



Loudspeaker HPFS Ø28 mm

Waterproof

WD11903Y8H-WPDAP

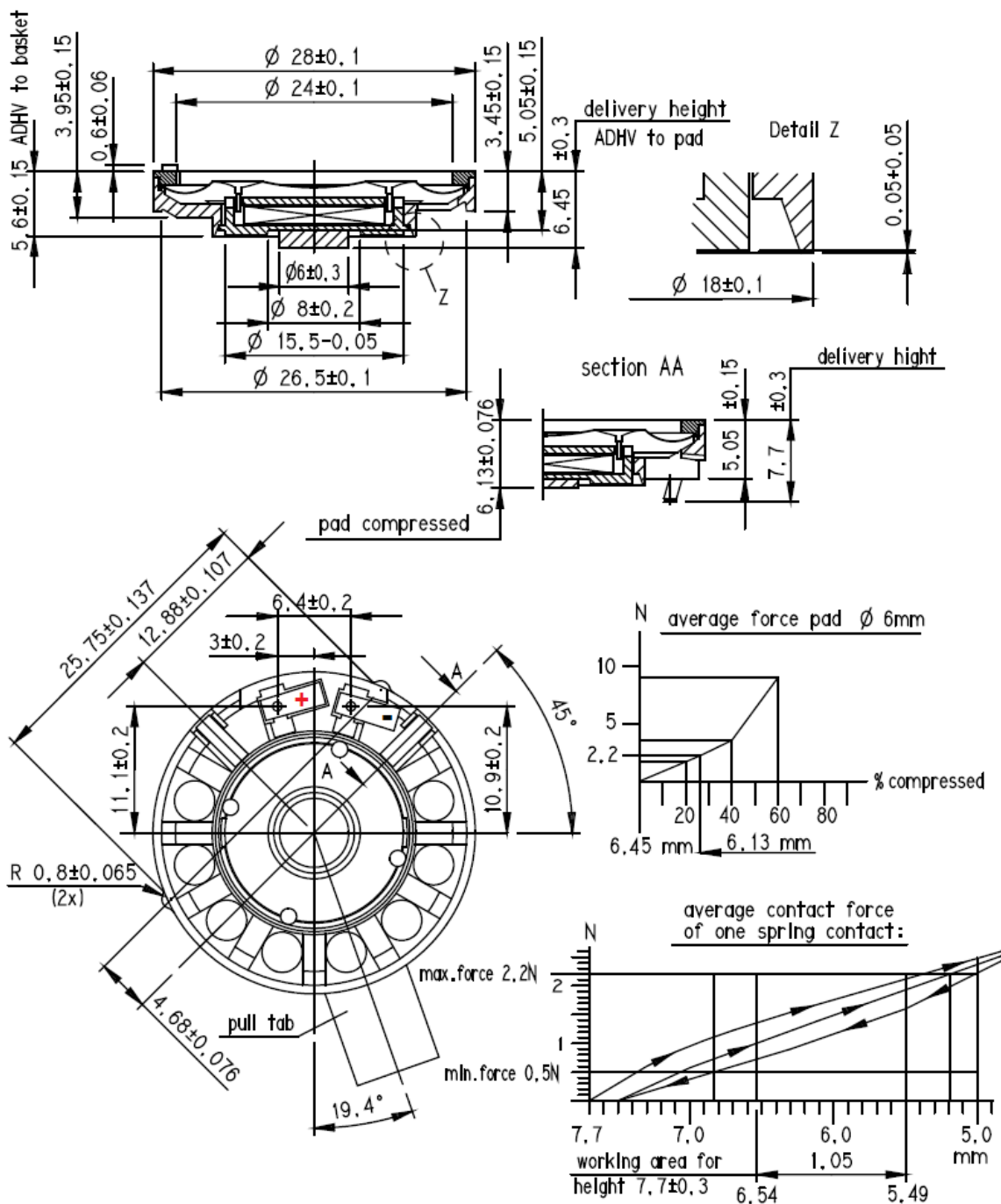
Revision

Date	Version	Status	Changes	Approver
2016/03/23	A	Obsolete	First release	MB
2017/02/17	B	Obsolete	Update marking, packaging and gasket	LC
2017/09/21	C	Obsolete	New logo (corrected version)	LC
2021/06/02	D	Released	Update clamping force of leak test	GDC

1. Mechanical Characteristics

1.1. Mechanical Drawing

Drawing not to scale I
Loudspeaker 28 mm



1.2. Part Marking/Labeling

The units have a serial number on bottom (pot) side

Example 13022 7342 1121/UA :

13022 – last 5 digits of the core speaker

7 – last digit of year

34 – week

2 – day

11 – hour

21 – minute

UA – Ukraine

Differentiation compared to non-waterproof speakers made by a green dot.

1.3. Material List

Material of POT	ABS/SAN
Material of MEMBRANE	POLYCARBONATE (PC)
DIMENSION	28MM/1.1
MASS	4.9g
MATERIAL of MAGNET	Nd Fe B
CONNECTION	SPRING-CONTACT
DIRECTION of CONNECTOR	PARALLEL TO PCB
GASKET	PC RING WITH ADHV VP 6899
PAD	PORON 4701-30-25 PFC/Φ 6

1.4. Water/gas tightness (IPx7)

The products are 100% tested for leaks between cover and membrane.

Method: Differential pressure measurement

Down force on cover: 4 ± 1 N

Air pressure: 11Kpa

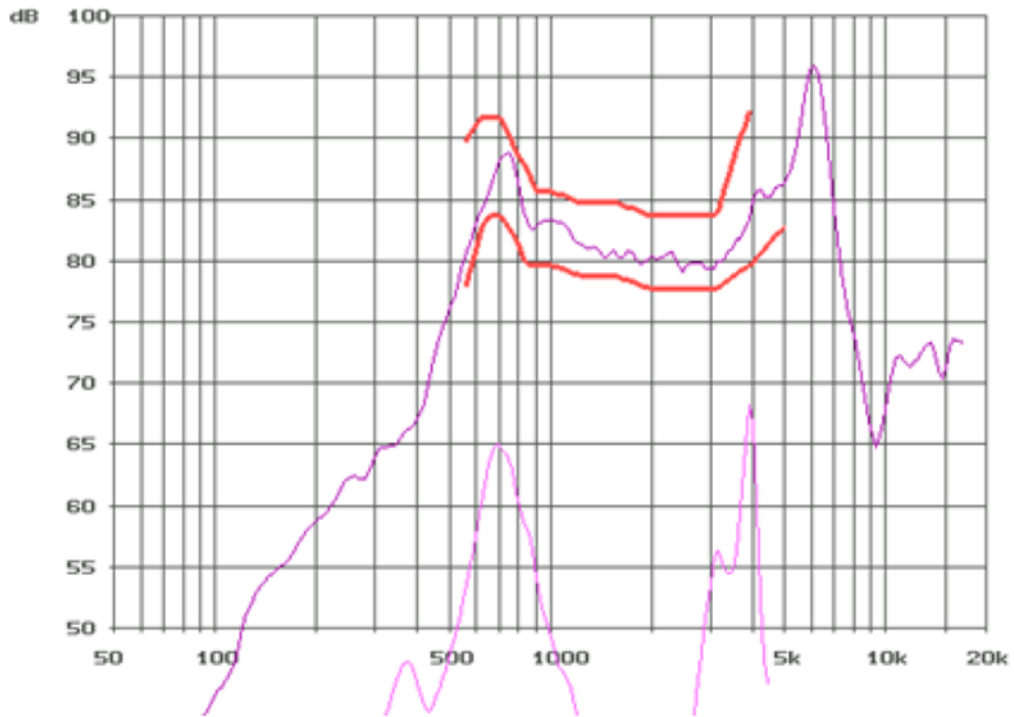
Allowed leakage: < 133 Pa at duration of 10s / < 65 Pa at duration of 5s

Air pressure direction: blow from membrane to magnet side

2. Electrical and Acoustic Specifications

2.1. Frequency response

TYPICAL FREQUENCY RESPONSE ON IEC- BAFFLE



measured at 500mW / 1m with 1/12 octave

f [Hz]	Tolerance window	
	lower limit [dB]	upper limit [dB]
560	71	83
630	76	85
670	77	85
710	77	85
800	75	82
850	73	81
900	73	79
1250	72	78
1600	72	78
2000	71	77
2500	71	77
3150	71	77
4000	73	86
5000	76	-

2.2. Electro-Acoustic Parameters acc. IEC268-5

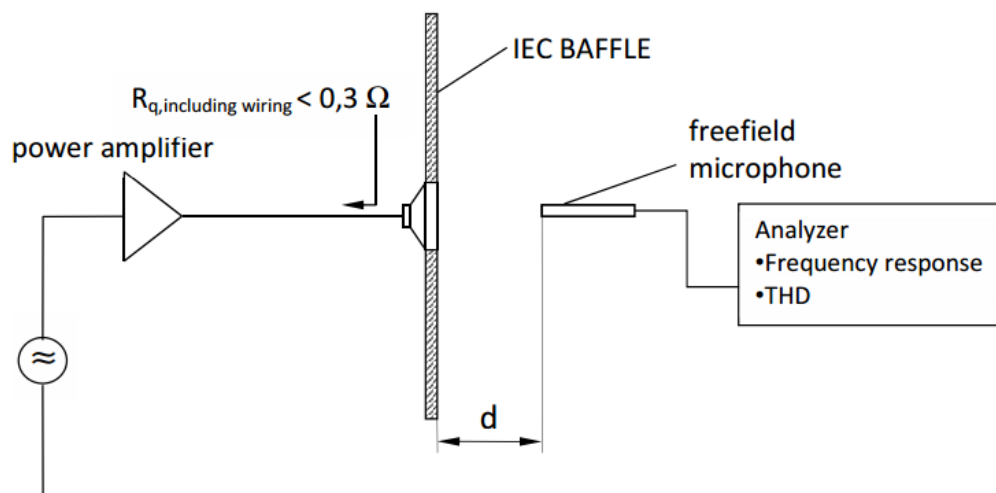
2.2.1. LOUDSPEAKER UNMOUNTED

1. RATED IMPEDANCE	Z:	8 Ω
2. VOICE COIL RESISTENCE	R:	7.3 Ω +10% / -4%
3. RESONANCE FREQUENCY	f ₀ :	700Hz \pm 15%

2.2.2. LOUDSPEAKER MOUNTED IN BAFFLE

1. CHARACT. SENSITIVY	83.5 \pm 2dB
AT 500mW IN DISTANCE d=1m	
IN THE FREQUENCY RANGE	
	500Hz – 2 kHz
2. THD	\leq 15% (500mW; 700Hz-3kHz)
3. MAX. SHORT TERM POWER	1 W(IEC)
4. MAX. NOISE POWER(PHC)	0.5W(IEC)
(CONTINUOUS)	
REQUENCY RANGE IN TELECOM APPLICATION: 300Hz - 3.4 kHz	

2.3. Measurement Setup



3. Environmental conditions

Generally the function is guaranteed in a temperature range of -40°C to +85°C. Transportation and storage in this same range does not cause remaining changes on the transducer.

4. Packaging

Transducers per tray	48
Transducers per box	768
Box size (in cm)	61 x 41 x 25
Max. boxes per pallet	16
Transducer mass	4,9 g
Net weight / box	4 kg
Gross weight / box	7 kg

5. Gasket

We recommend for a proper sealing to use our self-adhesive gasket.

PN : GASKET28W

