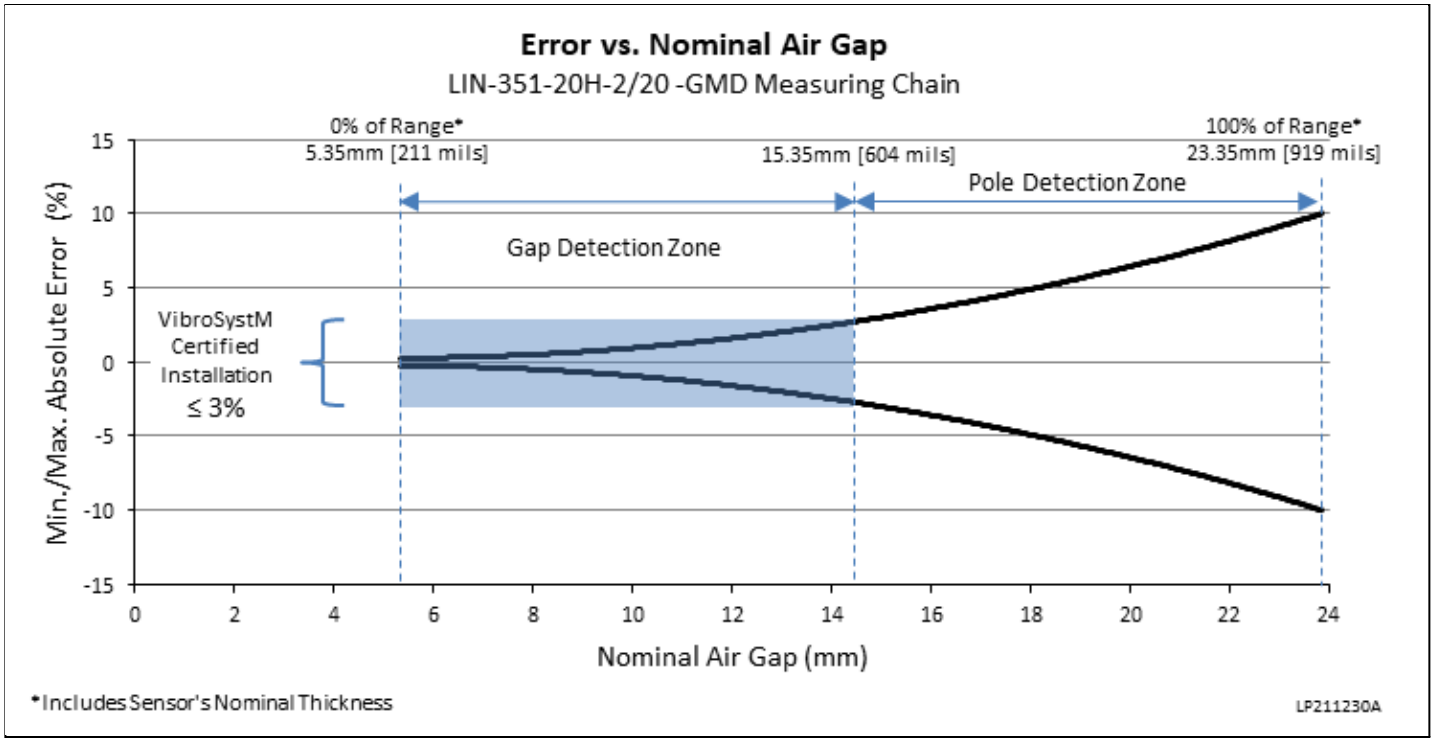
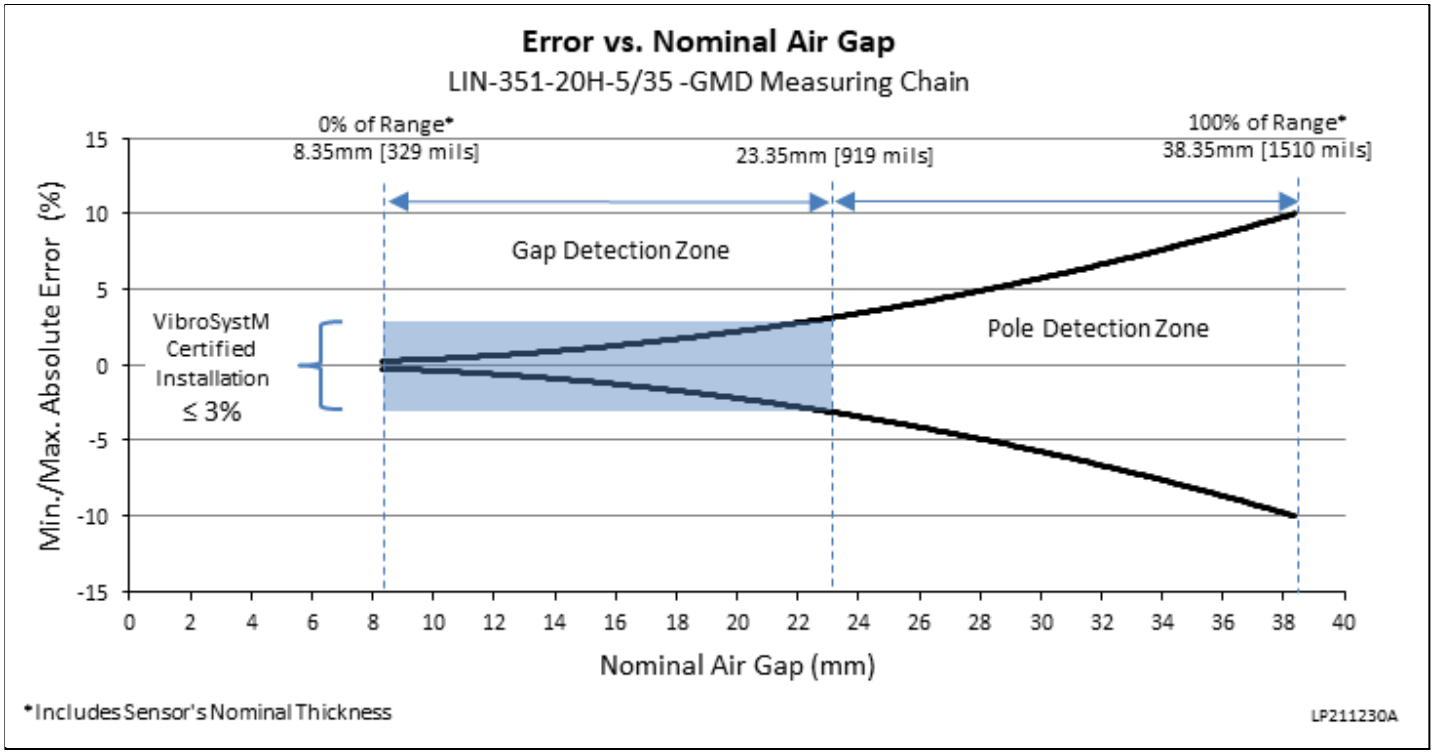
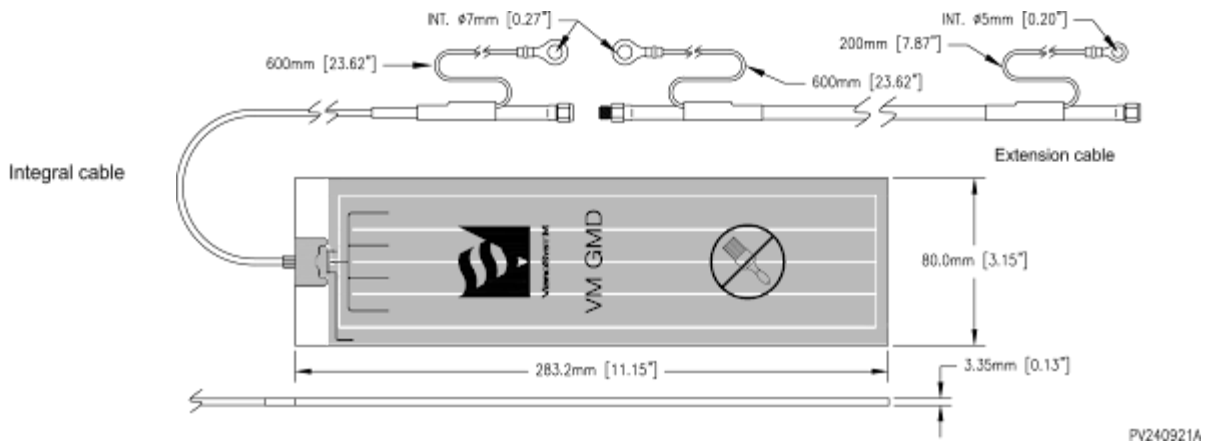


Figure 2

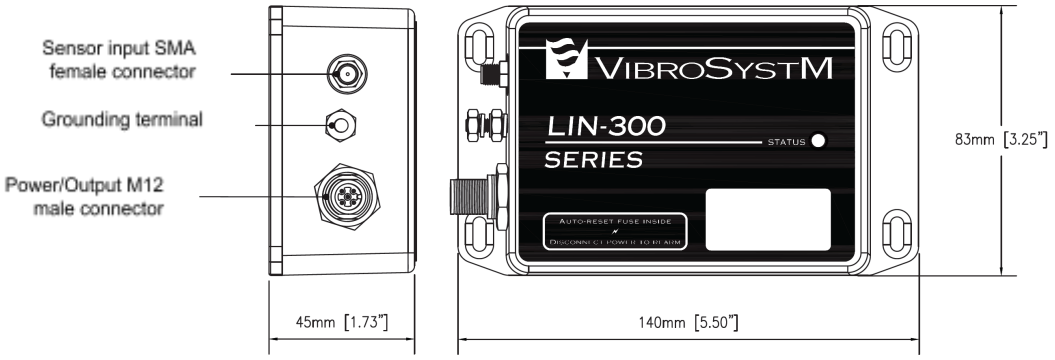


Dimensions

VM GMD Sensor



LIN-351-20H-GMD Conditioner



Product Identification

Product Number	Description
LIN-351-20H-2/20-GMD Measuring Chain	
VSM-L351-2/20-20HGMD	LIN-351-20H-GMD conditioner (2-20 mm)
VSM-CBL-351-20HGMD	Cable / Triaxial GMD - SMA/SMA / (20 m/65.6 ft) (2-20/5-35 mm)
VSM-VMGMD	VM-GMD air gap sensor (2-20/5-35 mm)
LIN-351-20H-5/35-GMD Measuring Chain	
VSM-L351-5/35-20HGMD	LIN-351-20H-GMD conditioner (5-35 mm)
VSM-CBL-351-20HGMD	Cable / Triaxial GMD - SMA/SMA / (20 m/65.6 ft) (2-20/5-35 mm)
VSM-VMGMD	VM GMD air gap sensor (2-20/5-35 mm)

Publication: 2022-03-22