

# SOUNDERS 105/110 dB(A) DS 5-SIL / DS 10-SIL



Integrated safety tough demands under industrial conditions.

- To signal dangerous situations in safety-relevant application such as process and plant safety, e. g.
  - leaks/gas warning, high-pressure/overfilling
 and machine safety, e. g. as
  - start-up warning, excess rotation speed warning, machine stop delay warning
- By means of integrated self-monitoring of the devices the normative required, regular inspection of warning devices is ensured.
- The warning devices can be implemented in Safety Instrumented Systems (SIS) up to **SIL 2/PLd**.

We would be more than happy to provide all safety-technical key data.



protection system



operating temperature



acoustic penetration



warranty



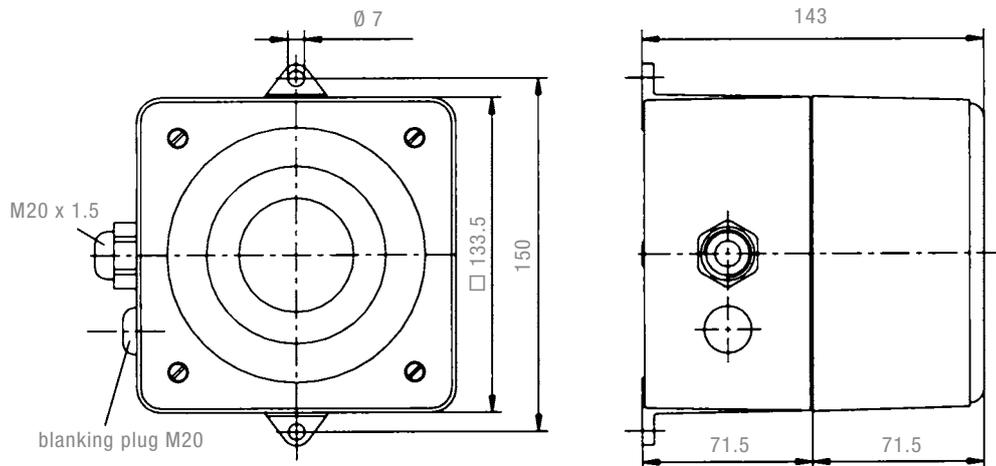
| PRODUCT                                | DS 5-SIL  |               | DS 10-SIL     |               |
|--|---|---------------|---------------|---------------|
| <b>DATA</b>                            |   |               |               |               |
| Operating range                        | 95–253 V  | 19–29 V       | 95–253 V V    | 19–29 V       |
|  | AC 50   60 Hz   | DC            | AC 50   60 Hz | DC            |
| Nominal current consumption            | 40 mA @ 230 V   | 280 mA        | 60 mA @ 230 V | 420 mA        |
| Diagnostics channel                    | current consumption   | 30 mA @ 230 V | 20 mA         | 30 mA @ 230 V |
|  | switching power   | 230 V / 80 mA |               |               |
| Sound pressure level                   | 105 dB(A)   |               | 110 dB(A)     |               |
| Alarm tones                            | 32 / 4 tones are externally selectable  |               |               |               |
| Operating temperature                  | –25 °C ... +55 °C   |               |               |               |
| Storage temperature                    | –40 °C ... +70 °C   |               |               |               |
| Relative humidity                      | 90 %  |               |               |               |
| Protection system according to EN 6052 | IP 66   IP 67   |               |               |               |
| Duty cycle                             | 100 %   |               |               |               |
| Material                               | die-cast aluminium GD-Al Si12 Cu  |               |               |               |
| Surface coating                        | epoxy resin paint RAL 3000, flame red   |               |               |               |
| Cable bushing                          | 2x M20 (1x chrome-plated brass cable fitting, 1x chrome-plated brass blanking plug) |               |               |               |
| Clamping range of the cable fitting    | 8–12 mm   |               |               |               |
| Connecting terminals                   | max. 2.5 mm <sup>2</sup>  |               |               |               |
| Weight                                 | 2.15 kg   | 1.95 kg       | 2.15 kg       | 1.95 kg       |

## OPTIONS/ACCESSORIES



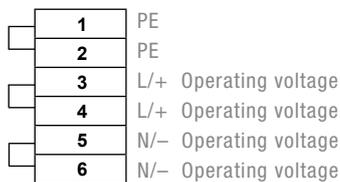
TAS: External tone selection for controlling several tones over great distances.

## DIMENSIONS

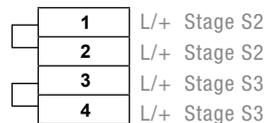


## CONNECTION DIAGRAM

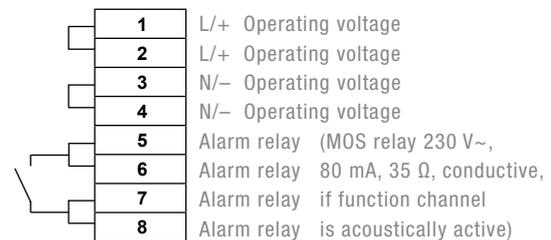
### X1 Sounder channel



### X2 optional external tone selection (option -TAS or -TAV)



### X1 Monitoring channel



| ARTICLE NO. |               | DS 5-SIL    |             | DS 10-SIL   |             |
|-------------|---------------|-------------|-------------|-------------|-------------|
| VERSION     | RATED VOLTAGE | 95–253 V AC | 24 V DC     | 95–253 V AC | 24 V DC     |
| Standard    |               | 23106100601 | 23106800601 | 23111100601 | 23111800601 |
| TAS         |               | 23106100603 | 23106800603 | 23111100603 | 23111800603 |

Article numbers for other voltages and versions on request.

## CONFORMITY TO STANDARDS

The sounders fulfil the requirements to the functional safety according to:

- EN 61508 Functional safety of electrical/electronic/programmable electronic safety-related systems
- EN 61511 Functional safety – Safety instrumented systems for the process industry sector

The devices can be used in safety related control systems in accordance with the following standards:

- EN ISO 13849-1 Safety of machinery – Safety related parts of control systems – part 1
- EN 62061 Safety of machinery – Functional safety of electrical/electronic/programmable electronic safety-related systems

The devices conform to the following standards:

- EN 61310-1 Safety of machinery – Indication, marking and actuation – part 1: Requirements for visual, acoustic and tactile signals
- EN ISO 7731 Ergonomic - alarms for public areas and workplaces – acoustic alarms
- EN 981 Safety of machinery – System of acoustic and visual alarm signals and information signals
- DIN 33404-1 Alarms for workplaces; acoustic alarms; unified emergency signal
- ISO 8201 Acoustics; Audible emergency evacuation signal