Loudspeakers 2022

NEUMANN®

NEUMANN ELEKTRONIK GMBH

Railway station loudspeakers

Diffuser 6W / 100V, weatherproof, IP54, polyester 7
Diffusers Accessories 8
Sound projector 6W / 100V, weatherproof, IP53, EN 54-24, aluminium 12
Sound projector 2x 6W / 100V, weatherproof, A/B, IP53, EN 54-24, aluminium 13
Sound projector 2x 6W / 100V, weatherproof, dipole, IP53, aluminium 15
Sound projector 10W / 100V, weatherproof, dipole, IP55, aluminium 17
Loudspeaker 6W / 100V, IP53, Fischer® built-in light system, plastic 19
Loudspeaker 10; 15W / 100V, IP53, V2A, recessed, light strip, V2A 21
Loudspeaker 10W / 100V, weatherproof, IP65, underfloor, V4A 23
Sound column 10W / 100V, IP42, aluminium 25
Cardioid sound columns 160 / 180 / 240W, IP42, aluminium 27

Horn loudspeakers

Horn loudspeaker 25W / 100V, weatherproof, IP65, plastic 32
Horn loudspeaker 30W / 8Ω, weatherproof, IP65, plastic 33
Horn loudspeaker 10W ... 30W / 100V, weatherproof, IP66, EN 54-24, plastic 35
Horn loudspeaker 50W; 100W / 100V, weatherproof, IP65, GRP 39
Horn loudspeaker 7W / 8Ω, weatherproof, IP54, plastic 41
Horn loudspeaker 10W / 4Ω, weatherproof, IP69K, plastic 43
Horn loudspeaker 10W / 4Ω, weatherproof, IP55, built-in, plastic 45
Horn loudspeaker 5W / 8Ω, weatherproof, IP55, built-in, plastic 47

Explosion-proof loudspeakers

Wall and ceiling loudspeaker 6W / 100V, Ex-protected, IP65, built-in, aluminium 51
Horn loudspeaker 25W / 100V, Ex-protected, IP65, polyamide conductive 54
Horn loudspeaker 30W / 8Ω, Ex-protected, IP65, polyamide conductive 55
Horn loudspeaker 25W / 100V, Ex-protected, IP66/67, plastic 57
Horn loudspeaker 25W / 100V, Ex-protected, IP66/67, aluminium / plastic 59
Horn loudspeaker, 15W / 100V, Ex-protected, IP66, plastic 61

Wall / Ceiling loudspeakers

Wall and ceiling loudspeaker 6W / 100V, IP53, EN 54-24, plastic 65
Wall and ceiling loudspeaker 6W / 100V, IP53, EN 54-24, wood 67
Wall and ceiling loudspeaker 6W, IP53, IP, active, Class D technology, wood 71
Wall and ceiling loudspeaker 2x 6W / 100V, A/B, IP53, EN 54-24, wood 73
Wall and ceiling loudspeaker 6W / 100V, IP53, plastic 75
Wall and ceiling loudspeaker 1W, active, IP53, plastic 77
Wall and ceiling loudspeaker 3W / 100V, IP54, built-in, steel 79
Wall and ceiling loudspeaker 6W / 100V, IP53, EN 54-24, built-in, fire dome, steel 81
Wall and ceiling loudspeaker 6W IP53, IP, active, Class D technology, built-in, steel 83
Wall and ceiling loudspeaker 2x 6W / 100V, A/B, IP53, EN 54-24, built-in, fire dome, steel 84
Wall and ceiling loudspeaker 6W / 100V, IP54, built-in, steel 85

Special loudspeakers

Loudspeaker 4W / 100V, IP53, built-in, plastic 88
Loudspeaker 6W / 100V, weatherproof, IP65, surface-mounted, V4A 89
Loudspeaker 6W / 8Ω, weatherproof, IP65, surface-mounted, V4A 91

IP / SIP DS-6 advanced modul

Loudspeaker installation module 8W 93

Amplifiers

Amplifier 250 / 300W and 2x 250 / 300W, Class D technology 96
Amplifier 4x 150W Class D technology 98
Amplifier 25 / 50W 102
Amplifier 100W 103

Control and monitoring components

DS-6 PA-Control I and II 106
DS-6 PA-Control I and II accessories 109

Voice alarm center unit

PACE-VA EN 54-16 110

The technology in detail

IP protection classes 115
General information on the marking of explosion-protected equipment 116

Railway station loudspeakers

4 806 8
4 805 7

Railway station loudspeakers

Diffuser 6W / 100V, weatherproof, IP54, polyester

- Bell and centre section made of flame-retardant polyester, glass-fibre reinforced polyester (colour and light resistant)
- Good speech reproduction, high syllable intelligibility
- Pole and wall mounting, attachment to suspension ropes

Diffusers can be used in closed rooms and outdoors. They are particularly suitable for sound reinforcement in acoustically difficult rooms and with varying noise levels.

Announcements with a high level of syllable intelligibility can be achieved with diffusers both in underground systems and on platforms of local and long-distance public transport, as well as when used in large-area systems such as track fields, squares or factory premises.

Art.-No.	4 805 7	4 806 8
Mechanical data		
Weight	Approx. 2.1kg	Approx. 1.6kg
Dimensions (WxHxD)	405mm x 192mm x 170mm	260mm x 192mm x 170mm
Housing colour	Iron grey (RAL 7011)	
Material	Polyester, glass fibre reinforced	
Number of funnels	2	1
Electrical data		
Nominal power	6W	
Transformer adjustment (100V)	6; 3; 1.5W	
Impedance	1.66; 3.33; 6.66kΩ	
Transmission range	250Hz … 10kHz	
Mean sound pressure (1W / 1m)	96dB	98dB
Max. sound pressure (Pmax / 1m)	102dB	103dB
Environmental conditions		
Environmental temperature range	-25°C … +70°C	
Protection class acc. to DIN EN60529	IP54	
Burning behaviour of the housing	UL94 V-0	

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Railway station loudspeakers

Diffusers Accessories

Article	Description	Art. no.
Standpipe and wall mount, pole mount		
Light metal flange	Aluminium alloy, for standpipes up to max. Ø 40mm, approx. 0.2kg	4 830 5
Light metal flange	Aluminium alloy, for standpipes up to max. Ø 70mm, approx. 0.25kg	4 839 4
Aluminium clamp	For mounting on masts from Ø 70mm, approx. 0.4kg	4 822 6
Light metal flange	With pipe thread R3/4“, for speaker mounting, approx. 0.15kg	4 829 3
Bracket	Made of cast aluminium, for wall mounting, adjustable	4 851 8
Ceiling/suspension rope and wide flange beam attachment		
Hanging nipple	For ceiling mounting, approx. 0.32kg	4 818 1
Suspension nipple/suspension rope	For pipe pendulum R3/4“, with 2 gland entries, approx. 0.5kg	4 819 2
Suspension nipple/suspension rope	As before, movable attachment, incl. 2 stuffing boxes	4 848 4
Rope clamp	For pendant tube attachment to suspension ropes, up to 6.5mm rope thickness	4 849 5
Pipe pendulum	Aluminium, thread R3/4“, length 95mm, approx. 0.09kg	4 800 2
Pipe pendulum	As before, but length 1m, approx. 0.9kg	4 823 7
Pipe pendulum	As before, but length 2m, approx. 1.8kg	4 824 8
Pipe pendulum	As before, but length 5m, approx. 4.5kg	4 825 9
Holding set	For fixing to wide flange beams up to 250mm, incl. clamps, hook screw and end sleeve, with gland, approx. 1.7kg	4 821 5

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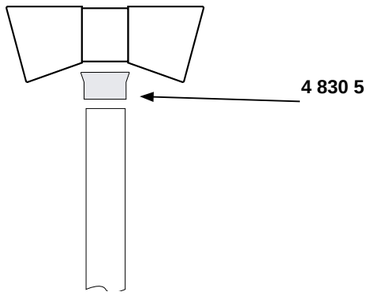
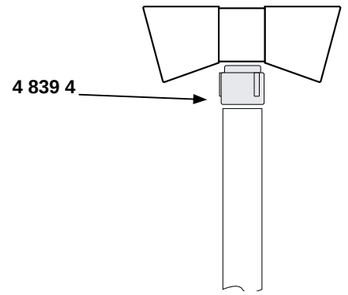
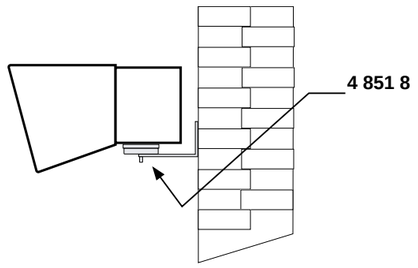
Mounting options for diffuser (single and double funnels)



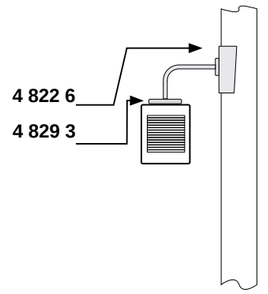
Standpipe attachment to pipe up to Ø 40mm



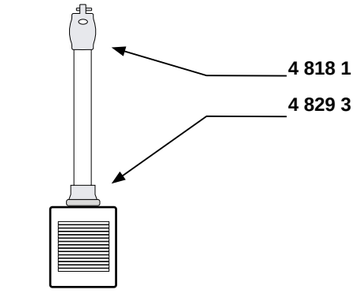
Standpipe attachment to pipe up to Ø 70mm



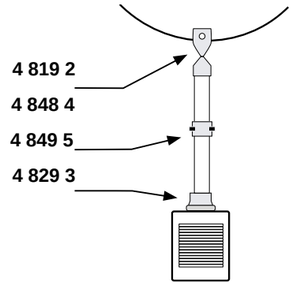
Wall mounting



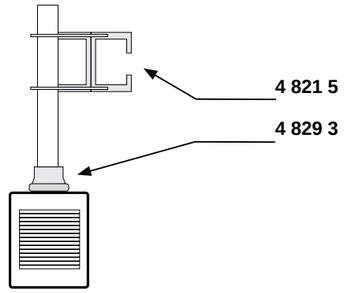
Pole mount on tube from Ø 70mm



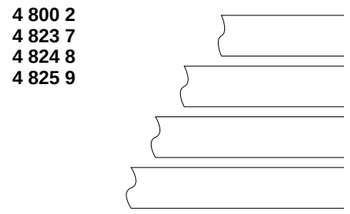
Ceiling mounting



Pipe pendulum mounting



Wide flange beam mounting



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4 783 2
4 782 1

Railway station loudspeakers

Sound projector 6W / 100V, weatherproof, IP53, EN 54-24, aluminium

certified EN 54-24

- Robust and vandal-proof aluminium housing
- Pivot and tilt bracket for wall and ceiling mounting
- Good speech reproduction, high syllable intelligibility
- Mast and wall mounting, attachment to suspension cables
- Simulation data available for Ease and Ulysses

The sound projector is a robust indoor and outdoor loudspeaker in aluminium design. The loudspeaker is equipped with a swivel-tilt bracket and is suitable for mounting on walls and ceilings.

The 130mm chassis is characterised by a high sound pressure and a very good transmission range. The sound projector is particularly suitable for use in passenger information systems of local and long-distance public transport, as well as in public address systems, alarm systems and evacuation systems. In addition, it is approved for use in fire alarm systems according to EN 54.

The scope of delivery includes a 1.5m connection cable and fixing material.

Art.-No.	4 782 1
Mechanical data	
Weight	Approx. 2.6kg
Dimensions	Ø 144 x 210mm
Housing colour	Pure white (RAL 9010)
Material	Aluminium
Connection cable	4-wire cable, length 1.5m
Electrical data	
Nominal power	6W / 100V
Transformer adjustment (100V)	6; 3; 1.5W
Impedance	1.66; 3.33; 6.66kΩ
Transmission range (-10dB)	80Hz … 20kHz
Mean sound pressure (1W / 1m)	93dB
Max. sound pressure (Pmax / 1m)	101dB
Sound pressure EN (1W / 4m)	77dB
Max. sound pressure EN (4m)	86dB
Beam angle 500 / 1000 / 2000 / 4000 Hz	180° / 152° / 116° / 56°
Environmental conditions	
Environmental temperature range	-40°C … +70°C
Protection class acc. to DIN EN60529	IP53
Certified according to	EN 54-24

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Railway station loudspeakers

Sound projector 2x 6W / 100V, weatherproof, A/B, IP53, EN 54-24, aluminium

certified EN 54-24

- Robust and vandal-proof aluminium housing
- Pivot and tilt bracket for wall and ceiling mounting
- Double voice coil
- Simulation data available for Ease and Ulysses

The sound projector in A/B technology with double voice coil is a robust indoor and outdoor loudspeaker in aluminium design.

The loudspeaker is equipped with a swivel-tilt bracket and is suitable for mounting on walls and ceilings. The 130mm chassis is characterised by a high sound pressure and a very good transmission range.

The sound projector is particularly suitable for use in passenger information systems of local and long-distance public transport, as well as in public address systems, alarm systems and evacuation systems. In addition, it is approved for use in fire alarm systems according to EN 54.

The scope of delivery includes a 1.5m connection cable and fixing material.

Art.-No.	4 783 2
Mechanical data	
Weight	Approx. 2.9kg
Dimensions	Ø 144mm x 210mm
Housing colour	Pure white (RAL 9010)
Material	Aluminium
Connection cable	4-wire cable, length 1.5m
Electrical data	
Nominal power	2x 6W / 100V
Transformer adjustment (100V)	2x 6; 3; 1.5W
Impedance	2x 1.66; 3.33; 6.66kΩ
Transmission range (-10dB)	80Hz … 20kHz
Mean sound pressure (1W / 1m)	93dB
Max. sound pressure (Pmax / 1m)	101dB
Sound pressure EN (1W / 4m)	77dB
Max. sound pressure EN (4m)	86dB
Beam angle 500 / 1000 / 2000 / 4000 Hz	180° / 152° / 116° / 56°
Environmental conditions	
Environmental temperature range	-40°C … +70°C
Protection class acc. to DIN EN60529	IP53
Certified according to	EN 54-24

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Railway station loudspeakers

Sound projector 2x 6W / 100V, weatherproof, dipole, IP53, aluminium

- Robust and vandal-proof aluminium housing
- Retaining plate mounting

The sound projector in dipole technology is a robust indoor and outdoor loudspeaker in aluminium design. The loudspeaker is equipped with a mounting plate and is suitable for mounting on walls and ceilings.

The 130mm chassis is characterised by a high sound pressure and a very good transmission range.

The sound projector is particularly suitable for use in passenger information systems as well as in public address systems for local and long-distance public transport.

The scope of delivery includes a 1.5m connection cable and mounting material.

Art.-No.	4 784 3
Mechanical data	
Weight	Approx. 2.9kg
Dimensions	Ø 144mm x 210mm
Housing colour	Pure white (RAL 9010)
Material	Aluminium
Connection cable	4-wire cable, length 1.5m
Electrical data	
Nominal power	2x 6W / 100V
Transformer adjustment (100V)	12; 6; 3W
Impedance	2x 0.83; 1.66; 3.33kΩ
Transmission range (-10db)	70Hz … 19kHz
Mean sound pressure (1W / 1m)	93dB each side
Max. sound pressure (Pmax / 1m)	101dB each side
Beam angle	160°
Environmental conditions	
Environmental temperature range	-40°C … +70°C
Protection class acc. to DIN EN60529	IP53

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Railway station loudspeakers

Sound projector 10W / 100V, weatherproof, dipole, IP55, aluminium

- Robust and vandal-proof aluminium housing
- Pole, wall or ceiling mounting

The sound projector in dipole technology is a robust indoor and outdoor loudspeaker in aluminium design.

The loudspeaker is suitable for mounting on a pole or on a wall or ceiling. The chassis is characterised by a high sound pressure and a very good transmission range.

The sound projector is particularly suitable for use in passenger information systems and in public address systems for local and long-distance public transport.

Art.-No.	4 786 5	4 787 6
Mechanical data		
Mounting	Pole mounting	Wall / ceiling mounting
Weight	Approx. 2.8kg	
Dimensions	Ø 144mm x 260mm	
Housing colour	White aluminium (RAL 9006)	
Material	Aluminium	
Connection cable	5-wire cable, length 1.5m	
Electrical data		
Nominal power	10W / 100V	
Transformer adjustment (100V)	10; 5; 2.5; 1.25W	
Impedance	1; 2; 4; 8kΩ	
Transmission range (-10 dB)	200Hz … 19kHz	
Mean sound pressure (1W / 1m)	94dB each side	
Max. sound pressure (Pmax / 1 m)	104dB each side	
Beam angle	140°	
Environmental conditions		
Environmental temperature range	-40°C … +70°C	
Protection class acc. to DIN EN60529	IP55	

NE 4 786 5
NE 4 787 6

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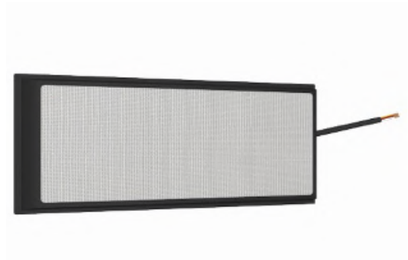
Railway station loudspeakers

Loudspeaker 6W / 100V, IP53, Fischer® built-in light system, plastic



- Plastic housing
- For 100V sound systems
- Suitable for Fischer® built-in lighting system

The recessed loudspeaker is designed for installation in round platform luminaires (Fischer system®).

The black plastic housing is closed and the grey front covering serves to protect against moisture.

Art.-No.	4 930 6
Mechanical data	
Weight	Approx. 0.75kg
Dimensions (WxHxD)	160mm x 90mm x 92mm
Housing colour	Deep black (RAL 9005)
Material	ABS plastic
Connection cable	4-wire cable, length 0.5m
Electrical data	
Nominal power	6W / 100V
Transformer adjustment (100V)	6; 3; 1.5W
Impedance	1.66; 3.33 6.66kΩ
Transmission range (-10 dB)	150Hz … 15kHz
Mean sound pressure (1W / 1m)	92dB
Max. sound pressure (Pmax / 1m)	99dB
Beam angle	180°
Environmental conditions	
Environmental temperature range	-40°C … +70°C
Protection class acc. to DIN EN60529	IP53

Fischer® is a registered trademark.

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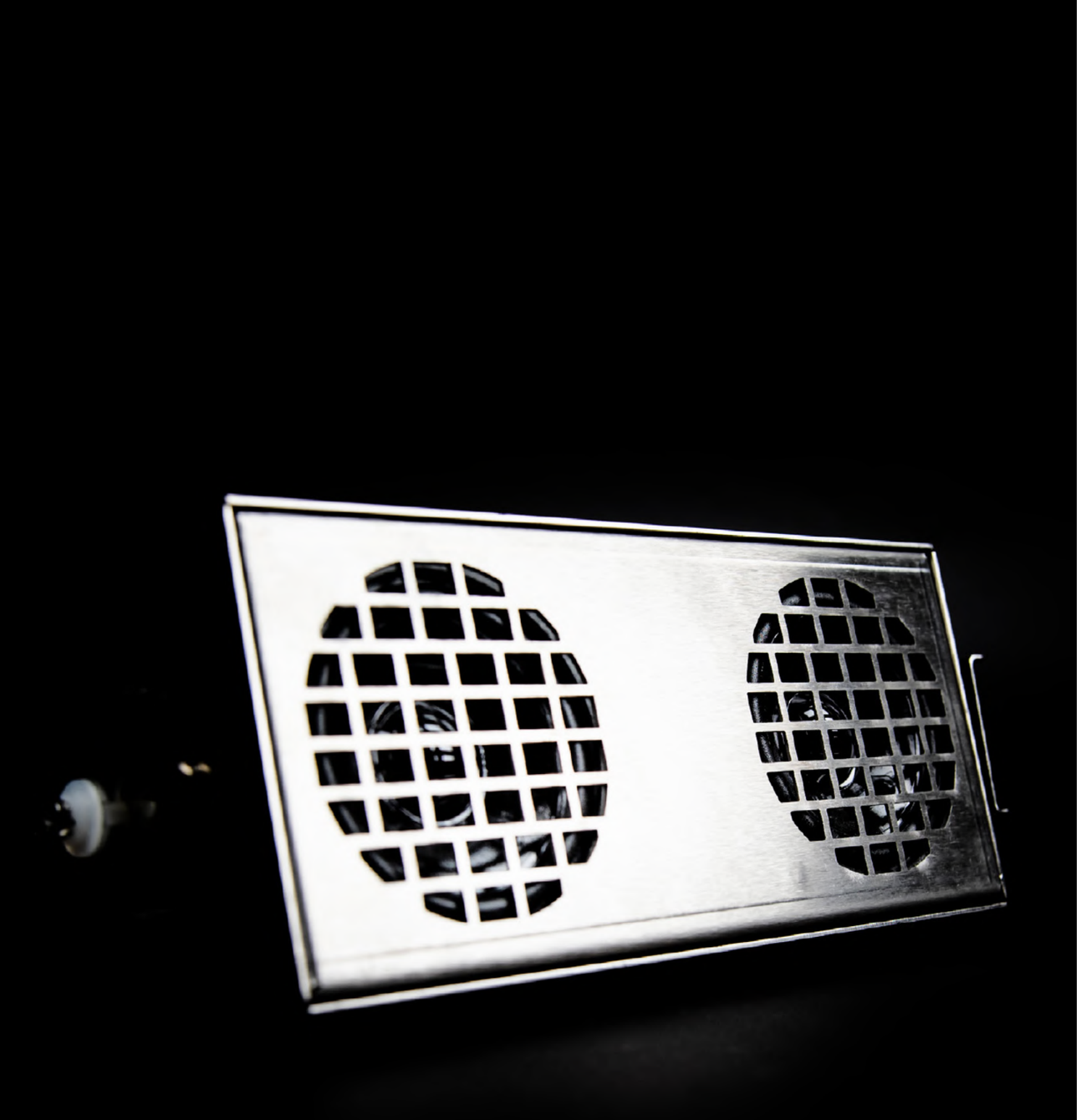

4 931 7
4 932 8

Railway station loudspeakers

Loudspeaker 10; 15W / 100V, IP53, V2A, recessed, light strip, V2A

- Rustproof V2A stainless steel housing
- For 100V sound systems
- Suitable for light band systems

The built-in loudspeaker is intended for use in light strips on local and long-distance public transport platforms, as well as in subways and underground stations.

The stainless steel housing provides protection against moisture. The loudspeaker has the best speech characteristics.

Art.-No.	4 931 7	4 932 8
Mechanical data		
Weight	Approx. 1.5kg	Approx. 1.7kg
Dimensions (WxHxD)	205mm x 91mm x 61mm	
Housing colour	V2A Stainless steel surface	
Connection cable	4-wire cable, length 1.5m	
Electrical data		
Nominal power	10W / 100V	15W / 100V
Transformer adjustment (100V)	10; 5; 2.5W	15; 7.5; 3.75W
Impedance	1; 2; 4kΩ	0.66; 1.33; 2.66kΩ
Transmission range (-10db)	180Hz … 22kHz	
Mean sound pressure (1W / 1m)	94dB	94dB
Max. sound pressure (Pmax / 1m)	101dB	103dB
Beam angle	160°	160°
Environmental conditions		
Environmental temperature range	-40°C … +90°C	
Protection class acc. to DIN EN60529	IP53	

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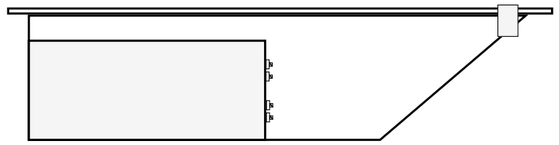
Railway station loudspeakers

Loudspeaker 10W / 100V, weatherproof, IP65, underfloor, V4A



Mounting scheme

Loudspeaker enclosure

- Weatherproof, rustproof V4A stainless steel housing (IP65), tread-proof
- Pressure chamber loudspeaker with good speech reproduction and high syllable intelligibility
- Enclosure cover can be swivelled 180°, incl. turnbuckle with double-bit operation
- Two-layer loudspeaker fabric made of Saran® and double expanded metal grille
- 2x mounting holes Ø 21mm for cable glands[1)] Pg13.5
- Mounting possibility of the installation tray with 6x M6 cylinder screws[1)]

Built-in tray

This weatherproof, rustproof V4A stainless steel loudspeaker is optimally protected against weather influences due to its robust construction as well as its splash-proof loudspeaker cover.

The loudspeaker has been specially developed for underfloor installation on motorail trains. A step-proof, lockable stainless steel installation tray serves as a sound-conducting element and forms a functional unit together with the built-in stainless steel loudspeaker housing.

Art.-No.	4 750 6
Mechanical data	
Weight	Approx. 9.5kg
Dimensions (WxHxD)	118mm x 220mm x 500mm
Material	V4A Stainless steel (1.4571)
Electrical data	
Nominal power	10W / 100V
Transformer adjustment (100V)	10; 6; 3W
Impedance	1; 1.66; 3.33kΩ
Transmission range (-10db)	300Hz … 5kHz
Mean sound pressure (1W / 1m)	94dB
Max. sound pressure (Pmax / 1m)	102dB
Environmental conditions	
Environmental temperature range	-25°C … +70° C
Protection class acc. to DIN EN60529	IP65

[1)] Not included in the scope of delivery.

In use by Deutsche Bahn, Sylt

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Railway station loudspeakers

Sound column 10W / 100V, IP42, aluminium

- **Extruded aluminium profile**
- **RAL 9010 powder-coated**
- **Mounting points in base and lid**
- **Adjustable wall bracket**

These sound columns in elegant, novel design are mainly suitable for speech and music transmissions in churches, foyers, modern offices, etc.

The excellent transmission quality for speech and music succeeds over long distances and achieves excellent results even in acoustically problematic rooms such as churches or halls.

Art.-No.	4 885 5
Mechanical data	
Weight	Approx. 2.7kg
Dimensions (WxHxD)	95mm x 310mm x 85mm
Housing colour	Pure white, powder-coated (RAL 9010)
Material	Extruded aluminium profile
Connection cable	4-wire cable, length 1.5m
Electrical data	
Nominal power	10W / 100V
Transformer adjustment (100V)	10; 6; 3W
Impedance	1; 1.66; 3.33kΩ
Transmission range (-10 dB)	120Hz...20kHz
Mean sound pressure (1W / 1m)	94dB
Max. sound pressure (Pmax / 1m)	103dB
Environmental conditions	
Environmental temperature range	-0°C … +50°C
Protection class acc. to DIN EN 60529	IP42

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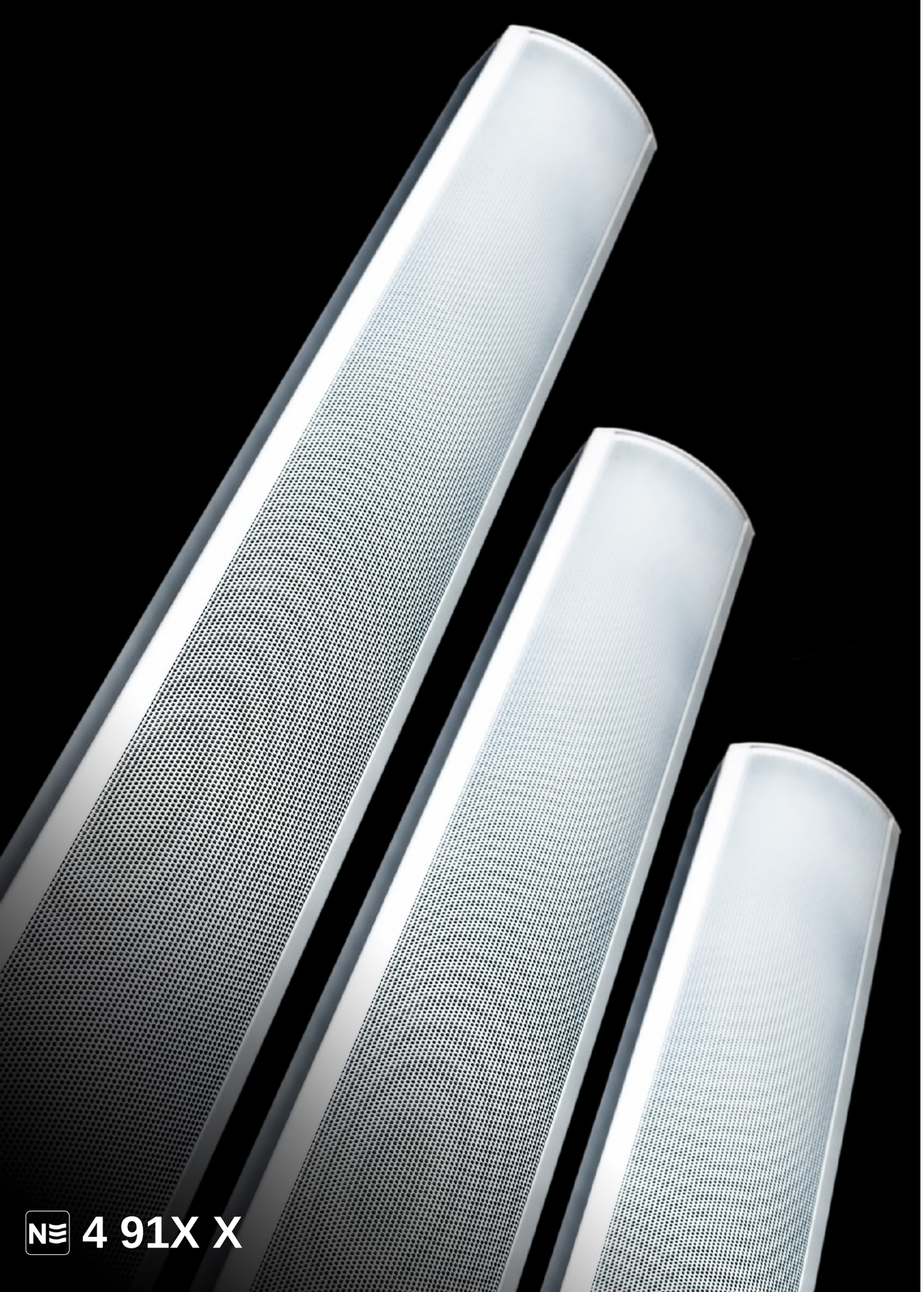

Railway station loudspeakers

Cardioid sound columns
160 / 180 / 240W, IP42, aluminium

- Cardioid technology
- Tweeter protection, electronically self-resetting
- 3-way system
- Extruded aluminium profile
- RAL 9010 powder-coated
- Mounting points in base and lid

These sound columns in elegant, new design are mainly suitable for speech and music transmissions in churches, foyers, modern offices etc..

They have a very good vertical bundling and a wide horizontal radiation. By means of appropriate cross-overs, the reproduction spectrum is adapted to the line length and a frequency-constant vertical coverage angle is achieved.

By means of the new cardioid technology, a pronounced rear and side attenuation is already achieved at medium and low frequencies.

The excellent transmission quality for speech and music succeeds over long distances and achieves excellent results even in acoustically problematic rooms such as churches or halls.

Art.-No.	4 912 6	4 913 7	4 914 8
Mechanical data			
Weight	Approx. 9.4kg	Approx. 12.5kg	Approx. 14.5kg
Dimensions (WxHxD)	125mm x 1070mm x 115mm	125mm x 1300mm x 115mm	125mm x 1900mm x 115mm
Housing colour	Pure white, powder-coated (RAL 9010)		
Material	Extruded aluminium profile		
Connection	Phoenix (1-/2+) and SPEAKON (1+/1-)		
Electrical data			
Nominal power	180W	160W	240W
Programme loadability	360W	320W	480W
Impedance	8Ω		
Transmission range (-10 dB)	200Hz … 20kHz	190Hz … 20kHz	190Hz … 20kHz
Mean sound pressure (1W / 1m)	94dB	99dB	100dB
Max. sound pressure (Pmax / 1m)	119dB	124dB	126dB
Beam angle	160° horizontal 30° vertical Cardioid-Hypercardioid	140° horizontal 30° vertical Cardioid-Hypercardioid	90° horizontal 25° vertical Cardioid-Hypercardioid
Environmental conditions			
Environmental temperature range	-0°C … +50°C		
Protection class acc. to DIN EN 60529	IP42		

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Horn loudspeakers

4 803 5
4 902 5

Horn loudspeakers

Horn loudspeaker 25W / 100V, weatherproof, IP65, plastic

- Self-extinguishing ABS plastic housing
- Splash-proofg
- High efficiency, good directivity
- Incl. U-shaped, stainless steel bracket, swivelling

Horn loudspeakers are intended for use in harsh environments. They are preferably used as loudspeakers for long ranges, predominantly in wide-area installations as well as in environments with high interference levels.

They are characterised by high efficiency, excellent speech reproduction and good directivity.

Art.-No.	4 803 5
Mechanical data	
Weight	Approx. 3.1kg
Dimensions (DxL)	Ø 235mm x 345mm
Housing colour	Silver-grey (similar to RAL 9006)
Material	Glass-fibre reinforced plastic
Connection cable	4-wire cable, length 1,5m
Electrical data	
Nominal power	25W
Transformer adjustment (100 V)	25; 12; 8; 6; 3; 1W
Impedance	0.4; 0.83; 1.25; 1.66; 3.33; 10kΩ
Transmission range	300Hz … 7kHz
Mean sound pressure (1W / 1m)	108dB
Max. sound pressure (Pmax / 1m)	121dB
Environmental conditions	
Environmental temperature range	-40°C … +70°C
Protection class acc. to DIN EN60529	IP54

[1] For assembly, we recommend using the hook spanner art. no. 97 9 4410 001 5

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Horn loudspeakers

Horn loudspeaker 30W / 8Ω, weatherproof, IP65, plastic

- Dust and waterproof, glass-fibre reinforced plastic housing
- Weatherproof and heat resistant
- High efficiency, good directivity
- Incl. U-shaped, stainless steel bracket, swivelling

Horn loudspeakers are intended for use in harsh environments. They are preferably used as loudspeakers for long ranges, predominantly in wide-area installations as well as in environments with high interference levels.

They are characterised by high efficiency, excellent speech reproduction and good directivity.

Art.-No.	4 902 5
Mechanical data	
Weight	Approx. 2.5kg
Dimensions (DxL)	Ø 235mm x 345mm
Housing colour	Silver grey (similar to RAL 9006)
Material	Glass-fibre reinforced plastic
Connection	Ceramic clamps
Electrical data	
Nominal power	30W
Impedance	8Ω
Transmission range	300Hz … 7kHz
Mean sound pressure (1W / 1m)	108dB
Max. sound pressure (Pmax / 1m)	122dB
Environmental conditions	
Environmental temperature range	-25°C … +70°C
Protection class acc. to DIN EN60529	IP65

[1] For assembly, we recommend using the hook spanner art. no. 97 9 4410 001 5

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4 92X X

Horn loudspeakers

Horn loudspeaker
10W ... 30W / 100V, weatherproof, IP66, EN 54-24, plastic

certified EN 54-24

- Self-extinguishing weatherproof ABS plastic housing
- Matching transformer for 100V technology with power adjustment
- Integrated high-pass filter
- Suitable for wall and ceiling mounting
- V2A swivel-tilt mounting bracket
- Resistant to exhaust gases, de-icing salts and road dust
- Certified according to EN 54-24 / BS5839
- Simulation data available for Ease and Ulysses

The weatherproof horn loudspeaker models for use in communication, public address or evacuation systems with 100V technology are ideally suited for speech transmission and voice alerting, even in acoustically difficult environments, due to their outstanding speech intelligibility. They are suitable for indoor use as well as for outdoor applications.

In addition, it is approved for use in fire alarm systems according to EN 54. The grey plastic housing is made of self-extinguishing PC/ABS and is therefore resistant to environmental influences. Due to the material used, the horn loudspeakers can withstand extreme temperatures and are equipped with a stainless steel swivel-tilt mounting bracket for flexible wall and ceiling mounting.

For cable entry, the horn loudspeakers each have two M20 cable glands. The connecting cables are connected to a 4-pole terminal inside. Delivery includes matching transformer, mounting material and a tuned high-pass filter.

Art.-No.	4 920 5	4 921 6	4 922 7	4 923 8	4 924 9
Mechanical data					
Weight	Approx. 1.8kg	Approx. 2.0kg	Approx. 2.1kg	Approx. 2.2kg	Approx. 2.3kg
Dimensions (WxHxL)	180mm x 120mm x 230mm				
Housing colour	Light grey (RAL 7035)				
Material	PC/ABS self-extinguishing				
Connection	4-pole clamp				
Cable entry	2x M20 Cable glands				
Pan-tilt mounting bracket	V2A Stainless steel				
Electrical data					
Nominal power	10W / 100V	15W / 100V	20W / 100V	25W / 100V	30W / 100V
Transformer adjustment (100V)	10; 5; 2.5W	15; 7.5; 3.75W	20; 10; 5W	25; 12.5; 6.25W	30; 15; 7.5W
Impedance	1; 2; 4kΩ	6.66; 1.33; 2.66kΩ	0.5; 1; 2kΩ	0.4; 0.8; 1.6kΩ	0.33; 0.66; 1.33kΩ
Transmission range (-10db)	350Hz ... 10kHz				
Beam angle	110° / 55°				
Mean sound pressure (1W / 1m)	110dB				
Max. sound pressure (Pmax / 1m)	119dB	120dB	121dB	122dB	123dB
Environmental conditions					
Environmental temperature range	-40°... +90°C				
Protection class acc. to DIN EN60529	IP66				
Certified according to	EN 54-24 / BS5839				

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60
60

Horn loudspeakers

Horn loudspeaker
50W; 100W / 100V, weatherproof, IP65, GRP

- Matching transformer for 100V technology with power matching
- Suitable for wall and ceiling mounting
- Corrosion-resistant stainless steel mounting brackets
- Resistant to exhaust gases, de-icing salts and road dust
- Simulation data available for Ease and Ulysses
- Opening cover in V4A stainless steel 1.4571 against animals & dust

The weatherproof and low-distortion horn loudspeaker for use in tunnels or also pre-portal public address systems with 100V technology are excellently suited for voice transmission and voice alerting, in this acoustically difficult environment, due to their outstanding speech intelligibility.

It is suitable for use in the tunnel itself (boundary layer/half sphere) as well as for use in the pre-portal area (full sphere).

Art.-No.	4 764 1	4 765 2
Mechanical data		
Weight	Approx. 21kg	
Dimensions (WxDxL)	770mm x 325mm x 1650mm	
Housing colour	Grey	
Material	GRP 056 / RM113	
Connection	Connection cable, Length 1,5m	
Mounting bracket	V4A Stainless steel (1.4571)	
Electrical data		
Nominal power	50W / 100V	100W / 100V
Transformer adjustment (100V)	50W / 37.5W / 25W / 12.5W	100W / 50W / 25W
Impedance	0.2; 0.26; 0.4; 0.8kΩ	0.1; 0.2; 0.4kΩ
Transmission range (+3 / -10dB)	250Hz … 10kHz	
Horizontal opening angle	500Hz Octave band 45° 1kHz Octave band 23° 2kHz Octave band 22°	
Max. sound pressure (Pmax / 1m)	141dB	
Sensitivity	500Hz Octave band 121dB SPL at 1W / 1m 1kHz Octave band 126dB SPL at 1W / 1m 2kHz Octave band 128dB SPL at 1W / 1m	
Reverse damping	500Hz Octave band 20dB 1kHz Octave band 26dB 2kHz Octave band 34dB	
Environmental conditions		
Environmental temperature range	-40° … +90°C	
Protection class acc. to DIN EN60529	IP65	

4 764 1
4 765 2

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Horn loudspeakers

Horn loudspeaker 7W / 8Ω, weatherproof, IP54, plastic

- Dimensionally stable plastic housing
- U-shaped metal bracket
- Horn loudspeakers
- C64 cable, approx. 2.0m free length

The dynamic horn loudspeaker is suitable for use in radio and ELA systems in stationary and mobile applications.

Art.-No.	4 844 0
Mechanical data	
Weight	Approx. 0.75kg
Dimensions (DxL)	Ø 115mm x 78mm (without mounting bracket)
Housing colour	Black
Material	Dimensionally stable plastic housing
Connection	C64 cable, approx. 2.0m length
Mounting bracket	U-shaped metal bracket
Electrical data	
Nominal power	7W
Transmission range	700Hz - 13kHz
Impedance	8Ω
Sound pressure (1W / 1m)	100dB
Environmental conditions	
Environmental temperature range	-25°C - +85°C
Permissible relative humidity	≤ 75%
Protection class acc. to DIN EN60529	IP54

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4 892 3

Horn loudspeakers

Horn loudspeaker 10W / 4Ω, weatherproof, IP69K, plastic

- Plastic housing
- With mounting bracket for quick attachment
- Extraordinary temperature range -40°C ... +110°C
- IP69K certified

This horn loudspeaker is specially designed for speech transmissions. It is characterised by its high sound pressure, compact design and wide temperature range, making it ideally suited for outdoor use on trains and vehicles.

Art.-No.	4 892 3
Mechanical data	
Weight	Approx. 0.5kg
Dimensions (DxL)	Ø 97mm x 102mm
Housing colour	Light grey (RAL 7035)
Material	PC/ABS UL 94 V0
Connection cable	2-wire cable, length 0.6m
Electrical data	
Nominal power	10W
Impedance	4Ω
Transmission range (-10db)	250Hz … 20kHz
Mean sound pressure (1W / 1m)	100dB
Max. sound pressure (Pmax / 1m)	109dB
Beam angle	150°
Environmental conditions	
Environmental temperature range	-40°C … +110°C
Protection class acc. to DIN EN60529	IP69K

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Horn loudspeakers

Horn loudspeaker 10W / 4Ω, weatherproof, IP55, built-in, plastic

- Plastic housing
- With mounting bracket for quick attachment
- Wide temperature range

This horn loudspeaker is specially designed for speech transmissions.

It is characterised by its high sound pressure, compact design and wide temperature range, making it ideally suited for use in emergency call devices, trains and vehicles.

Art.-No.	4 891 2
Mechanical data	
Weight	Approx. 1.0kg
Dimensions (WxHxD)	121mm x 121mm x 95mm
Installation diameter	Ø 101mm
Housing colour	Dusty grey (RAL 7037)
Material	Plastic
Connection cable	2-wire cable, length 2.0m
Electrical data	
Nominal power	10W
Impedance	4Ω
Transmission range (-10db)	300Hz … 20kHz
Mean sound pressure (1W / 1m)	98dB
Max. sound pressure (Pmax / 1m)	107dB
Beam angle	160° / 70°
Environmental conditions	
Environmental temperature range	-40°C … +70°C
Protection class acc. to DIN EN60529	IP55

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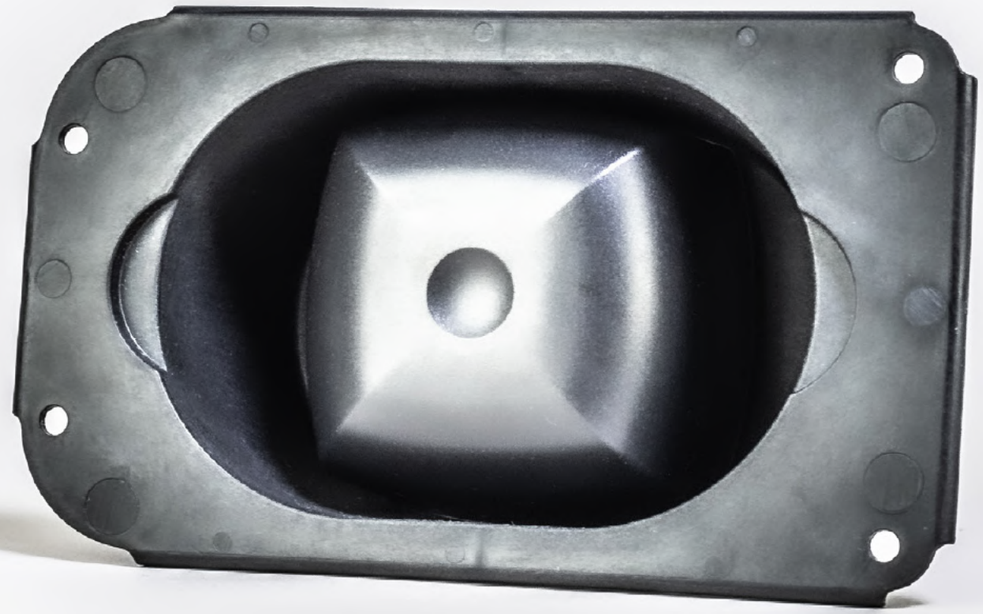

Horn loudspeakers

Horn loudspeaker 5W / 8Ω, weatherproof, IP55, built-in, plastic

- Plastic housing
- Easy mounting
- Reinforced mounting surface

This horn loudspeaker with full-range system is designed for built-in installation in microphone units and behind mounting walls.

Due to its high efficiency, it is excellently suited for speech and signal output.

Art.-No.	4 898 9	4 897 8
Mechanical data		
Version	Not vapourised	Metallically vapourised
Weight	Approx. 0.42kg	
Dimensions (WxHxL)	161mm x 95mm x 55mm	
Housing colour	Black	
Material	Pocan	
Connection cable	2-wire cable, length 0.1m	
Electrical data		
Nominal power	5W	
Music performance	10W	
Impedance	8Ω	
Transmission range (-10 dB)	280Hz … 16kHz	
Mean sound pressure (1W / 1m)	98dB	
Max. sound pressure (Pmax / 1 m)	104dB	
Environmental conditions		
Environmental temperature range	-40°C … +70°C	
Protection class acc. to DIN EN 60529	IP55	

4 898 9

4 897 8

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Explosion-proof loudspeakers

Explosion-proof loudspeakers

Wall and ceiling loudspeaker 6W / 100V, Ex-protected, IP65, built-in, aluminium

- Explosion-protected, earthed aluminium installation housing
- Suitable for use in Ex zones 1, 2, 21 and 22
- Metal cover fastened by screw connections
- Tested cable entry (M20 EExe ATEX)

The explosion-proof wall- and ceiling-mounted loudspeaker is designed for use in hazardous areas of zones 1, 2, 21, 22 and in all temperature classes (environments with gases and vapours with an ignition temperature >85°C and ≤ 100°C).

It consists of an encapsulated aluminium housing with a white painted metal cover, which is fixed to the housing with three cover screws.

Only certified cable entries and blind plugs may be used for mounting. The loudspeaker must additionally be earthed at the specially marked screws.

Art.-No.	4 953 1
Mechanical data	
Weight	Approx. 4.0kg
Dimensions (DxL)	Ø 200mm x 172mm
Ceiling cut-out	Ø 153mm
Housing colour	Pure white (RAL 9010)
Material	Aluminium
Electrical data	
Nominal power	6W
Transformer adjustment (100V)	6; 3; 1.5; 1; 0.5; 0.4W
Impedance	1.66; 3.33; 6.66; 10; 20; 25kΩ
Transmission range (-10db)	160Hz ... 20kHz
Mean sound pressure (1W / 1m)	90dB
Max. sound pressure (Pmax / 1m)	97dB
Environmental conditions	
Environmental temperature range	-20°C ... +40°C
Protection class acc. to DIN EN60529	IP65
Ex-approval according to EC-RL 94/9/EC	Ex EEx de IIC T6 / 01 ATEX 122

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4 970 0 Recertification 2022

4 971 1 Recertification 2022

Explosion-proof loudspeakers

Horn loudspeaker 25W / 100V, Ex-protected, IP65, polyamide conductive

- Explosion-protected, dust- and waterproof
- Housing made of conductive plastic (polyamide)
- Suitable for use in Ex zones 1, 2, 21 and 22
- Robust construction, corrosion and heat resistant
- Flameproof enclosure of all electronic components
- Filter made of sintered metal
- Tested cable entries (M20 EExe ATEX), one with replaceable blanking plug
- U-shaped stainless steel bracket, swivelling
- Low weight, easy mounting[1)]

The explosion-proof horn loudspeaker is designed for use in hazardous areas of zones 1, 2, 21, 22 and in all temperature classes (environments with gases and vapours with an ignition temperature >85°C and ≤ 100°C).

In addition, the extremely corrosion- and heat-resistant loudspeaker is particularly suitable for use in wide-area, loud and harsh environments and is characterised by high efficiency, excellent syllable intelligibility and good directivity.

In addition to central speech via power amplifiers, it can also be connected as a call loudspeaker to Neumann WFD Ex call stations.

Art.-No.	4 970 0
Mechanical data	
Weight	Approx. 4.0kg
Dimensions (DxL)	Ø 235mm x 345mm
Housing colour	Black
Material	Conductive plastic (Polyamide)
Cable entry[2)]	2x M20
Electrical data	
Nominal power	25W / 100V
Transformer adjustment (100V)	25; 12; 8; 6; 3; 1W
Impedance	0.4; 0.83; 1.25; 1.66; 3.33; 10kΩ
Transmission range (-10db)	300Hz … 7kHz
Mean sound pressure (1W / 1m)	106dB
Max. sound pressure (Pmax / 1m)	118dB
Environmental conditions	
Environmental temperature range	-30°C … +50°C
Protection class acc. to DIN EN60529	IP65
Ex approvals	
According to EC Directive 94/9/EC	Ex II 2 G EEx de IIC T6
According to EC Directive 94/9/EC, III-6	Ex II 2 Ex tD A21 IP65 T 80°C

[1)] For assembly we recommend the use of the hook spanner art. -no. 97 9 4410 001 5.
[2)] Supplied with plastic cable glands

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Explosion-proof loudspeakers

Horn loudspeaker 30W / 8Ω, Ex-protected, IP65, polyamide conductive

- Bell and centre section made of flame-retardant,
- glass fibre reinforced polyester (colour and light resistant)
- Good speech reproduction, high syllable intelligibility
- Pole and wall mounting, attachment to suspension cables[1)]

The explosion-proof pressure chamber loudspeaker has been designed for use in hazardous areas of zones 1, 2, 21, 22 and in all temperature classes (environments with gases and vapours with an ignition temperature >85°C and ≤ 100°C).

In addition, the extremely corrosion- and heat-resistant loudspeaker is particularly suitable for use in wide-area, loud and harsh environments and is characterised by high efficiency, excellent syllable intelligibility and good directivity.

In addition to central speech via power amplifiers, it can also be connected as a call loudspeaker to Neumann WFD Ex call stations.

Art.-No.	4 971 1
Mechanical data	
Weight	Approx. 3.6kg
Dimensions (DxL)	Ø 235mm x 345mm
Housing colour	Black
Material	Conductive plastic (Polyamide)
Cable entry[2)]	2x M20
Electrical data	
Nominal power	30W
Impedance	8Ω
Transmission range (-10db)	300Hz … 7kHz
Mean sound pressure (1W / 1m)	106dB
Max. sound pressure (Pmax / 1m)	119dB
Environmental conditions	
Environmental temperature range	-30°C … +50°C
Protection class acc. to DIN EN60529	IP65
Ex approvals	
According to EC Directive 94/9/EC	Ex II 2 G EEx de IIC T6
According to EC Directive 94/9/EC, III-6	Ex II 2 Ex tD A21 IP65 T 80°C

[1)] For assembly we recommend the use of the hook spanner art. -no. 97 9 4410 001 5.
[2)] Supplied with plastic cable glands

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919 1120 166 6

Explosion-proof loudspeakers

Horn loudspeaker 25W / 100V, Ex-protected, IP66/67, plastic

- Plastic version
- Suitable for use in Ex zones 1, 2, 21 and 22
- For 100V sound systems
- Swivelling VA bracket with mounting holes

The explosion-proof horn loudspeaker is designed for use in hazardous areas of zones 1, 2, 21, 22 and in all temperature classes.

The Ex loudspeaker is a high-performance explosion-proof loudspeaker with high speech and silver intelligibility. Its good directivity and acoustic performance make it ideally suited for use in wide-area, loud and harsh environments.

Certified for use in a wide temperature range of -55°C ... +55°C, the Ex enclosure is manufactured with a robust thermoplastic sound guide.

The Ex loudspeaker is a corrosion-free, heat-resistant and aesthetically pleasing product. In addition to central communication via power amplifiers, connection as a call loudspeaker to NEUMANN WFD Ex call stations is also possible.

Art.-No.	919 1120 166 6	919 1120 174 5	4 990 2	64 9 0116 028 7
Mechanical data				
Weight	Approx. 5.8kg			
Dimensions (DxL)	Ø 200mm x 280mm			
Housing colour	Black			
Material	Plastic, V0 flammable			
Cable entry	2x M20 Thread[1)]	2x M20 Thread[1)]	1x M20 Thread[1)] 1x M20 Screwing Plastic	1x M20 Thread[1)] 1x M20 Screwing Plastic
Connection cable				1m free cable length
Electrical data				
Nominal power	25W / 100V			
Transformer adjustment (100V)	25; 12.5; 6; 4; 2; 1W			
Impedance	0.4; 0.8; 1.16; 2.5; 5; 10kΩ			
Transmission range (-10db)	350Hz ... 7kHz			
Mean sound pressure (1W / 1m)	106dB (1kHz)			
Max. sound pressure (Pmax / 1m)	120dB (1kHz)	115dB (1kHz)	115dB (1kHz)	115dB (1kHz)
Environmental conditions				
Environmental temperature range	-50°C ... +55°C			
Protection class acc. to DIN EN60529	IP66 & IP67, NEMA 4X & 6			
Certification	ATEX Exd Gas Exd II T4/T5/T6 Gb	IECEx Ed de Gas and Dust Exd IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C, IP66		

[1)]Delivery without cable glands!

Accessories / Article	Description	Art.-No.
Ex cable gland brass	1x M20	96 916 22 1040
Ex cable gland Plastic	1x M20	36 316 22 3020

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919 1120 170 1

Explosion-proof loudspeakers

Horn loudspeaker 25W / 100V, Ex-protected, IP66/67, aluminium / plastic

- Aluminium / plastic version
- Suitable for use in Ex zones 1, 2, 21 and 22
- For 100V sound systems
- Swivelling stainless steel bracket with mounting holes
- IECEx, ATEX, Ex EAC & INMETRO certified

The explosion-proof horn loudspeaker is designed for use in hazardous areas of zones 1, 2, 21, 22 and in all temperature classes (environments with gases and vapours with an ignition temperature >85°C and ≤ 100°C).

The Ex loudspeaker is a high-performance explosion-proof loudspeaker with high speech and silver intelligibility. Its good directivity and acoustic performance make it ideally suited for use in wide-area, loud and harsh environments. Certified for use in a wide temperature range of -55°C ... +55°C, the Ex enclosure is manufactured with a robust thermoplastic sound guide.

The Ex loudspeaker is a corrosion-free, heat-resistant and aesthetically pleasing product. In addition to central communication via power amplifiers, connection as a call loudspeaker to Neumann WFD Ex call stations is also possible.

Art.-No.	919 1120 170 1
Mechanical data	
Weight	Approx. 3.95kg
Dimensions (DxL)	Ø 220mm x 313mm
Housing colour	Fire red (RAL 3000)
Material	Aluminium / plastic
Cable entry[1)]	2x M20 thread
Electrical data	
Nominal power	25W / 100V
Transformer adjustment (100 V)	25; 12.5; 6; 2W
Impedance	0.4; 0.8; 1.16; 5kΩ
Transmission range (-10db)	300Hz ... 8kHz
Mean sound pressure (1W / 1m)	105dB
Max. sound pressure (Pmax / 1m)	119dB
Beam angle	130° @ 1kHz & 32° @ 4kHz
Environmental conditions	
Environmental temperature range	-50°C ... +55°C
Protection class acc. to DIN EN60529	IP66 & IP67, NEMA 4X & 6
Certification	IECEx, ATEX, Ex EAC & INMETRO

[1)]Delivery without cable glands!

Accessories / Article	Description	Art.-No.
Ex cable gland brass, equipment group IIB	1x M20	96916221062
Ex cable gland brass, equipment group IIC	1x M20	96916221073

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Explosion-proof loudspeakers

Horn loudspeaker, 15W / 100V, Ex-protected, IP66, plastic

- Suitable for use in Ex zones 1, 2, 21 and 22
- Housing made of conductive plastic (antistatic)
- Housing UV-resistant
- Encapsulation
- Filter made of sintered metal
- Tested cable entries (M20 EExe ATEX)
- Stainless steel swivelling mounting bracket
- Cable entries made of plastic
- Low weight, easy mounting
- Suitable for wall and ceiling mounting

The explosion-proof loudspeaker is used in operating facilities that process flammable substances. It can be used in all hazardous areas of zones 1, 2 and up to temperature class T6.

Furthermore, the loudspeaker is suitable for use in environments with high interference levels. It is characterised by high efficiency, excellent speech reproduction and good directivity.

In addition to central discussion via power amplifiers, connection as a call loudspeaker to Neumann WFD Ex call stations is also possible.

Art.-No.	4 973 3
Mechanical data	
Weight	Approx. 3.5kg
Dimensions (DxL)	Ø 219mm x 287mm
Housing colour	Black
Material	Conductive plastic (antistatic)
Cable entry [1)]	2x M20
Electrical data	
Nominal power	15W / 100V
Transformer adjustment (100 V)	15; 7.5; 4W
Impedance	0.66; 1.33; 2.5kΩ
Transmission range (-10db)	280Hz … 10kHz
Mean sound pressure (1W / 1m)	107dB
Max. sound pressure (Pmax / 1m)	119dB
Environmental conditions	
Environmental temperature range	-20°C … +55°C
Protection class acc. to DIN EN60529	IP66
Protection class	II
Ex approvals according to EC Directive 94/9/EC	Ex II 2G Ex mb de IIC T* / 05 ATEX 1097 *) T4 -55°C ≤ Tamb ≥ 80°C *) T5 -55°C ≤ Tamb ≥ 65°C *) T6 -55°C ≤ Tamb ≥ 55°C

[1)] Supplied with plastic cable glands

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Wall / Ceiling Loudspeakers

NEUMANN 4 778 6

NEUMANN 4 779 7

Wall / Ceiling Loudspeakers

Wall and ceiling loudspeaker 6W / 100V, IP53, EN 54-24, plastic

certified EN 54-24

- White plastic housing with perforated plate cover
- Suitable for wall and ceiling mounting
- Available with or without integrated volume control
- Certified according to EN 54-24
- Simulation data available for Ease and Ulysses

Due to its ventilated plastic housing made of white ABS, the wall and ceiling loudspeaker is particularly suitable for use in passenger information systems of local and long-distance public transport, as well as in sound systems, alarm systems and evacuation systems.

In addition, it is approved for use in fire alarm systems according to EN 54. The symmetrical shape allows horizontal and vertical mounting. Screws and dowels are included in the scope of delivery. Anti-theft protection is ensured by appropriate components.

The loudspeaker is characterised by good music reproduction and clear syllable intelligibility and is available with and without integrated volume control.

Art.-No.	4 778 6	4 779 7
Mechanical data		
Integrated volume control	no	yes
Weight	Approx. 1.6kg	
Dimensions (LxHxT)	330mm x 240mm x 83mm	
Housing colour	Pure white (RAL 9010)	
Material	ABS-Plastic / aluminium perforated cover	
Connection	4-pole ceramic clamp	
Electrical data		
Nominal power	6W / 100V	
Transformer adjustment (100 V)	6; 3; 1.5W	
Impedance	1.66; 3.33; 6.66kΩ	
Transmission range (-10db)	80Hz … 19kHz	
Mean sound pressure (1W / 1m)	93dB	
Max. sound pressure (Pmax / 1m)	101dB	
Sound pressure EN (1W / 4m)	76dB	
Max. sound pressure EN (4m)	86dB	
Environmental conditions		
Environmental temperature range	-40°C … +70°C	
Protection class acc. to DIN EN60529	IP53	

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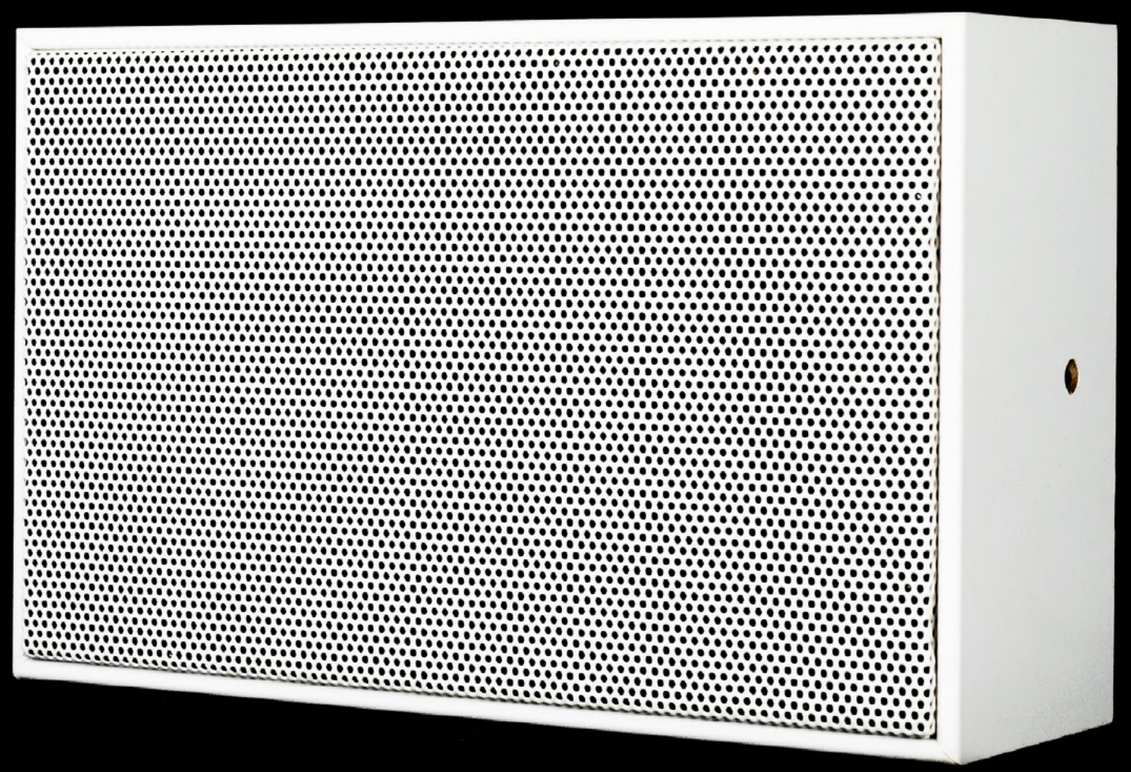

NE 4 775 3
NE 4 776 4

Wall / Ceiling Loudspeakers

certified EN 54-24

Wall and ceiling loudspeaker 6W / 100V, IP53, EN 54-24, wood

- White wooden housing with perforated plate cover
- Suitable for wall and ceiling mounting
- Available with or without integrated volume control
- Certified according to EN 54-24
- Simulation data available for Ease and Ulysses

The wall and ceiling loudspeaker is equipped with a high-quality full-range loudspeaker and is characterised by good music reproduction and clear syllable intelligibility.

This loudspeaker is particularly suitable for use in passenger information systems for local and long-distance public transport, as well as in sound systems, alarm systems and evacuation systems. In addition, it is approved for use in fire alarm systems according to EN 54.

For mounting, the rear panel of the loudspeaker is fixed with two screws, then the housing is attached and held in place with two sturdy springs.

Art.-No.	4 775 3	4 776 4
Mechanical data		
Integrated volume control	no	yes
Weight	1.6kg	
Dimensions (LxHxD)	265mm x 165mm x 88mm	
Housing colour	Pure white (RAL 9010)	
Material	Wood / aluminium perforated cover	
Connection	4-pole ceramic clamp	
Electrical data		
Nominal power	6W / 100V	
Transformer adjustment (100V)	6; 3; 1.5W	
Impedance	1.66; 3.33; 6.66kΩ	
Transmission range (-10db)	80Hz ... 19kHz	
Mean sound pressure (1W / 1m)	93dB	
Max. sound pressure (Pmax / 1m)	101dB	
Environmental conditions		
Environmental temperature range	-40°C ... +70°C	
Protection class acc. to DIN EN60529	IP53	

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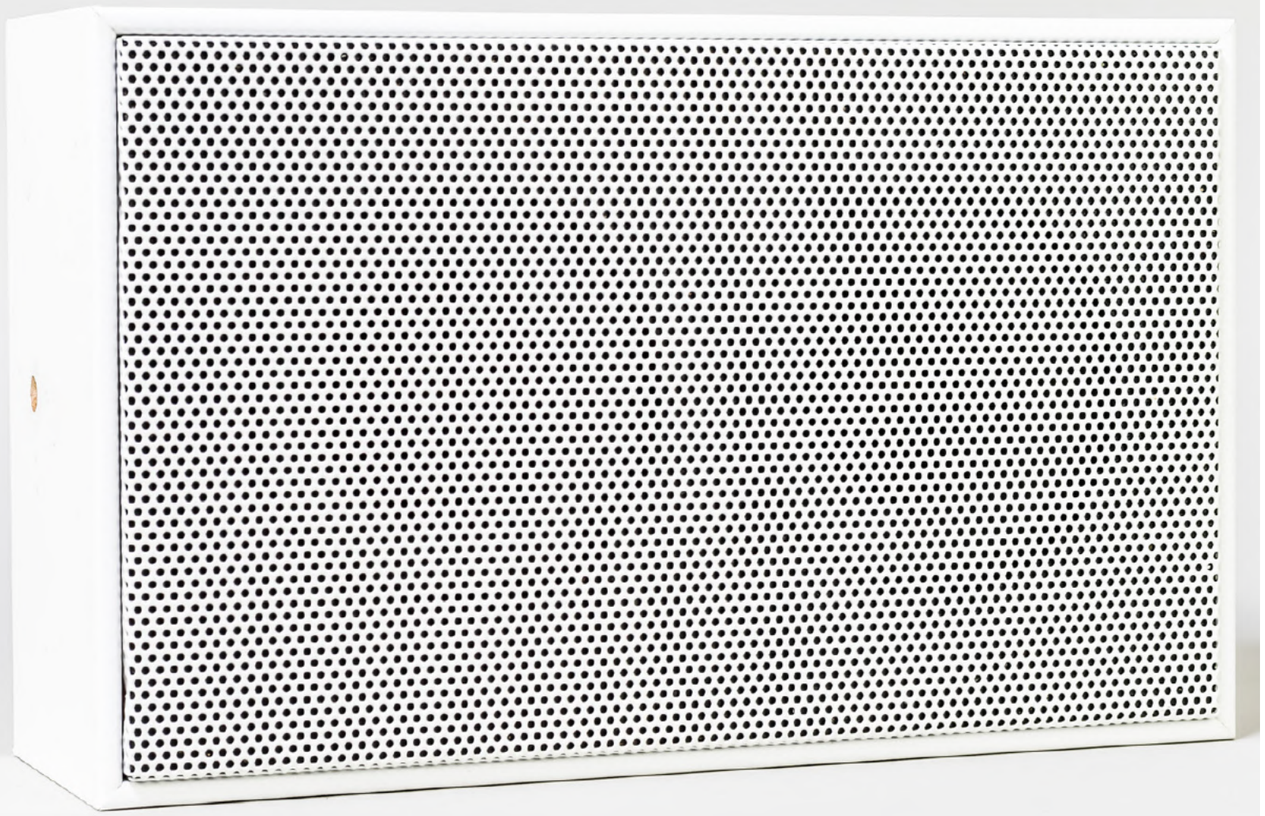

Wall / Ceiling Loudspeakers

Wall and ceiling loudspeaker 6W, IP53, IP, active, Class D technology, wood

- White wooden housing with perforated plate cover
- Suitable for wall and ceiling mounting
- Available with and without integrated volume control
- LAN connection, Ethernet RJ45, 10/100 Mbit/s
- Programming and management via web browser
- PoE power supply

The active wall and ceiling loudspeaker is equipped with a high-quality full-range loudspeaker and is characterised by good music reproduction and clear syllable intelligibility. Thanks to the integrated amplifier and the LAN module, the active loudspeaker can be connected directly to the SIP or DS-6 network.

This loudspeaker is particularly suitable for use in passenger information systems for local and long-distance public transport, as well as in sound systems, alarm systems and evacuation systems. The built-in digital 8W Class D audio amplifier provides high-quality audio signals.

For mounting, the rear panel of the loudspeaker is fixed with two screws, then the housing is slipped on and held in place with two sturdy springs.

Art.-No.	4 191 5	4 192 6
Mechanical data		
Integrated volume control	no	yes
Weight	1.6kg	
Dimensions (LxHxD)	265mm x 165mm x 88mm	
Housing colour	Pure white (RAL 9010)	
Material	Wood / aluminium perforated cover	
Connection	RJ45, 10/100Mbit/s	
Electrical data		
Operating voltage	PoE acc. to IEEE 802.3af	
Loudspeaker output power	6W	
Amplifier power	8W	
Transmission range (-10db)	80Hz ... 19kHz	
Mean sound pressure (1W / 1m)	93dB	
Max. sound pressure (Pmax / 1m)	101dB	
Environmental conditions		
Environmental temperature range	-40°C ... +70°C	
Protection class acc. to DIN EN60529	IP53	

4 191 5
4 192 6

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Wall / Ceiling Loudspeakers

certified
EN 54-24

Wall and ceiling loudspeaker
2x 6W / 100V, A/B, IP53, EN 54-24, wood

- White housing with perforated plate cover
- Suitable for wall and ceiling mounting
- Designed for A/B operation
- Certified according to EN 54-24
- Simulation data for Ease and Ulysses available

The wall and ceiling loudspeaker of the A/B series is equipped with two independent transducer/speaker combinations. Thus, a supply via two separate lines is possible.

The loudspeaker is characterised by good music reproduction and clear syllable intelligibility. This loudspeaker is particularly suitable for use in passenger information systems of local and long-distance public transport, as well as in sound systems, alarm systems and evacuation systems. In addition, it is approved for use in fire alarm systems according to EN 54.

The scope of delivery includes screws, dowels and the aluminium mounting bracket.

Art.-No.	4 777 5
Mechanical data	
Weight	Approx. 2.1kg
Dimensions (WxHxD)	265mm x 165mm x 88mm
Housing colour	Pure white (RAL 9010)
Material	Wood / aluminium perforated cover
Electrical data	
Nominal power	2x 6W / 100V
Transformer adjustment (100V)	2x 6; 3; 1.5W
Impedance	2x 1.66; 3.33; 6.66kΩ
Transmission range (-10db)	80Hz … 20kHz
Mean sound pressure (1W / 1m)	2x 92dB
Environmental conditions	
Environmental temperature range	-40°C … +70°C
Protection class acc. to DIN EN60529	IP53

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4 807 9
4 808 0

Wall / Ceiling Loudspeakers

Wall and ceiling loudspeaker
6W / 100V, IP53, plastic

- Plastic housing with perforated plate cover
- Connection to 100V mains with 4-pole pressure clamp
- Built-in volume control

This wall and ceiling loudspeaker offers high efficiency and is suitable for rooms with medium noise levels.

Its shapely plastic housing is equipped with a high-quality moisture-impregnated full-range chassis for optimal speech and music reproduction.

Art.-No.	4 807 9	4 808 0
Mechanical data		
Integrated volume control	yes	yes
Weight	Approx. 1.3kg	
Dimensions (WxHxD)	260mm x 175mm x 81mm	
Housing colour	Topaz	Traffic white (RAL 9016)
Material	ABS-Plastic / Perforated aluminium cover	
Electrical data		
Nominal power	6W / 100V	
Transformer adjustment (100V)	6; 3; 1.5W	
Impedance	1.66; 3.33; 6.66kΩ	
Transmission range (-10db)	150Hz … 20kHz	
Mean sound pressure (1W / 1m)	98dB	
Max. sound pressure (Pmax / 1 m)	103dB	
Environmental conditions		
Environmental temperature range	-40°C … +70°C	
Protection class acc. to DIN EN60529	IP53	

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Wall / Ceiling Loudspeakers

Wall and ceiling loudspeaker 1W, active, IP53, plastic

- For operating voltages DC 24-60V and AC 230V
- Built-in power amplifier (active loudspeaker)
- Transformer-balanced input (galvanic isolation)
- Volume control on the front panel

This wall and ceiling loudspeaker made of ABS plastic has a built-in power amplifier (active loudspeaker) and serves as a monitoring loudspeaker in radio operation and on telephone company lines.

Art.-No.	4 611 2	4 612 3
Mechanical data		
Integrated volume control	yes	yes
Weight	Approx. 0.6kg	
Dimensions (WxHxD)	200mm x 135mm x 90mm	
Housing colour	Grey white	
Material	ABS-Plastic	
Electrical data		
Operating voltage range	DC 24V…DC 60V	AC 230V
Max. Quiescent current	20mA	15mA
Max. Operating current	Approx. 125mA	Approx. 25mA
Output power	1W	
Input voltage	150mV	
Transmission range	300Hz … 10kHz	
Mean sound pressure (1 W / 1 m)	86dB	
Environmental conditions		
Environmental temperature range	-40°C … +70°C	
Protection class acc. to DIN EN 60529	IP53	

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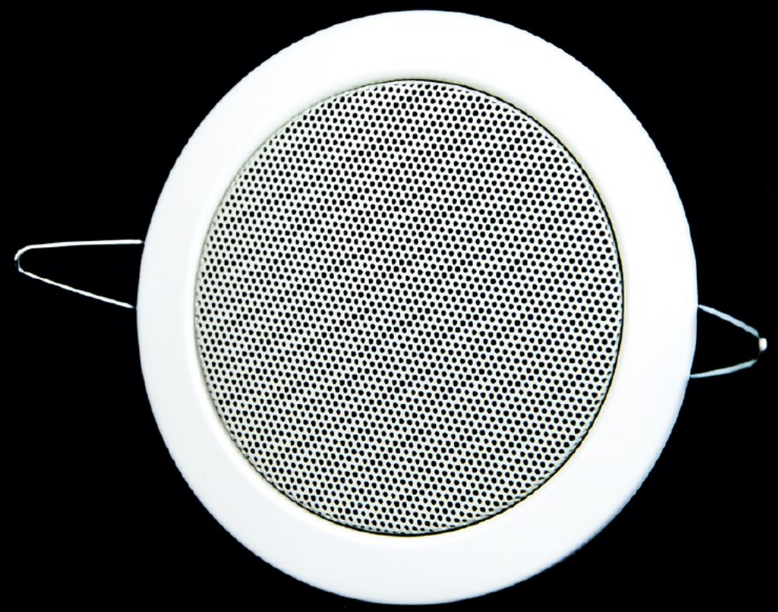

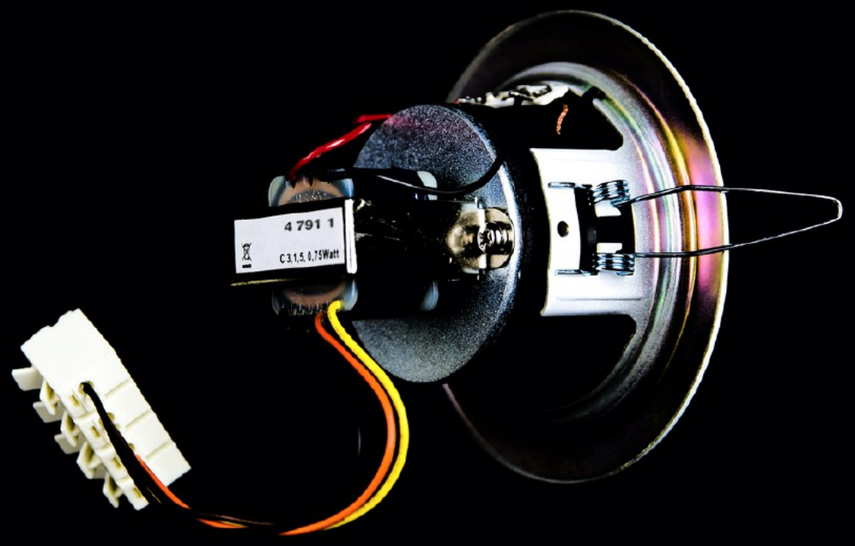

4 791 1

Wall / Ceiling Loudspeakers

Wall and ceiling loudspeaker 3W / 100V, IP54, built-in, steel

- Steel version
- For 100V sound systems
- Quick mounting via stainless steel springs
- Supplied without Fire dome
- Space-saving installation

One-piece wall and ceiling built-in speaker with ball-proof decorative grille, suitable for built-in in ceilings of all kinds.

Due to the special installation system (stainless steel springs), this loudspeaker can be mounted in a few seconds. The chassis is impregnated and thus protected against moisture.

Art.-No.	4 791 1
Mechanical data	
Weight	Approx. 0.485kg
Dimensions (DxL)	Ø 105mm x 71mm
Ceiling cut-out	Ø 81mm
Housing colour	Pure white (RAL 9010)
Material	Steel
Connection	4-pole pressure clamp
Electrical data	
Nominal power	3W / 100V
Transformer adjustment (100 V)	3; 1,5; 0.75W
Impedance	3.33; 6.66; 13.33kΩ
Transmission range (-10db)	90Hz … 18kHz
Mean sound pressure (1W / 1m)	84dB
Max. sound pressure (Pmax / 1m)	89dB
Environmental conditions	
Environmental temperature range	-0°C … +50°C
Protection class acc. to DIN EN60529	IP42

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Wall / Ceiling Loudspeakers

Wall and ceiling loudspeaker 6W / 100V, IP53, EN 54-24, built-in, Fire dome, steel

certified
EN 54-24

- Steel version
- High-performance wide belt system
- Quick assembly via stainless steel springs
- Supplied with Fire dome
- Certified according to EN 54-24
- Simulation data available for Ease and Ulysses

The wall- and ceiling-mounted loudspeaker is equipped with a 200mm high-performance broadband system.

Due to its outstanding speech intelligibility, it is ideally suited for use in passenger information systems of local and long-distance public transport, as well as in public address systems, alarm systems and evacuation systems. In addition, it is approved for use in fire alarm systems according to EN 54.

The loudspeaker is characterised by good music reproduction and clear syllable intelligibility.

The loudspeaker with white painted perforated metal cover is suitable for installation in ceilings of all materials. Thanks to the special installation system, the loudspeaker can be mounted in a few seconds with the help of stainless steel springs.

Art.-No.	4 797 7
Mechanical data	
Weight	Approx. 1.7kg
Weight (without fire dome)	Approx. 1.5kg
Dimensions (DxL)	Ø 252mm x 105mm
Ceiling cut-out	Ø 230mm
Housing colour	Pure white (RAL 9010)
Material	Steel
Connection	4-pole ceramic clamp
Electrical data	
Nominal power	6W / 100V
Transformer adjustment (100V)	6; 3; 1.5W
Impedance	0.16; 3.33; 6.66kΩ
Transmission range (-10db)	70Hz … 19kHz
Mean sound pressure (1W / 1m)	98dB
Max. sound pressure (Pmax / 1m)	106dB
Sound pressure EN (1W / 4m)	81dB
Max. sound pressure EN (4m)	90dB
Environmental conditions	
Environmental temperature range	-40°C … +70°C
Protection class acc. to DIN EN60529	IP53

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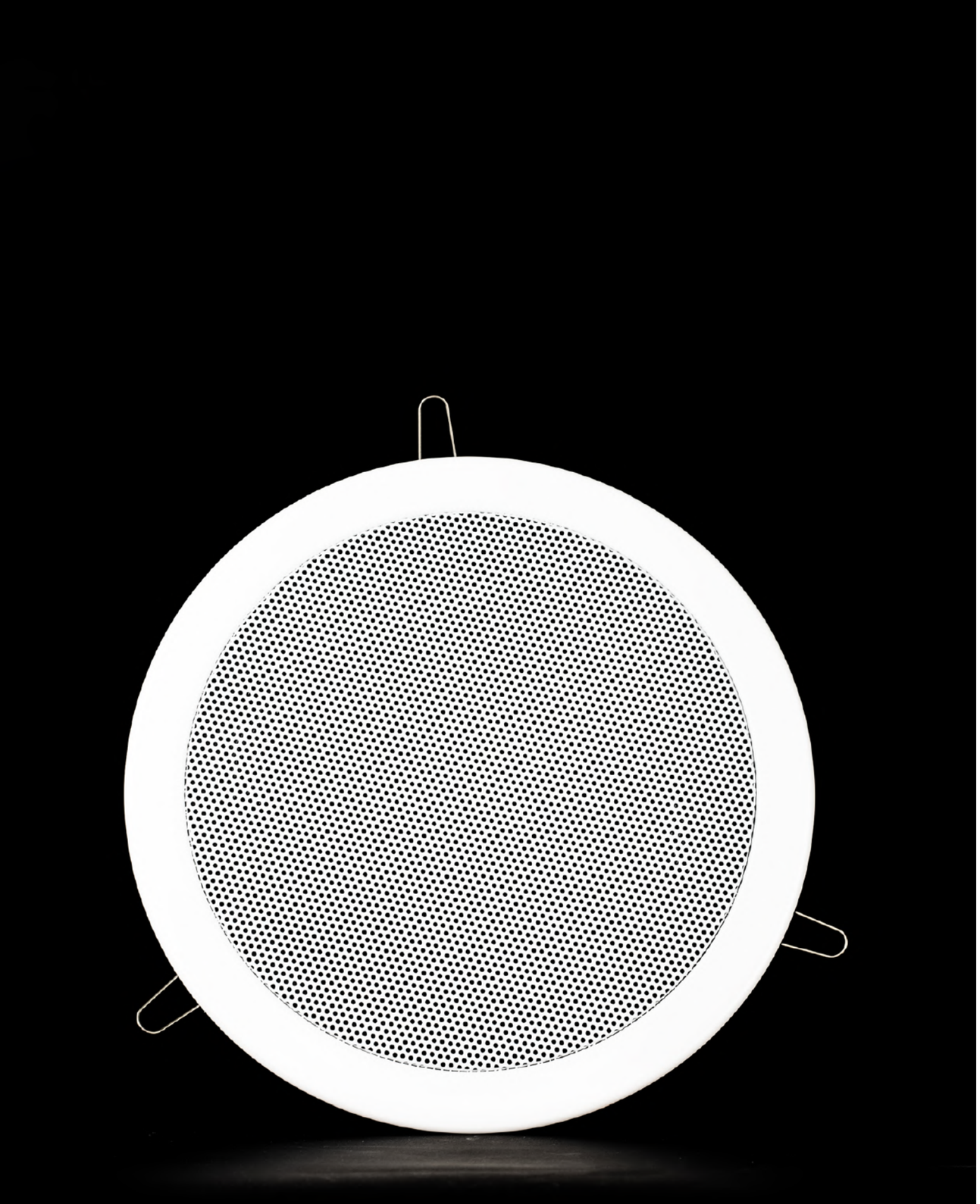

4 193 7

Wall / Ceiling Loudspeakers

Wall and ceiling loudspeaker 6W
IP53, IP, active, Class D technology, built-in, steel

- Steel version
- High-performance wide belt system
- Quick mounting via stainless steel springs
- LAN connection, Ethernet RJ45, 10/100 Mbit/s
- Programming and management via web browser
- PoE power supply

The active wall- and ceiling-mounted loudspeaker is equipped with a 200mm high-performance broadband system. Thanks to the integrated amplifier and the LAN module, the active loudspeaker can be connected directly to SIP or DS-6 networks.

Due to its outstanding speech intelligibility, it is excellently suited for use in passenger information systems of local and long-distance public transport, as well as in sound systems, alarm systems and evacuation systems. The built-in 8W Class D digital audio amplifier delivers high-quality audio signals.

The loudspeaker is characterised by good music reproduction and clear syllable intelligibility.

The loudspeaker with white lacquered perforated metal cover is suitable for built-in in ceilings of all materials. Thanks to the special installation system, the loudspeaker can be mounted in a few seconds with the help of stainless steel springs.

Art.-No.	4 193 7
Mechanical data	
Weight	Approx. 1.7kg
Dimensions (DxL)	Ø 252mm x 105mm
Ceiling cut-out	Ø 230mm
Housing colour	Pure white (RAL 9010)
Material	Steel
Connection	RJ45, 10/100Mbit/s
Electrical data	
Operating voltage	PoE acc. to IEEE 802.3af
Loudspeaker output power	6W
Amplifier power	8W
Transmission range (-10db)	70Hz … 19kHz
Mean sound pressure (1W / 1m)	98dB
Max. sound pressure (Pmax / 1m)	106dB
Environmental conditions	
Environmental temperature range	-40°C … +70°C
Protection class acc. to DIN EN60529	IP53

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Wall / Ceiling Loudspeakers

Wall and ceiling loudspeaker 2x 6W / 100V, A/B, IP53, EN 54-24, built-in, fire dome, steel

certified EN 54-24

- Steel version
- Quick mounting via stainless steel springs
- Supplied with fire dome
- Certified according to EN 54-24

The wall- and ceiling-mounted loudspeaker of the A/B series is equipped with two independent transducer/ speaker combinations. Thus, a supply via two separate lines is possible.

This loudspeaker is particularly suitable for use in passenger information systems for local and long-distance public transport, as well as in sound systems, alarm systems and evacuation systems. In addition, it is approved for use in fire alarm systems according to EN 54.

The loudspeaker is characterised by good music reproduction and clear syllable intelligibility.

The loudspeaker with white painted metal cover is suitable for built-in in ceilings of all materials. Thanks to the special installation system, the loudspeaker can be mounted in a few seconds with the help of stainless steel springs.

Art.-No.	4 796 6
Mechanical data	
Weight	Approx. 1.7kg
Dimensions (DxL)	Ø 252mm x 105mm
Housing colour	Pure white (RAL 9010)
Material	Steel
Electrical data	
Nominal power	2x 6W / 100V
Transformer adjustment (100 V)	2x 6; 3; 1.5W
Impedance	2x 1.66; 3.33; 6.66kΩ
Transmission range (-10db)	80Hz … 20kHz
Mean sound pressure (1 W / 1 m)	2x 92dB
Environmental conditions	
Environmental temperature range	-40°C … +70°C
Protection class acc. to DIN EN60529	IP53

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Wall / Ceiling Loudspeakers

Wall and ceiling loudspeaker 6W / 100V, IP54, built-in, steel

- Steel version
- For 100V sound systems
- Quick mounting via stainless steel springs
- Delivery without fire dome

One-piece wall- and ceiling-mounted loudspeaker with ball-proof grille, suitable for built-in in ceilings of all kinds.

The 130mm chassis is characterised by high sound pressure and a very good transmission range.

Due to the special installation system (stainless steel springs), this loudspeaker can be mounted in a few seconds. The chassis is impregnated and thus protected against moisture.

Art.-No.	4 798 8	4 799 9
Mechanical data		
Weight	Approx. 0.85kg	
Dimensions (DxL)	Ø 167mm x 62mm	
Ceiling cut-out	Ø 140mm … 150mm	
Housing colour	Pure white (RAL 9010)	
Material	Steel	
Connection	4-pole pressure clamp	
Electrical data		
Nominal power	6W / 100V	10W / 100V
Transformer adjustment (100 V)	6; 3; 1.5W	10; 5; 2.5W
Impedance	1.66; 3.33; 6.66kΩ	1; 2; 4kΩ
Transmission range (-10db)	70Hz … 19kHz	
Mean sound pressure (1W / 1m)	93dB	
Max. sound pressure (Pmax / 1m)	101dB	103dB
Environmental conditions		
Environmental temperature range	-40°C … +70°C	
Protection class acc. to DIN EN60529	IP54	

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Special loudspeakers

Special loudspeakers

Loudspeaker 4W / 100V, IP53, built-in, plastic

- Good speech intelligibility and high sound pressure
- Easy connection via pressure spring clamp
- Moisture-impregnated membrane, UV-resistant

This built-in loudspeaker in black plastic housing is equipped with an oval full-range loudspeaker and a transformer and is intended for use in 100V networks.
It can be used both indoors and outdoors. The connection is made by an easy-to-use pressure spring terminal.

The built-in loudspeaker is designed for speech and music reproduction and is characterised by good speech intelligibility and a high sound pressure level.

Art.-No.	4 847 3
Mechanical data	
Weight	Approx. 0.7kg
Dimensions (WxHxD)	151mm x 107.5mm x 90mm
Housing colour	Black
Material	ABS-Plastic
Connection cable length	0.45m
Electrical data	
Nominal power	4W / 100V
Transformer adjustment (100V)	4; 2; 1W
Impedance	2.5; 5; 10kΩ
Transmission range (-10db)	220Hz … 12kHz
Mean sound pressure (1W / 1m)	91dB
Max. sound pressure (Pmax / 1m)	97dB
Environmental conditions	
Environmental temperature range	-40°C … +70°C
Protection class acc. to DIN EN60529	IP53

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Special loudspeakers

Loudspeaker 6W / 100V, weatherproof, IP65, surface-mounted, V4A

- Weatherproof, rustproof V4A stainless steel housing (IP65)
- Horn loudspeaker with good speech reproduction and high syllable intelligibility
- Two-layer loudspeaker fabric made of Saran® and double expanded metal grille
- Stainless steel finish
- 2x mounting holes Ø 21mm for cable glands[1] M20
- Incl. 2x M10 fixing screws

These weather-protected, rustproof V4A stainless steel loudspeakers serve as auxiliary loudspeakers to increase speech performance in noisy environments.

The speakers are optimally protected against weather influences due to their robust construction and the splash-proof speaker cover.

The loudspeakers can be mounted on walls, railings or poles and thus offer a wide range of possible uses. They can be used in tunnel emergency call systems as well as on construction machinery and other vehicles.

Art.-No.	4 751 7
Mechanical data	
Weight	Approx. 2.5kg
Dimensions (WxHxD)	144mm x 160mm x 94mm
Housing colour	Steel
Material	V4A Stainless steel (1.4571)
Electrical data	
Nominal power	6W / 100V
Transformer adjustment (100V)	6; 3; 1.5W
Impedance	1.66; 3.33; 6.66kΩ
Transmission range (-10db)	300 Hz … 7kHz
Mean sound pressure (1W / 1m)	96dB
Max. sound pressure (Pmax / 1m)	106dB
Environmental conditions	
Environmental temperature range	-25°C … +70°C
Protection class acc. to DIN EN60529	IP65

[1] Cable glands not included in the scope of delivery.

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Special loudspeakers

Loudspeaker 6W / 8Ω, weatherproof, IP65, surface-mounted, V4A

- Weatherproof, rustproof V4A stainless steel housing (IP65)
- Horn loudspeaker with good speech reproduction and high
- and high syllable intelligibility
- Two-layer loudspeaker fabric made of Saran® and
- double expanded metal grille
- Version in stainless steel painted orange (RAL 2004)
- 2x mounting holes Ø 21mm
- Incl. 2x M20 cable glands
- Incl. 2x M10 fixing screws

These weather-protected, rustproof V4A stainless steel loudspeakers serve as auxiliary loudspeakers to increase speech performance in noisy environments.

The speakers are optimally protected against weather influences due to their robust construction and the splash-proof speaker cover.

The loudspeakers can be mounted on walls, railings or poles and thus offer a wide range of possible uses. They can be used in tunnel emergency call systems as well as on construction machinery and other vehicles.

Art.-No.	4 752 8
Mechanical data	
Weight	Approx. 2.25kg
Dimensions (WxHxD)	144mm x 160mm x 94mm
Housing colour	Pure orange (RAL 2004)
Enclosure material	V4A Stainless steel (1.4571)
Electrical data	
Nominal power	6W
Impedance	8Ω
Transmission range (-10db)	300Hz … 7kHz
Mean sound pressure (1W / 1m)	96dB
Max. sound pressure (Pmax / 1m)	106dB
Environmental conditions	
Environmental temperature range	-25°C … +70°C
Protection class acc. to DIN EN60529	IP65

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IP / SIP DS-6 advanced modul

Loudspeaker installation module 8W

- Programming and management via web browser
- Supported audio formats include MP3, MPEG-4, PCM linear, G.711, G.722, GSM, Opus etc.
- LAN connection, Ethernet RJ45, 10/100 Mbit/s
- Screw terminal contacts for loudspeaker and microphone
- Impedance of the connected loudspeaker 2-8Ω
- Power supply via PoE (IEEE 802.3af)
- Status LED display

The IP / SIP DS-6 advanced module is designed for mounting on loudspeakers and converts standard passive loudspeakers into network loudspeakers.

This enables audio streaming via the Internet to existing passive speakers.
The built-in digital 8 W Class D audio amplifier delivers high-quality audio signals to the connected wall, ceiling or table speakers. Due to its compact design, the IP / SIP DS-6 advanced module can be mounted directly to the existing passive loudspeaker using the transformer bracket.

The power supply of the IP SIP DS-6 advanced modul is provided by an optional Power-over-Ethernet Injector or a PoE switch. The IP / SIP DS-6 advanced modul integrates loudspeakers directly into an IP network and is particularly suitable for use in transit information systems and sound systems for local and long-distance public transport, as well as in SIP or DS-6 communication systems. Depending on the available installation space, the IP SIP DS-6 advanced module can be mounted both inside existing loudspeakers and externally on loudspeakers.

Art.-No.	4 190 4
Mechanical data	
Weight	Approx. 0.182kg
Dimensions (WxHxD)	52mm x 40mm x 66mm
Housing colour	Silver
Enclosure material	Aluminium
Electrical data	
Output power	8W
Loudspeaker impedance	8Ω
Power supply	PoE acc. to IEEE 802.3af
LAN Connection	RJ45
Loudspeaker connection	Screw/plug-in terminal
Environmental conditions	
Environmental temperature range	0°C … +50°C
Protection class acc. to DIN EN60529	IP42

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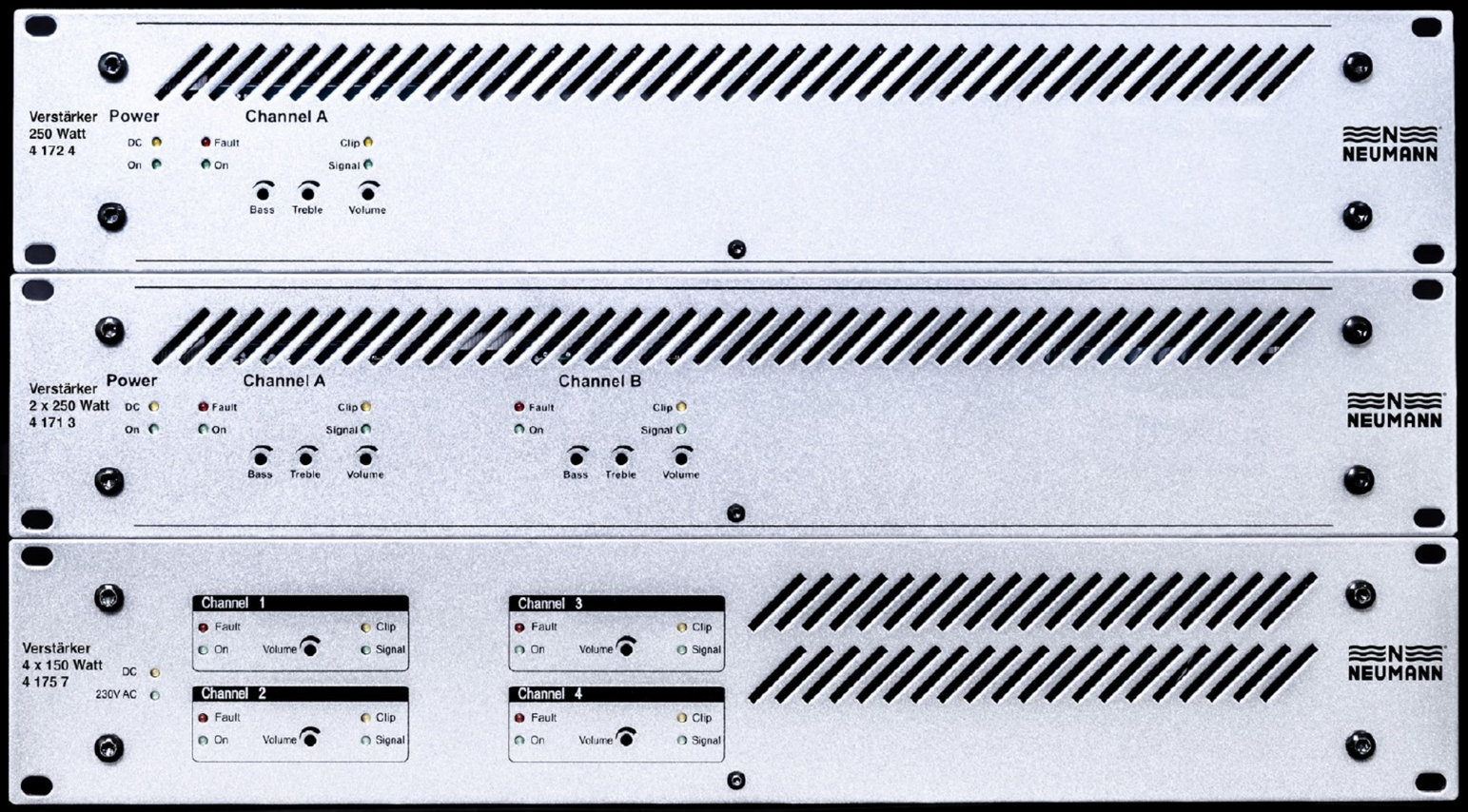
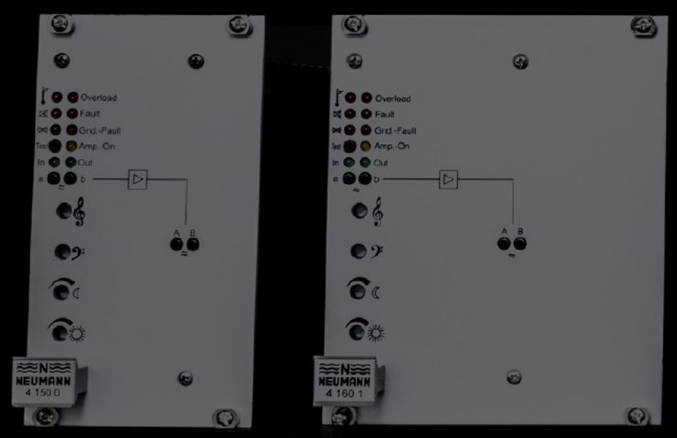
Amplifiers





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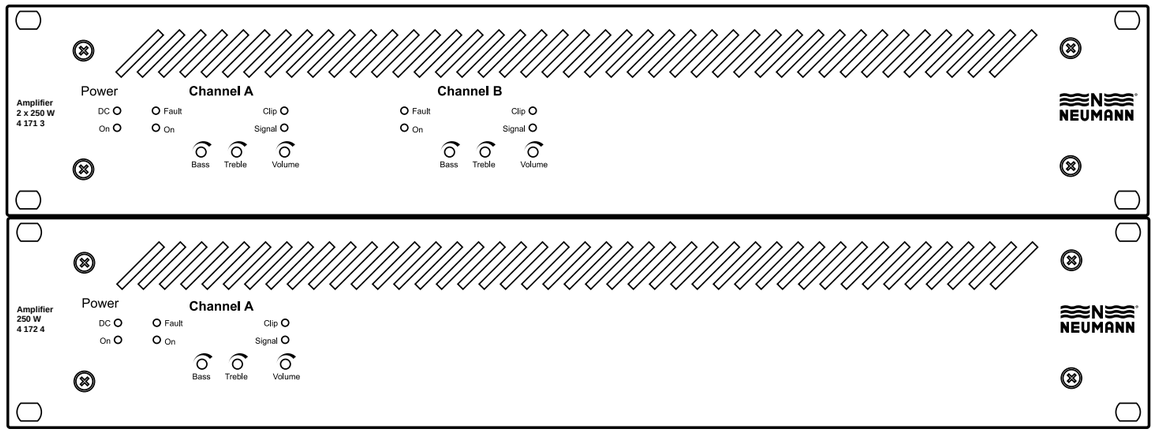
Amplifiers

Amplifier 250 / 300W and 2x 250 / 300W, Class D technology



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Amplifiers

Amplifier 250 / 300W and 2x 250 / 300W, Class D technology

- High efficiency
- Low heat generation
- No active ventilation required
- Low built-in depth (important for cabinet build-in)
- Control LEDs for all signal and operating states on the front panel: Power ON, DC, Signal OK, Clipping, Fault
- Volume, treble and bass controls accessible from the front (adjustable with screwdriver)
- Transformer-balanced inputs
- Potential-free amplifier switch-on
- One potential-free fault signal change-over contact
- Monitoring: fuse failure, overload, overtemperature
- Protective circuit against no-load, short-circuit, overload
- AC 230V / AC 115V input voltage (switchable)
- DC 48V / DC 60V input voltage
- Amplifier is open-circuit and short-circuit proof
- 100V and 50V output, earth-free
- High-quality toroidal output and mains transformers
- All leads plugged in, with detachable screw connections
- Important: The 2-channel power amplifier (Art.-No.: 4 174 6) is already preset by the manufacturer. The settings cannot be changed by the customer!

The 1-channel and 2-channel power amplifiers are designed for permanent installation in ELA systems (DS-6, MDK, MF etc.) from Neumann Elektronik.

The amplifiers are designed in Class D technology. This circuit design guarantees a high efficiency and has a low heat generation.

The amplifiers generate an output nominal power of 1x 250 / 300W or 2x 250 / 300W at an operating voltage of AC 230V / AC 115V or DC 48V ... DC 60V.

Art.-No.	4 172 4		4 171 3 / 4 174 6	
Mechanical data				
Dimensions	19“, 2U, 270mm deep			
Weight	11.5kg		15kg	
Electrical data				
Operating voltage	DC 48…DC68V	AC 230V /AC 115V	DC 48V…DC 68V	AC 230V / AC 115V
Max. Current consumption	6A	1.4A	12A (both channels)	2.8A (both channels)
Output power according to IEC 268.3/19.3	300W in mains operation		2x 300W in mains operation	
Output power according to IEC 268.3/19.4	250W in mains operation		2x 250W in mains operation	
Input voltage	320mV			
Frequency range	80Hz … 12kHz ± 1db			
Environmental conditions				
Environmental temperature range	+5 ... +40°C			

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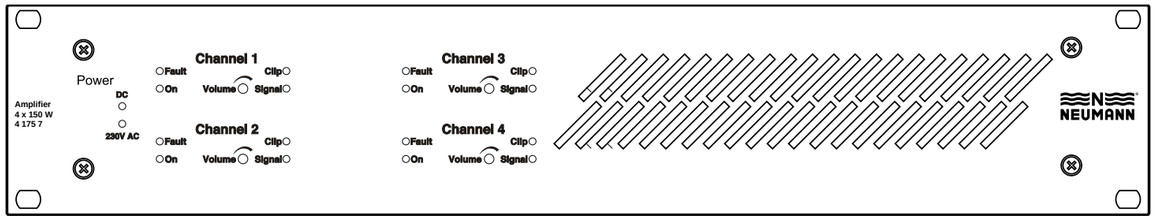
Amplifiers

Amplifier 4x 150W
Class D technology



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Amplifiers

Amplifier 4x 150W
Class D technology

- High efficiency
- Low heat generation
- Active ventilation switched on automatically
- Low built-in depth (important for cabinet build-in)
- Low installation depth (important for cabinet installation)
- Control LEDs for all signal and operating states at the front plate: Power ON, DC, Signal OK, Clipping, Fault
- Volume control for each channel accessible from the front (adjustable with screw driver)
- Electronically-balanced inputs
- Automatically or remote amplifier activation
- Two notification contacts for channel monitoring
- Two notification contacts for power supply monitoring
- Protective circuit against temperature rise and overload
- AC 230V operation voltage and DC 48V operation voltage
- High quality toroid output and mains transformers
- All feed lines plugged, with removable screw connections
- Amplifier controlling via RS485 interface (optional)

The 4-channel final stage is designed for the constant installation into PA systems and for connecting loudspeakers in 100V technique. The amplifier can be switched over to 2-channel output using external wiring.

Each final stage is designed as a Class D technology product. This circuit concept guarantees high efficiency, low heat development and a low standby consumption.
The amplifiers produce an actual power output of 4x 150W respectively 2x 300W with a power supply of AC 230V and / or DC 48V for redundant operating.

Art.-No.	4 175 7
Mechanical data	
Dimensions	19“, 2U, 280mm deep
Weight	16.5kg
Electrical data	
Operating voltage	DC 48V / AC 230V
Max. Current consumption	13.5A / 3.7A
Standby	0.3A 14.4W / 0.045A 10W
Output power	4 x 150 W, each 100V at 66 Ω 2 x 300 W, each 100V at 66 Ω
Input sensitivity	380mV / 10kΩ
Frequency range	80Hz … 22kHz - 3db
Environmental conditions	
Environmental temperature range	+5 ... +40°C

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4 150 0

4 160 1

22 1 5004 150 0 Amplifier backplane for DS-6 PA Control

22 1 5203 197 2 Amplifier backplane, LC 1, LC 2

22 2 5303 197 4 Amplifier backplane Extension, LC 3, LC 4

Amplifiers

Amplifier 25 / 50W

- Functions according to DIN EN60849 regulation
- Volume separately adjustable for day and night operation
- Low distortion factor ≤0.5%
- Treble and bass control
- Electronic, temperature-dependent
- switch-off from 85°C ±3K
- Light-emitting diode displays on the front panel of the following Functions:
  - Switch-on control “Amp.-ON”
  - Earth fault, “Gnd.-Fault”
  - Interruption of the loudspeaker circuit
  - Overload or short-circuit “Overload
  - Overtemperature
  - Fuse failure
  - General fault “Fault”
  - Level control for input and output signals
  - Output signals “In” and “Out”
- Galvanically free switch-on
- Mandatory call-in for loudspeaker
- Switchable input sensitivities
- Loudspeaker protection by active high-pass filter
- Attenuators for different input voltages
- Open-circuit and short-circuit proof

The 25 / 50W amplifier, was developed in a very compact design, serves to amplify the power of Neumann Elektronik DS-6 systems and also offers the possibility of connection to all voice communication centres with an analogue interface.

Thanks to different operating voltages, flexible use is possible. A special field of application is the public address and alarm system for small areas and fire compartments in office buildings, warehouses and storage areas, production environments, building yards and workshops.

Art.-No.	4 150 0		
Mechanical data			
Dimensions	14HP and 3U		
Weight	1.039kg		
Electrical data			
Nominal operating voltage	DC 24V (DC 26.5V)	DC 48V	DC 60V
Max. current consumption	2.1A	2.1A	1.8A
Audio frequency output power	20 / 25W	50W	50W
Input voltage 1	120mV		
Temperature limitation in °C	≥75° ±3K		
Temperature switch-off in °C	≥85° ±3K		
Frequency range	80Hz … 12kHz -3db		
Environmental conditions			
Environmental temperature range	-5 ... +40°C		

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Amplifiers

Amplifier 100W

- Functions according to DIN EN60849 regulation
- Volume separately adjustable for day and night operation
- Low distortion factor ≤0.5%
- Treble and bass control
- Electronic, temperature-dependent
- switch-off from 85°C ±3K
- Light-emitting diode displays on the front panel of the following Functions:
  - Switch-on control “Amp.-ON”
  - Earth fault, “Gnd.-Fault”
  - Interruption of the loudspeaker circuit
  - Overload or short-circuit “Overload
  - Overtemperature
  - Fuse failure
  - General fault “Fault”
  - Level control for input and output signals
  - Output signals “In” and “Out”
- Galvanically free switch-on
- Mandatory call-in for loudspeaker
- Switchable input sensitivities
- Loudspeaker protection by active high-pass filter
- Attenuators for different input voltages
- Open-circuit and short-circuit proof

The 100W amplifier, was developed in a very compact design, serves to amplify the power of Neumann Elektronik DS-6 systems and also offers the possibility of connection to all voice communication centres with an analogue interface.

Thanks to different operating voltages, flexible use is possible. A special field of application is the public address and alarm system for small areas and fire compartments in office buildings, warehouses and storage areas, production environments, building yards and workshops.

Art.-No.	4 160 1	
Mechanical data		
Dimensions	21HP and 3U	
Weight	1.910kg	
Electrical data		
Nominal operating voltage	DC 48V	DC 60V
Max. current consumption	4,3A	3.5A
Audio frequency output power	100W	
Input voltage 1	120mV	
Temperature limitation in °C	≥75° ±3K	
Temperature switch-off in °C	≥85° ±3K	
Frequency range	80Hz … 12kHz -3db	
Environmental conditions		
Environmental temperature range	-5 ... +40°C	

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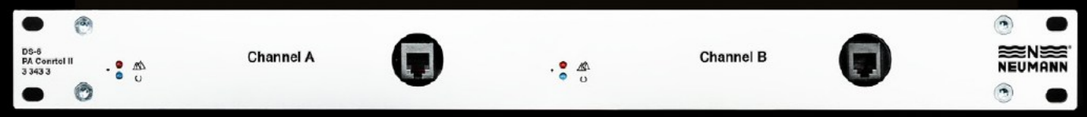
Control and monitoring components

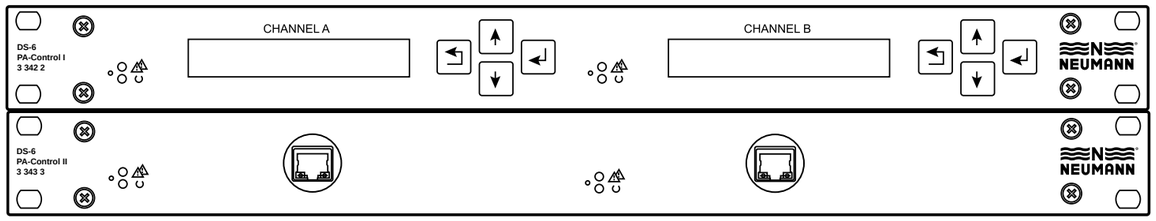


3 342 2
4 171 3

3 343 3
4 171 3

Control and monitoring components

DS-6 PA-Control I and II



DS-6 PA-Control I and II combine as ELA control units the control and monitoring of a 100V PA system with a maximum amplifier power of 2x 250W on a DS-6 system. In its compact 19” design with one height unit, the units replace a multitude of individual components, all of which required a great deal of wiring.

A modern PA system with DS-6 PA controls can be wired almost completely with pre-assembled system cables in a plug-in manner. Depending on the version of the PA Control, configuration can be carried out via the control panel with display or the serial interface or, in the case of the PA Control II, only via the serial interface on the unit. Optionally, a remote solution is also available, in which case the serial interface is integrated into the network via additional components that are available as accessories. Impedance monitoring, amplifier failure, as well as overload and earth-fault detection of the PA system can be configured via integrated software packages.

As a standard feature, one zone or one loudspeaker circuit can be supplied with Neumann amplifiers of the delivery number 41713. By means of optional additional components, which can be integrated into the unit, an extension to up to six zones with the above-mentioned monitoring is feasible.

In addition, in zone one, as well as in the optional zone two, in the case of ring-shaped cabling, the cable loops can be monitored and fed from both sides in the event of an interruption.

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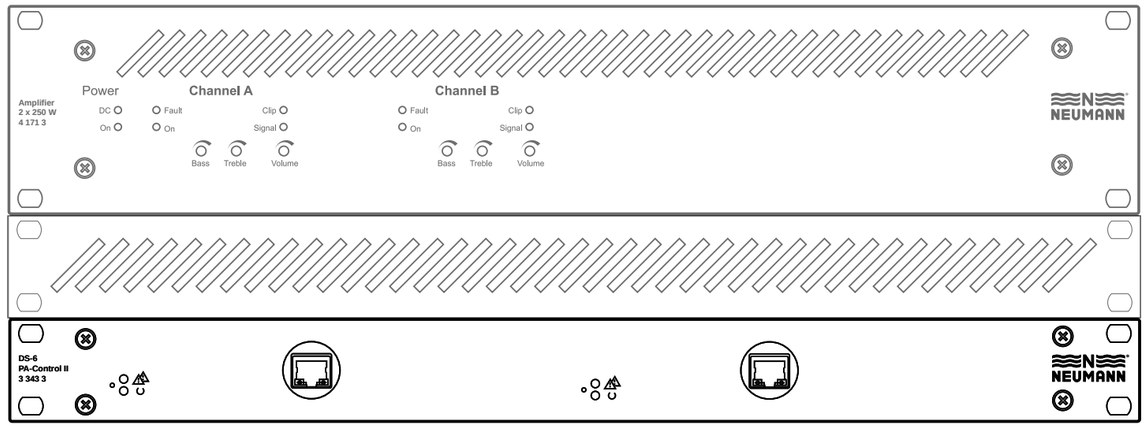
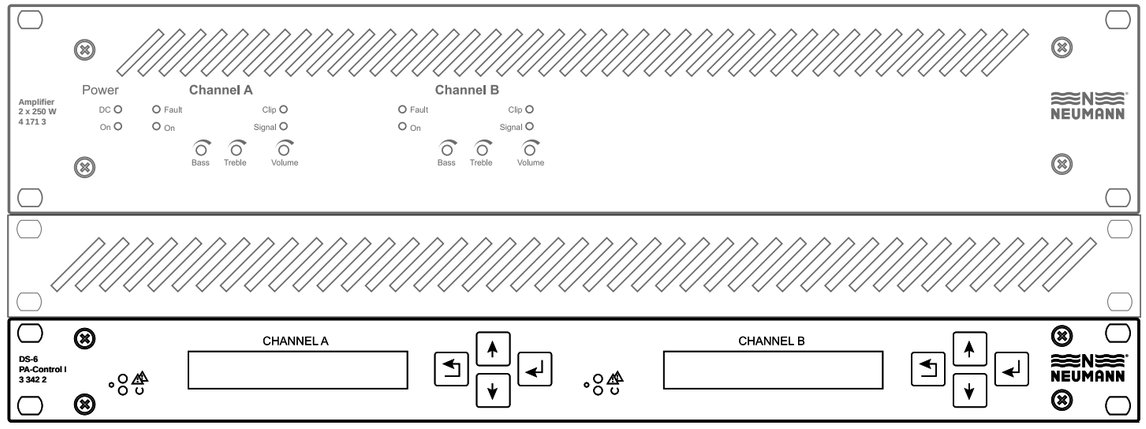
Control and monitoring components

DS-6 PA Control I and II





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Control and monitoring components

DS-6 PA-Control I and II

- 2 redundant DS-6 Ethernet RJ45 LAN interfaces
- Monitored DC 48V ... DC 60V supply input
- Amplifier monitoring with N+1 emergency function
- Depending on the unit, RS232 interface for configuration and error message on front and rear side, or control panel with display and RS232 interface for configuration and error message on rear side
- Main and secondary fault alarm contact with NC and NO contact
- 1 or optionally up to 6 zones or loudspeaker circuits can be controlled
- Fuse monitoring
- Volume night reduction
- Amplifier failure monitoring even during sound reinforcement
- No pilot tone monitoring necessary for automatic switchover to redundant amplifier, no additional power loss at the amplifier
- Loudspeaker circuit impedance monitoring
- Loudspeaker circuit current monitoring
- Earth-fault monitoring of the loudspeaker line
- 1 or optionally 2 loudspeaker loop monitors
- Network monitoring
- Optional environmental noise-dependent volume control

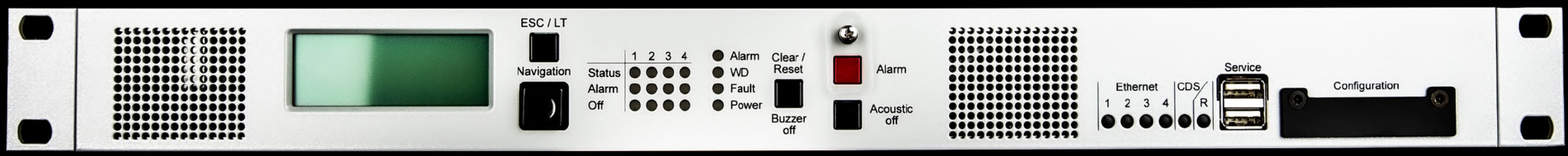
Art.-No.	3 342 2	3 343 3
Version	Control panel with display and RS232 interface on the rear side	RS232 interface on the front and rear
Mechanical data		
Dimensions	Width: 19”, Height: 1HE according to DIN EN 60297 Built-in depth (housing without connectors): 284 mm	
Weight	Approx. 4kg	
Technical data		
Audio channels	2 channels	
Network interfaces	2x LAN per channel	
Operating voltage	2x DC 43V… DC 72V	
Nominal power input min.	4W per channel	
Nominal power input max.	8W per channel	
Max. power to be monitored	250W per channel	
Environmental conditions		
Environmental temperature range	+5 ... +40°C	
Protection class acc. to DIN EN 60529	IP20	

Control and monitoring components

DS-6 PA-Control I and II accessories

Article	Description	Art.-No.
Additional plate 2 ... 4 zones	Analogue additional plate for expansion to up to 4 zones or speaker circuits	22 2 5203 343 6
Additional plate 2 ... 6 zones	Analogue additional plate for expansion to up to 6 zones or speaker circuits	22 2 5303 343 7
Additional plate 2 ... 6 zones+	Analogue additional plate for expansion to up to 6 zones or loudspeaker circuits and environmental noise dependent volume control	22 2 5303 332 3
Standard steel cabinet	Pre-wired standard steel cabinet with temperature controlled roof fan, swing frame, power supply, circuit breaker and switch, including wiring and mounting material. Dimensions: width: 800mm, height: 2000mm, depth: 600mm.	64 1 0136 197 8
Accident - Unit 2U	Consisting of 250W emergency amplifier, including circuit breaker, system cables and mounting material.	62 2 0236 197 8
Redundancy - Unit 1U	Consisting of 19“ switch, including circuit breaker, socket, cables and mounting material	62 2 0336 197 9
Battery - Unit 3U	Consisting of emergency power battery 48V 18AH in 19“ case, including cables and mounting material.	62 2 0436 197 0
I/O module - unit on mounting rail	Consisting of I/O module, power supply unit, terminal blocks, cables and mounting material for rear panel mounting. Various software packages are available for the I/O module unit, of which one software can always be saved to an I/O module unit:	62 2 0536 197 1
	Fault management	27 9 1004 475 9
	Flashlight connection	27 9 1904 475 8
	2-way virtual keystroke	27 9 1704 475 6
	Impedance measurement NTP	27 9 2004 475 0
System cable DS-6 PA-Control to amplifier, 0.7 m length	For connecting a DS-6 PA Control to an amplifier.	22 3 0303 332 1
System cable zones - loop/back panel	This system cable is used to route the ABs of zones 1 ...6, for further cabling on terminal blocks on the rear wall and to route the returns of zones 1 and 2 from the terminal blocks to DS-6 PA Control.	22 2 0903 332 6
System cable 100V-AB-Bus, 0.3 m length	For connecting the 100V-AB bus of two DS-6 PA Control devices in emergency mode and for one channel.	
System cable extension 100V AB bus, 0.7 m length	For extending the system cable. This allows the system cable 100V-AB-Bus to be extended to a length of 1m.	
Pre-assembled single wires, 0.3 m length socket housing	For extending the system cable 100V-AB bus to connect a further amplifier in case of emergency.	96 9 1640 391 8
	To extend the complete bus width, 6 single wires and a socket housing are required per DS-6 PA Control.	96 9 1640 381 7
Single wires, 0.7 m length	For extending the system cable 100V AB bus to connect an emergency amplifier. 2 single wires are required for each backup amplifier.	22 4 0503 332 4
System cable LF-ab bus, 0.5 m length	For connecting the LF-ab bus of two DS-6 PA Control devices and for one channel.	99 9 1980 162 4
System cable LF-ab bus, 1.0 m length	For connecting the LF-ab bus of two DS-6 PA Control devices and for one channel.	99 9 1980 165 7
System cable extension, 0.7 m length	For extending the LF-ab bus to connect one or maximum two backup amplifiers. Four wires for the first and four wires for the second backup amplifier.	22 4 060 3332 5
Bridge for the 100V AB bus	During operation of the system while the DS-6 PA-Control is unplugged	
Bridge for the LF-ab bus	During operation of the system while the DS-6 PA-Control is unplugged	96 9 1630 210 7

Voice alarm center unit
PACE-VA EN 54-16

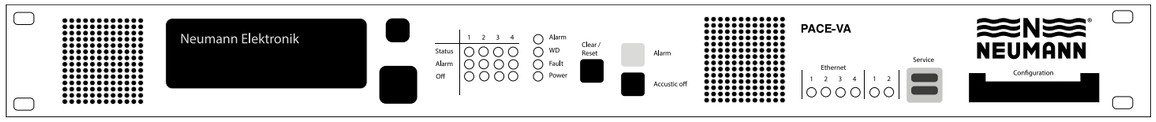


3 344 4

Control and monitoring components

certified EN 54-16

PACE-VA, EN 54-16 Voice alarm center unit



The PACE-VA is an ultra-compact, multi-channel public address system.
It is used to transmit alarm and evacuation announcements as well as general information and music with high quality.

The PACE-VA fulfils all requirements of EN 54-16 and is designed for use as a voice alarm system (SAA) in accordance with VDE0833-4 and supports staged evacuation by configuring alarm sequencers. The high availability in operation, a free network topology as well as the possibility of redundant interconnection allows the application of PACE-VA for all security levels and in all building classes.

Standard protocols are used for the connection of external network components.

The PACE system setup and configuration is very simple due to the auto-discovery function within WeNet.The monitoring of the transmission paths and the integrated error check of all system interfaces and ports reduce the effort for inspection and maintenance.

A comprehensive range of products and accessories enables flexible expansion and adaptation of the PACE-VA to different installation environments.

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Control and monitoring components

certified EN 54-16

PACE-VA, EN 54-16 Voice alarm center unit

- 19” width with 1U
- 4 integrated amplifiers, 150W each
- 8 loudspeaker circuits, galvanically isolated
- 4 audio outputs
- 4 audio inputs
- 8 control inputs
- 8 control outputs
- 4 inputs for measuring microphone
- 4 Ethernet ports
- 2 USB ports
- EN 54-16 approval
- Amplifier variably configurable
- Impedance monitoring
- Power monitoring
- Earth-fault monitoring
- Backup amplifier switching

Art.-No.	3 344 4
Mechanical data	
Dimensions (WxHxD)	482,5mm x 43,7mm x 360mm
Built-in dimensions	Width 19“, 1U according to DIN EN 60297, installation depth: 360mm without connectors (space required for cabling >= 90mm)
Weight	Approx. 5.5kg
Technical data	
Nominal operating voltage (voltage range)	DC 48V (DC 42V … DC 60V) AC 230V (AC 100V … AC 260V) , 40Hz … 60Hz
Peak input current	20A (DC 48V), 3,5A (AC 230V)
Inrush current	<25A (DC 48V), <16A (AC 230V)
Power dissipation (in idle mode) plus per active amplifier Speech reinforcement (-12dB) Sound reinforcement (-9dB) Max. output power (0dB)	 25W +10W +15W +30W
Connected load / max. power consumption	1kW
Amplifier data	
Quantity	4x Class D
Amplifier outputs [LS Out]	8 (4x with A/B wiring)
Amplifier type	100V, galvanically isolated
Output power	4x 150W (4x 200W according to EIA SE-101-A-19149) EN60268-3:2013 distortion limited output power DIN EN 54-16 Output power requirement FTC 63FR37233 Title 16, paragraph 1, part 432, rated power EIA SE-101-A-1949
Power output configuration	4x 150W (4x 200W according to EIA SE-101-A-1949) 2x 300W (2x 400W according to EIA SE-101-A-1949) 1x 300W, 2x 150W (2x 200W according to EIA SE-101-A-1949) 1x 450W, 1x 150W (1x 200W according to EIA SE-101-A-1949) 1x 600W (1x 800W according to EIA SE-101-A-1949)

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The technology in detail

The technology in detail

IP protection classes

According to DIN 40 050 / IEC / VDE 0470 / EN 60529.

The degrees of protection are identified by internationally valid abbreviations: a two-digit IP code number (International Protection) indicates the degree of protection of the enclosure against the ingress of foreign bodies, dust and water.

Example of a code number: IP65[1].

First IP code number	Protection levels for contact and foreign body protection	Second IP code number	Degrees of protection for water protection
0	Unprotected	0	Unprotected
1	Protected against the penetration of large foreign bodies with a diameter greater than 50mm.	1	Protected against the penetration of vertically falling dripping water
2	Protected against the penetration of medi-um-sized foreign bodies with a diameter greater than 12mm	2	Protected against dripping water falling at an angle of up to 15° from the vertical.
3	Protected against the penetration of small foreign bodies with a diameter greater than 2.5mm.	3	Protected against water spray falling at any angle up to 60° from vertical
4	Protected against the penetration of tools, wires (granular foreign bodies) with a diameter greater than 1.0mm.	4	Protected against water splashing against the equipment from all directions.
5	Complete protection against contact with live or internal moving parts. Protection against harmful dust deposits. The ingress of dust is not com-pletely prevented, but the dust must not penetrate in such quantities that the function is impaired.	5	Protected against water jets from a nozzle di-rected against the equipment from all directions.
6	Complete protection against contact with live or internal moving parts. Protection against ingress of dust.	6	Protected against strong jets of water or tempo-rary flooding
		7	Protected against temporary immersion in water, under the specified pressure/time conditions of 0.15-m
		8	Protected against permanent immersion in water
		9K	Protected against water directed against the en-closure from any direction under high pressure/ steam jet cleaning

1) If no IP degree of protection is specified, the letter X replaces the respective digit, e.g. IPX4.

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The technology in detail

General information on the marking of explosion-protected equipment

The marking of electrical equipment and protective systems intended for use in potentially explosive atmospheres is carried out in accordance with the requirements of EC Directive 2014/34/EU.

Example of labelling: Ex II 2G Ex db ib IIC T4

Explanation of this example

Ex	Ex sign
II	Device group II
2	Device category 2 (open-pit)
G	Gases/vapours, suitable for zone 1 and 2
Ex	Explosion protection according to EN IEC 60079-0 ff
db	Pressure-proof enclosure Ex d
ib	Intrinsic safety Ex i
IIC	Explosion group (open pit, subgroup C)
T4	Temperature classification

Explanation of explosion protection:

1. Zones / Unit group / Unit category

There are 2 equipment groups: for underground use the number “I” is assigned, above ground the number “II”. Hazardous explosive atmospheres are divided into zones or according to the degree of probability of the occurrence of an explosive atmosphere. Equipment of the corresponding equipment category (area of use) must be used in the respective zones. In the current IEC regulation, the zones are defined as follows:

Classification of the Ex-areas / equipment category / equipment group				
Combustible substances	Behaviour of the combustible substances	Zones	Equipment group (use above ground or underground)	Device category
G: Gases, mists, vapours	Are present constantly, for a long time or frequently	Zone 0	II	1G
	Occasionally occur	Zone 1	II	2G (also 1G)
	Probably do not occur, if they do, only rarely or briefly	Zone 2	II	3G (also 2G and 1G)
D: Dust	Are present constantly, for a long time or frequently	Zone 20	II	1D
	Occasionally occur	Zone 21	II	2D (also 1D)
	Probably not occur due to whirled-up dust, if only rarely or for a short time	Zone 22	II	3D (also 2D and 1D
M: Methane / Dust	-	Mining	I	M1
	-			M2 or M1

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The technology in detail

General information on the marking of explosion-protected equipment

Explosion subgroup : Classification of gases and vapours

Equipment group “II” is divided into three gas groups, with IIA being the least flammable and IIC the most flammable. In the USA there is a different division according to “Classes” (I, II, II): “Class I” refers to gases and vapours (see table).

Explosive subgroup / Representative vapours		
CENELEC / IEC	Representative vapours	U.S.A. and Canada
I	Methane	No assignment
IIA	Propane, n-Butane, Kerosene	Class I, Group D
IIB	Ethylene, Hydrogen sulphide, Ethyl ether	Class I, Group C
IIC	Hydrogen, Ethine (Acetylene), Carbon disulphide	Class I, Group B
IIC	Hydrogen, Ethine (acetylene), Carbon disulphide	Class I, Group A

2. Explosion protection

In order for electrical equipment to be used safely in potentially explosive atmospheres, explosion protection techniques must be taken to prevent ignition of the atmosphere. This can be prevented with different techniques, depending on the application and the equipment: Separation (o, q, m), exclusion (p), confinement (d), special mechanical design (n, e), energy limitation (ia, ib), and other measures (s). Each of these techniques is subject to national and or international standards and regulations.

Ex: Explosion protection certified according to CENELEC standard EN60079...Explosion protection certified according to CENELEC standard EN60079...complies with the applicable EN standards and contains safety measures for equipment that ensure at least the equivalent safety compared to the European standards.

Type of protection / Technology / Standards					
Labelling	Ignition protection type	Technology	CENELEC	IEC	DIN
	General requirements for all methods		EN60079-0	IEC60079-0	DIN EN60079-0
Ex d	Flameproof enclosure	Transmission of an explosion to the outside is excluded	EN60079-1	IEC60079-1	DIN EN60079-1
Ex e	Increased security	Special mechanical design	EN60079-7	IEC60079-7	DIN EN60079-7
Ex p	Pressurised enclosure	E atmosphere is separated from the ignition source	EN60079-2	IEC60079-2	DIN EN60079-2
Ex m	Potting enclosure		EN60079-18	IEC60079-18	DIN EN60079-18
Ex o	Oil enclosure		EN60079-6	IEC60079-6	DIN EN60079-6
Ex q	Sandkapselung		EN60079-5	IEC60079-5	DIN EN60079-5
Ex n	Without sparking (nA) / vapour-proof enclosure (nR)	Special mechanical design (only for zone 2 or 22)	EN60079-15	IEC60079-15	DIN EN60079-15
Ex i	Intrinsic safety	Spark energy limitation	EN60079-11	IEC60079-11	DIN EN60079-11
Ex s	Special protection	Measures other than the standardised types of protection			

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The technology in detail

General information on the marking of explosion-protected equipment

4. Classification of the temperature classes

Gas-air mixtures can be ignited not only by sparks but also by contact with hot surfaces. If the surface temperature of a piece of equipment reaches the ignition temperature of the explosive atmosphere, ignition can occur. For this reason, all electrical equipment used in potentially explosive atmospheres is divided into temperature classes.

Temperature classification		
	Permissible surface temperature of the electrical equipment in °C	Permissible surface temperature of the units in °C
T1	> 450°C	450°C
T2	> 300°C … ≤ 450°C	300°C
T3	> 200°C … ≤ 300°C	200°C
T4	> 135°C … ≤ 200°C	135°C
T5	> 100°C … ≤ 135°C	100°C
T6	> 85°C … ≤ 100°C	85°C

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