

DATA SHEET



Ascom d83 EX DECT Handset

Features

- Variants: Messenger EX and Protector EX
- ATEX/UKEX/IECEX/CSA classified handset
- Enhanced DECT security Step A and Step B
- GAP/CAP compliant DECT handset
- Cleanable, IP65
- Easy registration
- Shared phone
- Two multifunction buttons and programmable keys
- Push-to-talk (PTT)
- Bluetooth 5.1
- Bluetooth headset support¹

Messaging

- Interactive messaging inc. message acknowledgment and advanced messaging queueing
- Multicast/broadcast messaging
- Voicemail

Alarm²

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

Location

- Base station location
- DECT beacon location
- IR, BLE, and LF location
- BLE location
- Poll 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, including battery and clip
Material:	Case: PC/ABS Keypad: PC Clip: PA
Color:	Handset: gray and black Front plate: yellow
Display:	40 × 50 mm (2.4 in.), TFT display Multiple colors with high resolution, 262K individual colors 240 × 320 pixels 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:	Standard (hinge-type) or swivel-type, or no clip

Indication

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

Battery and Charging

Type:	Li-ion 3.7 V 920 mAh
Speech time ³ :	Up to 16 h (Bluetooth disabled and location features enabled) Up to 18 h (Bluetooth disabled and location features disabled) Up to 10 h (with Bluetooth headset in use and location features enabled) Up to 10 h (with Bluetooth headset in use and location features disabled)
Stand-by time ³ :	Up to 120 h (Black screen saver activated and location features disabled) Up to 60 h (Black screen saver activated and location features enabled)
Charging time ^{3 4} :	Approx. 3 hours in CR3 charging rack and DC3 desktop charger NOTE: Do not charge or disconnect the battery in a hazardous area.

3. Based on optimal conditions (no roaming or handover and black display).

4. Not following environmental conditions can prolong charging time.

Specifications are subject to change without notice

Connectors



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

Multi-purpose connector:	With USB for fast software download, configuration, and battery charging
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Audio

Ring signal:	Maximum sound level 105 dBA @ 10 cm Adjustable in 8 steps
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Earpiece:	Adjustable in 8 steps of 3 dB each
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Loudspeaker:	Duplex loudspeaking function
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Voice codecs:	G.722.2, G.726
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Phonebook

Central phonebook:	Maximum 40 characters in a name and 20 digits in a number
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Company phonebook:	Maximum 24 characters in a name and 24 digits in a number (1 number per name) 1,000 entries
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Local phonebook:	48 character name 24 digit work number 24 digit mobile phone number 24 digit other number 250 entries Selectable ringtones per contact ⁵
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Telephony

Indication:	14 ring signals, illuminated display, LED, and vibrator
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Answer call:	Button press or auto answer
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Call list storage capacity:	50 calls (received, dialled and missed) with time stamp
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Messaging

Storage capacity:	Messenger and Protector: 30 received/sent messages (up to 20,000 characters)
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Maximum message length:	Messenger and Protector: Up to 1,500 characters from handset, depending on language and system settings
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5. Ringtones shall be set using the handset's 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
Alarm (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
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)

Specifications are subject to change without notice

Additional Features

List of features:

High quality voice
 Centralized management
 Easy access to PBX services
 Easy replacement of a handset
 Programmable headset button
 Programmable handset restrictions
 Site survey tool
 Customizable sounds
 Customizable menus
 Mute button and Sound off key
 Clear message⁶ and call lists in charger
 180 degrees rotation of message⁶ and call information

Accessories

NOTE: Use only accessories that are in line with and certified for the applicable hazardous area.

CR3-AAAD CR3-ABAD	Charging rack ⁷
DC3-AABD DC3-AAAD	Desktop charger ⁷
DP1-AAAD	Desktop programmer ⁷
P/N: 660642	Standard clip
P/N: 660644	Swivel clip
P/N: 660646	No clip cover plate
P/N: 660645	Carrying case
P/N: 660201	Security string
P/N: 660640	Battery pack
P/N: 60647, 660648, 660649, 660650, 660651	Colored front plates (10 pcs)
P/N: 660653	Cover plug kit for pull cord alarm (10pcs) ⁸
P/N: 660275	Pull cord ⁸
P/N: 660641	Screw kit (20 pcs + screwdriver)

6. Not applicable to Talker

7. Not allowed to use in a hazardous area.

8. Applies to Protector EX only.

Specifications are subject to change without notice

Environmental

Operating temperature:	−10 °C to +40 °C (+14 °F to +104 °F)
Storage temperature ⁹ :	−20 °C to +60 °C (−4 °F to +140 °F)
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
Free fall test ¹⁰ :	IEC 60068-2-31, procedure 1, dropped 12 times, specification extended to 2 m IEC 60068-2-31, procedure 2, dropped 1,000 times from 0.5 m
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

9. Storing batteries at high temperature dramatically reduces its capacity. For example storage around +60 °C reduces capacity with 20% in less than a month, permanently.

10. IEC60068-2-31 supersedes IEC60068-2-32 and requirements are equivalent in free fall test.

Specifications are subject to change without notice

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 5.25 V.

Headset in Hazardous Area

Only Bluetooth headsets fulfilling the site requirements are allowed.

 0470 CSANe 22ATEX1023X

 8501 CSAE 22UKEX1065X

IECEX CSAE 22.0014X

 22CA80089371X

II 2GD Ex ib IIC T4 Gb
EX ib IIIC T135 °C Db IP54
Tamb = -10 °C to +40 °C

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.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 Regulations and Standards

Product marking:



IP65, IP54 for EX approval

Directives and regulations:

Directive 2014/53/EU (RED)
 Directive 2015/863 (RoHS) amending 2011/65/EU
 Directive 2012/19/EU (WEEE)
 Regulation (EC) 1907/2006 (REACH)
 Battery Regulation (EU) 2023/1542
 Packaging and packaging waste regulation 2025/40
 Directive 2014/34/EU (ATEX)

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

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

Specifications are subject to change without notice

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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