

WPS-04 Exx

explosion-proof call station, 4 toggle

Explosion-proof digital intercom call station with 2-wire technology, suitable for intercom and public address applications in areas exposed to explosion risks zone 2 / 22

At a glance:

- economical 2-wire digital technology
- Up to 4 km remote installation with internal 4 Watt loudspeaker
- Compact and robust design for wall mounting
- With built-in loudspeaker and microphone
- Intercom electronics with microphone preamplifier and dynamic compressor
- 25 W booster amplifier with 100V output
- 4 toggles allow 4 connections
- LED to indicate operating states for each toggle
- Material made of glass-reinforced polyester, fully insulated, colour red (RAL 3001)
- Operating voltage 48 VDC
- Protection class IP65
- Dimensions h/w/d = 400 x 100 x 100 (130) mm
- Weight approx. 3,5 kg

General data:

2-wire technology

Operating voltage: 48 VDC

Amplifier power: 1 Watt
Optionally with additional amplifiers: 25 Watt

Power consumption: max. 5W stand-alone (typically)
max. 50W with booster amplifier

Frequency range: up to 12 kHz with 4DAV

Volume control, adjust: 0 - 25 dB

Microphone: dynamic, direct

4 toggles with LED indicators
4 label fields



System design:

The explosion-protected station consists of a bottom part and a lid. The lower part is equipped with a PCB (Printed Basic Board) and 3 cable glands. Optionally, the board is expandable for external speakers with an additional 25 W amplifier. The performance-relevant parts are molded according to ATEX II 3G Ex nA IIC T4 Gc and ATEX II 3D Ex tc IIIC T130°C. The station's cover is equipped with speaker, microphone, keyboard circuit board (electronics including station's 1 watt amplifier) and 4 toggles. LEDs for signaling are assigned to the toggles mounted on the PCB.

To the DVS-21, WPS-04 Exx is connected with one pair on the LF interface slot 4DAV. A booster amplifier for the additional power supply is required. These can be picked up over a second pair of wires at the 4DAV or supplied locally.

Data transfer between the station and DVS-21 is uP controlled. On the light-emitting diodes busy messages, voice and call signalling receipts are displayed. The display and blinking behaviour of the LEDs is configured with the operating software of ICS DVS 21st

Casing characteristics:

Material:	GRP
Protection class:	IP65 acc. to EN 60529
Stability:	< 7 Nm acc. to EN 50014
Temperature range:	-25 °C to +60 °C acc. to EN 6072 1-3-3 (T4)
Fastening of cover with casing:	6 stainless steel +/- front plate screws, M6 thread
Sealing:	gasket in tongue and groove system

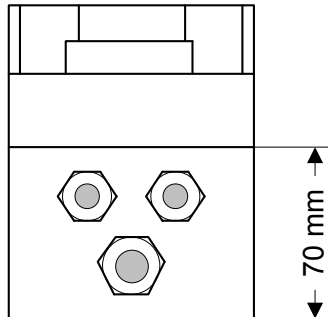
Microphone in protective casing:

Type:	directional, noise cancelling
Mechanical protection:	Gore membrane

Internal loudspeaker:

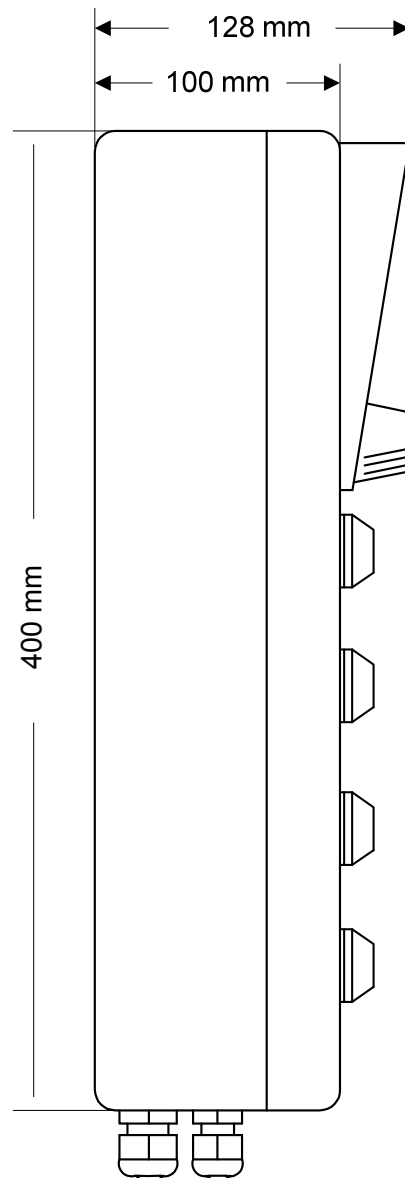
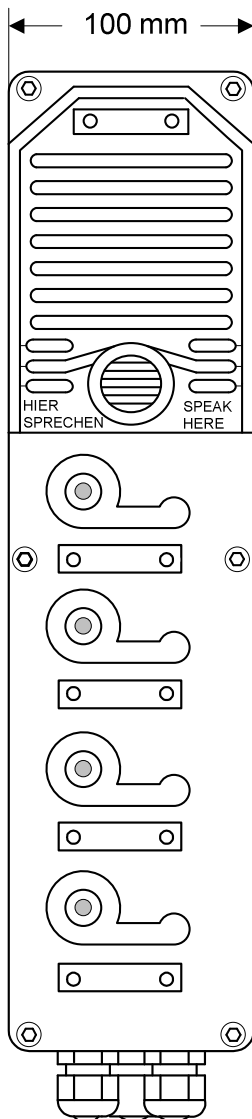
Electrical power:	4 Watt
Sound pressure level:	≥ 92 dB @ 0,25m
Frequency range:	300 Hz - 12 kHz
Impedance:	4 Ohm

Installation and cabling:



Material: Polyester with glass fiber,
self-extinguish acc. UL 94-VO
Colour of casing: red, RAL 3001
Colour of toggles, glands and mic cover: black
Weight: approx. 3,5 kg

Material: Glasfaserverstärktes Polyester,
schwer entflammbar nach UL 94-VO
Gehäusefarbe: rot, RAL 3001
Schwenktaster, Verschraubungen, Mikrokorb:
schwarz
Gewicht: ca. 3,5 kg



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The explosion-proof stations have 4 integrated fastening holes for direct wall mounting. Apart from the fastening screws, no further mounting material are necessary. The connection cable is inserted through the cable gland and the wires are connected to the clamp terminals. There are three cable glands available, one for the cable coming from the exchange DVS-21, a second for the cable to the external loudspeaker, and the remaining one for Use of additional signalling units, e.g. indicator.

The required terminal connections for the above-mentioned applications are shown on the circuit board, allowing the connection of wires even without the necessity of any drawings. The terminals are accessible after removing the casing cover and the protective cover. In case of service at the call station in areas with explosion risk the call stations must be made zero potential during this process.

Mounting on wall: 4 holes for 6 mm screws integrated in casing
Whole assembly: 362 x 84 mm (14.25 x 3.3 inches)

Cabling glands: one cable gland M25 (exchange cable)
one cable gland M20 (add. loudspeaker)
one cable gland M20 (indicator)

Wire/cable requirement for stations operating with internal loudspeaker only:

- Data/voice/power: 1 pair twisted (a/b symmetrical)
- Cable type: standard telephone cable, e.g. AY(2YL), preferably >0.8 mm diameter wire, Ex-approved connection terminals 2 x 2.5 mm².
- Cable to indicator (48 VDC): 2 cords, standard telephone cable, preferably >0.8 mm diameter wire, Ex-approved connection terminals 2 x 2.5 mm². switching capacity max. 48 VDC/0.6 A

Additional wire/cable requirement for stations operating with external loudspeaker:

- Cable to ext. loudspeaker: 2 cords of 0.8 mm or higher (100 V-line), terminals permit 1 x 2.5 mm².
- Additional power feed 2 cores of 0.8 mm or higher, terminals permit 1 x 2.5 mm².

Attachments:



- Sound insulation hood: L-No. 1.340 made of V2A, H x W x D = 1000 x 600 x 500 mm
Weight: approx. 27 kg
Optional: with pole bracket

- Ex-Indicator On enquiry

- Strobe & Sounder Combination On enquiry