



Date: August 29, 2019

CERTIFICATE OF COMPLIANCE

This certificate of compliance validates the following			
TEST REPORT NUMBER	1. 1846/BA/19 2. 1355/BA/18 3. 964/BA/18	CERTIFICATE NUMBER	DC – UAE – 0140
DATE OF ISSUE	1. August 6, 2019 2. February 22, 2018 3. August 08, 2018	DATE OF ISSUE	August 29, 2019
DATE OF EXPIRY	Not applicable	DATE OF EXPIRY	August 28, 2029
Manufacturer details			
NAME OF FACTORY / MANUFACTURER	Ambient-System Sp. z o.o.	NAME OF THE BRAND	Edwards
FACTORY ADDRESS / REGION	ul. Galaktyczna 37 80-299 Gdańsk Republic of Poland	MODEL / NO	EST-T1510, EST-T2215, EST-T2430
WEBSITE	www.firesecurityproducts.com	LOGO ON THE PRODUCT	
TELEPHONE	+34 93 480 27 78	EMAIL	secretariaat.nederland@fs.utc.com





Product Details From Test Report				Reference Test Report Page No.	
DESCRIPTION OF THE PRODUCT	Loudspeaker for voice alarm systems type EST-T1510, EST-T2215, EST-T2430 (Detailed specification below)			(3) 1846/BA/19 1355/BA/18 964/BA/18	
TESTS STANDARD	EN 54-24:2008: Fire detection and fire alarm systems – Part 24: Components of voice alarm systems – Loudspeakers			(8) 1846/BA/19 (9) 1355/BA/18 (8) 964/BA/18	
TESTS DESCRIPTION	Requirements, test methods and performance criteria for loudspeakers intended to broadcast a warning of fire between a fire detection and fire alarm system and the occupants of a building.			(6) 1846/BA/19 (7-13) 1355/BA/18 (7-13) 964/BA/18	
SPECIFICATION OF TEST SPECIMEN	Loudspeaker type:	EST-T1510		(8) 1846/BA/19 (10) 1355/BA/18 (9) 964/BA/18	
	Transformer type:	62-HS11-0010			
	Loudspeaker power voltage [V]:	70 / 100			
	Loudspeaker rated power [W]:	10			
	Loudspeaker output setting on the transformer taps [W]:	70V: 5 / 2,5 / 1,25 / 0,625 100V: 10 / 5 / 2,5 / 1,25			
	Loudspeaker impedance [Ω]:	8			
	Impedance of transformer – for particular terminals[Ω]:	1000 / 2000 / 4000 / 8000			
	Maximum sound pressure level (rated power / 4m) [dB]:	96			
	Sensitivity S (1W / 4m) [dB]:	86			
	Coverage angle for 500 Hz [°]	240			
	Coverage angle for 1kHz [°]	200			
	Coverage angle for 2kHz [°]	88			
	Coverage angle for 4kHz [°]	45			
	Type of work environment:	B			
	IP protection:	33C			
	Terminals:	2 ceramic connection blocks			
	Type of installation:	surface wall or ceiling mounted			
	Dimensions of loudspeaker with housing [mm]:	156 x 236			
	Material of housing:	plastic material, metal			
	Mass [g]:	1750			
	Correction value:	6300 Hz: +3dB	8000 Hz: +6dB		10000 Hz: +3dB
	Optional elements	Identifying data			
	Fuse activation parameter:	250V, 3A, 145°C			
	Type of capacitor:	not applicable			
	Filter:	not applicable			
	Type of additional protection:	not applicable			
TESTS RESULTS	EN 54-24	Frequency response limits	PASS	(8) 1846/BA/19 (10-22) 1355/BA/18 (9-20) 964/BA/18	
	EN 54-24	Reproducibility	PASS		
	EN 54-24	Rated impedance	PASS		
	EN 54-24	Horizontal and vertical coverage angles	PASS		
	EN 54-24	Maximum sound pressure level	PASS		
	EN 54-24	Durability	PASS		
	EN 54-24	Construction	PASS		
	EN 54-24	Marking and data	PASS		
	EN 54-24	Rated noise power (durability)	PASS		
	EN 54-24 - EN 60529	Enclosure protection IP 21	PASS		
	EN 54-24 - EN 60068-2-2	Dry heat (operational)	PASS		
	EN 54-24 - EN 60068-2-2	Dry heat (endurance)	PASS		
	EN 54-24 - EN 60068-2-1	Cold (operational)	NOT APPLICABLE		
	EN 54-24 - EN 60068-2-30	Damp heat, cyclic (operational)	PASS		
	EN 54-24 - EN 60068-2-78	Damp heat, steady state (endurance)	PASS		
	EN 54-24 - EN 60068-2-30	Damp heat, cyclic (endurance)	NOT APPLICABLE		
	EN 54-24 - EN 60068-2-42	Sulphur dioxide corrosion (endurance)	PASS		
	EN 54-24 - EN 60068-2-27	Shock (operational)	PASS		
	EN 54-24 - EN 60068-2-75	Impact (operational)	PASS		
	EN 54-24 - EN 60068-2-6	Sinusoidal vibration (operational)	PASS		
EN 54-24 - EN 60068-2-6	Sinusoidal vibration (endurance)	PASS			
PRODUCT APPLICATION GUIDELINE	21.08.2019	EST-T1510 is an indoor and outdoor loudspeaker. It is made of plastic material with metal installation kit. The loudspeaker have to be mounted to the surface of the wall or to the ceiling. The loudspeaker for voice alarm systems type EST-T1510 has to be used with Voice Alarm System		Not applicable	

Product Details From Test Report				Reference Test Report Page No.	
DESCRIPTION OF THE PRODUCT	Loudspeaker for voice alarm systems type EST-T1510, EST-T2215, EST-T2430 (Detailed specification below)			(3) 1846/BA/19 1355/BA/18 964/BA/18	
TESTS STANDARD	EN 54-24:2008: Fire detection and fire alarm systems – Part 24: Components of voice alarm systems – Loudspeakers			(8) 1846/BA/19 (9) 1355/BA/18 (8) 964/BA/18	
TESTS DESCRIPTION	Requirements, test methods and performance criteria for loudspeakers intended to broadcast a warning of fire between a fire detection and fire alarm system and the occupants of a building.			(8) 1846/BA/19 (10) 1355/BA/18 (9) 964/BA/18	
SPECIFICATION OF TEST SPECIMEN	Loudspeaker type:	EST-T2215		(8) 1846/BA/19 (10) 1355/BA/18 (9) 964/BA/18	
	Transformer type:	62-HS10-0015			
	Loudspeaker power voltage [V]:	70 / 100			
	Loudspeaker rated power [W]:	15			
	Loudspeaker output setting on the transformer taps [W]:	70V: 7,5 / 3,75 / 1,87 / 0,94 100V: 15 / 7,5 / 3,75 / 1,87			
	Loudspeaker impedance [Ω]:	8			
	Impedance of transformer – for particular terminals[Ω]:	667 / 1330 / 2660 / 5330			
	Maximum sound pressure level (rated power / 4m) [dB]:	100			
	Sensitivity S (1W / 4m) [dB]:	87			
	Coverage angle for 500 Hz [°]	180			
	Coverage angle for 1kHz [°]	121			
	Coverage angle for 2kHz [°]	68			
	Coverage angle for 4kHz [°]	36			
	Type of work environment:	B			
	IP protection:	33C			
	Terminals:	2 ceramic connection blocks			
	Type of installation:	surface wall or ceiling mounted			
	Dimensions of loudspeaker with housing [mm]:	216 x 284			
	Material of housing:	plastic material, metal			
	Mass [g]:	1950			
	Correction value:	6300 Hz: +3dB	8000 Hz: +6dB		10000 Hz: +3dB
	Optional elements	Identifying data			
	Fuse activation parameter:	250V, 3A, 145°C			
Type of capacitor:	not applicable				
Filter:	not applicable				
Type of additional protection:	not applicable				
TESTS RESULTS	EN 54-24	Frequency response limits	PASS	(8) 1846/BA/19 (10-22) 1355/BA/18 (9-20) 964/BA/18	
	EN 54-24	Reproducibility	PASS		
	EN 54-24	Rated impedance	PASS		
	EN 54-24	Horizontal and vertical coverage angles	PASS		
	EN 54-24	Maximum sound pressure level	PASS		
	EN 54-24	Durability	PASS		
	EN 54-24	Construction	PASS		
	EN 54-24	Marking and data	PASS		
	EN 54-24	Rated noise power (durability)	PASS		
	EN 54-24 - EN 60529	Enclosure protection IP	PASS		
	EN 54-24 - EN 60068-2-2	Dry heat (operational)	PASS		
	EN 54-24 - EN 60068-2-2	Dry heat (endurance)	PASS		
	EN 54-24 - EN 60068-2-1	Cold (operational)	NOT APPLICABLE		
	EN 54-24 - EN 60068-2-30	Damp heat cyclic (operational)	PASS		
	EN 54-24 - EN 60068-2-78	Damp heat steady state (endurance)	PASS		
	EN 54-24 - EN 60068-2-30	Damp heat cyclic (endurance)	NOT APPLICABLE		
	EN 54-24 - EN 60068-2-42	Sulphur dioxide corrosion (endurance)	PASS		
EN 54-24 - EN 60068-2-27	Shock (operational)	PASS			
EN 54-24 - EN 60068-2-75	Impact (operational)	PASS			
EN 54-24 - EN 60068-2-6	Sinusoidal vibration (operational)	PASS			
EN 54-24 - EN 60068-2-6	Sinusoidal vibration (endurance)	PASS			
PRODUCT APPLICATION GUIDELINE	21.08.2019	EST-T2215 is an indoor and outdoor loudspeaker. It is made of plastic material with metal installation kit. The loudspeaker have to be mounted to the surface of the wall or to the ceiling. The loudspeaker for voice alarm systems type EST-T2215 has to be used with Voice Alarm System.		Not applicable	



Product Details From Test Report					Reference Test Report Page No.	
DESCRIPTION OF THE PRODUCT	Loudspeaker for voice alarm systems type EST-T1510, EST-T2215, EST-T2430 (Detailed specification below)				(3) 1846/BA/19 1355/BA/18 964/BA/18	
TESTS STANDARD	EN 54-24:2008: Fire detection and fire alarm systems – Part 24: Components of voice alarm systems – Loudspeakers				(8) 1846/BA/19 (9) 1355/BA/18 (8) 964/BA/18	
TESTS DESCRIPTION	Requirements, test methods and performance criteria for loudspeakers intended to broadcast a warning of fire between a fire detection and fire alarm system and the occupants of a building.				(6) 1845/BA/19 (7-13) 1356/BA/18 (7-13) 963/BA/18	
SPECIFICATION OF TEST SPECIMEN	Loudspeaker type:	EST-T2430			(8) 1846/BA/19 (10) 1355/BA/18 (9) 964/BA/18	
	Transformer type:	62-HS16-0030				
	Loudspeaker power voltage [V]:	70 / 100				
	Loudspeaker rated power [W]:	30				
	Loudspeaker output setting on the transformer taps [W]:	70V: 15 / 7,5 / 3,75 / 1,87 100V: 30 / 15 / 7,5 / 3,75				
	Loudspeaker impedance [Ω]:	8				
	Impedance of transformer – for particular terminals [Ω]:	333 / 666 / 1330 / 2660				
	Maximum sound pressure level (rated power / 4m) [dB]:	103				
	Sensitivity S (1W / 4m) [dB]:	88				
	Coverage angle for 500 Hz [°]	180				
	Coverage angle for 1kHz [°]	120				
	Coverage angle for 2kHz [°]	75				
	Coverage angle for 4kHz [°]	41				
	Type of work environment:	B				
	IP protection:	33C				
	Terminals:	2 ceramic connection blocks				
	Type of installation:	surface wall or ceiling mounted				
	Dimensions of loudspeaker with housing [mm]:	233 x 325				
	Material of housing:	plastic material, metal				
	Mass [g]:	2200				
	Correction value:	5000 Hz: +3dB	6300 Hz: +6dB	8000Hz: +3dB		10000 Hz: +3dB
	Optional elements	Identifying data				
	Fuse activation parameter:	250V, 3A, 145°C				
	Type of capacitor:	not applicable				
	Filter:	not applicable				
	Type of additional protection:	not applicable				
TESTS RESULTS	EN 54-24	Frequency response limits	PASS	(8) 1846/BA/19 (10-22) 1355/BA/18 (9-20) 964/BA/18		
	EN 54-24	Reproducibility	PASS			
	EN 54-24	Rated impedance	PASS			
	EN 54-24	Horizontal and vertical coverage angles	PASS			
	EN 54-24	Maximum sound pressure level	PASS			
	EN 54-24	Durability	PASS			
	EN 54-24	Construction	PASS			
	EN 54-24	Marking and data	PASS			
	EN 54-24	Rated noise power (durability)	PASS			
	EN 54-24 - EN 60529	Enclosure protection IP 21C	PASS			
	EN 54-24 - EN 60068-2-2	Dry heat (operational)	PASS			
	EN 54-24 - EN 60068-2-2	Dry heat (endurance)	PASS			
	EN 54-24 - EN 60068-2-1	Cold (operational)	NOT APPLICABLE			
	EN 54-24 - EN 60068-2-30	Damp heat cyclic (operational)	PASS			
	EN 54-24 - EN 60068-2-78	Damp heat steady state (endurance)	PASS			
	EN 54-24 - EN 60068-2-30	Damp heat cyclic (endurance)	PASS			
	EN 54-24 - EN 60068-2-42	Sulphur dioxide corrosion (endurance)	NOT APPLICABLE			
	EN 54-24 - EN 60068-2-27	Shock (operational)	PASS			
	EN 54-24 - EN 60068-2-75	Impact (operational)	PASS			
	EN 54-24 - EN 60068-2-6	Sinusoidal vibration (operational)	PASS			
EN 54-24 - EN 60068-2-6	Sinusoidal vibration (endurance)	PASS				
PRODUCT APPLICATION GUIDELINE	21.08.2019	EST-T2340 is an indoor and outdoor loudspeaker. It is made of plastic material with metal installation kit. The loudspeaker have to be mounted to the surface of the wall or to the ceiling. The loudspeaker for voice alarm systems type EST-T2340 has to be used with Voice Alarm System			Not applicable	

United Arab Emirates

Ministry of interior

Civil Defense G.H.Q

Fire intentional Lab & House
of Expertise & Training Center

Approval Committee



دولة الامارات العربية المتحدة

وزارة الداخلية

القيادة العامة للدفاع المدني

لجنة اعتماد المختبرات العالمية

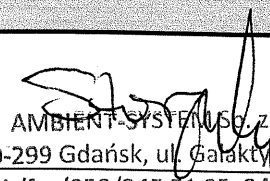
وبيوت الخبرة ومعاهد التدريب

Laboratory and Certification Body Details

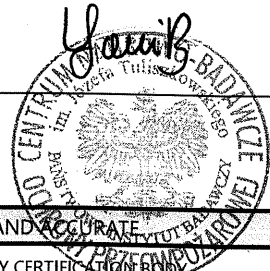
NAME OF CERTIFICATION BODY	CNBOP-PIB Centrum Naukowo-Badawcze Ochrony Przeciwpożarowej Państwowy Instytut Badawczy	NAME OF TEST FACILITY	CNBOP-PIB Zespół Laboratoriów Sygnalizacji Alarmu Pożaru i Automatyki Pożarniczej
CERTIFICATION BODY ADDRESS / REGION	ul. Nadwiślańska 213 05-420 Józefów REPUBLIC OF POLAND	TEST FACILITY ADDRESS / REGION	ul. Nadwiślańska 213 05-420 Józefów REPUBLIC OF POLAND
WEBSITE	www.cnbop.pl	WEBSITE	www.cnbop.pl
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EMAIL	jcw@cnbop.pl	EMAIL	ba@cnbop.pl
ACCREDITED BY	Polish Centre for Accreditation http://www.pca.gov.pl	ACCREDITED BY	Polish Centre for Accreditation http://www.pca.gov.pl
AS PER	EN ISO/IEC 17065 Requirements for bodies certifying products, processes and services	AS PER	EN ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories
VALIDITY	October 3, 2022	VALIDITY	October 11, 2021
REFERENCE NUMBER	AC 063	REFERENCE NUMBER	AB 207

CERTIFICATION MARK	 CNBOP-PIB
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(ENDORSEMENT) TO BE SIGNED BY MANUFACTURER

NAME AND SURNAME OF MANUFACTURERS SIGNATORY	Ambient-System Sp. z o.o. CEO Marcin Starzyński	SIGNATURE	 AMBIENT-SYSTEM Sp. z o.o. 80-299 Gdańsk, ul. Galaktyczna 37 Tel./fax/058/345 51 95; 343 18 77
EMAIL / TELEPHONE	ambient@ambient-system.pl +48 58 345 51 95	FACTORY OFFICIAL SEAL	REGON 190061698 NIP 584-030-22-20
NOTES	I UNDERTAKE THAT ALL DATA AND INFORMATION PROVIDED ARE GENUINE AND ACCURATE.		

(ENDORSEMENT) TO BE CERTIFICATION BODY

NAME AND SURNAME OF CERTIFICATION BODY SIGNATORY	st. bryg. dr inż. Paweł Janik	SIGNATURE	
EMAIL / TELEPHONE	cnbop@cnbop.pl +48 22 769 33 00	CERTIFICATION BODY OFFICIAL SEAL	
NOTES	I UNDERTAKE THAT ALL DATA AND INFORMATION PROVIDED ARE GENUINE AND ACCURATE.		

ATTACHEMENT:

COPY OF "CERTIFICATE OF CONSTANCY OF PERFORMANCE" NO. 1438-CPR-0680 ISSUED BY CERTIFICATION BODY