SATELLINE-3AS(d) Epic NMS

The SATELLINE-3AS Epic NMS exhibits a high power (10 W) transmitter and two receivers operated in a Diversity Reception mode. The Diversity Reception improves the reliability of the connection where there is a lot of signal fading caused by reflections. The high output power and the Diversity Reception make it possible to more than double the connection distances in comparison to ordinary SATELLINE-3AS NMS radio modems with 1 W output power.

The remotely manageable SATELLINE-3AS Epic NMS offers configuration through radio, efficient diagnostics tools and accumulation of operation statistics data, in addition to ordinary communication functions.

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

With SATEL radio modems, setting up a local data transfer network is quick and cost effective. Your 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. For the latest information, please visit our website www.satel.com.

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

Functionality and transmission power

Diversity Reception

- Fading of a radio signal occurs when a signal reflected from several objects is caught by the antenna of a radio modem and reaches the receiver at different times. The signals at the receiving antenna are in different phases so in the worst case two equally strong signals being in opposite phases cancel each other out causing signal fading. The SATELLINE-3AS Epic NMS is equipped with two separate receivers. Signal fading is reduced by tuning the two antennas properly apart from each other.

Dependable long-range data transfer

- The 3AS Epic NMS radio modems monitor, on a continuous basis, the condition of the radio connection, in particular the strength of the received 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.
- In the SATELLINE-3AS Epic NMS the error rate is minimised by means of advance checking and correction of the data packets. In Forward Error Correction (FEC), the data packets are split in several blocks. The radio modem adds correction information inside the blocks during transmission.
- A SATELLINE-3AS Epic NMS network consists of remotely adjustable radio modems operated in a polling mode, and controlled through the Master Station by dedicated SATEL NMS PC software. The SATEL NMS PC software provides the user with a powerful graphical tool for designing a radio network, which ensures that each NMS radio modem receives and transfers only the messages intended for it, and that each message is appropriately routed, using repeaters where necessary.
- The user data and NMS information are transferred seamlessly together. The Network Management System is compatible with most user protocols, making the NMS network suitable for a wide range of applications.

SATELLINE-3AS(d) NMS	
TRANSCEIVER	
Frequency Range	330...470 MHz
Tuning Range	+/-2 MHz from the central frequency *Note1
Channel Spacing	12.5 kHz / 20 kHz / 25 kHz
Frequency stability	< ± 1.5 kHz
Type of Emission	F1D
Communication Mode	Half-Duplex
TRANSMITTER	
Carrier Power	1, 2, 5 and 10 W / 50 ohm
Carrier Power Stability	+ 2 dB / - 3 dB
Adjacent Channel Power	according to EN 300 113-1
Spurious Radiation	according to EN 300 113-1
RECEIVER	
Sensitivity	< -115 dBm (BER < 10 E-3) *Note2
Co-channel Rejection	> -12 dB
Adjacent Channel Selectivity	> 60 dB @ 12.5 /> 70 dB @ 25 kHz
Intermodulation Attenuation	> 65 dB
Spurious Radiation	< 2 nW
Diversity	Space diversity
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
Data format	Asynchronous RS-232, RS-422, RS-485

GENERAL	
Operating voltage	+ 11.8 ...+ 30 Vdc
Power consumption (average)	1.6 W typical (Receive), 36 W typical (Transmit)
	0.1 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	154 x 123 x 29 mm without cooling part
	154 x 151 x 77 mm with cooling part
Weight	580 g without cooling part
	1480 g with cooling part
MTBF	60 years

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

* Note1: The Dual Band version operates on two separate 2 MHz frequency band.
*Note 2: Depending on Receiver settings.

Values are subject to change without notice.

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