



VHF AND UHF DIGITAL TRANSCEIVERS (dPMR™)

IC-F3202DEX

(VHF transceiver for Europe version)

IC-F4202DEX

(UHF transceiver for Europe version)

IC-F3203DEX

(VHF transceiver for Export versions)

IC-F4203DEX

(UHF transceiver for Export versions)

IECEX/ATEX INTRINSICALLY SAFE RADIO



iDAS™
COM DIGITAL ADVANCED SYSTEM



IEC Certifications

Mining : Ex ib I Mb
Gas : Ex ib IIC T4 Gb
Dust : Ex ib IIIC T110°C Db
-20°C ≤ Ta ≤ +55°C
IEC 60079-0 (2011), IEC 60079-11 (2011)

ATEX Certifications

Mining : I M2 Ex ib I Mb
Gas : II 2G Ex ib IIC T4 Gb
Dust : II 2D Ex ib IIIC T110°C Db
-20°C ≤ Ta ≤ +55°C
EN 60079-0 (2012), EN 60079-11 (2012)

IP67 Dust-tight & Waterproof Protection

The IC-F3202DEX/F3203DEX series provides rugged protection against dust and water that is equivalent to IP67. The IC-F3202DEX/F3203DEX series can withstand 1m depth of water for 30 minutes and its dust-tight construction shuts out powder dust, sand and other objects.

dPMR™ Mode 1/2 Operation

The IC-F3202DEX/F3203DEX series provides basic operation in dPMR Mode 1, 2 conventional mode. It is compatible with Mode 2 multi-site system. The following dPMR features are programmable.

- PTT ID (TX)
- Power ON/OFF status call (TX)
- Ambience listening (RX)
- Lone worker/Man down function
- Voting scan for Mode 2 multi-site system
- Individual/Group call
- Stun/kill/revive (RX)
- Emergency (TX)
- Digital voice scrambler

TX: Transmit, RX: Receive

Analogue Mode Compatible

The IC-F3202DEX/F3203DEX series has built-in 5-Tone, 2-Tone, CTCSS and DTCS signaling capability for analogue mode group communication and selective calling. The lone worker and man down functions automatically send an emergency signal to assist in worker safety. The radio is perfect for use as an analogue transceiver ready for future digital migration.

Other Features

- 16 memory channels with channel announcement function
- BIIS 1200 PTT ID transmission • DTMF autodial
- Three programmable buttons (including emergency red button)
- Low electrical resistivity body; Carrying case is not required
- 19.5–21 hours* operating time with BP-277EX (* 5: 5: 90 duty cycle with Power save.)
- Optional waterproof speaker-microphone, HM-203EX



SPECIFICATIONS

	IC-F3202DEX IC-F3203DEX	IC-F4202DEX IC-F4203DEX
GENERAL		
Frequency coverage	136–174 MHz	400–470, 450–520, 350–400 MHz
Number of channels	16 channels	
Type of emission	16K0F3E, 14K0F3E, 8K50F3E, 4K00F1E/F1D	
EXP	16K0F3E, 11K0F3E, 8K50F3E, 4K00F1E/F1D	
Power supply requirement	7.4 V DC nominal	
Current drain (approx.)		
Tx High	550 mA	
Rx Max. audio/Standby	300 mA (Internal SP)/110 mA (Digital mode)	
Antenna impedance	50 Ω	
Operating temperature range	–20°C to +55°C	
Dimensions (W × H × D) (Projections not included)	63 × 144 × 50 mm (With BP-277EX)	
Weight (approx.)	258 g (Radio only) 466 g (With MB-94EX, BP-277EX & FA-SC55V)	250 g (Radio only) 460 g (With MB-94EX, BP-277EX & FA-SC57U)
TRANSMITTER		
Output power (at 7.4 V DC)	1 W, 0.8 W, 0.6 W (Hi, L2, L1)	
Max. permissible deviation	±5.0 kHz/±4.0 kHz/±2.5 kHz (W/M/N)	
Frequency stability	±1.0 ppm	
Spurious emissions	0.25 μW (≤ 1 GHz), 1.0 μW (> 1 GHz) 66 dB min.	
FM Hum and Noise (EXP)	50/46 dB typ. (W/N)	46/40 dB typ. (W/N)
Residual modulations (EUR)	54/53/50 dB typ. (W/M/N)	48/46/42 dB typ. (W/M/N)
Audio harmonic distortion	1.0/1.0/1.5% typ. (W/M/N) (@ AF 1 kHz 40% deviation)	
FSK error	2.0% typ. (Digital)	
Ext. microphone connector	14-pin multi-connector/2.2 kΩ	
RECEIVER		
Sensitivity	Digital (5% BER) –8 dBμV emf typ. Analog (EUR, 20 dB SINAD) –4 dBμV emf typ. Analog (EXP, 12 dB SINAD) 0.24 μV typ.	–9 dBμV emf typ. –5 dBμV emf typ. 0.22 μV typ.
Adjacent channel selectivity	78/75/70/62 dB typ. (W/M/N/D)	74/72/66/57 dB typ. (W/M/N/D)
Spurious response	85 dB typ. (W/M/N), 87 dBμV emf typ. (Digital)	75 dB typ. (W/M/N), 79 dBμV emf typ. (Digital)
Intermodulation	EUR 67 dB typ. (W/M/N), 73 dBμV emf typ. (Digital) EXP 75/75/67 dB typ. (W/N/D)	74/74/73 dB typ. (W/N/D)
Hum and noise	EUR (With CCITT filter) 53/51/48 dB typ. (W/M/N) EXP (Without CCITT filter) 48/43 dB typ. (W/N)	46/44/41 dB typ. (W/M/N) 43/37 dB typ. (W/N)
Audio output power	400 mW typ. (at 5% distortion with 32 Ω load)	
External speaker connector	14-pin multi-connector/32 Ω	

Measurements made in accordance with TIA-603, EN 300-086, EN 301-166.
All stated specifications are subject to change without notice or obligation.

Applicable U.S. Military Specifications & IP Rating

Standard	Method	Procedure
Low Pressure	500.5	I, II
High Temperature	501.5	I, II
Low Temperature	502.5	I, II
Temperature Shock	503.5	I-C
Solar Radiation	505.5	I
Rain Blowing/Drip	506.5	I, III
Humidity	507.5	II
Salt Fog	509.5	–
Dust Blowing	510.5	I
Immersion	512.5	I
Vibration	514.6	I
Shock	516.6	I, IV

Also meets equivalent MIL-STD-810-C, -D, -E and -F.

Ingress Protection Standard

Dust & Water IP67 (Dust-tight and waterproof)

Supplied accessories: (May differ according to version)

- Battery pack, BP-277EX
- Belt clip, MB-94EX
- Antenna
- Battery charger, BC-212EX
- AC adapter, BC-123S

Read all instructions enclosed with the transceiver carefully and completely before using the transceiver.

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OPTIONS

BATTERY PACK

IP67



BP-277EX
Rechargeable
Li-ion, 7.4 V
1800 mAh (min.)
1900 mAh (typ.)

RAPID CHARGER



BC-123S^{**} **BC-212EX**

Charges the BP-277EX in 2 hours (approx.).

SPEAKER-MICROPHONE

IP67



HM-203EX

BELT CLIP



MB-94EX
Alligator type
Same as supplied.

ANTENNAS

- FA-SC25V : 136–150 MHz
- FA-SC55V : 150–174 MHz
- FA-SC01U : 350–400 MHz
- FA-SC25U : 400–430 MHz
- FA-SC57U : 430–470 MHz
- FA-SC72U : 470–520 MHz

^{**} BC-123SA for USA.
SE for Europe. SV for Australia.

DO NOT use the transceiver with any other equipment other than the above options. The battery charger, BC-212EX must not be used in an explosive atmosphere.

ATEX mining protection and meaning

I	M2	Ex	ib	I	Mb
Mb = Mining equipment protection level: High protection					
I = Protection in mining group: Methane					
ib = Intrinsic safety					
Ex = Explosion proof equipment					
M2 = Must be switched OFF in case of firedamp					
I = Group I, Mining					

ATEX gas protection and meaning

II	2	G	Ex	ib	IIC	T4	Gb
Gb = GAS equipment protection level: High protection							
T4 = Device surface temperature will not exceed 135°C							
IIC = Protection in GAS group: Acetylene, Hydrogen							
ib = Intrinsic safety							
Ex = Explosion proof equipment							
G = Gas, vapour and mist							
2 = High level protection for use in Zone 1 (gas)							
II = Group II, other (non-mining) areas							

ATEX dust protection and meaning

II	2	D	Ex	ib	IIC	T110°C	Db
Db = Dust equipment protection level: High protection							
T110°C = Maximum temperature of device surface							
IIC = Dust group: Conductive dust (R<10 ³ Ωm)							
ib = Intrinsic safety							
Ex = Explosion proof equipment							
D = Dust							
2 = High level protection for use in Zone 21 (dust)							
II = Group II, other (non-mining) areas							

* Please ask your dealer to ensure the ATEX and IECEx ratings are acceptable for the intended place of use.

Les spécifications et informations données dans ce document peuvent être modifiées sans préavis. La configuration du poste peut varier suivant les versions.

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