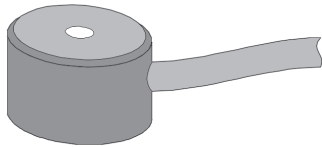


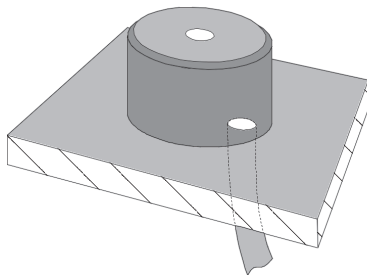
Wide band acoustic emission sensor AEW 100



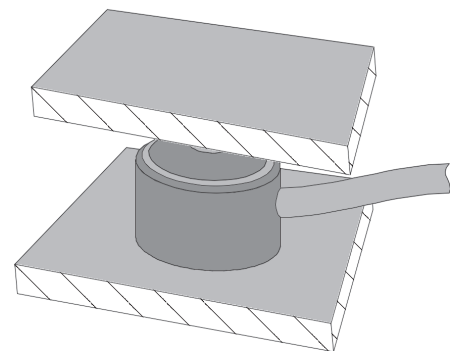
AEW 100 with side connection



AEW 100 with top connection



AEW 100 with bottom connection



AEW 100 with spring disc fixing

The sensor technology you use is a critical factor for successful tool condition monitoring or process monitoring on machine tools. Forces are among the physical parameters of the machining process best suited for monitoring purposes.

In certain cases, however, structure-borne sound or acoustic emission sensors can be a useful addition to force sensors. They detect largely force-proportional monitoring signals even in machining operations which generate very small cutting forces. Acoustic emission and structure-borne sound sensors are the best choice for tools with small chip cross-sections, especially if force and effective power sensors are no longer capable of resolving a measurable signal.

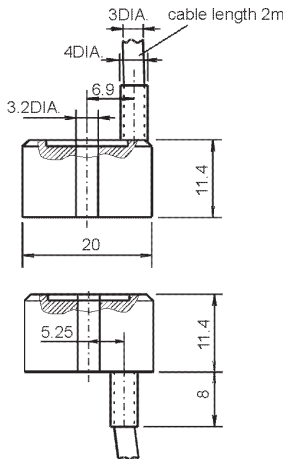
Thanks to its very broad frequency range (approximately 8 to 800 kHz), the AEW 100 broadband structure-borne sound sensor also detects oscillations in machine components or workpieces caused by crack propagation,

crack wall friction and plastic deformation. Filter circuits in the preamplifier or sensor module clean up noise components and compensate background noise levels so that the signal can be processed in a monitoring unit.

With its small dimensions and flexible fitting options, the AEW 100 can be used in a wide variety of different applications, as a stand-alone solution (4 mounting variants) in or on machine parts, in combination with piezoelectric force cells in measuring rings or plates, or as an insert for flexible measuring plates. Because of its many fitting variants, the AEW is also highly suitable for simple retrofitting to existing plant.

Apart from monitoring cutting processes monitoring, the AEW 100 has a wide range of combined applications with force sensors for monitoring metal-forming processes like deep drawing of sheet components or pressing operations.

Wide band acoustic emission sensor AEW 100

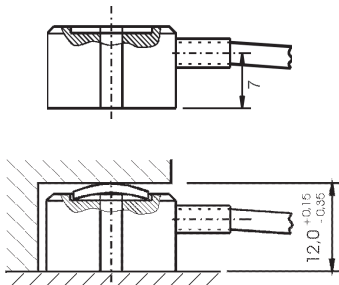


Article-No.:
OSH.AEW.100CT
with top connection

All dimensions in mm.

Article-No.:
OSH.AEW.100CB
with bottom connection

Article-No.:
OSH.AEW.100CR
with side connection

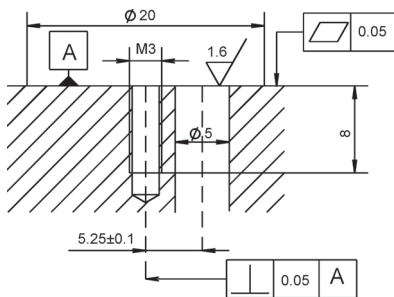


Alternative fixture with
spring disc DIN 137-A5

Enclosure IP 68, salt spray, industrial climate, oil, aggressive cooling lubricants, chip protection only with extra protective sleeve Px 4.

Package includes union for preamplifier cable input.

Screw mounting surface



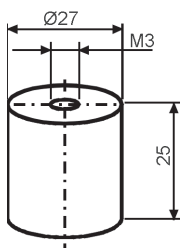
For fixed AEW 100 mounting on machine components (e.g. headstocks, slides, tables etc.). Ø5 hole required only for bottom connection.

The fitting surface must be clean. Silicon

adhesive between the fitting surface and the sensor improves structure-borne sound transmission.

Magnetic fitting for AEW 100

Article-No.: *019.403.HM27M3*

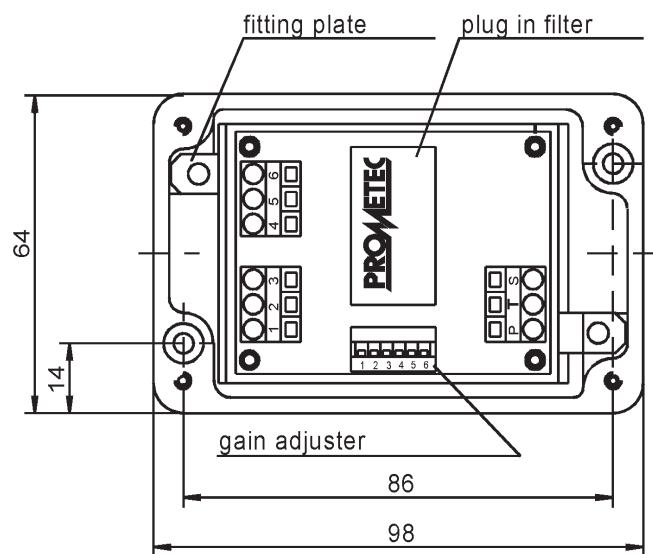
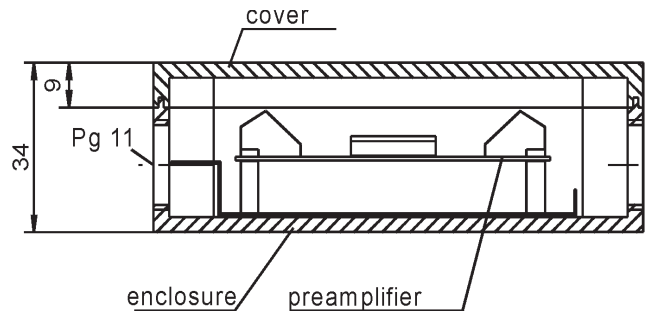


Magnetic fitting for flexible AEW 100 (CT/CR) mounting on workpieces, tools or holders or on machine components. However, a screw mounting provides better acoustic transmission.

Preamplifier AEW

for acoustic emission sensors

Article-No.: *097.817.AEW*



Technical data

Power supply:	± 15 V DC, ± 10%
Output	0 to 10 V DC
Frequency range:	8 to 800 kHz
Default filter:	10 kHz high pass
Gain:	2 to 60 dB adjustable
Temperature range:	0° to 60°C
Enclosure	IP 68, oil and coolant proof

Connection

