ecom
MOBILE SAFETY

Mobile Phones | Two Way Radios | Headsets

HARD-LINE COMMUNICATION -

IN HAZARDOUS AREAS

Smart-Ex®

EXPLORING MOBILITY

Organizations are now starting to see the capability of mobility solutions and the impact they can have on operations, reducing cost and improving efficiency. Game changing new devices are enabling break-throughs in workforce productivity, data quality and the speed and accuracy of decision making.

The world's first Intrinsically Safe 4G / LTE Smartphone, the Smart-Ex® 01 Android operating system. Unlocked and SIM free - allowing connection to any network worldwide. The 9th generation of the Intrinsically Safe cell phones from ecom certified and approved for use in Zone 1 & DIV 1 incl. Dust Ex-areas.

ZONE 1 / 21, ZONE 2 / 22

DIV 1 / DIV 2

NEW Smart-Ex® 01 Ex-Handy 09

Intrinsically Safe Smartphone **Smart-Ex® 01 & 201**

THE LATEST INNOVATIVE PRODUCT IN ECOM'S MOBILE COMMUNICATION RANGE

RANGE OF FUNCTIONS

- SIM lock free
- 4G / LTE cellular network connectivity
- Android™ 4.4 (Kitkat) - the most popular Android operating system
- 4.0" capacitive multi-touch screen made of extreme shock and scratch resistant Gorilla Glass® 2
- Glove Touch Screen
- High Visibility Display in Direct Sunlight
- 8MP rear camera with auto focus and LED flash with torchlight function and 1MP front camera (optional)
- 3600 mAh Li-Ion battery pack
  4800 mAh Li-Ion battery pack
- Bluetooth® 4.0 incl. BLE (Bluetooth Low Energy)
  BLE (30 times faster, 1/100th of power)
- WiFi 802.11 a/b/g/n
- Magnetic and waterproof USB 2.0 High Speed connector
- IP68 - Dust proof, water proof
- Push-to-talk (App solution)
- Lone Worker Protection (App solution)
- NFC functionality
- Optional Service Level Agreement 3 years (SLA)

EXPERIENCE THE SMART-EX® 01 & 201 SMARTPHONE

CERTIFICATION

	SMART-EX® 01	SMART-EX® 201
ATEX	II 2G Ex ib IIC T4 Gb IP64 II 2D Ex ib IIIC T135 °C Db IP64	II 3G Ex ic IIC T4 Gc IP64 II 3D Ex ic IIIB T135 °C Dc IP64
IECEx	Ex ib IIC T4 Gb IP64 Ex ib IIIC T135 °C Db IP64	Ex ic IIC T4 Gc IP64 Ex ic IIIB T135 °C Dc IP64
NEC & CEC	Class I, Division 1, Groups A-D T4 Class II & III, Division 1, Groups E-G T4	Class I, Division 2, Groups A, B, C, D, T4

Smart-Ex®

ANDROID™ 4.4 - MOST POPULAR ANDROID OPERATING SYSTEM

ANDROID™ 4.4 enables this intrinsically safe device to be used in hazardous areas without any compromises compared to conventional Smartphones for these applications and many more. With the online integration and the use of a variety of applications the Smart - Ex® 01 & 201 allows an efficiency potential:

- Collaborative Working
- Audits & Inspection
- Operator Rounds
- Asset Tracking
- Condition Monitoring
- Process Automation
- Indoor / Outdoor Tracking & Navigation
- Safety / Security Management
- Man Down - Lone Worker Protection
- Push to talk function

ecom App-library

www.ecom-ex.com/apps

WORKER SAFETY WITH SMART-EX 01/201

An ultra-rugged, LTE/ WiFi/ Android Smartphone, the Smart-Ex® 01 & 201 comes with unrivalled features:

- Such as a touch screen that can be viewed in direct sunlight and easily used with dirty or wet work gloves.
- An extremely loud speaker, noise cancellation, a powerful battery, water and drop resistance and an optional 3-Year Service Level Agreement are just some features of the Smart-Ex® 01 & 201 that provide peace of mind to enterprises and workers alike.
- Access to productivity applications and worker safety as well as a full suite of industrial-grade accessories completes the solution.

In extreme and often dangerous working environments where every step is critical, you don't settle for less than the best – Smart-Ex® 01 & 201.

MAKE ALL THE DIFFERENCE

4.0“ CAPACITIVE MULTI-TOUCH SCREEN

Made of extreme shock and scratch-resistant Gorilla Glass® 2, the large display increases the workers productivity due to the larger work surface. And, the brightness, sharpness and high resolution is easier on the eyes.The multi-touch display remains easy and accurate to use, even when used with gloves or wet fingers.

Google Play Store certification provides access to more than 700,000 software applications. And, if you need your device to stay up to date, FOTA (Firmware Over The Air) does this automatically and securely - just as your personal phone does.

SCOPE OF DELIVERY

- Smart-Ex® 01 & Smart-Ex® 201
- Li-Ion battery 3600mAh (built-in)
  Li-Ion battery 4800mAh (built-in)
- Charger TC S01
- Safety Box SB S01 / USB Data cable PC S201
- Belt Clip BC S01 / S201
- Needle (for opening SIM Slot)
- Documentation

Smart-Ex®

TECHNICAL DATA

CORE PLATFORM / FUNCTIONS

	ZONE 1	ZONE 2
Operating System	Android 4.4	Android 4.4
Chipset	MSM8926 1.2 GHz Quad core	MSM8926 1.2 GHz Quad core
Band	4G / LTE-Standard Quad Band UMTS 850 / 900 / 1900 / 2100 MHz Quad Band GSM 850 / 900 / 1800 / 1900 MHz EU: B1, B3, B7, B8, B20, B38 (TDD) US: B1, B2, B3, B4, B5, B7, B8, B12, B17	4G / LTE-Standard Quad Band UMTS 850 / 900 / 1900 / 2100 MHz Quad Band GSM 850 / 900 / 1800 / 1900 MHz EU: B1, B3, B7, B8, B20, B38 (TDD) US: B1, B2, B3, B4, B5, B7, B8, B12, B17
Antenna	MIMO antenna for LTE	MIMO antenna for LTE
WiFi	802.11 a / b / g / n dual-band, WiFi Direct, WiFi-Hotspot	802.11 a / b / g / n dual-band, WiFi Direct, WiFi Hotspot
Memory	16 GB Internal Storage / 1GB RAM	16 GB Internal Storage / 1GB RAM
User memory	12 GB	12 GB
Applications	Google Play	Google Play

CONNECTIVITY

Bluetooth SMS, MMS (text, image, audio, video)	BT4.0 / BLE (Low Energy) Support SMS and MMS	BT4.0 / BLE (Low Energy) Support SMS and MMS
GPS, NFC	GPS, GLONASS, NFC	GPS, GLONASS, NFC
Languages supported	Arabic, Simplified Chinese, Croatian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Swedish, Turkish	Arabic, Simplified Chinese, Croatian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Swedish, Turkish
Email Client	EAS, Gmail, POP3, IMAP	EAS, Gmail, POP3, IMAP
Capacity (mAh)	3600 mAh	4800 mAh
Battery Life	Up to 1000 hours Stand by, up to 40 hours talk time	Up to 1000 hours Stand by, up to 40 hours talk time

PHYSICAL CHARACTERISTICS

Ambient temperature	-20°C.....+55°C	-20°C.....+55°C
Protection class	IP68	IP68
Size	137 mm x 72.1 mm x 26.9 mm (5.39"x 2.54"x 1,05")	137 mm x 72.1 mm x 20.8 mm (5.39 x 2.54 x 0,82")
Weight	approx. 370 g	approx. 290 g

Dedicated Keys	PTT key / Alarm key / Power key	PTT key / Alarm key / Power key
Ports	3.5 mm audio connector	3.5 mm audio connector
DISPLAY		
Size	4.0 inch	4.0 inch
Type	Corning Gorilla® Glass 2 with Glove Touch, Blan-view Display	Corning Gorilla® Glass 2 with Glove Touch, Blanview Display
Resolution	WVGA (480x800)	WVGA (480x800)
Outdoor Visibility	Yes	Yes
Capacity	16.7 M color	16.7 M color
Audio		
Microphone	Dual Mic Solution with Noise cancellation	Dual Mic Solution with Noise cancellation
Speaker	19 mm Loud Speaker with Gore® Protective Vents, Output up to 103 dB	19 mm Loud Speaker with Gore® Protective Vents, Output up to 103 dB
MULTIMEDIA		
Audio Formats	MP3, WMA 9, AAC, ACC+, eAAC+, AMR-NB/WB	MP3, WMA 9, AAC, ACC+, eAAC+, AMR-NB/WB
Video Formats	Support AVI, MP4, 3GPP	Support AVI, MP4, 3GPP
Media Player	Android native + GMS	Android native + GMS
FM Radio	Yes	Yes
Camera	8MP auto focus rear, 1MP fixed focus front	8MP auto focus rear, 1MP fixed focus front
LED torch light	Yes	Yes

OPTIONAL ACCESSORIES / PERIPHERAL DEVICES

- Car charger
- Leather case
- Leather holster
- Single-bay desktop charger
- 4-bay desktop charger
- Stylus
- IS headset "ComCom Ex"
- IS in-ear noise reduction headset "Serenity SPC Ex"
- Bluetooth Remote Speaker Mic "Ex-RSM Aurelis BT"
- Non-IS stereo headset

Ex-Handy

CERTIFICATION

	EX-HANDY 09	EX-HANDY 209
ATEX	⟨Ex⟩ II 2G Ex ib IIC T4 Gb IP64 ⟨Ex⟩ II 2D Ex ib IIIC T135 °C Db IP64	⟨Ex⟩ II 3G Ex ic IIC T4 Gc IP64 ⟨Ex⟩ II 3D Ex ic IIIB T135 °C Dc IP64
IECEx	Ex ib IIC T4 Gb IP64 Ex ib IIIC T135 °C Db IP64	Ex ic IIC T4 Gc IP64 Ex ic IIIB T135 °C Dc IP64
NEC & CEC	Class I, II, III Division 1 Groups AG T4	Class I, Division 2, Groups A,B,C,D, T4

Intrinsically Safe Featurephone **Ex-Handy 09 / 209**

ZONE 1 / 21, ZONE 2 / 22 , DIV 1 / DIV 2

RANGE OF FUNCTIONS

- Sim lock free
- Touch Screen and Numeric Keypad
- High Visibility Display in Direct Sunlight
- 4G LTE cellular network connectivity
- Android™ 4.4 Kit Kat® Operating System
- Wifi 802.11 a/b/g/n with hotspot feature
- Long Battery Life
- Powerful Loudspeaker
- Protection from micro particles
- Waterproof to IP68 standards
- High Shock/Vibration Resistance
- Extreme Temperature Resistance
- Resistant to extreme pressure
- High puncture resistance
- Resistant to most oils and chemicals
- Optional Service Level Agreement 3 years (SLA)
- PTT - Push to talk (optional)

EXPERIENCE THE
EX-HANDY 09/209 FEATUREPHONE

OPTIONAL ACCESSORIES / PERIPHERAL DEVICES

- Car charger
- Leather case
- Leather holster
- Single-bay desktop charger
- 4-bay desktop charger
- USB connector plug
- Stylus
- IS headset “ComCom Ex“
- IS in-ear noise reduction headset “Serenity SPC Ex”
- Bluetooth Remote Speaker Mic “Ex-RSM Aurelis BT“
- Non-IS stereo headset

SCOPE OF DELIVERY

- Ex-Handy 09 / 209
- Li-Ion battery 3600mAh (built-in)
  Li-Ion battery 4800mAh (built-in)
- Charger TC S01
- Safety Box SB S01 / USB data cable PC S201
- Belt Clip BC H09 / H209
- Needle (for opening SIM Slot)
- Documentation

TECHNICAL DATA

CORE PLATFORM / FUNCTIONS		
	ZONE 1	**ZONE 2**
Operating System	Android 4.4	Android 4.4
Chipset	MSM8926 1.2 GHz Quad core	MSM8926 1.2 GHz Quad core
Band	4G / LTE-Standard Quad Band UMTS 850 / 900 / 1900 / 2100 MHz Quad Band GSM 850 / 900 / 1800 / 1900 MHz EU: B1, B3, B7, B8, B20, B38 (TDD) US: B1, B2, B3, B4, B5, B7, B8, B12, B17	4G / LTE-Standard Quad Band UMTS 850 / 900 / 1900 / 2100 MHz Quad Band GSM 850 / 900 / 1800 / 1900 MHz EU: B1, B3, B7, B8, B20, B38 (TDD) US: B1, B2, B3, B4, B5, B7, B8, B12, B17
WiFi	802.11 a / b / g / n dual-band, with Hotspot feature	802.11 a / b / g / n dual-band, with Hotspot feature
Memory	8GB Internal Storage / 1GB RAM	8GB Internal Storage / 1GB RAM
User memory	4GB	4GB
Applications	Google Play Store applications	Google Play Store applications
CONNECTIVITY		
Bluetooth **SMS, MMS** **(text, image, audio, video)**	BT4.0 / BLE (Low Energy) Support SMS and MMS	BT4.0 / BLE (Low Energy) Support SMS and MMS
GPS, NFC	GPS, GLONASS	GPS, GLONASS
Languages supported	Arabic, Simplified Chinese, Croatian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Swedish, Turkish	Arabic, Simplified Chinese, Croatian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Swedish, Turkish
Email Client	EAS, Gmail, POP3, IMAP	EAS, Gmail, POP3, IMAP
Capacity (mAh)	3600 mAh	4800 mAh
Battery Life	Up to 1000 hours Stand by, up to 40 hours talk time	Up to 1000 hours Stand by, up to 40 hours talk time
PHYSICAL CHARACTERISTICS		
Ambient temperature	-20°C.....+55°C	-20°C.....+55°C
Protection class	IP68	IP68
Size	137 mm x 65 mm x 26.9 mm (5.39" x 2.54" x 1.05")	137 mm x 65 mm x 20.5 mm (5.39" x 2.54" x 1.05")
Weight	approx. 330 g	approx. 270 g
Dedicated Keys	PTT key / Alarm key / Power key	PTT key / Alarm key / Power key
Ports	3.5 mm audio connector	3.5 mm audio connector

DISPLAY		
Size	2.6 inch	2.6 inch
Type	Corning Gorilla® Glass 2 with Glove Touch, Blan-view Display	Corning Gorilla® Glass 2 with Glove Touch, Blanview Display
Resolution	432 x 320	432 x 320
Outdoor Visibility	Yes	Yes
Capacity	16.7 M color	16.7 M color
Audio		
Microphone	Dual Mic Solution with Noise cancellation	Dual Mic Solution with Noise cancellation
Speaker	19 mm Loud Speaker with Gore® Protective Vents, Output up to 103 dB	19 mm Loud Speaker with Gore® Protective Vents, Output up to 103 dB
MULTIMEDIA		
Audio Formats	MP3, WMA 9, AAC, ACC+, eAAC+, AMR-NB/WB	MP3, WMA 9, AAC, ACC+, eAAC+, AMR-NB/WB
Video Formats	Support AVI, MP4, 3GPP	Support AVI, MP4, 3GPP
Media Player	Android native + GMS	Android native + GMS
FM Radio	Yes	Yes
Kamera	-	5-MP Autofocus camera back side
LED torch light	Yes	Yes

Ex-PMR 2000

ecom has developed a professional handheld radio specifically for your daily work in hazardous areas. The Ex-PMR 2000 offers safe and reliable voice communication in daily operation and even in emergency situations. Communicate simply and without risk with your colleagues – at any time in all situations.

The Ex-PMR 2000 can be used in the Zones 1 and 2. This professional radio operates in two different frequency bands and is available in either the VHF 136-174 MHz or the UHF 400-470 MHz version. The radio's transmission power has been limited to 1.2 watts for safe working in potentially explosive areas and initiating calls even over large distances.

In addition, the Ex-PMR 2000 complies with IP 64 and therefore satisfies high industrial demands on ruggedness and reliability, particularly in hazardous areas.

CERTIFICATION

ATEX	⟨Ex⟩ II 2G Ex ia IIC T4

SCOPE OF SUPPLY

- Ex-PMR 2000 U/V
- Rechargeable battery Ex-AM PMR 2000
- Belt clip
- Operating instructions

Intrinsically safe professional **Mobile Radio**

FOR ZONE 1

TECHNICAL DATA	
Frequency range	VHF 136-174 MHz, UHF 400-470 MHz
Number of channels	16
Channel spacing	12,5/20/25 kHz
Operating voltage	7,4 V
Ambient temperature	-20 °C ... +50 °C
Antenna impedance	50 Ohm
Protection rating	IP64
Dimensions (LxWxD)	150 x 60 x 40 mm
Weight	ca. 400 g
Battery	2,000 mAh, Lithium-Ion
Operating time	ca. 12 h (90% Standby 5% TX 5% RX)

The CTCSS and DCS pilot tone systems and the signalling modes with five-tone signals guarantee that communication is secure thus preventing interference from other radio communication.

The Ex-PMR 2000 is equipped with a variety of mechanisms to protect lone workers. The integrated position sensor enables the monitoring of angles and will in emergency situations trigger an automatic alarm (Lone worker). The functions for protecting lone workers as well as the emergency button also allow manual alarms to be triggered by workers in emergency situations.

All parameters for the Ex-PMR 2000 functions may be comfortably set on a PC using the corresponding software kit and can also be saved for programming several units. Thus minimizing work and ensuring that all radios harmonize with each other.

Ex-PMR 2000

RANGE OF FUNCTIONS

- 16 channels
- Programmable channel spacing
- CTCSS, DCS, 5-tone signalling
- Scan mode
- Adjustable squelch levels
- Transmission time limitation (TOT)
- Emergency alarm functions
- Lone worker protection with position sensor
- Dead-man's switch

BATTERIES / CHARGER / LEATHERCASE / HAND STRAP

Battery Ex-AM PMR 2000 (2000 mAh Li-Ion)	Charger Power adaptor and charger (UK oder EU)	Multi Docking Station MC PMR 2000	Leather case incl. carrying strap and belt loop (black)	Hand strap (black)
A0000282	AS000283	A0000285 EU A0000294 UK A0000295 US	A0000288	A0000298

HEADSETS

Microphone-/Remote speaker combination Ex-HS02	Ear Protection Headset Ex-TRA 300	Ear Protection Headset Ex-TRA 300 Available with helmet adaptor for popular safety helmets
A0000286	A0000389	A0000406

Neck band Headset Ex-TRA 300	Fire brigade headset Ex-TRA 300 Adaptor for almost every helmet available	Fire Talk Supra Ex-TRA 300
A0000393	A0000397	A0000401

GENERAL ACCESSORIES

VHF-Antenna (150-170 MHz) A0000278 (135-150 MHz, whip) A0000293	UHF-Antenna (420-450 MHz) A0000289 (450-470 MHz, long) A0000289	Cloning cable	Software Kit incl. data cable (attention serial plug needed)
		A0000296	A0000297

HEADSETS -

SECURELY AND UNDERSTANDABLE

The effective use of resources is a fundamental key to the success of a company. Clear and targeted communication is a very important factor in this regard.

One such aspect is the use of modern facilities to relay information and instructions between the sender and the receiver in a reliable manner.

What is a problem, however, is the comprehensible transmission of the message. The correct volume is a factor. Another is the phonetically correct transmission of what is being said. It depends on whether the consonants can be transmitted and heard clearly and cleanly. Sounds such as “s, f, g, t, p, h, k and z“ are particularly critical.

These occur in the upper frequency range and can be hard to understand, or not heard at all, especially amidst a cacophony of voices or background noise. “care“ or “bear“ becomes “air“ or „shine“ becomes „nine“ or „sign“. This not only creates unpleasant situations; such misunderstandings in the operational environment can sometimes lead to hazardous situations. Without the correct equipment it is often virtually impossible to ensure a proper flow of information.

High-quality headset systems can help to avoid or defuse such situations. These transfer the sound to exactly where it is needed. Close to the ear. Moreover, these headsets are specialist devices in their field. They have been specifically developed and designed to ensure maximum quality reproduction, especially in noisy environments. Accurate voice transmission is just one reason why the use of headsets is worthwhile. Legislation does not prescribe the use of a hands free device or a headset when driving vehicles for nothing. Thanks to its technical components a headset fulfils the same tasks as a telephone receiver.

The advantage lies in the fact that both hands are kept free. The headset user has the use of both hands during a conversation and does not have to worry about his phone or radio, meaning he can concentrate on the conversation and his activity at hand.

Ex-TRA 80*Au

in cooperation with

Imtradex

The Ex-TRA 80* Aurelis series is the first audio accessory, especially designed for digital radios. Due to the integrated amplifier the Ex-TRA 80* Aurelis is one of the loudest speaker-mics on the digital market.

RANGE OF FUNCTIONS

- Loud and clear communication due to low noise amplifier
- Connector for external accessories
- Detachable clip
- Emergency button
- Three stage volume regulator

Ex-TRA 80* Aurelis

SPEAKER MICROPHONE FOR ZONE 1 / 21

COMPATIBLE WITH

AIRBUS THR9 Ex

urelis

HEADSETS

Ex-TRA PTT-E	Ex-TRA PTT-EH	Ex-TRA FT / FTS	Ex-TRA NB
A0000984	A0000985	A0000988-989	A0000986

Invisio M3 Ex	ComCom Ex	Serenity SPC Ex
A0000976-977	A0000990	AS000990

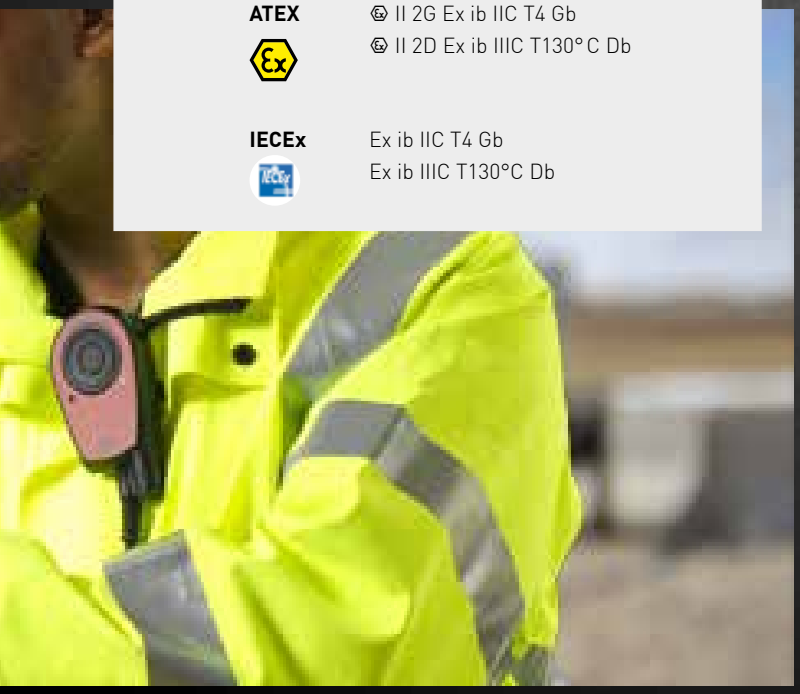
CERTIFICATION

ATEX

II 2G Ex ib IIC T4 Gb
II 2D Ex ib IIIC T130° C Db

IECEx

Ex ib IIC T4 Gb
Ex ib IIIC T130°C Db



TECHNICAL DATA

Loudspeaker	
Pattern	dynamic
Impedance	8 Ohm at 1 mW/1 kHz
Sound pressure level	max. 86 dB
Frequency range	200 Hz - 8 kHz
Microphone	
Charakteristik	electret
Directional	omni-directional
Impedance	1,200 Ohm
Sensivity	-38 dB V/Pa 1 kHz
Frequency range	50 Hz - 16 kHz
Additional data	
Ambient temperature	-20 °C to +55 °C
Protection class	IP54
Weight	approx. 200 g

Lite Com Pro II

The intrinsically safe Lite Com Pro II is a hearing protection with a built-in radio. The device is dedicated for use in extremly harsh and noisy environments and fulfills all requirements for absolutely safe communication. Simultaneously it protects you from harmful noise.

Despite the immense sound absorption you are always able to perceive your environment, e.g. warning signals, machine noise, other important information. This is possible due to two integrated exterior microphones. The speaker microphone is adjustable to your needs and has a noise reduction for clear communication. For hands-free communication you can use the VOX-Function and during enormous external noise pollution the PTT button enables reliable communication.

All your settings can be done with three buttons and with the new Lite Com Pro II you can use a wider frequency range (403-470MHz) than before.

TECHNICAL DATA

Frequency range	403-470 MHz
Channels	up to 30
Channel separation	12,5 kHz / 20 kHz / 25 kHz
Outreach	approx. 3km
Output power	200 / 20 / 10 mW
Ambient temperature	- 20 °C... + 50 °C
Operating time	ca. 14 hours (high output power)
Power supply	1,350 mAh Li-Ion Akku
Charging time	approx. 10-12 hours
Weight	approx. 540 g
Attenuation **Headband/Neckband** **Helmet adapter**	 SNR 31 dB SNR 30 dB

- Two in one - Combination of radio & ear protection
- Easy to handle
- Reliable and professional communication system
- Brilliant and clear communication in noisy environment
- Perfect sound quality and wearing comfort
- Warning in case of low battery
- PTT button for easy and quick activation of voice transmission
- VOX functionality for unrestricted movement

DIFFERENT VERSIONS

Headband	Neckband	Helmet adapter
AS000231	AS000232	AS000233

SPARE BATTERY

Battery Peltor ACK08
A0000568

CHARGING CABLE

Charging cable DEAL-2AH for ACK08
A0000569

CHARGING PLUG

Charging plug FR08 f. ACK08 (incl. internat. adapter kit)
A0000570

MICROPHONES

Microphone electret MT53N-12	Microphone dynamic MT7N-02
A0000247	A0000252

CERTIFICATION

ATEX

II 1G Ex ia IIC T4 Ga
II 1D Ex ia IIIC T130°C Da
I M1 Ex ia I Ma

IECEx

Ex ia IIC T4 Ga
Ex ia IIIC T130°C Da
Ex ia I Ma

Intrinsically safe **Headset Lite-Com Pro II**

FOR ZONE 0 / 20

GENERAL ACCESSORIES

Clean hygiene interface ear cup, one-way use HY100A	Hygiene kit HY79	Microphone protection HYM1000	Helmet adapter
A0000246	A0000417	A0000248	A0000432 - 436
External PTT button FL5602-501	**Wind muffler f. dynamic microphone M40/1**	**Wind muffler f. exterior microphone M60/2**	**Wind muffler for microphone M995**
A0000253	A0000990	A0000250	A0000428

ComCom Ex

Intrinsically Safe Headset **ComCom Ex**

FOR ZONE 1 / 21

COMPATIBLE EQUIPMENT		GENERAL		
Ex-Handy 08, LWP / 07 / Ex-GSM 07	**Ex-HSPA 08 / LWP**	**SNR: 28 dB Acoustic filter 110WH**	**SNR: 25 dB Acoustic filter 100YE**	**SNR: 24 dB Acoustic filter 105OR**
Page 12	Page 14	A0000962	A0000963	A0000964
Smart-Ex 01 & Ex-Handy 09		**Lace**	**Generic ear shells**	**Wind muffler**
Page 2		A0000965	A0000966	A0000967

in cooperation with

PHONAK

The intrinsically safe ComCom Ex is the ultimate headset, especially for connection to the Ex-Handy 07 and Ex-Handy 08. While wearing the headset you are still able to move freely and hands free working is possible.

With the noise cancelling microphone your counterpart is able to understand every command and you are able to understand all instructions as well due to the in-ear loudspeaker.

- Excellent performance
- Noise cancelling microphone
- Totally free movement
- Highest wearing comfort with custom-made ear shells

TECHNICAL DATA

Loudspeaker	
Pattern	Balanced Armature
Impedance	50 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 100 dB
Frequency range	100 Hz - 10 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	2,200 Ω
Sensitivity	-44 dB V/Pa, 1 kHz
Frequency range	100 Hz - 10 kHz
Additional data	
Ambient temperature	-20 °C to +55 °C
Weight	approx. 18 g

CERTIFICATION

ATEX	⟨Ex⟩ II 2G Ex ib IIC T4 Gb ⟨Ex⟩ II 2D Ex ib IIIC T130°C Db
IECEx	Ex ib IIC T4 Gb Ex ib IIIC T130°C Db

Serenity SPC

in cooperation with

PHONAK

The intrinsically safe Serenity SPC Ex is a hearing protection headset especially for connection to the Ex-Handy 07 and Ex-Handy 08. The light weight headset enables you to move freely and with both hands free during your telephone call. In noisy environments you are always protected against loud ambient noises due to the high noise attenuation of the Serenity SPC Ex. As well as you understand your counterpart, your counterpart can also hear you excellently because of the noise cancelling of the microphone.

Hearing Protection Headset **Serenity SPC Ex**

FOR ZONE 1 / 21

COMPATIBLE EQUIPMENT		GENERAL		
Ex-Handy 08, LWP / 07 / Ex-GSM 07	**Ex-HSPA 08 / LWP**	**SNR: 28 dB Acoustic filter 110WH**	**SNR: 25 dB Acoustic filter 100YE**	**SNR: 24 dB Acoustic filter 105OR**
Page 12	Page 14	A0000962	A0000963	A0000964
Smart-Ex 01 & Ex-Handy 09		**Lace**	**Wind muffler**	
Page 2		A0000965	A0000967	

C Ex

TECHNICAL DATA	
Loudspeaker	
Pattern	Balanced Armature
Impedance	50 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 100 dB
Frequency range	100 Hz - 10 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	2,200 Ω
Sensitivity	-44 dB V/Pa, 1 kHz
Frequency range	100 Hz - 10 kHz
Additional data	
Ambient temperature	-20 °C to +55 °C
Noise attenuation	max. 28 dB
Weight	approx. 23 g

- Excellent performance
- Noise cancelling microphone
- Totally free movement
- Highest wearing comfort and hearing protection due to custom made ear shells
- Complies to EN 352-2

CERTIFICATION

ATEX
⟨Ex⟩ II 2G Ex ib IIC T4 Gb
⟨Ex⟩ II 2D Ex ib IIIC T130°C Db

IECEx
Ex ib IIC T4 Gb
Ex ib IIIC T130°C Db

Ex-RSM Aurel

in cooperation with

Imtradex

The world's first intrinsically safe Remote Speaker Microphone Ex-RSM Aurelis BT is the latest wireless solution for you. It can connect with any Bluetooth mobile phone or PDA.. Even in harsh and loud environment your colleagues are able to understand you due to the high volume of the device. In the event that the environment is too loud, you can connect the device to a hearing protection headset without any limitations.

CERTIFICATION

ATEX	⟨Ex⟩ II 2G Ex ib IIC T4 Gb ⟨Ex⟩ II 2D Ex ib IIIB T135°C Db
IECEx	Ex ib IIC T4 Gb Ex ib IIIB T135°C Db
NEC	North America (USA / Canada) Class I, Division 1, Groups A-D T4 Class II, Division 1, Groups F-G T4 Class III, Division 1

Intrinsically safe **Ex-RSM Aurelis BT**

SPEAKERMIC FOR ZONE 1 / 21

COMPATIBLE PRODUCTS		ACCESSORIES			
Ex-Handy 07/08	**Tab-Ex®**	**Ex-TRA PTT-E**	**Ex-TRA PTT-EH**	**Ex-TRA FT / FTS**	**Ex-TRA NB**
		A0000984	A0000985	A0000988-989	A0000986
Smart-Ex 01 & Ex-Handy 09	**Getac V100 -Ex2**	**Ex-TRA INVISIO**		**Ex-TRA ComCom Ex**	**Serenity SPC Ex**
		A0000976-977		A0000990	AS000990

lis BT

TECHNICAL DATA	
Loudspeaker	
Sound pressure level	90 dB at 0,3 m
Frequency range	200 Hz - 8 kHz
Microphone	
Pattern	electret
Directional	omni-directional
Frequency range	50 Hz - 16 kHz
Additional data	
Ambient temperature	-20 °C to +55 °C
Bluetooth	2.0
Bluetooth profiles	HSP, HFP, SPP
Power supply	Li-Ion 800mAh
Protection class	IP54
Talk-time	up to 8,5 h
Stand-by time	up to 60 h (BT connected)

RANGE OF FUNCTIONS

- To be used with any Bluetooth® enabled device (Mobile Phone, Radio, PDA, Tablet)
- When connected to a radio, the speakermic can be attached to clothing for more comfortable, hands-free communication.
- Background noise reduction technology, allowing for more effective communication..
- Bluetooth®, allowing hands-free communication.
- Loud and clear communication with three stage volume regulator
- Low weight (approx. 180 g)

Ex-TRA 300 ANALOG

HEADSETS FOR ZONE 1

Ex-TRA300

in cooperation with Imtradex

TECHNICAL DATA	
Loudspeaker	
Pattern	dynamic
Impedance	150 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 115 dB
Frequency range	150 Hz - 12 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	4.400 Ohm
Sensivity	-44 dB V/Pa 1 kHz
Frequency range	300 Hz - 9 kHz
Additional data	
Ambient temperature	-20°C to +50°C
Protection class	IP54
Weight	approx. 520 g
Noise attenuation	approx. 27 dB

CERTIFICATION

ATEX ⟨Ex⟩ II 2G Ex ia IIC T4

IECEx Ex ia IIC T4 Gb

- Clear sound in noisy environments
- High attenuation
- High and excellent wearing comfort
- Big PTT-button

Analog

The Ex-TRA 300 headsets are a series of explosion-protected headsets for use under extreme conditions. The products have been developed in conjunction with demanding users and subjected to rigorous examination. Therefore the headset will fulfill all requirements for industrial capability and reliability.

COMPATIBLE PRODUCTS			
Ex-PMR 1000	**Ex-PMR 2000**	**Motorola GP 900**	**Motorola GP340-680 Ex**
AS000260	AS000280/ 281		

Intrinsically safe **HEARING PROTECTION** HEADSET
FOR ZONE 1

ACCESSORIES	
Windscreen for microphone M995	**Foam speaker cover**
A0000428	A0000430
Headband cushion (nappa leather)	**Ear cushions**
A0000431	A0000429

Ex-TRA300

in cooperation with Imtradex

TECHNICAL DATA	
Loudspeaker	
Pattern	dynamic
Impedance	150 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 115 dB
Frequency range	150 Hz - 12 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	4.400 Ohm
Sensivity	-44 dB V/Pa 1 kHz
Frequency range	300 Hz - 9 kHz
Additional data	
Ambient temperature	-20°C to +50°C
Protection class	IP54
Weight	approx. 520 g
Noise attenuation	approx. 27 dB

CERTIFICATION

ATEX II 2G Ex ia IIC T4

IECEx Ex ia IIC T4 Gb

- Clear sound in noisy environments
- High attenuation
- High and excellent wearing comfort
- Big PTT-button
- Fits to nearly all helmet variants

Analog

The Ex-TRA 300 headsets are a series of explosion-protected headsets for use under extreme conditions. The products have been developed in conjunction with demanding users and subjected to rigorous examination. Therefore the headset will fulfill all requirements for industrial capability and reliability.

COMPATIBLE PRODUCTS

Ex-PMR 1000	Ex-PMR 2000	Motorola GP 900	Motorola GP340-680 Ex
AS000260	AS000280/ 281		

HEADSET WITH **HELMET ADAPTER**
FOR ZONE 1

ACCESSORIES

Windscreen for microphone M995	Helmet adaptor, types on request	
A0000428	A0000432 - 436	
Headband cushion (nappa leather)	**Ear cushions**	**Foam speaker cover**
A0000431	A0000429	A0000430

Ex-TRA300

in cooperation with Imtradex

TECHNICAL DATA	
Loudspeaker	
Pattern	magnetic
Impedance	250 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 115 dB
Frequency range	100 Hz - 4 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	4.400 Ohm
Sensivity	-44 dB V/Pa 1 kHz
Frequency range	300 Hz - 10 kHz
Additional data	
Ambient temperature	-20°C to +50°C
Protection class	IP54
Weight	approx. 118 g

CERTIFICATION

ATEX	II 2G Ex ia IIC T4
IECEx	Ex ia IIC T4 Gb

- Light weight headset
- Pressure-free comfortable wearing
- Possible with helmets and chemical splash suits

Analog

The Ex-TRA 300 Neckband provides to you a comfortable light weight headset solution and can be used with almost every kind of helmet. Through the Open-Ear-Gain technology you are able to hear all ambient noises and also be able to have clear and loud communication even in dangerous situations.

COMPATIBLE PRODUCTS

Ex-PMR 1000	Ex-PMR 2000	Motorola GP 900	Motorola GP340-680 Ex
AS000260	AS000280/ 281		

Intrinsically safe **NECKBAND** HEADSET
FOR ZONE 1

ACCESSORIES

Windscreen for microphone M995	Ear Mould	
A0000428	A0000424 - 425	
Ear bud	**Acoustic ear olive**	**Acoustic ear tube**
A0000421 - 423	A0000426	A0000427

Ex-TRA300

in cooperation with Imtradex

TECHNICAL DATA	
Loudspeaker	
Pattern	magnetic
Impedance	150 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 106 dB
Frequency range	300 Hz - 4 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	2.500 Ohm
Sensivity	-34 dB V/Pa 1 kHz
Frequency range	100 Hz - 5 kHz
Additional data	
Ambient temperature	-20°C to +50°C
Protection class	IP54
Weight	approx. 130 g

CERTIFICATION

ATEX ⟨Ex⟩ II 2G Ex ia IIC T4

IECEx Ex ia IIC T4 Gb

- Clear voice transmission and clear understanding
- Easy adaptation to helmets
- Rugged and big PTT button

Analog

The Ex-TRA 300 Fire talk headset is designed to provide optimum communication in critical situations for fire and rescue services. The robust and rugged design and the PTT button provides to you with the highest performance in all situations. Through a large variety of helmet adaptors you can use it with almost all fire brigade standard helmets. Even changing from one helmet to another is quickly possible.

COMPATIBLE PRODUCTS

Ex-PMR 1000	Ex-PMR 2000	Motorola GP 900	Motorola GP340-680 Ex
AS000260	AS000280/ 281		

Intrinsically safe **FIRE TALK** HEADSET

FOR ZONE 1

ACCESSORIES

Windscreen for microphone M995

A0000428

Helmet adaptor for Fire brigade Headset

A0000451-461

Ex-TRA300

The Ex-TRA 300 Fire talk supra is a special designed and very robust headset. It fits on all common fire brigade supra helmets without any additonal adaption. Due to the design of the headset the rescue brigades can hear the ambient noises and have clear and loud communication to avoid mishearing commands.

Intrinsically safe **FIRE TALK SUPRA** HEADSET
FOR ZONE 1

ACCESSORIES

Windscreen for Microphone M995

A0000428

Analog

in cooperation with Imtradex

TECHNICAL DATA

Loudspeaker	
Pattern	magnetic
Impedance	150 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 106 dB
Frequency range	300 Hz - 4 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	2.500 Ohm
Sensivity	-34 dB V/Pa 1 kHz
Frequency range	100 Hz - 5 kHz
Additional data	
Ambient temperature	-20°C to +50°C
Protection class	IP54
Weight	approx. 130 g

CERTIFICATION

ATEX ⟨Ex⟩ II 2G Ex ia IIC T4

IECEx Ex ia IIC T4 Gb

- Perfect voice transmission even with loud ambient noises
- Special design for fire brigade helmets
- Optimum performance due to design
- Robust and big PTT button

COMPATIBLE PRODUCTS

Ex-PMR 1000	Ex-PMR 2000	Motorola GP 900	Motorola GP340-680 Ex
AS000260	AS000280/ 281		

ecom
MOBILE SAFETY

Ex-TRA 300 DIGITAL

HEADSETS FOR ZONE 1

Ex-TRA300

in cooperation with Imtradex

TECHNICAL DATA	
Loudspeaker	
Pattern	dynamic
Impedance	150 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 115 dB
Frequency range	150 Hz - 12 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	4.400 Ohm
Sensivity	-44 dB V/Pa 1 kHz
Frequency range	300 Hz - 9 kHz
Additional data	
Ambient temperature	-20°C to +50°C
Protection class	IP54
Weight	approx. 520 g
Noise attenuation	approx. 27 dB

CERTIFICATION

ATEX ⟨Ex⟩ II 2G Ex ia IIC T4

IECEx Ex ia IIC T4 Gb

- Internal amplifier for best volume and clear sound in every situation
- High attenuation
- High and excellent wearing comfort
- Big PTT-button

Digital

The Ex-TRA 300 headsets are a series of explosion-protected headsets for use under extreme conditions. The products have been developed in conjunction with demanding users and subjected to rigorous examination. Therefore the headset will fulfill all requirements for industrial capability and reliability.

COMPATIBLE PRODUCTS	
AIRBUS THR880i Ex	**AIRBUS THR9 Ex**

Intrinsically safe **HEARING PROTECTION** HEADSET
FOR ZONE 1

ACCESSORIES	
Windscreen for microphone M995	**Foam speaker cover**
A0000428	A0000430
Headband cushion (nappa leather)	**Ear cushions**
A0000431	A0000429

Ex-TRA300

in cooperation with Imtradex

TECHNICAL DATA	
Loudspeaker	
Pattern	dynamic
Impedance	150 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 115 dB
Frequency range	150 Hz - 12 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	4.400 Ohm
Sensivity	-44 dB V/Pa 1 kHz
Frequency range	300 Hz - 9 kHz
Additional data	
Ambient temperature	-20°C to +50°C
Protection class	IP54
Weight	approx. 520 g
Noise attenuation	approx. 27 dB

CERTIFICATION

ATEX II 2G Ex ia IIC T4

IECEx Ex ia IIC T4 Gb

- Internal amplifier for best volume and clear sound in every situation
- High attenuation
- High and excellent wearing comfort
- Big PTT-button
- Fits to nearly all helmet variants

Digital

The Ex-TRA 300 headsets are a series of explosion-protected headsets for use under extreme conditions. The products have beendeveloped in conjunction with demanding users and subjected to rigorous examination. Therefore the headset will fulfill all requirements for industrial capability and reliability.

COMPATIBLE PRODUCTS

AIRBUS THR880i Ex	AIRBUS THR9 Ex

HEADSET WITH **HELMET ADAPTER**

FOR ZONE 1

ACCESSORIES

Windscreen for microphone M995	Helmet adaptor, types on request	
A0000428	A0000432 - 436	
Headband cushion (nappa leather)	**Ear cushions**	**Foam speaker cover**
A0000431	A0000429	A0000430

Ex-TRA300

in cooperation with Imtradex

TECHNICAL DATA	
Loudspeaker	
Pattern	magnetic
Impedance	250 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 115 dB
Frequency range	100 Hz - 4 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	4.400 Ohm
Sensivity	-44 dB V/Pa 1 kHz
Frequency range	300 Hz - 10 kHz
Additional data	
Ambient temperature	-20°C to +50°C
Protection class	IP54
Weight	approx. 118 g

CERTIFICATION

ATEX II 2G Ex ia IIC T4

IECEx Ex ia IIC T4 Gb

- Internal amplifier for best volume and clear sound in every situation
- Light weight headset
- Pressure-free comfortable wearing
- Possible with helmets and chemical splash suit

Digital

The Ex-TRA 300 Neckband provides to you a comfortable light weight headset solution and can be used with almost every kind of helmet. Through the Open-Ear-Gain technology you are able to hear all ambient noises and also be able to have clear and loud communication even in dangerous situations.

COMPATIBLE PRODUCTS

AIRBUS THR880i Ex	AIRBUS THR9 Ex

Intrinsically safe **NECKBAND** HEADSET
FOR ZONE 1

ACCESSORIES

Windscreen for microphone M995	Ear Mould	
A0000428	A0000424 - 425	
Ear bud	**Acoustic ear olive**	**Acoustic ear tube**
A0000421 - 423	A0000426	A0000427

Ex-TRA300

in cooperation with Imtradex

TECHNICAL DATA	
Loudspeaker	
Pattern	magnetic
Impedance	150 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 106 dB
Frequency range	300 Hz - 4 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	2.500 Ohm
Sensivity	-34 dB V/Pa 1 kHz
Frequency range	100 Hz - 5 kHz
Additional data	
Ambient temperature	-20°C to +50°C
Protection class	IP54
Weight	approx. 130 g

CERTIFICATION

ATEX ⟨Ex⟩ II 2G Ex ia IIC T4

IECEx Ex ia IIC T4 Gb

- Internal amplifier for best volume and clear sound in every situation
- Clear voice transmission and clear understanding
- Easy adaptation to helmets
- Rugged and big PTT button

Digital

The Ex-TRA 300 Fire talk headset is designed to provide optimum communication in critical situations for fire and rescue services. The robust and rugged design and the PTT button provides to you with the highest performance in all situations. Through a large variety of helmet adaptors you can use it with almost all fire brigade standard helmets. Even changing from one helmet to other is quickly possible.

COMPATIBLE PRODUCTS	
AIRBUS THR880i Ex	**AIRBUS THR9 Ex**

Intrinsically safe **FIRE TALK** HEADSET
FOR ZONE 1

ACCESSORIES
Windscreen for microphone M995
A0000428
Helmet adaptor for Fire brigade Headset
A0000451-461

Ex-TRA300

The Ex-TRA 300 Fire talk supra is a special designed and very robust headset. It fits on all common fire brigade supra helmets without any additonal adaption. Due to the design of the headset the rescue brigades can hear the ambient noises and have clear and loud communication to avoid mishearing commands.

Intrinsically safe **FIRE TALK SUPRA** HEADSET
FOR ZONE 1

ACCESSORIES

Windscreen for Microphone M995

A0000428

Digital

in cooperation with Imtradex

TECHNICAL DATA

Loudspeaker	
Pattern	magnetic
Impedance	150 Ohm at 1 mW / 1 kHz
Sound pressure level	max. 106 dB
Frequency range	300 Hz - 4 kHz
Microphone	
Pattern	electret
Directional	noise cancelling (NC)
Impedance	2.500 Ohm
Sensivity	-34 dB V/Pa 1 kHz
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Additional data	
Ambient temperature	-20°C to +50°C
Protection class	IP54
Weight	approx. 130 g

CERTIFICATION

ATEX ⟨Ex⟩ II 2G Ex ia IIC T4

IECEx Ex ia IIC T4 Gb

- Internal amplifier for best volume and clear sound in every situation
- Perfect voice transmission even with loud ambient noises
- Special design for fire brigade helmets
- Optimum performance due to design
- Robust and big PTT button

COMPATIBLE PRODUCTS

AIRBUS THR880i Ex	AIRBUS THR9 Ex

EMEA

Germany (Headquarters) [1]
ecom instruments GmbH
Industriestraße 2
97959 Assamstadt
Phone +49 62 94 42 24-0
Fax +49 62 94 42 24-100
sales@ecom-ex.com
[1] also covering Austria

ecom Benelux [2]
ecom instruments BV
Watertoren 45c
3247 CL Dirksland, Netherlands
Phone +31 1 87 60 59 16
Fax +31 1 87 60 33 47
info.nl@ecom-ex.com
[2] also covering Belgium and Luxemburg

France [3]
ecom Nied sarl
4 Rue Ettore Bugatti
67201 Eckbolsheim
Phone +33 3 88 76 46 84
Fax +33 3 88 76 02 85
info.fr@ecom-ex.com
[3] also covering Algeria, Egypt, Morocco, Tunisia and Libya

Italy
ecom instruments srl
Via Gandhi, 15 Galleria
20017 Rho (MI)
Phone +39 02 93 90 92 16
Fax +39 02 93 90 62 97
info.it@ecom-ex.com

Switzerland
ecom instruments GmbH
Merkurstraße 2
6210 Sursee
Phone +41 4 19 21 60 00
Fax +41 4 19 22 00 08
info.ch@ecom-ex.com

Nordics
ecom instruments GmbH
Postbox 304
2970 Hørsholm
Denmark
Phone +45 28 252 575
info.nordics@ecom-ex.com

United Kingdom
ecom instruments ltd
A310, The Wilton Centre,
Redcar, TS10 4RF,
United Kingdom
Phone +44 1642 46 54 00
Fax +44 1642 46 54 02
info.uk@ecom-ex.com

Middle East
ecom instruments fze
P.O. Box 8918
Saif-Zone, Sharjah, UAE
Phone +971 6 5 57 34 30
Fax +971 6 5 57 34 31
info.uae@ecom-ex.com

Americas

USA
ecom instruments Inc.
1779 Westborough Drive, Suite 102
Katy, Texas 77449
Phone +1 281 496 59 30
Fax +1 281 496 23 21
sales.us@ecom-ex.com

Asia

South East Asia
Ecom Instruments (SEA) Pte Ltd
15 Pioneer Turn
P+F GDC Building
Singapore 627577
Phone +65 6779 9078
info.sg@ecom-ex.com

Locate your nearest ecom partner on www.ecom-ex.com

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