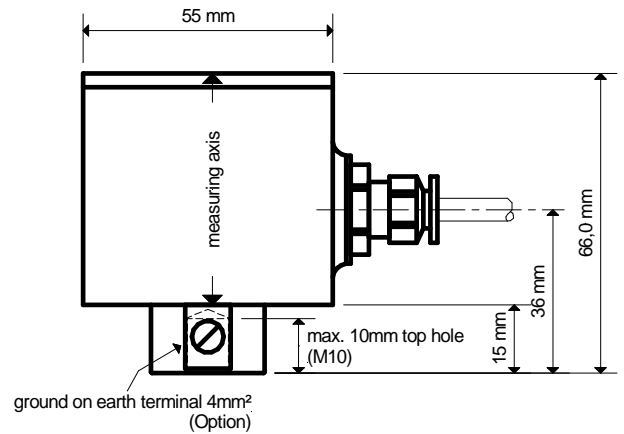


ATEX acceleration sensor

ESW[®]-small-Ex-...-K2-Sensor (hol660)



Description

The piezoelectric accelerometer ESW[®]-small-Ex-... sensor has been developed to record vibrations and temperature under industrial conditions. Thanks ATEX approval it is for the use in explosion-proof environment. The device operates according to the ICP[®] industry standard with two-wire signal transmission at a constant current supply of 4mA. To avoid distortions of the measured results of ambient noise signals the case is isolated. This isolated structure guarantees a operation without disruption. A low-noise electronics and an accurate temperature compensated construction ensure precisely measurements in the entire work area.

A high degree of reliability is ensured by the high-quality stainless steel cabinet as well as the simple installation and operation of the sensor.

The instrument is approved according to the ATEX Directive 94/9 EG for use in gas-air mixtures under atmospheric conditions or flammable dusts.

The unit has an IEC Ex approval: IECEx BVS 13.0006X

Application fields

In all technical applications in which oscillations occur, the ESW[®]-small-Ex-...Sensor is a valuable aid. Here are a few examples:

- Fans, pumps and blowers
- Jolters, decanters and separators
- Hoisting and transportation devices
- Drives
- Machine tools, processing machines and production machines

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The technical design of the ESW[®]-small-Ex-... Sensor varies according to the requirements that you place on the device. Owing to its flexible structure, holthausen elektronik GmbH can fulfill customer wishes and produce specific versions. Should you have any questions, we are always at your service.

In the following, you can see an overview of the general technical data of versions that have already been produced. The data in grey can be matched to your wishes.

Technical data

| | | | |
|----------------------------|---|--|--------------------------|
| supply | ICP [®] -constant-current-source: +4mA (+2 to +10mA DC) ICP [®] -output-voltage: +22V to +28V DC | | |
| temperature range | -40°C to +70°C (T6) or -40°C to + 80°C (T5) | | |
| type of protection | IP 68 | | |
| case | Aluminium, Edelstahl V2A (1.4305) or V4A (1.4571) | | |
| case dimensions | 66 x 55mm (h x Ø) | | |
| weight | approx. 750g | | |
| connection cable | different length and types of cables, firmly fixed | | |
| screw-type conduit fitting | ADE 1F, M12, Di4, Brass nickel-plated, Sealing ring: Neoprene | | |
| sensor | integrated ICP [®] acceleration sensor | | |
| sensitivity | 100 mV/g ±5% (+24°C) - 100 mV/g ±10% (- 40°C to +80°C) | | |
| frequency range | ±10 % : 1 to 3500 Hz ±3 dB : 0.5 to 5000 Hz | | |
| resonance frequency | > 15kHz | | |
| measurement range | 80 g pk | | |
| transverse sensitivity | < 5% (20Hz, 5g) | | |
| starting time | < 1sec | | |
| temperature measuring | integrated (KTY81-110) | | |
| gas registration | I12G Ex d IIC T6 Gb | or | I12G Ex d IIC T5 Gb |
| dust registration | I12D Ex tb IIIC T80°C Db | or | I12D Ex tb IIIC T90°C Db |
| cable connection | white sensor (+) yellow KTY81-110 shield not connected | brown sensor (ground) green KTY81-110 | |
| optional | threaded pin, M10x25mm, V4A | | |
| optional | ground on earth terminal, BARTEC, 4,0mm ² | | |

Technical data under reservation!

ICP[®] is a registered trademark of PCB Piezotronic INC.

holthausen elektronik GmbH is certified according to DIN EN ISO 9001.

ESW[®] is a registered trademark of holthausen elektronik GmbH, Wevelinghoven 38, 41334 Nettetal