SPM 90546 is a low noise triaxial vibration transducer in rugged design with broad frequency response. It features a versatile M12 connector and an external case in a thick shell for high resistance to impact. Designed for both route-based and permanent-mount applications, this triaxial accelerometer hosts three general purpose, 100 mV/g vibration sensors with ±10% sensitivity tolerance. It has EMI/RFI and ESD protection.

**Technical data**

**Dynamic**
- Sensitivity, ± 10%, 25° C: 100 mV/g
- Acceleration range: 60 g peak
- Amplitude nonlinearity: 1%
- Frequency response:
  - Z Axis ± 3 dB: 2 - 10 000 Hz
  - X and Y axis ± 3 dB: 2 - 7000 Hz
  - Transverse sensitivity, max: 7% of axial

**Electrical**
- Power requirement:
  - Voltage source: 18 - 30 VDC
  - Current regulating diode: 2 - 5 mA
- Electrical noise, equiv. g nominal:
  - Broadband 2.5 Hz to 25 kHz: 160 μg
  - Spectral:
    - 10 Hz: 10 μg/√Hz
    - 100 Hz: 2.0 μg/√Hz
    - 1000 Hz: 1.5 μg/√Hz
- Output impedance, max: 400 Ω
- Bias output voltage: 12 VDC
- Grounding: Case isolated, internally shielded
- Turn-on time: < 1 sec

**Environmental**
- Temperature range: -50 to 120 °C
- Vibration limit: 500 g peak
- Shock limit: 5000 g peak

**Electromagnetic sensitivity, equiv. g.** 100 μg/gauss
**Sealing** Hermetic
**Base strain sensitivity, max** 0.0005 g/μstrain

**Physical**
- Weight: 124 g
- Case material: 316L stainless steel
- Mounting: UNF10-32
- Output connector: 4 pin, M12 male
- Mating connector: M12S female
- Recommended cabling: 4 conductor, shielded
- Accessories supplied: Captive screw, calibration data

**Connections**
- Axis X, power / signal: Connector pin 1
- Axis Y, power / signal: Connector pin 2
- Axis Z, power / signal: Connector pin 3
- Common (all channels): Connector pin 4
- Ground: Shell

**Part numbers**
- 90546 Triaxial vibration transducer
- CAB91 Cable for 90546, 8-pin / 4-pin M12 connectors
- 16941 Mounting foot for 90546, screw
- 16974 Mounting foot for 90546, glue
- 90510 Connector M12S female, straight