

Installation instructions

for SwitchBox - VIB 6.785

Measurement location switch

- Mount the housing (IP 65 protection) ...
 - in an easily accessible location, ideally next to the machine
 - in an existing installation rack, if possible.
 - by taking into account the dimensions.
 - using four M8 bolts.
- Connect the cables to the SwitchBox:
 - Lay a cable loop (approx. 30cm) before each gland to prevent any pulling forces being exerted on the connection during subsequent maintenance and repair work.
 - Mark the cable ends in order to prevent mix-ups when connecting the wires.
 - Open the housing, and feed the cable through the cable gland into the housing.
 - Dismantle the cable end, and clamp a wire sleeve onto each wire. Insulate the shield conductor and transition to the cable sheath with a suitable shrinkage tube.
 - To open the spring terminal, insert a small screwdriver (VIB 81060) into the lower opening (1) and rotate it 90° (2).
 - Push in the wire until the end stop.
 - Remove the screwdriver to close the spring terminal.

Notes

Each measurement channel is assigned three terminals. Their polarity is as follows:

Meas. ch. 1: terminal 1(+) / 2 (-) / 3 (shield)

Meas. ch. 2: terminal 4 (+) / 5 (-) / 6 (shield)

etc.

A complete overview of the channel-terminal assignment is found in the housing cover. All shield and minus (-) terminals are on par and - from hardware version 1.1 and higher - connected to PA.

- Connecting a coaxial cable: Signal to Plus (+), Shield to Minus (-)
- Connecting a shielded twisted-pair cable: Signal to Plus (+), GND to Minus (-), Shield to shield terminal (S)

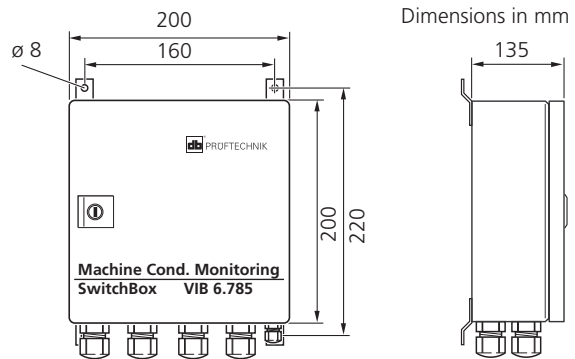


Note

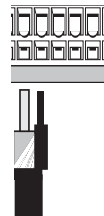
Note that PRÜFTECHNIK vibration transducers with MIL connectors have different pin assignments (ICP or CLD type).

MIL connector in the SwitchBox:

Pin A is connected to the Plus-(+) terminals, Pin B is connected to the Minus(-) terminals (=>PA).

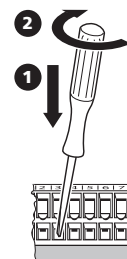


1 2

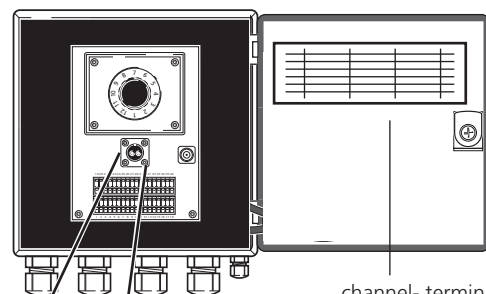


Coaxial cable ... shielded TP cable connected. Shielding insulated with shrinkage tube

1 2 3



Open spring terminal:
1) insert screw driver
2) rotate it 90°



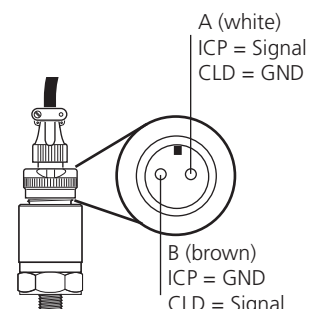
channel-terminal assignment



A = Plus (+)

B = Minus (-), connected to PA

ICP-type transducer
VIB 6.172
CLD-type transducer
VIB 6.195

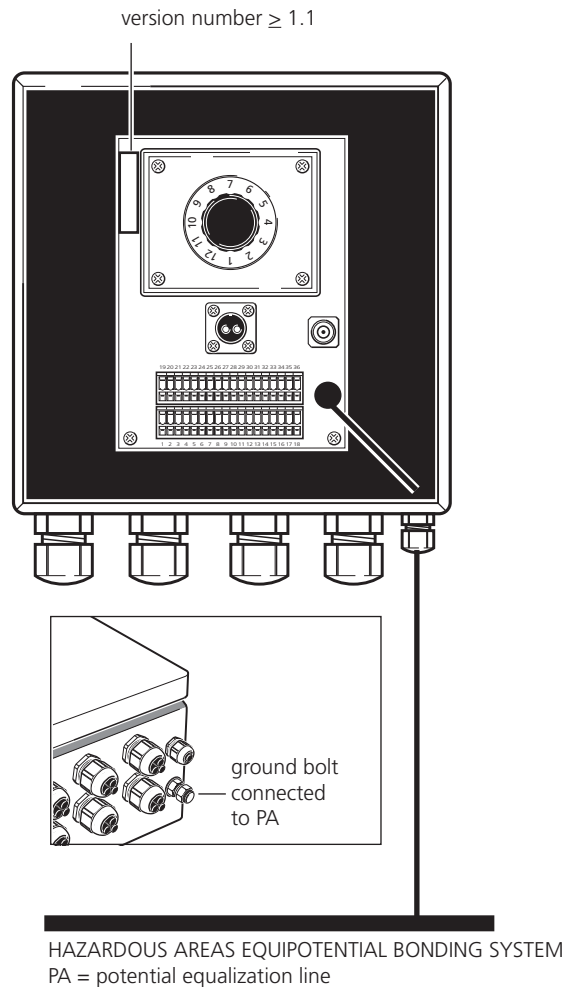




Installation in hazardous areas

The SwitchBox measurement location switch (VIB 6.785) of version 1.1 and higher can be used for installation in hazardous areas.

The version number of the SwitchBox is located to the left of the rotary switch on the main board. For measurement location switches of version 1.1 and higher, the main board is connected to the ground bolt with a cable.



Attention

Conditions for the safe operation of the SwitchBox (VIB 6.785) and the sensors



- Sensors must be insulated against the machines. The insulated sensors must be fitted with the IP68 option or with caps beyond the insulating position. The caps must be reliably fixed by plastic clamps.
 - If possible, the housing should not be installed outside of the hazardous area. Otherwise, it should be labeled accordingly.
 - The ground bolt of the SwitchBox housing should be connected to the HAZARDOUS AREAS EQUIPOTENTIAL BONDING SYSTEM (PA) on site.
 - The cable between the ground bolt and the main board in the housing may not be disconnected.
 - Wiring to the HAZARDOUS AREAS EQUIPOTENTIAL BONDING SYSTEM::
 - > For reasons of noise suppression, a line resistor of $<120\text{ m}\Omega$ is recommended ($120\text{ m}\Omega = 1.5\text{ qmm}/10\text{ m cable length}$).
 - > Moreover, the safety regulations of personnel, goods, ... with respect of lightning, explosion, electricity and, if necessary, any other regulations of the respective customers, trade union, insurers, country, confederation, etc. must be taken into account.
 - > The respective installation regulations regarding the safety of the type of connection must also be followed here. Consequently, this must be performed by an authorized specialist there who is insured to do so.
 - The sum of capacitances and inductances of all connected cables and transducers may not exceed the allowable values for the measurement device to be connected.
 - The measurement device to be connected must not exceed the interface parameters of the connected transducers.
 - The line operator is responsible for the safe operation of the equipment.
- Recommendation:
- The resulting interface parameters of the system should be clearly identified.