



SINUS

Power amplifiers

EN 54-16

- ✓ *Sophisticated, high efficient 100V power amplifiers according EN 54-16: 2008 and EN 50849: 2017. In the power range from 120W up to 500W Analog & Digital models, single channel and multi-channel models*

SINUS 410 D / 420 D / 450 D

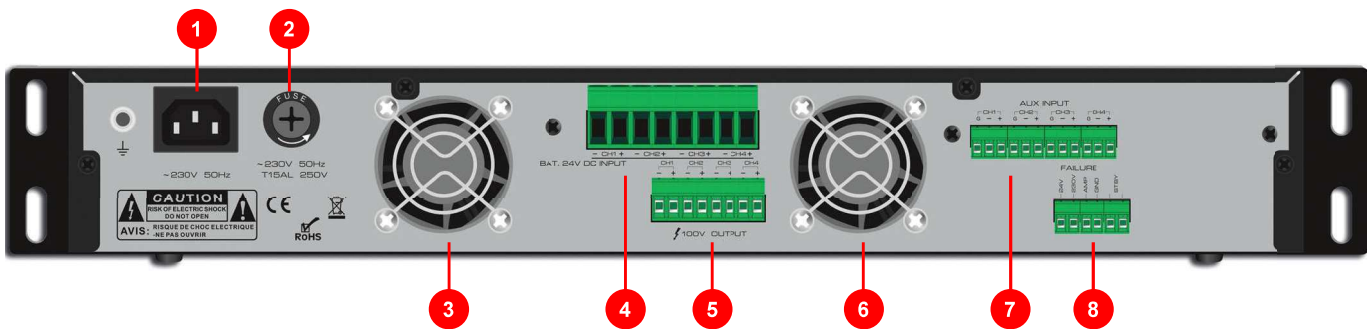
EN 54-16

Digital multi-channel power amplifiers



SINUS 450 D front panel: equal for SINUS 420 D and SINUS 410 D

- | | | |
|------------------|--------------------|------------------------------|
| 1. Signal, green | 3. Protect, orange | 5. Power (230VAC), green/red |
| 2. Clip, orange | 4. Standby, orange | 6. DC (24VDC), green/red |



SINUS 450 D rear panel: equal for SINUS 420 D and SINUS 410 D

- | | | |
|-------------------------------|--------------------------------|-------------------|
| 1. Mains power input (230VAC) | 4. Battery power input (24VDC) | 7. Audio inputs |
| 2. Mains power fuse | 5. 100V outputs | 8. Error contacts |
| 3. Ventilator | 6. Ventilator | |

SINUS 410 D / 420 D / 450 D

Sophisticated, high efficient 4-channel class D amplifiers according EN 54-16. SINUS 410 D - 4 x 120 W / SINUS 420 D - 4 x 240W / SINUS 450 D - 4 x 500W continuous output power at 100Volt.

- When connected to a system controller (eg. EVA 16 2.0 or EVALINE 2.0), each amplifier channel can be assigned with its own audio signal
- The audio connection is analog, using common shielded cable

Key features:

- Galvanic isolated outputs (Ground free)
- Each of the four independent digital amplifier channels is powered by its own switch mode power supply, allowing to use one of these channels as backup amplifier
- In case of a mains power failure, the power is supplied via the 24VDC inputs, one for each amplifier channel
- If one amplifier channel fails this does not influence the operation of the other channels (also not when powered from 24VDC)
- Each amplifier channel is protected against damage due to thermal overload, DC input, Low frequency input signals as well as overload or short circuit

SINUS 410 D / 420 D / 450 D

TECHNICAL SPECIFICATIONS

| SINUS | 410 D | 420 D | 450 D |
|--------------------|--|--|--|
| Outputs | 4 x 100V | 4 x 100V | 4 x 100V |
| Channel separation | ≥ 85dB | ≥ 85dB | ≥ 85dB |
| Input sensitivity | 1V/20k ohm, balanced | 1V/20k ohm, balanced | 1V/20k ohm, balanced |
| THD | ≤ 0,5% at 1kHz and 30% output power | ≤ 0,5% at 1kHz and 30% output power | ≤ 0,5% at 1kHz and 30% output power |
| Indicators | Standby, AC Power, 24VDC & per channel: Inputs signal, Clipping, Protect | Standby, AC Power, 24VDC & per channel: Inputs signal, Clipping, Protect | Standby, AC Power, 24VDC & per channel: Inputs signal, Clipping, Protect |
| Power consumption | 650VA @ rated power | 1250VA @ rated power | 2600VA @ rated power |
| Output power | 4 x 120W / 100V | 4 x 240W / 100V | 4 x 500W / 100V |
| Operating voltage | 230VAC/50-60Hz; 24VDC | 230VAC/50-60Hz; 24VDC | 230VAC/50-60Hz; 24VDC |
| Housing & color | Steel, black | Steel, black | Steel, black |
| Dimensions (WxHxD) | 485 x 66 x 425 mm; 19"; 1,5 U | 485 x 66 x 425 mm; 19"; 1,5 U | 485 x 66 x 425 mm; 19"; 1,5 U |
| Weight | 9,3 kg | 9,3 kg | 9,3 kg |
| Article no. | ART05788 | ART05787 | ART05789 |

SINUS 10/20/40/220/410

EN 54-16

Analog single and multi-channel power amplifiers



SINUS 220 front panel: equal for SINUS 10 / 20 / 40 / 410

- 1. OVERLOAD LED, green
- 2. SIGNAL LED, green
- 3. POWER LED, green



SINUS 220 rear panel: equal for SINUS 10 / 20 / 40 / 410

- 1. Mains power fuse
- 2. Mains power input (230VAC)
- 3. Grounding
- 4. Power switch
- 5. Mains error contact
- 6. DC input (24VDC)
- 7. Amplifier outputs
- 8. Audio Link Out
- 9. Input level
- 10. Audio input (balanced)

SINUS 10 / 20 / 40 / 220 / 410 according EN 54-16

Cost-effective and robust single and multi-channel analog power amplifiers meeting EN 54-16 requirements.

In case of a mains power failure the secondary 24VDC power supply takes over for each of the individual amplifier channels

Key features:

- The power amplifiers are protected for thermal overload, DC on inputs, low frequency input signals, output overload and short circuits. The 100V outputs are galvanically isolated from ground
- The 2 (SINUS 220) and 4 (SINUS 410) independent amplifier channels of the multichannel power amplifiers are powered from by a separate power supply each, which allows the use of one of these channels as a backup amplifier channel

SINUS 10/20/40/220/410

TECHNICAL SPECIFICATIONS

| SINUS | 10 | 20 | 40 |
|-----------------------------|--------------------------------|--------------------------------|--------------------------------|
| Outputs | 1x 100V / 70V / 8ohm | 1x 100V / 70V / 8ohm | 1x 100V / 70V / 8ohm |
| Signal-to-noise-ratio (SNR) | ≥ 86dB | ≥ 86dB | ≥ 86dB |
| Input sensitivity | 1V/10k ohm, balanced | 1V/10k ohm, balanced | 1V/10k ohm, balanced |
| Distortion | ≤1% at 1kHz at nominal power | ≤1% at 1kHz at nominal power | ≤1% at 1kHz at nominal power |
| Indicators | Signal, Overload, Power Status | Signal, Overload, Power Status | Signal, Overload, Power Status |
| Power consumption | ~ 320VA at nominal power | ~ 640VA at nominal power | ~ 1280VA at nominal power |
| Output power | 1 x 120W / 100V | 1 x 240W / 100V | 1 x 480W / 100V |
| Operating voltage | 230VAC/50-60Hz; 24VDC | 230VAC/50-60Hz; 24VDC | 230VAC/50-60Hz; 24VDC |
| Housing | steel sheet, black | steel sheet, black | steel sheet, black |
| Dimensions | 485 x 88 x 305 mm (19"; 2U) | 485 x 88 x 305 mm (19"; 2U) | 485 x 88 x 355 mm (19"; 3U) |
| Weight | 8,5 kg | 10,5 kg | 16,0 kg |
| Article-no. | ART00905 | ART00907 | ART00910 |

| SINUS | 220 | 410 |
|-----------------------------|--------------------------------|--------------------------------|
| Outputs | 2x 100V / 70V / 8ohm | 4x 100V / 70V / 8ohm |
| Signal-to-noise-ratio (SNR) | ≥ 86dB | ≥ 86dB |
| Input sensitivity | 1V bei 10k ohm, balanced | 1V bei 10k ohm, balanced |
| Distortion | ≤1% at 1kHz at nominal power | ≤1% at 1kHz at nominal power |
| Indicators | Signal, Overload, Power status | Signal, Overload, Power status |
| Power consumption | ~ 1280VA at nominal power | ~ 1820VA at nominal power |
| Output power | 2 x 240W / 100V | 4 x 120W / 100V |
| Operating voltage | 230VAC/50-60Hz; 24VDC | 230VAC/50-60Hz; 24VDC |
| Housing & Color | steel sheet, black | steel sheet, black |
| Dimensions (WxHxD) | 485 x 88 x 305 mm (19"; 2U) | 485 x 88 x 355 mm (19"; 3U) |
| Weight | 18,0 kg | 22,0 kg |
| Article-no. | ART00908 | ART00906 |