Vertex Standard

VX-820 ATEX Series

VHF/UHF Portable Radios

SPECIFICATION SHEET

Compact Size With Robust Capabilities

The smallest radio offered by Vertex Standard is unobtrusive and easy to wear all day and built with more enhanced features typically not found in other radios of this size. The VX-820 Series is Intrinsically Safe and certified to meet ATEX approval specifications for gas protection to use in explosive hazardous settings.

ATEX Approved for Gas Protection

II 2 G E Ex ib IIC T4

II	2	G	E	Ex	ib	IIC	T4
							T4 = Device surface temperature will not exceed 135°C
						IIC = Protection in the most explosive gas environment (hydrogen)	
					ib = Type of intrinsic safety protection		
				Ex = Explosion-proof equipment			
			E = Certified to European ATEX Standard				
		G = Gas					
	2 = Likely hazardous atmosphere						
II = Group II "other" environments, (chemical industries, refineries, etc.)							

Withstands Harsh Environments

Water, dust, temperature extremes, shock and vibration are no problem for these radios manufactured to rugged Military Standards specifications. The VX-820 Series also meets international waterproofing standard IP57 where water does not harm the radio when submersed to a depth of 1 metre for up to 30 minutes.

Tailored Communications to Meet Your Demands

Get the ultimate signaling performance with a choice of multiple 2-tone encode and decode or 5-tone signaling to support the most advanced communications needs from individual to fleet operations. The front panel also includes a 7-colour LED with a variable flash pattern for custom incoming call alerts.

When Safety Counts – Never Be Alone

When help is needed, the VX-820 Series has Emergency notification that will switch to a designated channel and send an emergency alert. The radios also include Remote Listen which turns the radio on remotely if needed to check out what is happening near the radio.

Loud Audio for Noisy Environments

With 700 mW audio output, be assured of hearing critical information you need in most situations.

Exclusive Auto-Range Transpond System – ARTS™

Only Vertex Standard radios are designed to inform you when you and another ARTS™-equipped station are within communication range. If out of range for more than 2 minutes, your radio senses no signal has been received and beeps to alert you. The base station can then alert the field unit to move back in range. A great solution to keep your workers co-ordinated.

The Vertex Standard Difference

Our number one goal is achieving superior customer satisfaction by delivering products and services that exceed your expectations. Count on Vertex Standard for radios that are built to last and designed to provide more features for a better return on your investment. Ask your Dealer for more details.

Top

VX-829 VX-824 VX-821

96.5 (H) X 57.5 (W) X 41 (D) mm

VX-820 ATEX Series

Vertex Standard

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Additional Features

- 512 Channel capacity (VX-829/824)
- 16 Channel capacity VX-821)
- Wide band coverage
- Seven programmable keys (VX-829/824)
- Three programmable keys (VX-821)
- Direct channel recall
- 12-Character alphanumeric display (VX-829/824)
- RX/TX Battery power save
- DTMF ANI
- CTCSS / DCS Encode and Decode
- User selectable tone
- BCLO / BTLO and TOT
- MDC-1200® ANI Encode
- Stun / kill / revive (5-tone)
- Lone Worker
- Compander
- Whisper
- Minimum volume control
- Scan options: Priority, Dual Watch, Follow-me, Follow-me Dual Watch, Talk Around
- Programmable home channel function
- Radio-to-radio cloning

Accessories - ATEX Approved

- MH-50D7A: Public Safety speaker mic w/toggle
- MH-66A7A: Submersible noise cancelling speaker mic
- MH-66B7A: Submersible speaker mic w/PF key & toggle
- FNB-V100LIEX: 1500 mAh Li-Ion battery

Accessories - ATEX Exempt

- VAC-6921EX: 6-Unit multi charger
- CD-37EX: Desktop charger
- PA-42: AC Adapter for desktop charger
- DCM-1: Mounting adapter for desktop charger
- VCM-2: Vehicular charger kit

Option Boards - ATEX Approved

- FVP-35: Rolling Code Encryption
- FVP-36: Voice Inversion Encryption
- DVS-5: Digital voice storage
- VME-100: MDC-1200® / GE-STAR® ANI Encode
- VMDE-200: MDC-1200® / GE-STAR® ANI Enc./Dec.

VX-820 ATEX Series Specifications

	VHF	UHF
General Specification		
Frequency Range	134 – 174 MHz	400 – 470 MHz
Number of Channels and Groups	512 and 32 Groups (VX-829/VX-824) 16 and 1 Group (VX-821)	
Power Supply Voltage	7.4 V DC ± 20%	
Channel Spacing	12.5 / 20 / 25 kHz	
PLL Steps	5 / 6.25 kHz	
Battery Life (5-5-90 duty) 1500 mAh FNB-V100LIEX	16.5 hrs (12.5 hrs w/o saver)	16 hrs (12.2 hrs w/o saver)
IP Rating	IP 57	
Operating Temperature Range	–10° C to +55° C	
Frequency Stability	±2.5 ppm	
RF Input-Output Impedance	50 Ohms	
Dimension (H x W x D)	96.5 x 57.5 x 41 mm	
Weight (Approx.)	335 g (w/FNB-V100LIEX, Antenna and Belt Clip)	
Receiver Specification: measured by EN 300 086		
Sensitivity 20 dB SINAD	-4 / -2 dB µV emf	
Adjacent Channel Selectivity	75 / 65 dB	
Intermodulation	65 dB	
Spurious and Image Rejection	70 dB	
Hum and Noise	48 / 42 dB	
Audio Output	700 mW @ 16 Ohms 5% THD	
Transmitter Specification: measured by EN 300 086		
Output Power	1 / 0.5 W	
Modulation Limiting	±5.0 kHz @ 25 kHz ±4.0 kHz @ 20 kHz ±2.5 kHz @ 12.5 kHz	
Spurious Emissions	-36 dBm @ ≤ 1 GHz, - 30 dBm @ > 1 GHz	
FM Hum & Noise	45 / 40 dB	
Audio Distortion	< 3 % @1kHz	

Applicable MIL-STD

Standard	MIL 810C Methods/ Procedures	MIL 810D Methods/ Procedures	MIL 810E Methods/ Procedures	MIL 810F Methods/ Procedures
Low Pressure	500.1	500.2	500.3	500.4
High Temperature	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II
Low Temperature	502.1/Procedure I, II	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II
Temperature Shock	-	-	-	503.4/Procedure I
Solar Radiation	505.1/Procedure I	505.2/Procedure I Cat.A1	505.3/Procedure II, Cat A1	505.4/Procedure I,II Cat.A1
Rain	506.1/Procedure I	506.2/Procedure I	506.3/Procedure I, II	506.4/Procedure I
Humidity	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	-
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4/Procedure I
Dust	-	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III
Vibration	514.2/ Procedure VIII, X	514.3/Procedure I Cat. 10	514.4/Procedure I Cat. 10	514.5/Procedure I Cat. 20, 24
Shock	516.2/Procedure I	516.3/Procedure I	516.4/Procedure I	516.5/Procedure I