

DIN ISO 5348:2022-05 (E)

Mechanical vibration and shock - Mechanical mounting of accelerometers (ISO 5348:2021)

| Contents | Page |
|--|-------------|
| National foreword | 3 |
| National Annex NA (informative) Bibliography | 4 |
| Foreword | 5 |
| Introduction | 6 |
| 1 Scope | 7 |
| 2 Normative references | 7 |
| 3 Terms and definitions | 7 |
| 4 Basics | 7 |
| 5 Characteristics to be specified by manufacturers of accelerometers | 10 |
| 6 Considerations for selecting a mounting method | 10 |
| 6.1 General considerations | 10 |
| 6.1.1 Procedures | 10 |
| 6.1.2 Conditions | 10 |
| 6.2 Specific considerations | 11 |
| 6.2.1 Frequency range of operation | 11 |
| 6.2.2 Transducer cable | 11 |
| 6.3 Determination of the mounted fundamental resonance frequency | 12 |
| 6.3.1 General | 12 |
| 6.3.2 Vibration excitation method | 12 |
| 6.3.3 Shock excitation methods | 13 |
| 6.4 Recommendations for particular types of mountings | 14 |
| 6.4.1 General | 14 |
| 6.4.2 Stud mounting | 15 |
| 6.4.3 Adhesive mounting | 16 |
| 6.4.4 Magnets | 19 |
| 6.4.5 Quick mount | 19 |
| 6.4.6 Probe | 20 |
| 6.4.7 Conical bolting | 20 |
| 6.4.8 Low-percussion mounting devices for recording human exposure to vibration .. | 21 |
| 6.4.9 Mounting by three-point support and ground spikes | 21 |
| 6.4.10 Wedge anchors | 21 |
| 6.4.11 Mounting fixtures | 21 |
| 7 Typical frequency response for various types of mounting | 22 |
| 8 Further mounting aspects | 25 |
| 8.1 Base strain sensitivity of an accelerometer | 25 |
| 8.2 Thermal mounting effects | 25 |
| 8.3 Electrical ground loops | 26 |
| Bibliography | 27 |