

## SATELCODE / SENTINEL

### Industrial radio alarm transceivers

# Radio alarm transceiver SATELCODE



- Secured transmission of alarms
- Deployment in wide zones (multi sites, long distances, hostile environments)
- Alarm messages received on a central station or on autonomous receivers
- Very low supply current
- Remote monitoring software: SENTINEL
- Self-tested radio links

#### Principal characteristics:

- Usable on channels subjected to license as well as on license free channels
- Frequency band: 144-230 MHz

#### Transmitters:

- SATELCODE:
  - 8 digital inputs
  - Carrier power: 10mW to 4W
  - Event triggered transmission
  - Pseudo-random transmission retries
- SATELSAFE :
  - Wrist alarm transmitter

#### Receivers:

- very high sensitivity (-127dBm)
- SATELNODE X3S :
  - 3 open collector outputs
- SATELNODE X8S :
  - 8 open collector outputs

#### Remote monitoring software:

- SENTINEL for Windows 3.11, 95, 98, NT, 2000 or XP

#### Applications:

SATELCODE and SATELNODE are efficient one-way radio transmitter and receiver which can be used in the following contexts:

- Remote copy of digital signals on distant sites
- Wireless alarm system with a central station and the SENTINEL software.

The target applications are multiple:

- Telemetry or remote control on site of production
- Water or smoke sensing
- Wireless copy of digital signals
- Radio alarm system for industrial sites...

Several types of network are possible:

- Mirror: one transmitter toward one receiver
- Star: several transmitters toward one receiver
- Multi-cells: several transmitters towards several receivers bound together.

#### Characteristics:

Products SATELCODE and SATELNODE are usable in frequency bands subjected to license or license free (144 - 230 MHz). They comply with the European recommendations: ETS 300.220 and ETS 300.113.

The SATELCODE transmitter has 8 digital inputs:

- Transmission triggered by level change detection
- Each input is individually set up with a specific address (each input can be transmitter toward a specific SATELNODE receiver)
- Number of SATELCODE addresses: 64000 max.

## Radio range:

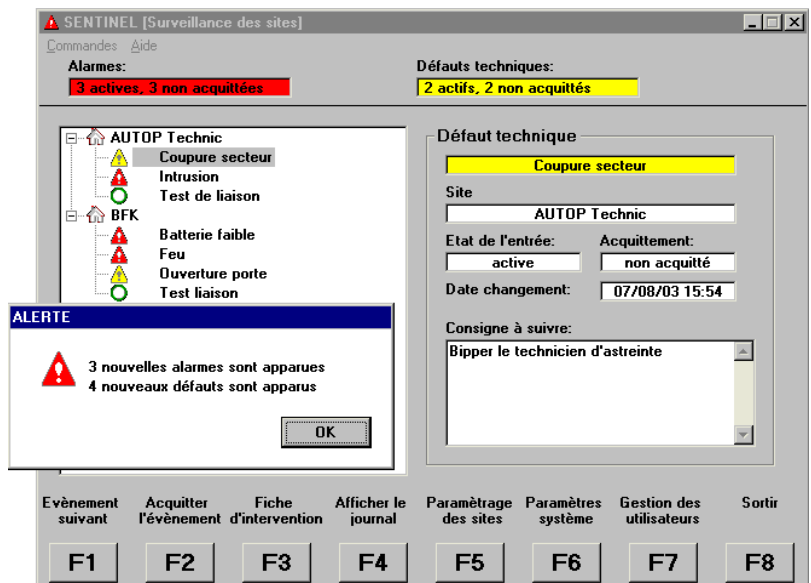
The very great sensitivity and selectivity of receiver SATELNODE (-127 dBm), with the carrier power of the transmitter SATELCODE (10 mW to 4 W), allow to cover several kilometers (4 to 30 km according to the situations).

- The frequencies in the VHF band offer a very good compromise of propagation in industrial, urban or rural environments.

## SENTINEL:

SENTINEL is a software for central station to display and use the alarms sent by SATELCODE transmitters:

- SENTINEL runs under Windows environment (3.11, 95, 98, NT, 2000 or XP)
- Management of events: graphical user interface to display events with colors depending on the priority level (3 levels: alarm, minor event, test)
- Visual and sound alarm, acknowledgment mandatory or not
- Supervision multi-sites: configuration of events by sites independently of the hardware used (the same SATELCODE can be used to supervise several sites with different shifts and schedules)
- User settable labels attached to each site and each event
- Intervention management: textual instructions configurable for each event, phone numbers to contact the on-duty shift...
- Edition of intervention sheets: name of the site, address, access plan, label of the active event, help text to localize the problem...
- Event log: SENTINEL stores in a log many time stamped information such as the activation, deactivation and acknowledgement of alarms and minor events, the application starts and stops, operators' login and logout, radio link failures...
- Monitoring of the radio links' status: detection of communication loss
- Support for the deployment of the radio network: manual test one radio link
- User access management: configuration of user profiles with password and access level (3 levels: operation, configuration, administration)



## Technical specifications:

Frequency range	X3S: 144-230 MHz X8S: 144-175 MHz
Frequency stability	+/- 5 ppm
Carrier power	10 mW ~ 1 W, and 4 W
Sensitivity	- 127 dBm
Connector	DB15 female
Serial port	RS232 (parameter setting + Satelnode's output to a central station)

Non contractual information

Digital outputs	X3S: 3 digital outputs X8S: 8 digital outputs
Supply voltage	7 to 14 Vdc
Supply current	< 50 mA (Satelnode)
Temperature Range	-25°C, +55°C
Weight	200 gr
Size	Satelcode 10mW~1W: 130/65/26 mm Satelcode 4W: 108/56/15 mm