



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



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	480 g (16.93 oz.)	IP54	-20°C to +60°C (-4°F to 140°F)

HEARING PROTECTION	REGION	STANDARD	RESULT	HB	BTN	HM
Volume Limiter - 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	33dB

POWER	BATTERY TYPE	BATTERY CAPACITY	OPERATING TIME	CHARGE TIME	CHARGING TEMPERATURE
	Rechargeable Lithium-ion	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. Audio revert to radio when headset Hirose disconnected or headset battery dies (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)

Sensear Inc.
 1141 East Main Street
 Suite 201
 East Dundee, IL 60118
 United States

Sensear Pty Ltd
 4 Hehir Street
 Belmont, WA 6104
 Australia

