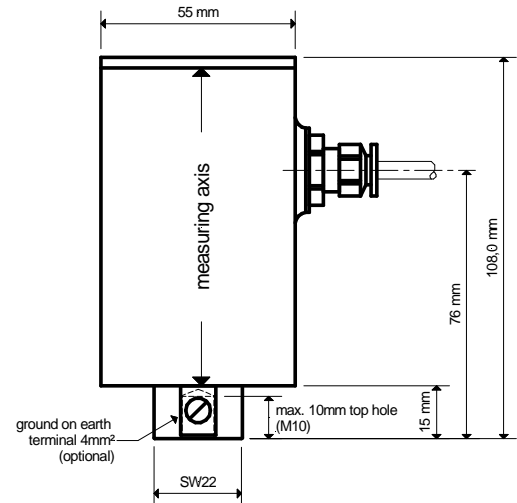


# Electronic Vibration monitoring unit

ESW<sup>®</sup>-small-Ex-...Compact (hol660)



## Description

The ESW<sup>®</sup>-small-Ex-...Compact is used for permanent machine monitoring.

Undesired vibrations that occur owing to mechanical defects or imbalances in the machine being monitored are detected early. Warning devices can be actuated with the help of the alarm relay. Thanks to this early detection, increased wear and the concomitant costs are avoided, and the life is extended. Production downtimes are also reduced, as a result of which a higher degree of certainty of planning is ensured.

A high degree of reliability is ensured by the integrated sensor, the high-quality stainless steel cabinet as well as the simple installation and operation of the ESW<sup>®</sup>-small-Ex-...Compact. Other fitted features include the adjustable measurement range, the switchable analog output, which can be used for adjusting the alarm limiting values and the self-test function.

Optionally, an alarm memory can be activated for one of the two relays.

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

Gas registration: II2G Ex d IIC T6 Gb / Dust registration: II2D Ex tb IIIC T80°C Db

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

## Application fields

In all technical applications in which oscillations occur, the ESW<sup>®</sup>-small-Ex-...Compact 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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## ESW<sup>®</sup>-small-Ex-...Compact (hol660)

The technical design of the ESW<sup>®</sup>-small-Ex-...Compact 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

operating voltage	24V DC $\pm 20\%$ , reverse polarity protected
current input	max. 100mA
temperature range	-40°C to +60°C
type of protection	IP 68
case	Aluminium, high grade steel V2A (1.4305) or V4A (1. 4571)
case dimensions	108 x 55mm (h x Ø)
weight	approx. 1,0kg
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 acceleration sensor
measured value	vibration acceleration in $m/s^2$ or vibration velocity in mm/s
measurement range	0 to 10 / 0 to 20 / 0 to 50mm/s, switchable
signal assessment	arithm. average, aligned to RMS
frequency range	10Hz to 1kHz (-3dB)
filter	Butterworth, 60dB/dec resp. 18dB/oct
analog output	0 to 20mA or 4 to 20mA current source proportional to the selected measuring range
load	max. 500Ohm
switching output	two potential free switching-contacts K1 and K2 (30V,1A)
switching threshold	10% to 100% of measuring range, adjustable by Potentiometer in the case
rise time delay	K1 = 10s, K2 = 5s
fall time delay	K1 = 0,5s, K2 = 0,5s
alarm memory (optional)	After the activation of the alarm relay K1 the unit will remain in the alarm status until an external and manually reset will be activated.
line monitoring	The switching contacts of K1 and K2 are closed in their normal position, the relays are activated (excited). In the case of alarm, voltage drop or cable breakage, the switching outputs become highly resistive because the switching contacts are deactivated.
ground on earth terminal	(optional) BARTEC, 4,0mm <sup>2</sup>

Technical data under reservation!

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

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