

DATA SHEET



Ascom d83 EX DECT Handset

Features

- Two variants: Messenger EX and Protector EX
- ATEX/UKEX/IECEX/CSA classified handset
- GAP/CAP compliant DECT handset
- Enhanced DECT security Step A and Step B (ETSI EN 300 444, N.35, N.36)
- High resolution 2.4 inch TFT display
- Cleanable, IP65
- Easy registration
- Shared phone
- System profiles and advanced user profiles
- Two multifunction buttons and programmable soft keys & hot keys
- Priority handling of calls and messages
- Procedure calls
- Push-to-talk (PTT)
- Application controlled telephony with automation calls and automatic group calls
- Dynamic output power
- Poll location
- Wideband audio
- Dual microphones background noise cancelling
- Bluetooth 5.1
- Bluetooth headset support¹

Messaging

- Advanced messaging queueing
- Colour and interactive messaging
- Multicast/broadcast messaging
- Message acknowledgement
- Voicemail

Alarm²

- Push-button alarm
- Pull-cord alarm
- Man-down and No-movement alarm
- Acoustic Location Signal (ALS)
- Automatic call after alarm

Location

- Base station location
- BLE location
- DECT beacon location
- Poll location
- IR location
- LF location

1. Only Bluetooth headsets fulfilling the site requirements are allowed.

2. Applicable to Protector EX only.

Technical Specifications

Overview

Dimensions (l × w × d):	150 × 64 × 23 mm
Weight:	175 g (incl. battery and clip)
Material:	Case: PC / ABS, Key pad: PC, Clip: PA
Color:	Handset: Gray / Black Front plate: Yellow
Display:	40 x 50 mm (2.4 in), TFT display Multiple colors with high resolution, 262 K individual colors 240 × 320 pixel LCD with white LED backlight
Menu and message languages:	Arabic, Czech, Danish, Dutch, English, Finnish, Flemish, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Portuguese (Brazilian), Portuguese (European), Russian, Simplified Chinese, Slovak, Spanish, Swedish and Turkish + one downloadable
Clip:	Hinge-type (standard) or swivel-type, or no clip

Indication

Indicator:	Multicolor LED on top for visual indication of incoming call/message The LED may also be used for visual indication of normal function
Vibrator:	Incoming call/message/alarm

Battery and Charging



All battery times are based on optimal conditions (no roaming or handover and black display).

Type:	Li-ion 3.7 V 920 mAh
Speech time:	Up to 16 h (Bluetooth disabled / location features enabled) Up to 18 h (Bluetooth disabled / location features disabled) Up to 10 h (with Bluetooth headset in use / location features enabled) Up to 12 h (with Bluetooth headset in use / location features disabled)
Stand-by time:	Up to 120 h (Black screen saver activated / location features disabled) Up to 60 h (Black screen saver activated / location features enabled)
Charging time:	Approx. 3 hours in CR3 charging rack, DC3 desktop charger NOTE: Do not charge or disconnect the battery in a hazardous area. NOTE: Not following environmental conditions can prolong charging time.

Connectors



The 3.5 mm headset connector shall not be used on the Ascom d83 EX handset.

Specifications are subject to change without notice

Multi-purpose connector:	With USB for fast software download, configuration and battery charging
Audio	
Ring signal:	Maximum sound level 105 dBA @ 10 cm Adjustable in 8 steps
Earpiece:	Adjustable in 8 steps of 3dB each
Loudspeaker:	Duplex loudspeaking function
Voice codecs:	G.722.2, G.726
Phonebook	
Central phonebook:	Maximum 40 characters in a name and 20 digits in a number
Company phonebook:	Maximum 24 characters in a name and 24 digits in a number (1 number per name) 1000 entries
Local phonebook:	48 character name 24 digit work number 24 digit mobile phone number 24 digit other number 250 entries Selectable ringtones per contact NOTE: Selectable ringtones for local phonebook are not part of any phonebook file and ringtones shall be set using the handset's settings.
Telephony	
Indication:	14 ring signals, illuminated display, LED, and vibrator
Answer call:	Button press or auto answer
Call list storage capacity:	50 calls (received, dialled and missed) with time stamp
Messaging	
Storage capacity:	30 received/sent messages (> 20 000 characters)
Maximum message length:	Up to 140 characters from handset, depending on language and system settings
Multicast groups per handset:	The handset can be a member in maximum 8 different messaging groups
Message character encoding:	SMS Standard Latin-1 UTF-8

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Alarm (applicable to Protector EX only)

Alarm features:	Push-button alarm (a dedicated alarm button with the ability to send different alarm types) Man-down and No-movement alarm Pull-cord alarm Acoustic Location Signal (ALS) Automatic call after alarm
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Bluetooth

Bluetooth radio spectrum:	ISM 2.4000–2.4835 GHz
Output power:	Class 2, maximum 3 dBm
Supported version:	5.1
Supported profiles:	Headset and handsfree
BLE beacon protocol:	iBeacon

Radio

Automatic DECT protocol detection:	Automatic detection and configuration for US DECT and EU DECT at first registration
Frequency range:	1880–1900 MHz: Europe, Africa, Middle East, Australia, New Zealand and parts of Asia 1900–1906 MHz: Thailand 1910–1920 MHz: Brazil 1910–1930 MHz: Latin America 1920–1930 MHz: US
Modulation:	GFSK
Channel spacing:	1.728 MHz
Antenna:	2 integral antennas for antenna diversity
Sensitivity:	–93 dBm
Dynamic output power:	EU/LA/BR: 10 mW (maximum average power) US: 4 mW (maximum average power)

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Additional Features	
List of features:	High quality voice Centralized management Easy access to PBX services Easy replacement of handset Programmable headset button Programmable handset restrictions Site survey tool Customizable sounds Customizable menus Mute button / Sound off key Clear message (not applicable to Talker) and call lists in charger 180 degrees rotation of message (not applicable to Talker) and call information
Accessories	
Available accessories:	DC3 Desktop charger CR3 Charging rack DP1 Desktop programmer Battery pack Standard/Swivel-type clip Cover plate (no clip) Carrying case Security string (80 cm) Headset connector plug kit (10 pcs) Pull cord (80 cm)(Applicable to Protector EX only) Screw kit (20pcs + screwdriver) NOTE: Use only accessories that are in line with and certified for the applicable hazardous area.
Environmental	
Operating temperature:	-10°C to +40°C (+14°F to +104°F)
Storage temperature:	-20°C to +60°C (-4°F to +140°F) NOTE: Storing Li-Ion batteries at high temperature dramatically reduces its capacity. For example storage around +60°C reduces capacity with 20% in less than a month, permanently.
Charging temperature:	+5°C to +40°C (+41°F to +104°F)
Immunity to electromagnetic fields:	10 V/m (EN 61000-4-3)
Immunity to ESD:	8 kV contact discharge and 15 kV air discharge (EN 61000-4-2)
Enclosure protection:	IP65, IP54 for EX approval, IEC EN 60529

Specifications are subject to change without notice

Free fall test:	IEC 60068-2-31, procedure 1, dropped 12 times, specification extended to 2 m IEC 60068-2-31, procedure 2, dropped 1000 times from 0.5 m NOTE: IEC60068-2-31 supersedes IEC60068-2-32 and requirements are equivalent in free fall test.
Chemical resistance test:	3% Hydrochloric Acid M-alcohol (85% methylated ethanol) 60% Chlorhexidin 0.5 mg/ml

Accelerated Life Testing

Multi-purpose connector:	With USB for fast software download, configuration and battery charging
Climate stress:	Handset exposed to quick temperature and humidity changes Temperature: -40°C to +75°C Humidity: 0% to 90%
Drop test:	Handset dropped 30 times from 1.2 m (6 times each loop for 5 loops)
Vibration test:	Handset exposed to 30 Hz vibrations for a duration of 2.5 h
Chemical stress:	Handset exposed to Oleic Acid
Keypad actuation test:	Keys pressed 15 000 times with a force of 13 N
Squeeze test:	Handset squeezed 1 000 times with a force of 130 N

Use in Potential Explosive Atmosphere




The product has been designed using the protection type intrinsic safety (ib) and the approvals are valid exclusively for surface industry. The handsets shall therefore not be used in mining (underground location) or surface parts of such mines endangered by firedamp and/or combustible dust. Ascom (Sweden) AB does not support or take responsibility of any change in the product or its designation. Battery charging or replacement is not permitted in hazardous area.

SPECIAL CONDITION OF USE

The **X** placed after the ATEX, UKCA and CSA numbers indicates that DP1 only to be used with a SELV/PELV 60950 or 62368 compliant device with Um 5.25V.

Headset in Hazardous Area

Only Bluetooth headsets fulfilling the site requirements are allowed.


 0470 CSANe 22ATEX1023X	II 2GD Ex ib IIC T4 Gb
 8501 CSAE 22UKEX1065X	EX ib IIIC T135°C Db IP54 Tamb = -10°C to +40°C
IECEx CSAE 22.0014X	
 ^{us} 22CA80089371X	Class I Zone 1 AEx ib IIC T4 Gb Class I Zone 21 AEx ib IIIC T135°C Db Tamb = -10°C to +40°C

Ex type approvals and Declarations of Conformity can be found at www.ascom-ws.com/doc/

IECEx certificates can also be found at www.iecex-certs.com

Specifications are subject to change without notice


Compliance to Regulations and Standards

Bluetooth marking:	 QDID: 177829
Compliance to European and UK Regulations and Standards	
EU directives and regulations:	<p>2014/53/EU (RED) 2014/34/EU (ATEX) 2015/863 (RoHS3) amending directive 2011/65/EU 2012/19/EU (WEEE) 94/62/EC with amendment 2015/720 (Packaging and packaging waste) 2006/66/EC (Battery Directive) Regulation 1907/2006 (REACH)</p>
UK directives and regulations:	<p>Radio Equipment Regulations 2017 Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 RoHS in Electrical and Electronic Equipment Regulations 2012 Reach Enforcement Regulations 2008 Batteries Packaging (essential requirements) Regulations 2015 and Accumulators (placing on the market) Regulations 2008 and Waste Batteries and Accumulators Regulations 2009 Waste Electrical and Electronic Equipment Regulations 2013</p>
Product marking:	 IP65, IP54 for EX approval
Radio:	EN 301406, TBR22
ATEX/UKEX:	EN 60079-0, EN 60079-11
Bluetooth:	EN 300328, EN 301489-17
SAR (Specific Absorption Rate):	EN 50360, 0.074 W/kg (10 gram) and EN 50566, 0.084 W/kg (10 gram)
Safety:	EN 62368-1
EMC:	EN 301489-6, EN 301489-1
Compliance to US Regulations and Standards	
Product marking:	 FCC ID: BXZDH8 HAC IP65, IP54 for EX approval
EX:	IEC 60079-0, IEC 60079-11


Specifications are subject to change without notice

SAR (Specific Absorption Rate):	FCC 47 CFR § 2.1093 (d) and IEEE Std. 1528 Body Worn 0.191 W/kg (1 gram) (DECT + BT + BLE) Left Head 0.178 W/kg (1 gram) (DECT + BT + BLE)
Safety:	UL 62368-1
EMC/Radio:	FCC Part 15 D, FCC Part 15 C (Bluetooth) and FCC Part 15 B
Hearing aid:	47 CFR Part 68

Compliance to Canadian Regulations and Standards

Product marking:	 IC: 3724B-DH8 IP65, IP54 for EX approval
SAR (Specific Absorption Rate):	RSS-102, Issue 5 Body Worn 0.191 W/kg (1 gram) (DECT + BT + BLE) Left Head 0.178 W/kg (1 gram) (DECT + BT + BLE)
Safety:	CAN/CSA-C22.2 NO. 62368-1
EMC/Radio:	RSS-213 and RSS-247 (Bluetooth)
Hearing aid:	CS-03 Part V, Issue 9, Amendment 1

Compliance to Australian and New Zealand Regulations and Standards

Product marking:	 IP65, IP54 for EX approval
SAR (Specific Absorption Rate):	EN 50360, 0.074 W/kg (10 gram) and EN 50566, 0.084 W/kg (10 gram)
Safety:	AS/NZS 62368-1
EMC/Radio:	Radiocommunications Act 1992 Telecommunications Act 1997
Audio:	AS/CA S004
Bluetooth:	EN 300328, EN 301489-17

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Ascom (Sweden) AB

Grimbodalen 2

SE-417 49 Göteborg

Sweden

Phone +46 31 55 93 00

www.ascom.com

ascom