


## SM1B-Ex: A Battery-Powered Hazardous Location (ATEX) Two-Way Radio Headset

The SM1B-Ex two-way radio headset offers advanced connectivity and superior performance in explosive environments that require ATEX and IECEx certification. It features a durable lithium-ion battery and SENS® Technology, enhancing safety and situational awareness in noisy industrial settings. This makes the SM1B-Ex a top choice for industries that require reliable and effective communication solutions for their workforce in hazardous environments such as explosive chemicals and fuels as well as combustible powders.

 See more details at [sensear.com/products/headsets/sm1b-ex](https://sensear.com/products/headsets/sm1b-ex)



KEY FEATURES	
SENS® Technology	Enhances speech while suppressing background noise to a safe level
360° Situational Awareness	Remain aware of surrounding noises and hazards
Hearing Protection	Up to 27dB NRR / 33dB SNR / 31dB, Class 5 SLC80
Volume Limiter	Limit 'in-ear' exposure to 82 dB(A)
Communication	Two-Way Radio with PTT Cable
Voice Transmission	Noise Cancelling Boom Mic, VOX-Capable
Power	Upgraded 24-hour battery life for use in multiple shifts
Headsets Styles	Headband, Behind-the-Neck, Helmet Mount
IP Ratings	IP54 (headset), IP68 (boom mic)
Intrinsic Safety	ATEX, IECEx, UL 913 8th, UL 60079-0, UL 60079-11, CSA 60079-0, CSA 60079-11

 360° SITUATIONAL AWARENESS	 ELECTRONIC VOLUME LIMITER	 PROTECTS HEARING	 ENHANCE SPEECH SUPPRESS NOISE
 FACE-TO-FACE COMMUNICATION	 TWO-WAY RADIO COMMUNICATION	 INTRINSIC SAFETY	

**Sensear**   
SAFETY THAT SPEAKS VOLUMES

**SENS**  
TECHNOLOGY by Sensear





# Sensear in Action

## Headset Styles



**SM1BBEX02 | HEADBAND**  
27dB NRR / 33dB SNR / 31dB, Class 5 SLC80



**SM1BEEEX02 | BEHIND-THE-NECK**  
24dB NRR / 30dB SNR / 27dB, Class 5 SLC80



**SM1BHEX02 | HELMET MOUNT**  
23dB NRR / 31dB SNR / 26dB, Class 5 SLC80

## Technical Specifications

GENERAL	MOUNTING TYPE	PART NUMBER	WEIGHT	IP RATING	OPERATING TEMPERATURE
	Headband (HB)	SM1BBEX02	495 g (17.46 oz.)	IP54	-20°C to +60°C (-4°F to 140°F)
	Behind-the-Neck (BTN)	SM1BEEEX02	428 g (15.09 oz.)	IP54	-20°C to +60°C (-4°F to 140°F)
	Helmet Mount (HM)	SM1BHEX02	480g (16.93 oz.)	IP54	-20°C to +60°C (-4°F to 140°F)

HEARING PROTECTION	REGION	STANDARD	RESULT	HB	BTN	HM
<b>Volume Limiter</b> - 82 dB(A) [programmable]. Only applicable when headset is powered on	Australia / NZ	AS/NZS 1270	SLC80	31dB, Class 5	27dB, Class 5	26dB, Class 5
	USA / Canada	ANSI S3.19	NRR	27dB	24dB	23dB
	Europe	EN352-1/EN352-3	SNR	33dB	30dB	31dB

POWER	BATTERY TYPE	BATTERY CAPACITY	OPERATING TIME	CHARGE TIME	CHARGING TEMPERATURE
	Rechargeable Li-ion Polymer	2250 mAh	24 hours	5 hours	0°C to +40°C (32°F to 104°F)

COMMUNICATION	FACE-TO-FACE SENS® MODE	VOICE TRANSMISSION	TWO-WAY RADIO
	SENS® voice pickup limit of 95 dB(A)	Noise-canceling boom microphone. VOX capable when connected to VOX enabled two-way radio (Must be verified and tested for compatibility with the two-way radio.)	6-pin Hirose connector. Two-way radio audio through headset without headset battery. Audio revert to radio when headset Hirose disconnected. (Dependent on radio type and compatible SRCK radio cable.)

**ATEX & IECEx certifications:**  
 II 2G Ex ib IIC T4 Gb (-20°C ≤ Ta ≤ +40°C)  
 II 2D Ex ib IIIC T155°C Db (-20°C ≤ Ta ≤ +40°C)  
 I M2 Ex ib I Mb (-20°C ≤ Ta ≤ +60°C)

**UL & CSA certifications:**  
 Class I Division 1 Groups A-D, T4 (-20°C ≤ Ta ≤ +40°C);  
 Class 1 Zone 1 AEx ib IIC T4 Gb (-20°C ≤ Ta ≤ +40°C)  
 Class II Zone 21 AEx ib IIIC T155°C Db (-20°C ≤ Ta ≤ +40°C)

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