turbine

TCIS-4

TURBINE COMPACT IP STANDARD-4

STENTOFON

whencommunicationiscritical

HIGHLIGHTS

- **Designed according to Disability Act requirements**
- **STENTOFON Audio Presence - crystal clear audio**
- **Amazing sound pressure levels when needed with automatic volume adjustment**
- **Background noise cancellation**
- **Dirt, dust and water resistant - rating IP-66**
- **Built to last with robust die-cast aluminum frame - rating IK 08**
- **Supports wide set of IP and networking standards**
- **Black thermoplastic front plate with one labelled button**
- **Unique labelling solution with PMOLED display**
- **Ideal for Building Security and Public Environments**

- **STENTOFON ALPHACOM XE**
- **STENTOFON PULSE**
- **SIP PBX**

HD VOICE

CCoIP®

DESCRIPTION

All IP stations in the STENTOFON Turbine series utilize the latest technology to create unparalleled audio quality. Some of the many features include: HD voice quality, Open Duplex, Active Noise Cancellation, MEMS microphone, a 10W Class D amplifier and our unique speaker grille design. These features, in conjunction with STENTOFON's 65+ years of experience with acoustic technology are only a few of the many factors that contribute to our superior audio quality.

TURBINE IP IS COMPATIBLE WITH THE FOLLOWING SYSTEMS

- SIP PBX – This station can be used with basically any SIP server. Various server types have been tested explicitly by STENTOFON and therefore a proper functionality can be confirmed – see SIP PBX Compability for overview.
- STENTOFON Alphacom XE Audio servers - CCoIP® (Critical Communication over IP). See www.stentofon.com for more information.
- STENTOFON Pulse – Intercom for everyone. See www.stentofon.com for more information.

ORDER NUMBER	DESCRIPTION	SHIP WEIGHT
1008111040	TCIS-4, Turbine Compact IP Standard-4	0.8 kg / 1.8 lbs
Accessories		
1008140010	TA-1 Turbine Compact Onwall Box	-
1008140020	TA-2, US 2 GANG, Double Depth - 3.5", Back Box, Masonry	-
1008140050	TA-5, Bracket for US 2 GANG Back Box	-

TCIS-4, TURBINE COMPACT IP STANDARD-4 TECHNICAL SPECIFICATIONS

AUDIO

Audio quality - speech transmission index (STI) - at 70 dB	> 0.8*
Audio quality - percentage articulation loss of consonants (Alcons) - at 70 dB	< 5%*
Audio quality - total harmonic distortion + noise, without noise reduction (THD+N) - at 70 dB	<2%*
SPL rated power at 1m in open duplex	95 dB*
SPL rated power at 1m in half duplex	105 dB*
SPL rated power at 1m in program distribution and announcement	105 dB*
Noise cancelling - suppression of musical noise	YES
Noise cancelling - suppression of static noise	YES
Noise cancelling - suppression of rapidly changing noise	YES
Codecs	G.711, G.722
Frequency range, G.722 Codec	200 Hz – 7000 Hz
Audio technology	Modes: Full open duplex, switched open duplex Adaptive jitter filter Local tone generator Audio mixing - 3 channels Sound level detection (scream alarm) Automatic gain control (microphone)
Internal speaker amplifier	10 W class D
Microphone technology	Digital MEMS, omnidirectional microphone

*Tested with Audio Precision SYS 2722 equipment

HARDWARE

Ethernet connector	1 x RJ 45
All other connectors	Tool less, spring loaded, vibration proof terminals
General inputs and outputs	6 (configurable)
Outputs	12mA as LED drivers
Change-over relay (NO+NC+COM)	Max: 250VAC/220VDC, 2A, 60W
Power options	PoE and or external power supply
PoE (power over Ethernet)	IEEE 802.3af standard, Class 0 (0.44W to 12.95 W)
External power supply	24 VDC (16 – 48 V)
Power consumtion	Idle 1.8W, max 12W (depending on volume)
Audio line out / induction loop signal	600 Ohm
Button backlight	LED
Call indication	Icons / colors according norm for hearing impaired
Door open indication	Icons / colors according norm for hearing impaired
Display technology	PMOLED
Display contrast	20000:1
Viewing angle	160 deg
Display brightness	120 cd/m2
Display lifetime	100 000 hours (11.5 years)

CONSTRUCTION

Dimensions (HxWxD)	180 x 120 x 70 mm / 7.1" x 4.7" x 2.8"
Dimensions after flush mount	180 x 120 x 20 mm / 7.1" x 4.7" x 0.8"
Dimensions with on wall box	180 x 120 x 82 mm / 7.1" x 4.7" x 3.3"
Weight	0.8 kg / 1.8 lbs
Faceplate material	3 mm / 0.12" PMMA, colour printed on back side
Base / frame material	3 mm / 0.12" Aluminum alloy - A413.0, AlSi12Se, anodized and painted
Electronics cover material	Polycarbonate (translucent)
Gasket material	Silicone rubber
Fastening bracket material	SECC Steel
Button material	3 mm / 0.12" Polycarbonate (transparent)
Button travel length	1.25 mm
Button activation force	350 gf
Button push-cycles before failure	300 000
Vandal resistant fasteners	Stainless steel, security TORX (with pin), T25
Loudspeaker poke protection, large diameter object	3D cast aluminum speaker grille
Loudspeaker poke protection, small diameter objects	Stainless steel mesh, acoustically transparent

NETWORKING AND PROTOCOLS

Protocols	IPv4 (with DiffServ), SIP, TCP, UDP, HTTPS, TFTP, RTP, DHCP, SNMP, STENTOFON CCoIP® , NTP
LAN protocols	Power over Ethernet (IEEE 802.3 a-f) VLAN(IEEE 802.1pq) Network Access Control (IEEE 802.1x) STP (IEEE 802.1d) RSTP (IEEE 802.1d-2004)
Management and operation	HTTP/HTTPS (Web configuration) DHCP and static IP + STENTOFON Pulse™ Remote automatic software upgrade Centralized monitoring
Advanced supervision functions	E.g. network test, tone test, status reports
SIP support	RFC 3261 (SIP base standard) RFC 3215 (SIP refer) RFC 2976 (SIP info)
DTMF support	RFC 2833, 2976 (SIP info)

ENVIRONMENT AND COMPLIANCES

IP rating	IP-66, tested according to EN 60529
IK rating	IK 08, tested according to EN 62262
Operating temperature range	-25° to 70° C / -13° to 158 ° F
Storage temperature range	-25° to 70° C / -13° to 158 ° F
Realtive humidity	< 95% not condensing
Corrosion	Salty mist, tested according to EN60945
Vibration	Tested according to EN60945
UV-resistant	YES
EMC	CE and FCC Part 15
Compliances	IEC/EN 60945 Marine Equipment IEC/EN 61000-6 Light and heavy industry IEC/EN 50155 Railway Application IEC/EN 50486 Equipment for use in audio video door-entry systems

OTHER SPECIFICATIONS

System boot time	Under 10 seconds
IP adress information	Speaks IP address after system boot
MTBF (mean time between failure)	Value from final calculation
Country of manufacture	Norway

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