SATELLINE-3AS VHF

The SATELLINE-3AS VHF belongs to SATEL's concept of remotely manageable radio modems. In addition to ordinary communication functions it offers configuration through radio, efficient diagnostics tools and accumulation of operation statistics data.

The management and surveillance of a network of 3AS VHF radio modems is effected through the Master Station connected by a serial interface to a PC with dedicated Network Management System software.

A special advantage of the SATELLINE-3AS VHF, operated in a VHF frequency band, is the wider coverage. With the same carrier power and antenna gain, the connection ranges are 30 to 50 per cent larger than those reached with an equivalent UHF radio modem.

Setting up a local data transfer network is quick and cost effective with SATEL radio modems. The wireless network is independent and free of operator services. The cost of operation is either free of charge or fixed, depending on the frequency used. SATEL radio modems are type-approved in over 50 countries.

SATEL radio modems are always on line and provide reliable, real-time data communications over distances ranging from tens or hundreds of metres up to around 80 kilometres. Thanks to a store and forward function, any radio modem in a network can be used as a master station, substation and / or repeater.

SATEL radio modem networks are flexible, easy to expand and can cover a wide variety of solutions from simple point-to-point connections to large networks comprising hundreds of modems. Even for expanded networks, only one operating frequency is required.

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SATEL

Mission-Critical Connectivity

The SATELLINE-3AS VHF operates on the 135...174 MHz frequency band. The radio modem is compatible with the most widely used serial interfaces RS-232, RS-485 and RS-422.
SATELLINE-3AS VHF with 5 W output power and a heat sink is the appropriate choice when continuous transmission (when transmitter duty cycle exceeds 20%) is required. In mobile fleet management applications, use of VHF frequencies reduces signal fading significantly.
The model SATELLINE-3ASd VHF is equipped with a LCD, which facilitates easy programming of the radio modem.

Reliability and efficiency
A SATELLINE-3AS VHF network consists of remotely adjustable radio modems controlled through the Master Station by the dedicated SATEL NMS PC software. The user data and NMS information are transferred seamlessly together. The Network Management System provides easy configuration of the network and advance indication of faults, for maximum reliability, labour-saving maintenance work and efficient system management.

The NMS radio modems monitor, on a continuous basis, the condition of the radio connection, in particular the strength of the signal (RSSI) and the voltage level of the power source as well as the inside temperature of the modem. The information is transmitted to the SATEL NMS PC software, where it is stored and displayed as logs and trend data. With the help of the graphical display of the network available at the SATEL NMS PC software, the user can conveniently configure, add or remove radio modems as well as set repeater links, without need of a terminal.

Technical Specifications SATELLINE-3AS(d) VHF
The equipment complies with the EN 300 113, EN 301 489-1, -5, EN 60950-1 and FCC Part 90 specifications.

SATELLINE-3AS(d) VHF	
TRANSCEIVER	
Frequency Range	135...174 MHz MHz
Tuning Range	135...155, 138...160, 155...174 MHz
Channel Width	12.5 kHz / 25 kHz
Frequency stability	< ± 650 Hz
Type of Emission	F1D
Communication Mode	Half-Duplex
TRANSMITTER	
Carrier Power	100 mW, 500 mW, 1 W, 5 W / 50 ohm
Carrier Power Stability	+ 1.5 dB / - 1.5 dB
Adjacent Channel Power	according to EN 300 113 and CRF47 section 90
Spurious Radiation	according to EN 300 113 and CRF47 section 90
RECEIVER	
Sensitivity	< -115 dBm (BER < 10 E-3) *1
Co-channel Rejection	> -12 dB
Adjacent Channel Selectivity	> 50 dB @ 12.5 kHz /> 60 dB @ 25 kHz
Intermodulation Attenuation	> 60 dB
Spurious Radiation	< 2 nW
DATA MODEM	
Interface level	RS-232, RS-485 or RS-422
Interface	One port for data and one for NMS
Interface Connector	D15, female
Data speed of RS interface	1200 - 38400 bps
Data speed of radio interface	19200 bps @ 25 kHz, 9600 bps @ 12.5 kHz
Data format	Asynchronous RS-232, RS-422, RS-485

GENERAL	
Operating voltage	+10.6 ...+25 Vdc (-15 % / +20 %)
Power consumption (average)	1.7 W typical (Receive)
	6.6 W @ 1W / 22 W @ 5W typical (Transmit)
	0.07 W typical (in Standby mode)
Temperature range - Operating	-25 °C...+55 °C (tests acc. to ETSI standards)
	-40 °C ...+75 °C (absolute minimum / maximum)
Temperature range - Storage	-40 °C … +85 °C
Antenna Connector	TNC, 50 ohm, female
Construction	Aluminium Enclosure
Size H x W x D	137 x 67 x 29 mm without cooling part
	137 x 80 x 56 mm with cooling part
Installation plate	130 x 63 x 1 mm
Weight	265 g without cooling part
	550 g with cooling part

*1:Depending on Receiver settings

Values are subject to change without notice.